

Northeast Becker Co.

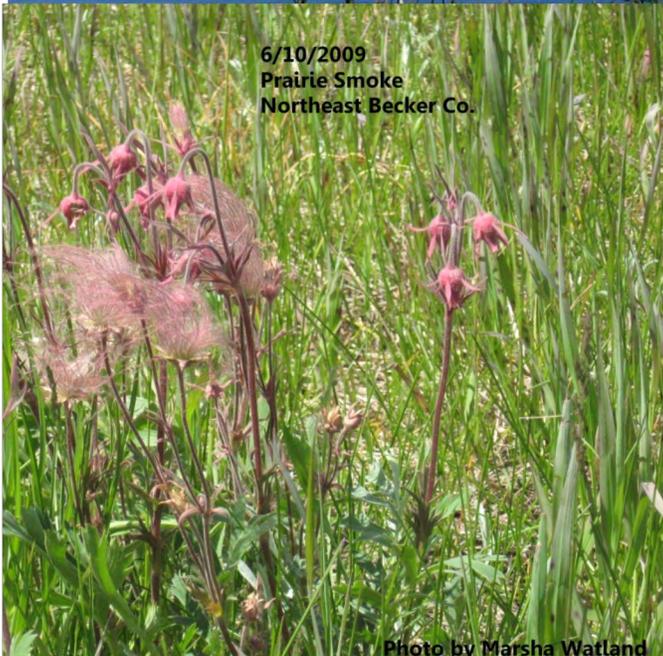


6/24/2010  
Northeast Becker Co.

Photo by Marsha Watland  
Becker SWCA

# Becker County Lakeshore Landscaping Manual

A guide to protecting water quality with Minnesota native perennial plantings.  
Personal design assistance is also available.



6/10/2009  
Prairie Smoke  
Northeast Becker Co.

Photo by Marsha Watland



# Welcome to Becker County Shoreland Program

We are fortunate in Becker County to enjoy lakes and streams with good water quality and wonderful scenic views. Growing up with bountiful resources of water, fish, and wildlife is a blessing many of us enjoyed and hope to preserve for future generations.

This guidebook is intended to help you design and install native wildflower plantings to protect and improve water quality in your lake, stream or neighborhood. Deep rooted native vegetation absorbs and purifies both surface runoff and shallow groundwater reducing the amount runoff and pollutants reaching the lake.

## Getting Started On Native Plant Shoreline Buffer & Rain Gardens

### Analyze the Site:

Identify everything that is on the site: *note sunlight patterns, wind patterns, slopes, climate, rain runoff areas, shoreline, existing plant material, type of soil, structures, walkways, and driveway.*

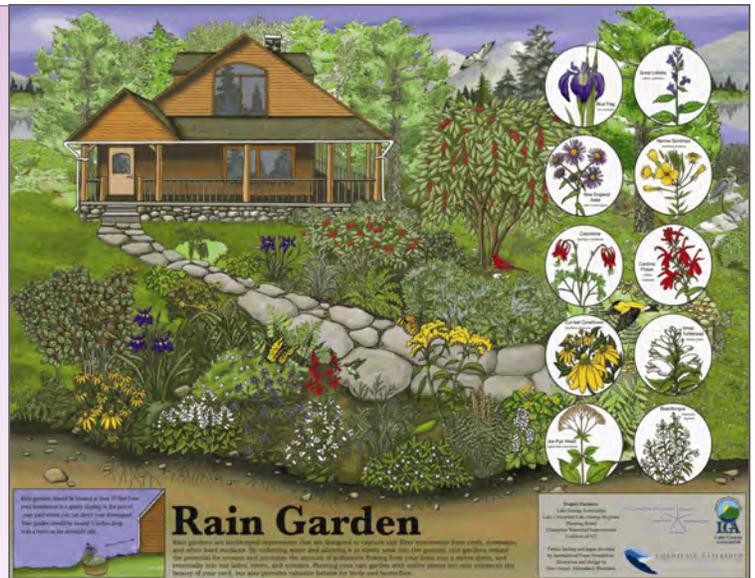
1. Try to preserve the natural features.
2. Drainage; need to know how water flows over the ground. The volume of water handled on a piece of property increases significantly when structures and hard surfaces are placed on the property. Example: 1,200 sq. ft. roof will discharge 750 gallons of water on surrounding ground during a 1 inch rainfall.

