



BROCHURE #55

RESIDENTIAL RAIN GARDEN

What is a rain garden?

A rain garden is a shallow landscaped area with compost-amended soils and adapted plants that collects, absorbs, and filters stormwater runoff from roof tops, driveways, patios, and other hard surfaces that don't allow water to soak in. It is listed as BMP T5.14A. The full guidance and useful information can be found in the [Rain Garden Handbook for Western Washington](#).

Where can a rain garden be located?

Several things affect placement of a rain garden – locate your rain garden in accordance with the following:

- 10' or more from property lines.
- 10' or more from another infiltration BMP.
- 5' or more from structures without a basement
- 10' or more from structures with a basement
- 30' or more from an on-site septic system, when rain garden is uphill from the septic system.
- 10' or more from an on-site septic system, when rain garden is to the side or downhill from the septic system.
- 100' or more from open water features and designated landslide hazards.
- 50' or more from the top of any slope over 15%
- 200' or more* from the top of a 30% or greater slope. *This setback may be reduced if supported by a geotechnical analysis and report.
- Rain gardens may not be located on slopes steeper than 20%. A geotechnical analysis or report is required if the rain garden is to be built on a slope between 15% and 20%.

Other considerations:

- There must be a minimum of 12" of separation between the bottom of the rain garden and both hardpan and the seasonal high-water table
- Other constraints may apply, the full list can be found on Kitsap County Stormwater Design Manual (KCSDM) Vol II chapter 5.
- Locate utilities—to prevent extra expense and hazardous conditions, make sure to have all utilities located and marked before digging. Utility companies typically locate and mark power, gas, phone, water, and other lines and facilities. Contact utility locate services by calling 811.
- Low, poorly draining depressions – these areas will not support rain garden plants very well.
- In areas that would require disturbing healthy native soils, trees, and other vegetation— These areas already do a good job of filtering and storing stormwater

What soil is required?

On-site analysis of the soil is needed to test the infiltration feasibility of the rain garden and to obtain soil infiltration rate. A minimum of 0.3 inch/hour of infiltration rate is required for rain gardens. Please follow the link below for instruction on how to conduct the soil infiltration test. Please complete the [Simple Infiltration Test Checklist](#).

What is the size of a typical rain garden?

Rain gardens shall have a horizontally projected surface area below the overflow which is at least 5% of the total impervious surface area draining to it. For instance, the area of rain garden for a 2000 square feet roof is 100 square feet.

For better performance of your rain garden, you could increase the size to 10% ~30% of the contributing impervious area. More details on sizing the rain garden are described on Rain Garden Handbook for Western Washington.

Who can install a rain garden?

Anyone can install a rain garden, following the specifications and guidelines in the Kitsap County Stormwater Design Manual, Vol. II, Chapter 5, and the Rain Garden Handbook for Western Washington.

Although not required, installation by a landscaping company or other professional with experience in rain garden construction is highly recommended.

