



# RAIN GARDENS

A fun & attractive way to improve water quality!



## WHAT IS A RAIN GARDEN?

Rain gardens are simple, fun, and attractive options to help protect waterways and groundwater. A rain garden is a shallow depression planted with native plants. It collects and temporarily holds runoff water allowing the water to filter into the ground while helping remove pollutants. The native plants are also a beautiful way to attract butterflies and birds.

Artwork courtesy of raingarden.org



## Why be concerned about runoff?

Runoff occurs when water from rain or snowmelt moves across the land, streets, parking lots, fields, or yards and enters streams, lakes, or groundwater. As the water moves across the land, it picks up natural and artificial pollutants such as oil, salt, fertilizers, pesticides, soil particles, leaves, grass clippings, etc. These pollutants end up in the waterways used for boating, swimming, and even drinking. As more buildings and roads are built, more runoff occurs because there is less open land to soak up the water. This can cause:

- \* Flooding problems
- \* Polluted water in lakes and streams; as well as
- \* Decreased groundwater levels due to less water soaking into the ground

## How do rain gardens help?

Rain gardens collect runoff water from many sources including downspouts, driveways, sidewalks, and lawns. This reduces the amount of runoff entering waterways and increases water soaking into the ground. Rain gardens also help remove natural and artificial pollutants in the runoff by filtering the water and capturing these pollutants. While rain gardens are just one way to help protect our waterways and groundwater, they are a simple, fun, and attractive option!



**CASE STUDY:** Sept. 2005, Mosquito Hill Nature Center, New London

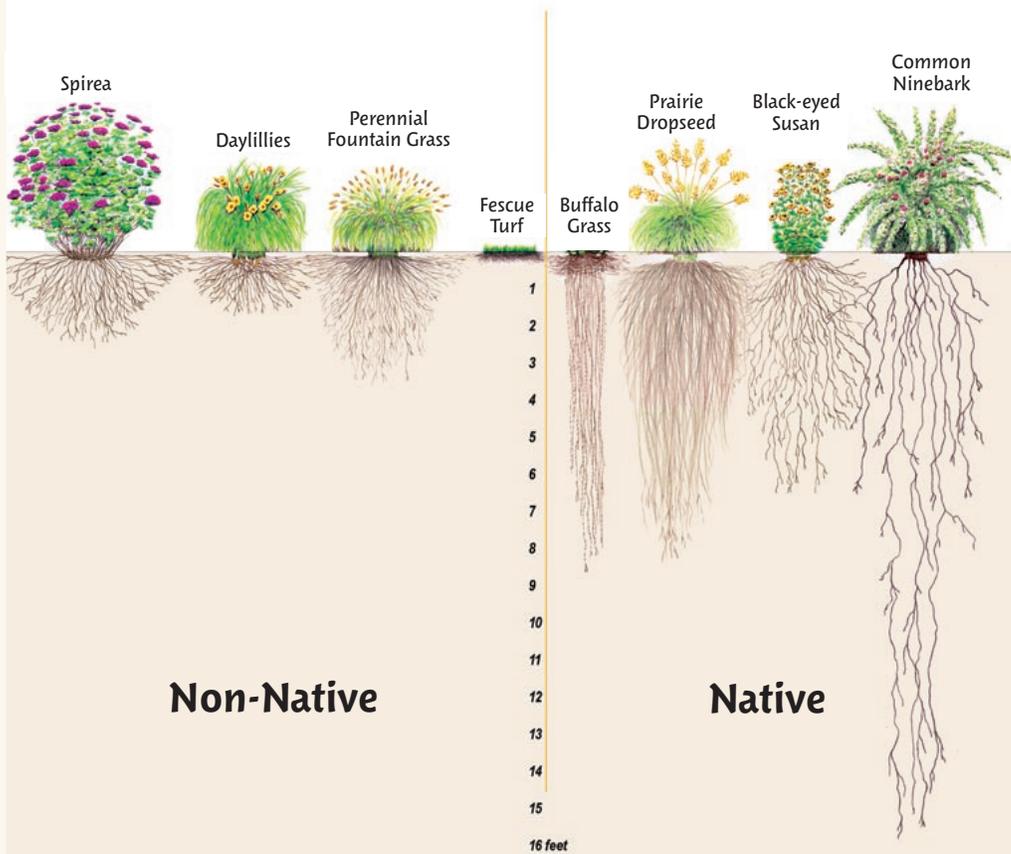


## Why use native plants?

Native plants are those that have been growing here since before Europeans arrived. That means native plants are well adapted to Wisconsin's climate and are suited to living without much attention from people. You may need to provide some assistance for the first year or two but once established native plants require no fertilizer, little watering, and will be able to crowd out weeds. In other words, they're tough!