### Choose the Right Location:

1. Plantings that catch downspout discharge or surface runoff have a direct impact on water quality.
2. These plantings can be located in road ditches, between buildings, or on slopes.
3. The deep roots of native plants capture, purify and utilize large amounts of water so correct placement is important in landscape.
4. Planting on slopes near the lake combine both benefits and eliminate hard to manage areas.

### Planning a shoreland buffer or rain garden? Some questions to ask before you begin.

- Is your main goal to provide habitat for birds, butterflies, pollinating insects and other wildlife?**  
Choose plants that are higher in wildlife value.
- Are you looking for a showy splash of color in your landscape?** Include more forbs and use fewer grasses and make sure your design includes plants with interest year-round.
- Is your goal to have a more functional planting, such as erosion control, stormwater runoff and water filtering?** You will want to consider fast-growing rhizomatous plants to hold the soil. Once established these become low maintenance.



**Our Shoreland Lakescaping Program provides assistance with designing of shoreland buffers, erosion control and rain gardens with native flowers, grasses, shrubs and trees.**

Cost-share may be available for qualified shoreline projects.

**What Is A Rain Garden:** A rain garden is a planted shallow depression designed to catch and filter rainfall runoff. Provides attractive landscaping that can turn drainage or erosion problems into beauty for your yard. The garden is designed to slow stormwater runoff, help prevent erosion, and remove pollutants in the process.

**Choose a Landscape Style:**

The style of rain garden or shoreline planting you prefer has a large influence on your planting.

Plant choices, height layouts, site preparation and annual maintenance vary based on garden type. Height profile is also a personal preference that can be built into a planting.

**Pick Your Plant Heights:**

Knee	2 feet
Thigh	3 feet
Navel	4 feet
Shoulder	5 feet

If you have room, taller plants add structure to your planting attracting more wildlife. Many taller plants are vigorous bloomers and don't reach full height till after mid-summer. Shrubs often have early blossoms, berries and excellent fall colors.



**Shoreline Buffer Zone:** Is a natural strip of vegetation along at least 75% of a property's frontage.



**Permits:**

Your project may require permits.

**Becker County Zoning permits** are required for changes near shore. **Contact (218) 846-7314**

Example: When working on a shoreland plan and you need more than 10 cu. yds. of fill you will need a permit.

**MN DNR permits** are required to plant aquatic vegetation, spray herbicides on aquatic vegetation, change shore or remove aquatic vegetation and excavating lake bottom. **Contact (218) 846-8383**

A DNR permit may be required for planting or removing aquatic vegetation or for work that is done below the Ordinary High Water Landmark Level (OHWL). More information on permitting can be found at these DNR web-sites:

[http://www.co.becker.mn.us/dept/soil\\_water/programs.aspx#SHORE](http://www.co.becker.mn.us/dept/soil_water/programs.aspx#SHORE)

