

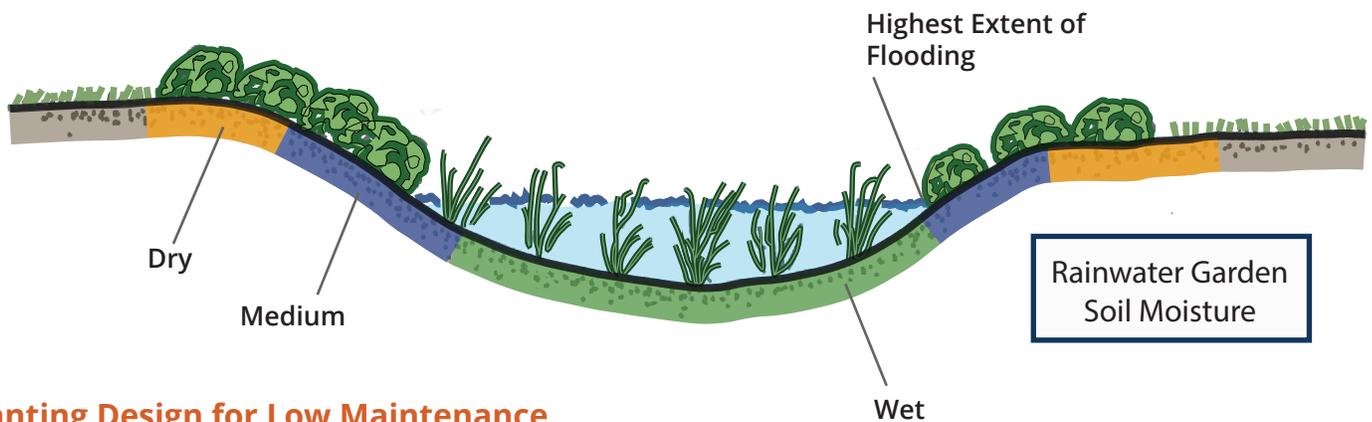


Introduction

Plant Selection

The key to selecting plant species for your rainwater garden or other stormwater feature is to first closely examine the growing conditions of the area to be planted, and then selecting plants that grow best under those conditions. Choosing the right plant for the right place reduces the amount of maintenance because thriving plants will better out-compete weeds.

Start your plant selection process by assessing the area you are to plant. Examine the light levels, soil types, and moisture levels throughout the area you are to plant. These will vary at different parts of the garden. In rainwater gardens two different growing conditions typically exist: the bottom of the basin where the soils get saturated after storm events, and the upper reaches that are above the flood line. But even more conditions may exist if part of the garden is shaded. Next, search the plant list to select plants that will grow well under the growing conditions of your garden.



Planting Design for Low Maintenance

Low maintenance is often a need for property owners. Below are a few tips on how to plan a planting for reduced maintenance. **Please understand that reduced maintenance does not mean no maintenance.** Every rainwater garden requires weeding once a month during the growing season.

- ✓ Select species that do not produce seed. These are typically native cultivars or horticultural (non-native) perennials.
- ✓ Select species that do not spread via roots or runners (quick-spreading plants are labeled as aggressive in the list below).
- ✓ Select a limited number species for the garden and plant them in large groups of 10 – 20, or more. It is manageable to weed simple plantings because identifying weeds is easier within a grouping of one species.
- ✓ Select the right plant for the right place. Match the plant tolerances to the growing conditions of your garden.



Introduction

Site Preparation

*Adapted from the book: Lakescaping for Wildlife and Water Quality by author Fred Rozumalski
Reprinted with Permission; Carrol Henderson, MN DNR*

The primary goal in preparing a planting bed for a rainwater garden, buffer zone or shoreline planting is to eliminate all previous vegetation that could become a weed in the new planting. The definition of a weed is – a plant out of place. Therefore, turf grass can be a weed in native plantings, and native plants a weed in turf. Save future maintenance work by thoroughly eliminating weeds before planting.