Native plants come in all shapes, sizes, and colors. Some plants are only a few inches tall while other plants get over 10 feet tall. Plants are available that bloom throughout the growing season. There are many color options including pinks, purples, blues, reds, yellows, oranges, and whites! Here are some examples:

Native plants often have deeper root systems than non-native plants which can substantially increase the ability of soil to absorb and retain water. More water going into the ground means less water running off the landscape to potentially pollute our lakes and rivers.



Yellow Coneflower



Ox-eye Sunflower



Purple Coneflower



Spiderwort



Cardinal Flower



Prairie Smoke



Black-eyed Susan



Wild Iris

**CASE STUDY:**

May 2005, Mosquito Hill Nature Center, New London



## Where to start?

There are a few things to think about before planting a rain garden to make sure the plants will grow properly and it will be enjoyable and meet your expectations.

### FIND a location in the yard

- Pick an area near a water source such as a downspout from the roof or a sidewalk where water can be directed to the garden.
- Try to stay away from the foundation of the house or building so water does not soak into the basement.
- A general rule of thumb for rain garden size is to make it about one-third as big as the area from which it will receive runoff.

### DESIGN the garden

- Look for local nurseries that supply native plants for rain gardens. Plants native to Wisconsin work best for rain gardens because they are well-adapted to the state's climate.
- Choose a design for the garden. Many contractors, nursery professionals, and landscapers can help design a rain garden.
- Pick out plants for the garden. Depending on the location of the rain garden, make sure the plants can tolerate: sun or shade; extremely wet or dry conditions; and sand or clay soils.
- Resources:
  - \* Information on Wisconsin native plants, nurseries, and rain gardens can be found on-line at: [www.dnr.wi.gov/org/water/wm/nps/rg/](http://www.dnr.wi.gov/org/water/wm/nps/rg/)
  - \* For the do-it-yourselfer, *Rain Gardens – A How-To Manual for Homeowners*, 2003, is available at county UW-Extension offices, Cooperative Extension Publications 1-877-947-7827 or online at: [learningstore.uwex.edu](http://learningstore.uwex.edu)

### PLANT the garden

- Gather friends and family to help prepare and plant the garden.
- Make sure to mulch around the plants to help reduce weeds.
- Water the plants initially to help them establish roots.

### ENJOY!

- Rain gardens are designed to bloom throughout the growing season.
- Birds and butterflies are attracted to the native plants.
- Less runoff will be entering your local lakes and streams.

# What about mosquitoes?

While mosquitoes are very common in Wisconsin, no one wants them living in their yard. Rain gardens are not breeding grounds for mosquitoes when properly designed. After entering the rain garden, water usually soaks into the ground within a couple of hours; whereas mosquitoes need standing water for a number of days. The lack of standing water causes the mosquito eggs to dry up and die.



## Tips & Considerations

Rain gardens are different than typical gardens, and so, there are a few additional tips and considerations to think about before planting a rain garden.

- While sunny areas work best for rain gardens, they can be planted in shady areas with the right plants.
- Clay soils can be tough on new plants. If the area where the rain garden will grow has a lot of clay soil, look for native plants that like clay conditions or add compost or another soil amendment to improve soil conditions.
- Rain gardens may pond or even overflow during heavy rains. This is OK! The water will soak into the ground within a few hours in a properly designed rain garden.
- Some native plants used in rain gardens can get very tall (up to 10 feet). When considering the location of the rain garden also consider the height of the plants when they are full-grown.

This publication was written to help raise awareness about rain gardens and their role in reducing runoff, improving water quality, and increasing groundwater quantity. Readers who are interested in taking the next steps in planting a rain garden are encouraged to seek more specific information about how to design and build a garden appropriate to their individual situation by consulting with the resources listed on the previous page.

Developed by the Calumet County Land & Water Conservation Department and the UW-Extension.  
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References:  
Dane County Lakes & Watershed Commission  
Native Landscapes by AES  
RainGardens.org  
Taylor Creek Restoration Nurseries  
University of Wisconsin – Extension  
Wisconsin Department of Natural Resources