<http://www.dnr.state.mn.us/shorelandmgmt/apg/regulations.html>

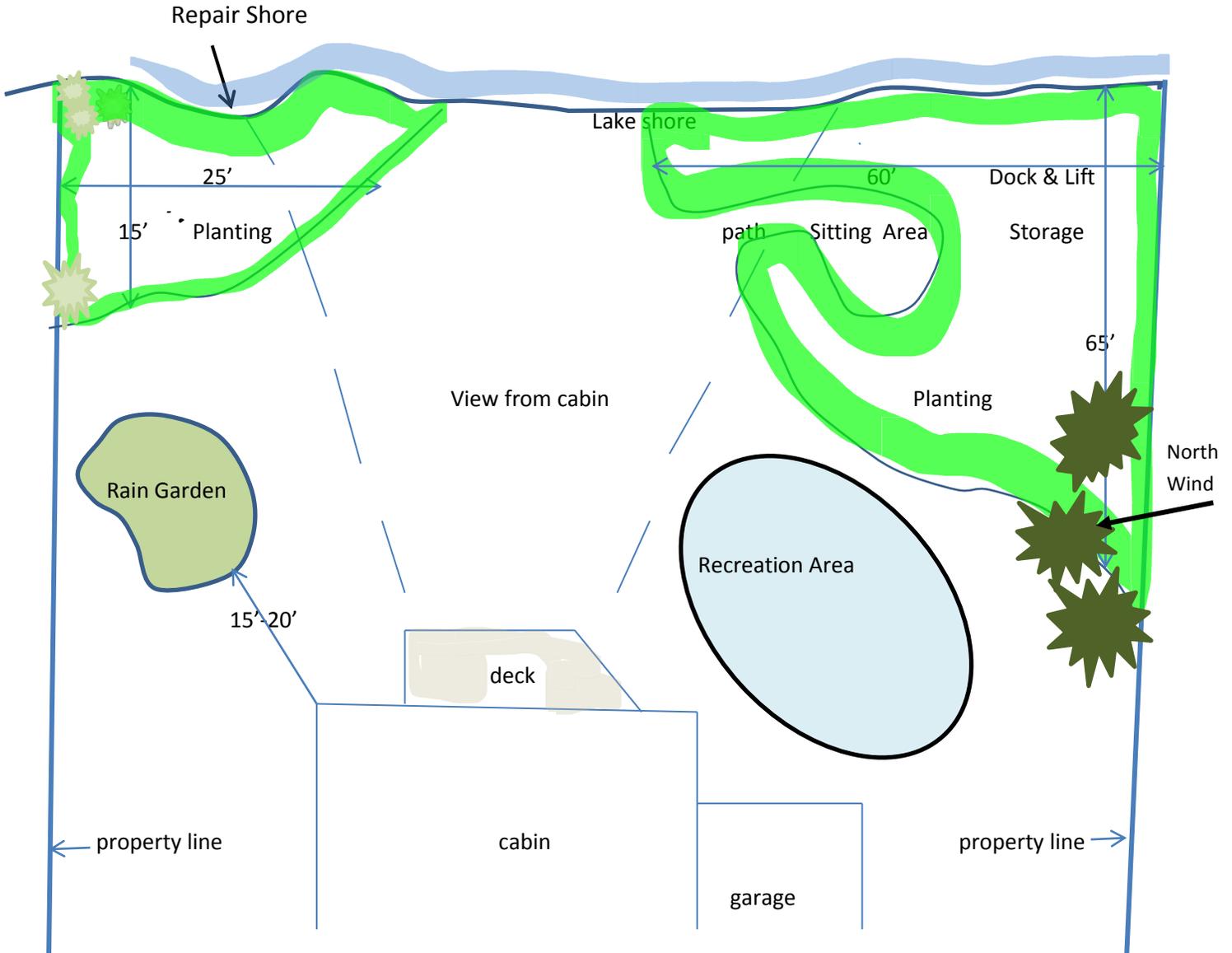
[http://www.dnr.state.mn.us/waters/watermgmt\\_section/pwpermits/applications.html](http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/applications.html)

**Other permitting agencies may include but are not limited to City, Township, or Watershed District.**

Vegetation conversion alone usually does not require a permit, always check before beginning any projects.

Contact the Becker County Shoreland Specialist at (218) 846-7360

## Project Steps



### Start Your Sketch

1. Sketching your lot on a sheet of paper will allow you to visualize how your elements and varied plant heights fit into your landscape.
2. Sketches can be simple or very detailed.
3. Define your landscape areas:
  - A. Public Area— pathways
  - B. Outdoor Living Area- recreation, sitting, pathways, sandbox, swings et, decks.
  - C. Service Area— septic, dock or lift storage
4. Mark areas of excessively wet or dry soils, steep slopes, viewing lines, shade and prevailing winds on your sketch will simplify the plant selection process.

