



Rain Gardens

Ensuring clean runoff

Lake friendly living
means using lakeshore
BEST MANAGEMENT
PRACTICES

BMP

Rain Gardens

STANDARDS

Recreation Area

- Soil erosion is not occurring on site (no eroding pathways, or exposed dirt)
- No pesticide, fertilizer, or unfiltered runoff to lake

LAKE BENEFITS

Rain Gardens reduce the potential for erosion and minimize the amount of pollutants flowing from your property into lakes, rivers, streams or wetlands directly or via storm drains.

MATERIALS

Replacement soil mixes and Erosion Control Mix are available at local garden centers. Native plants can be bought from your local nursery. Please see Planting and Maintaining Woodland Zones from this series for planting specifications. Do not use fill that may contain invasive plant material.

Rain Gardens

Description: Rain gardens are attractive and functional landscaped areas that filter rain runoff.

Purpose: Rain gardens are designed to capture and filter runoff from paths and impervious surfaces. They collect water in bowl-shaped vegetated areas, and allow it to slowly soak into the ground. A rain garden reduces the potential for erosion and minimizes the amount of pollutants flowing from the lawn into lakes, ponds, rivers, streams and wetlands.

How to:

Installing a Rain Garden. Rain gardens can vary in size, but are most effective when built to 20-30% of the drainage area (Picture the drainage area as a bowl with the rim of the bowl being the drainage boundary). Rain gardens for single-family homes will typically range from 150 to 300 square feet, but even a smaller one will help reduce water pollution problems.

- ◆ The garden should be bowl-shaped, with the lowest point of the garden no more than 6" below the surrounding land.
- ◆ The sides should be gently sloping towards the center to prevent sudden drop-offs that could lead to erosion problems or walking hazards.
- ◆ Rain gardens are often placed in a preexisting or created depression within a lawn, or in a location that receives roof runoff from a downspout.
- ◆ To avoid flooding improperly sealed foundations, build your rain garden **10' away from existing structures (including septic tanks)**, and direct water into the garden with a grassy swale, French drain, gutter extension or other device.

Rain gardens can be placed in sunny or shady regions of your lawn, but plants should be chosen accordingly, with the lowest point planted with wet tolerant species, the sides closest to the center planted with moist tolerant species, and the edges of the rain garden should be planted with moist to dry or dry tolerant plants. It is also important to check the permeability of your soil. Sandy soils only need compost added, but clay soils should be replaced with a mix (50– 65% sand, 15-30% topsoil, 2 -30% compost). After construction of the garden is complete, the entire area should be covered with a thick layer of mulch, preferably **Erosion Control Mix**.



A small rain garden with native plants captures and filters runoff from rain events.

Source: Vermont Low Impact Development Guide for Residential and Small Sites

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Design Guidance for Placement:

To test the drainage of the possible rain garden location, dig a 6-8 inch deep and wide hole and fill with water. If the water does not drain within 12 hours, the location is not appropriate for a rain garden. Rain gardens should be placed where their potential can be maximized. For example, although placing a rain garden under a mature tree will intercept runoff, the tree is most likely taking up more water than the garden would take up; therefore, a rain garden is unnecessary in this location.

Maintenance:

Overall, once plants mature, the maintenance of a rain garden is very low. Watering is important during

the first growing season, and some weeding is necessary after planting. As the garden matures, some of the perennials may need to be divided if plantings become too crowded.

Links:

For more details on how to properly construct a rain garden, check out the *Vermont Low-Impact Development Guide*: http://www.vtwaterquality.org/stormwater/docs/sw_LID%20Guide.pdf,

And *The Vermont Rain Garden Manual* developed by the Winooski Natural Resources Conservation District: <http://www.uvm.edu:8889/~seagrants/communications/assets/VtRainGardenManual.pdf>.

Rain Garden in a neighborhood setting



Adapted from illustration by Doug Adamson. Source: <http://www.sleepycreekwatershedassociation.org>