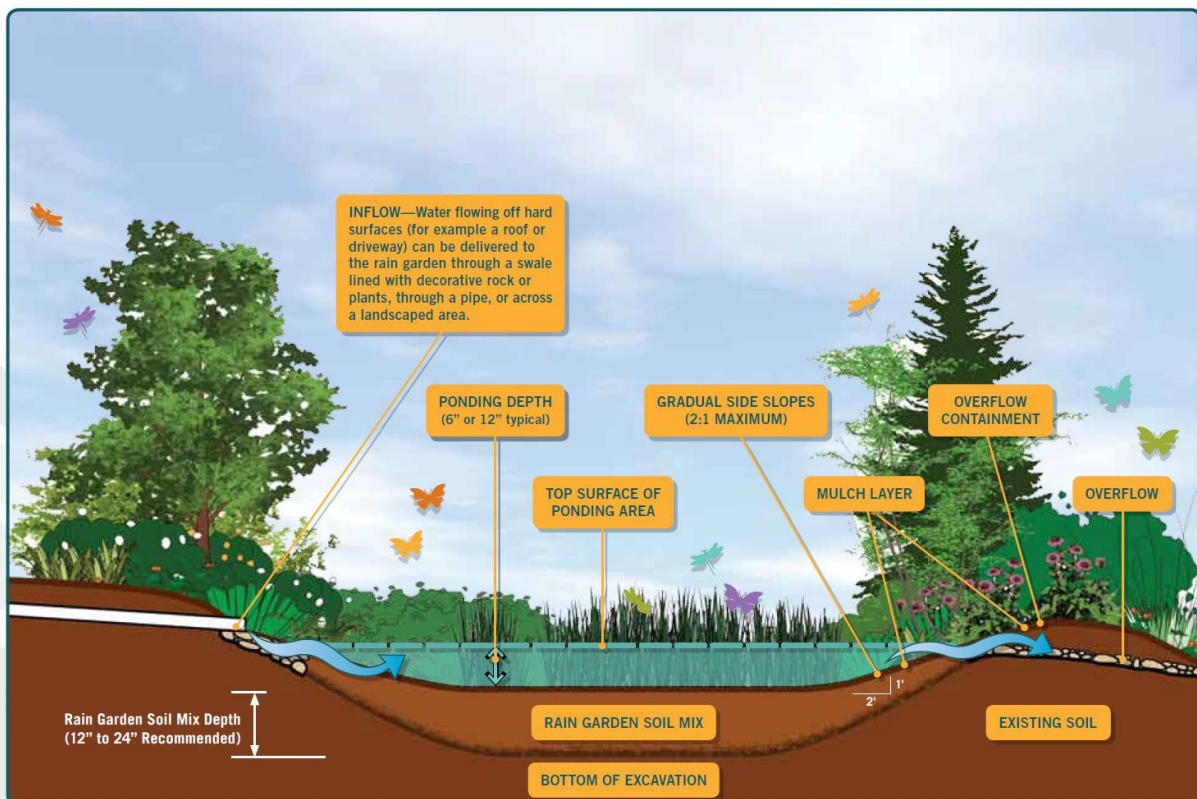


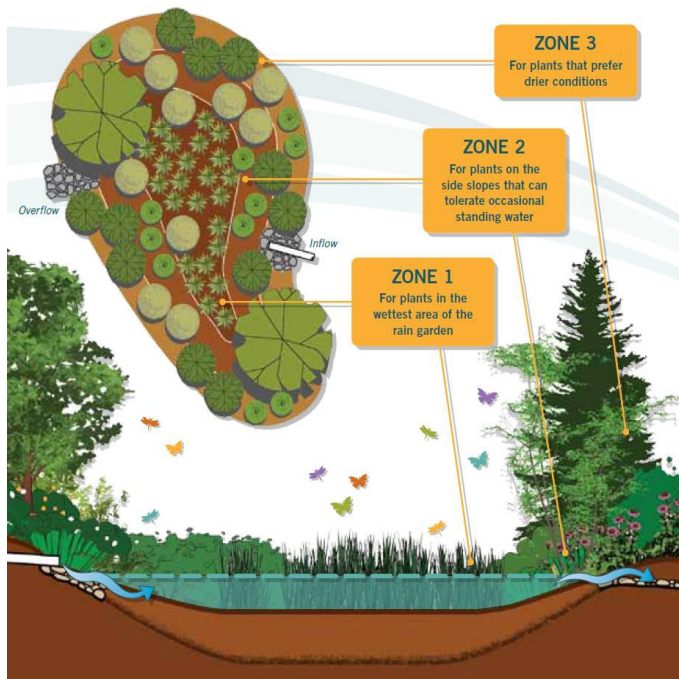
Figure 1 Profile view of a rain garden. Picture from Rain Garden Handbook for Western Washington.



Figure 2 Rain gardens can be constructed in a variety of shapes and have diverse planting schemes.
Source and credits: Statewide LID training program by the Department of Ecology.

Planting Zones

Rain gardens have three planting zones. Zone 1 is the bottom of the rain garden—the wettest area. Zone 2 covers the side slopes, which occasionally may become wet. This zone requires plants to help stabilize the slopes. Zone 3 covers the area around the perimeter of the rain garden and/or on the berm, where plants will grow in drier soil.



SUGGESTED PLANTS

ZONE 1

- Emergents** Dagger-leaf rush (*Juncus ensifolius*), and taper-tipped rush (*Juncus acuminatus*)
- Herbaceous Perennials** Henderson's checker-mallow (*Sidalcea hendersonii*)
- Deciduous Shrubs** Dwarf red-twig dogwood (*Cornus sericea* 'Kelsey'), Pacific ninebark (*Physocarpus capitatus*), and Bloodtwig dogwood (*Cornus sanguinea* 'Midwinter Fire')

ZONE 2

- Herbaceous Perennials** Daylily (*Hemerocallis* spp.) and giant camas (*Camassia leichtlinii*)
- Deciduous Shrubs** Dwarf red-twig dogwood (*Cornus sericea* 'Kelsey'), snowberry (*Symphoricarpos albus*), and Hancock coralberry (*Symphoricarpos x chenaultii* 'Hancock')
- Evergreen Shrubs** Boxwood honeysuckle (*Lonicera pileata*) and dwarf tall Oregon grape (*Mahonia aquifolium* 'Compacta')

ZONE 3

- Ornamental Grasses** *Miscanthus sinensis* 'Morning Light' and switch grasses (*Panicum virgatum* 'Heavy Metal,' and 'Shenandoah')
- Deciduous Shrubs** Oceanspray (*Holodiscus discolor*), red-flowering currant (*Ribes sanguineum*), and snowberry (*Symphoricarpos albus*) set back from the grasses to fill in
- Evergreen Shrubs** Tall Oregon grape (*Mahonia aquifolium*)
- Deciduous and Evergreen Trees and Large Shrubs** Western serviceberry (*Amelanchier alnifolia*), Oceanspray (*Holodiscus discolor*), and dwarf strawberry tree (*Arbutus unedo* 'Compacta')

Figure 3 A sample planting plan adapted from Rain Garden Handbook for Western Washington. More guidance for plant selection can be found from A-13 to A-18 in that hand book.