

# RAIN GARDEN



## MAINTENANCE

## COSTS

- Range: \$500 – \$9500  
(average = \$1245)
- Healthy Lakes & Rivers grant funding available: \$1000 per rain garden

## MATERIALS

- Black plastic or herbicide
- Shovel or excavating equipment
- Compost
- Native plants
- Bulb auger or hand trowel
- Mulch
- Watering equipment



Rock Lake, Jefferson County - Pamela Toshner

**A RAIN GARDEN**, an upland best practice, is a landscaped shallow depression (within 1000 feet of a lake or 300 feet of a river) with loose soil and native plants designed to collect roof, path, and driveway runoff while also creating wildlife habitat and natural beauty.

## PURPOSE

Rain gardens capture and infiltrate runoff allowing about 30% more water to soak into the ground than conventional lawn and can be used with any soil type. Rain gardens collectively protect lakes and rivers by diverting and cleaning polluted runoff; much of the runoff soaks into the ground and the rest is filtered through native plants that help clean the runoff before it drains to the lake or river. They also simultaneously provide habitat for birds, butterflies, and beneficial insects and promote natural beauty. Rain gardens are designed to drain within 1-2 days, which means they won't pond water long enough to grow more mosquitoes who need 7-12 days for a successful hatch.

## HOW TO BUILD

Rain gardens can vary in size from 5-50% of the drainage area, depending on soil type. Rain gardens for single-family homes will typically range from 150 to 600 square feet, but even a smaller one will help reduce water pollution. It may be necessary to work with your county land and water conservation department or a landscaper to design and/or construct this practice. Check with your local zoning department to determine if any permits are necessary.

Detailed guidance is found here: <http://dnr.wi.gov/topic/stormwater/raingarden/>.

### 1. Find a location

Place the garden at least 10 feet away from your home to prevent flooding. You should try to choose a naturally occurring low spot in your yard or position the garden where your downspouts or sump pump outlet can be used to direct rainwater into your garden. A grassy swale or diversion practice may be necessary to redirect runoff water into the rain garden. Do not locate the garden over a septic field or where water already ponds. Try to choose a location in full or partial sun.

### 2. Measure drainage area

If you are building the rain garden in a low spot in your yard you do not need to measure the drainage area. Just ensure the area receives water regularly during a rainstorm.

## PROJECT TIMELINE

**SITE PREP**  
1 DAY - 6 WEEKS

**INSTALLATION**  
1-2 DAYS

**MAINTENANCE**  
2 YEARS

**PROJECT END**  
3 YEARS  
Ongoing weeding may be necessary in subsequent years.



## FACT SHEET SERIES: RAIN GARDEN

If you are capturing water from a roof or other hard surface you will need to measure the specific drainage area of that surface and multiply by the number associated with the type of soil you have. For sandy soil multiply by 10%, for loam use 20% and for clay use 45%. These numbers are somewhat inflated but they will ensure the garden holds as much water as possible.

### 3. Create a design

Whether your garden is large or small the same basic principles apply. By planning your garden on paper first, you will be able to create the best appearance possible for your rain garden.

### 4. Choose your plants

Native plants should be used because they are best adapted for our climate and provide ideal habitat for our wildlife. You will want to choose plants (flowers and grasses) that will grow well in both moist and dry areas because the rain garden will temporarily fill with rainwater from time to time.

### 5. Lay out the garden

Lay out the shape and boundary of the garden based on your design. Before you start digging, contact <http://www.diggershotline.com/>.

### 6. Dig the garden

Install silt fence downslope of where the garden will be constructed. Remove the turf grass and dig your garden approximately 6-18 inches deep for sandy soil; 6-12 inches deep for loamy soil; and 6-8 inches deep for clay soil. The bottom of the garden should be flat to evenly disperse water. Use the soil to build a berm around the garden edges if necessary. The berm must be totally level so it does not blow out.

### 7. Prepare the soil

Amend the soil with 2"-3" of compost. Mix in well.

### 8. Plant the flowers and grasses

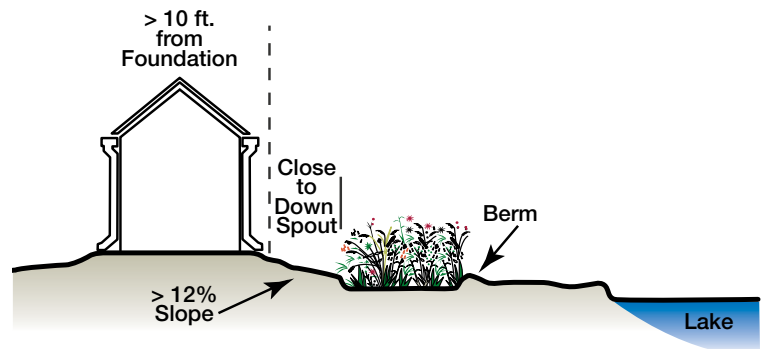
Follow the design and place your plants in the approximate positions. Step back and look at the garden and the design. Plants should be placed about 1 foot apart from each other. Once you are satisfied you can start planting the flowers and grasses using a hand trowel.

### 9. Mulch the garden or plant through a wood fiber blanket

Use coarse, fibrous, shredded wood chips, straw, or leaves. Apply the mulch about 2-3 inches deep. This will help to keep the moisture in and the weeds out.

### 10. Water and arrange downspouts

After you've planted the garden, water every other day for 2 weeks if it doesn't rain until the garden looks to be growing on its own. Good water techniques and maintenance are critical to a quality rain garden.



### \$ FUNDING NOTE

Eligible for shoreland properties within 1000 feet of a lake or 300 feet of a river.

## MAINTENANCE

- Water the plants a minimum of 1 inch per week and more during dry periods for 1-2 years.
- Weeding is most important the first year and by the third year should no longer be necessary.
- The standing dead plants may be left in place through the winter for wildlife cover and food and then cut back when new spring growth emerges.
- The rain garden must remain in place for 10 years if Healthy Lakes & Rivers grant-funded.

## LINKS

Healthy Lakes & Rivers Website – <http://healthylakeswi.com>

Rain Garden Guidance – <http://dnr.wi.gov/topic/stormwater/raingarden/>

Controlling Runoff and Erosion on Your Waterfront Property: A Guide for Landowners – <http://healthylakeswi.com>

DNR Surface Water Grants – <http://dnr.wi.gov/aid/surfacewater.html>



WISCONSIN  
LAKES & RIVERS  
PARTNERSHIP

Design and layout by Amy Kowalski, Extension Lakes