#### With Completed Sketch You Can:

Select your own plants and materials.

Contact Becker County Shoreland Specialist for personal assistance.

For more information visit [www.becker.mn.us/dept/soil\\_water/program](http://www.becker.mn.us/dept/soil_water/program) or (218)– 846-7360

# Site Preparation

***Preparing your site is similar to preparing any perennial bed. In general all existing vegetation must be killed before re-establishing native flowers, grasses, shrubs & trees.***

1. Apply a lake friendly Glyphosate (Roundup) formulation (Eraser AQ, Kills All Aquatic, Rodeo) is most effective and doesn't harm water quality by following herbicide directions.  
*Found at your local elevator/herbicide distributor*
2. Two applications need to be applied. They need to be 10-14 days apart. Do not dig up or rototill soil.
3. Wait a minimum of 10-14 days to plant at the site.
4. For Cottage gardens spread a layer of mulch four inches thick on top of the dead vegetation.
5. Once your planting site is virtually weed-free and the soil surface is prepared with erosions control mat or mulch, it is time to plant your selected plants.
6. For Prairie gardens rake the site vigorously immediately before scattering the short grass seed then cover with an erosion control blanket. Erosion control blankets retain moisture improving germination and growth.
7. If planting next to a lawn, you will need to establish some sort of edging method to keep lawn grasses from invading the native site.

## Planting Tips

Keep your planting affordable, divide master plan into small sections and plant one area each year over a five to six year period.

Use plants within 15' of shore instead of seeds, due to erosion.

Label a few plants of each species so that you can identify them as they grow and prevent accidentally weeding them later.

Thoroughly soak containerized plants before taking them out of their pots to plant. Dry root-balls tend to repel water.

Avoid burying plants either too deep or too shallow. Keep root ball surface at same level of existing soil surface.

## Maintenance

- A. Water immediately following seeding and planting. Lawn irrigation systems will not provide a thorough watering. The first year will be higher maintenance until root system develops.
- B. Watering small seedlings after sprouting is critical in sandy soils.
- C. Plan to water 1/2 inch daily, preferably in the morning, for the first few days or until plants are germinated (range from 5 days to 21 days) and growing well and then reduce watering to help develop strong roots. Soil must be moist for seed germination.
- D. Water new plant plugs or larger plants regularly for first week or two depending on soil. For the first year, water for one–two hours once a week if it does not rain. Once plants are established water as needed if prolonged dry periods occur. *This will develop healthy root systems.*

**80% of the first year's growth in your planting will be root growth!**

Perennial natives will eventually out-compete annual weeds that sprout from seed. The best method is to repeatedly trim weedy vegetation 6-8 inches with a weed whacker. This should be done every few weeks or when the weed species reach 10-12 inches in height. Remove clippings immediately if they cover the native plants. This will discourage weed growth (not disturbing soil), remove shade, and allow native plants to grow.

## **Year Three and Beyond**

No watering or weeding should be necessary except for extreme drought conditions or stubborn invasive weed problems. Leave vegetation in place in the fall and through the winter months.

Contact Becker County Shoreland Specialist at (218) 846-7360

## Disclaimer

These instructions are for plantings in areas with gentle slopes and no active erosion. Projects that include work on steep slopes, eroding areas, rain gardens or shoreline plantings require professional assistance. Design assistance is available from a variety of sources including Becker County Soil and Water Conservation District.

### **Becker Soil & Water Conservation District**

**Becker County Shoreland Specialist**

**809 8th St. SE, Detroit Lakes, MN 56501**

**218-846-7360**



### **Riprap Alternative**

#### **= Coir Log**

Sediment log consists of an outside, open weave, containment fabric fill with aspen curled excelsior or coconut fiber.

Its purpose is to provide a flexible, light-weight porous, sediment control device demonstrating the ability to conform to terrain details, such as along toe of shoreline and riverbanks and dissipate water velocity, act as a wave breaker, flow barrier and grow plant material to provide further stabilization.