Eliminating Invasive Weeds

The removal of problem species like reed canary grass, purple loosestrife, crown vetch and common buckthorn, takes time and requires persistence. Plan for the eradication to take an entire growing season before beginning to plant. Consult with the MN DNR for techniques on how to eradicate invasive species. <http://www.dnr.state.mn.us/invasives/-terrestrialplants/index.html>

Eliminating Turf

Clearing sod is necessary to create an attractive planting and to minimize weeding in the future. Remnant lawn grasses tangling through a native planting are unattractive, reduce native plant vigor through competition, and are very difficult to weed out. Three methods of turf removal are discussed here.

The first method of turf removal is to directly remove sod with a gas-powered sod cutter. This method avoids the use of herbicides but is labor intensive and can result in soil erosion if exposed soils are not quickly planted and covered with straw or erosion control blanket. When cutting sod, the blade should be set deep to reach all grass roots (about one half inch). Any sod or root fragments left behind may regenerate and become unattractive weeds in the planting. Cut sod should be either composted on-site or reused to patch open soil areas in the lawn. Most landfill and composting sites do not take sod. A drawback to sod removal is that it opens the soil, making it susceptible to erosion. An erosion-control blanket or mulch must be put down immediately after sod is stripped.

The use of heavy equipment such as a bobcat to strip sod damages the soil and is not recommended. Large machines compact soil and can break the structure of lake and stream banks. Once soil is compacted, plants have difficulty establishing because of the lack of air in the soil; plant roots require oxygen to survive.

A second method of turf removal avoids the heavy work of removing sod but requires an entire growing season to be effective. Smother lawn grasses with black polyethylene plastic, old carpet, show curtains or layers of newspaper or cardboard. Stake your material of choice to the ground over the sod, and leave it in place for one entire growing season (five to six months). It takes this long to smother the robust roots of grass plants. After this period you can plant directly through the dead sod. If planting seed it is important to till the dead sod before spreading the seed.



Introduction

(Eliminating Turf)

The quickest and most cost-effective method to eradicate sod is application of an herbicide. Unfortunately organic herbicides only burn off the above-ground vegetation and leave the root systems in tact to sprout and grow again. Chemical based herbicides such as Roundup TM are very effective in eliminating turf. In situations where herbicide can come in contact with water, Rodeo TM should be used. Rodeo has the same active ingredient as Roundup, but is nontoxic to fish. Any herbicide application to aquatic or shoreline plants must be accompanied by a permit from the MN DNR.

Take care in spraying. These herbicides kill any plant with which they come in contact. After spraying any of these herbicides it takes 10 to 14 days for sod to die. At that time the sod will become yellow. Where green areas remain after this waiting period spot spray at least two days before planting to completely eradicate any surviving turf. Another advantage to using herbicide is that the dead sod can be left in place. Leaving it in place prevents soil erosion, leaves valuable organic material on the soil, and saves the labor of hauling it away to be composted. When you are ready to plant, install live plants directly through the dead sod. Be sure that the roots are buried in soil and not in the thatch of dead lawn where the plant would quickly dry out and die. If you plan to seed native plants, however, you must till the dead sod and soil before seeding.

Soil Preparation

Beyond eliminating sod or invasive plants, no soil preparation is required for the installation of native plants. Appropriately selected native plants will thrive in the soil condition that exists on the site. The incorporation of soil amendments such as black dirt, compost, manure or fertilizer are not necessary and, in fact, would be detrimental to the success of the native planting. Amendments that enrich the soil favor weed growth and cause plants to grow fast and then flop over. The exception to this rule is shady woodland plantings and rainwater gardens planted with non-native perennials; these benefit from the addition of 3-6 inches of compost or manure.

Before you disturb the ground for planting make sure you will be able to obtain the plants you have selected. Open soil can easily erode. It is best to prepare the site after you have arranged with a nursery to purchase plants. For large projects contract with a nursery a year in advance to have them grow the plants you require.

To prevent bank erosion never till below the normal high-water line of the lake or stream, or any closer than 15 feet away from the shoreline. If you will be planting seed above the high-water line, light tilling (approximately 2 inches deep) is necessary to provide a good seed bed, but you must take strong measure to control erosion.