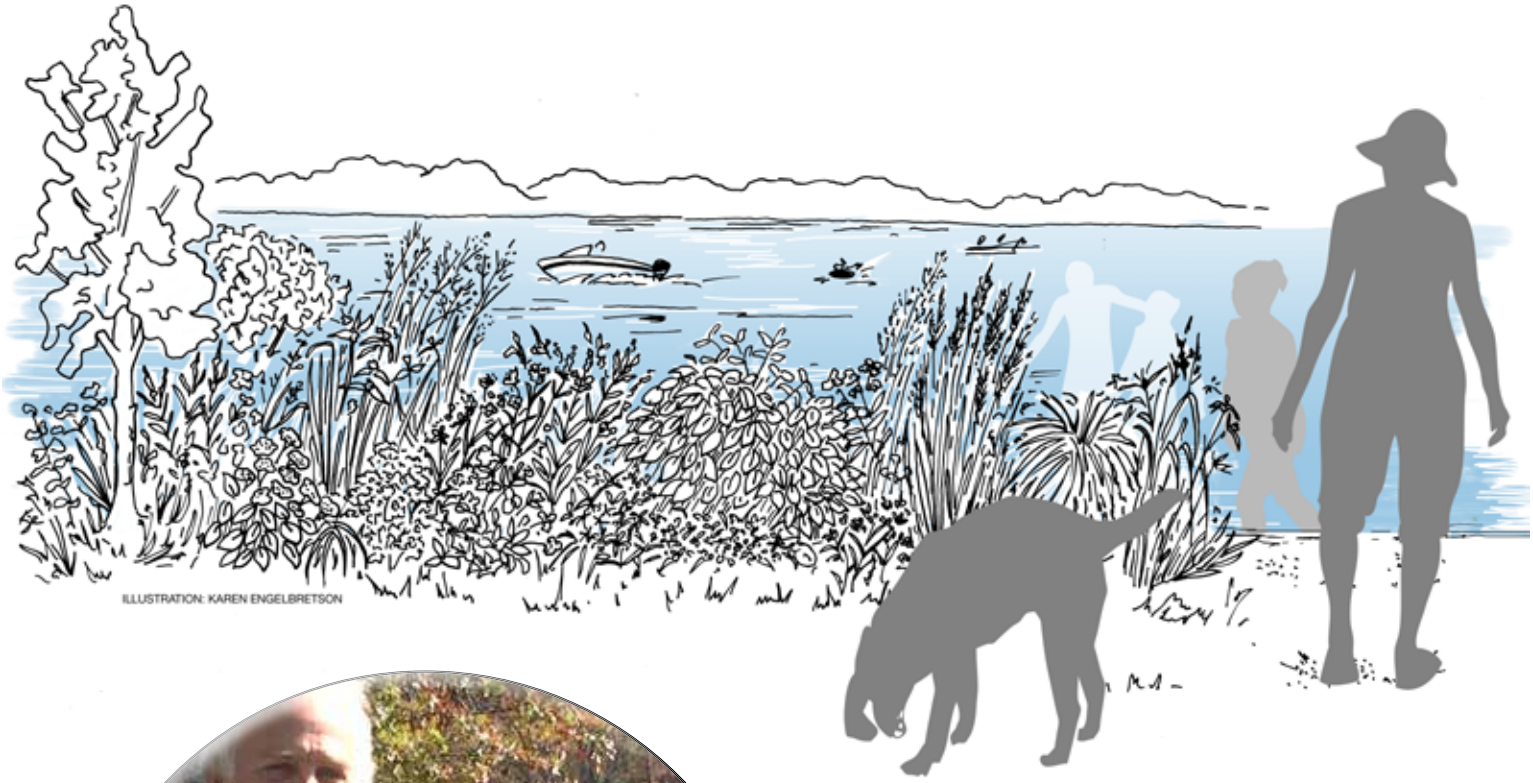
# Healthy Lakes 350 ft$^2$ Native Planting Companion Guide

***Improve wildlife habitat, natural beauty and privacy, and decrease runoff.***



**Native plantings include grasses and wildflowers with shrubs and trees. Choose <u>one</u> of the six native plant options provided – based on your property specifications and interests – from bird/butterfly habitat to a low-growing native garden showcasing your lake view.**

# How to Use this Guide

Follow the first three, simple steps. It is important not only to consider the best location and option for your property, but to carefully contemplate your own interests and goals for the project. Once you've decided which native planting option is right for you and your property, take the corresponding native plant list in this guide to your local greenhouse or landscaper to get started on your native garden.

**Each prescribed native plant list (pages 9-19) details which plants and how many are required for Healthy Lakes grant funding (find the substitution policy on page 20).** They are based on Wisconsin's current technical standard (*Natural Resource Conservation Service.* 2001. Wisconsin biology technical note 1: shoreland habitat). According to these state standards, each native garden option listed in this guide must include the following:

- ☑ Woody component (1 tree and 2-3 shrubs, or 5 shrubs for the low-growing option)
- ☑ Grasses/Grass-like species (72-84 grasses, sedges and rushes)
- ☑ Wildflowers/Ferns (84-96 wildflowers and ferns)

The planting density for each native garden option in this guide is 50 plants per 100 $ft^2$ of space, or for the entire 350 $ft^2$ planting, a total of 168 native plants (plus a tree and shrubs). After you have chosen your native planting option, use the guidance provided in steps 4-7 to help create your native garden.

**Choose 1 Option**

Choose from six native planting options (page 4) designed for a contiguous area of at least 350 $ft^2$. Each option has a corresponding list of prescribed native plants suited to the given soil conditions. Native plantings improve wildlife habitat, natural beauty and privacy, and decrease runoff. Each option described in this guide serves all of these functions to some degree, but one may be better than another given your property's unique site characteristics and areas of concern. For example, the bird/butterfly option includes flowers that attract these types of wildlife.

## What is a native plant?

**A native plant...**

- Is well suited in local site conditions, eliminating the need for soil modifications or fertilizers.
- Can thrive without regular watering once established.
- Can attract more birds and butterflies - important pollinators for the food we eat.
- Creates a sense of place, preserving the natural character of the region.

# Step 1: Map it out.

## Where and what shape do you want your native planting?

Mark the area(s) you want your native plantings to be placed with spray paint, flagging, old garden hose, or stakes and twine. Leave the marking there a few days or weeks and try to envision what it will look like.

Keep in mind that the native plantings:

- ☑ Must total 350 contiguous square feet,
- ☑ Must be at least 10 feet wide in any direction,
- ☑ Must be adjacent to the lakeshore, and
- ☑ Can augment an existing area of vegetation.

**Healthy Lakes Tip**

Take advantage of areas you don't regularly use – places on the side of your yard or out of the way of foot traffic.

The orientation to the lakeshore is up to you. In other words, your native planting could be 35 feet parallel to the lakeshore and 10 feet landward, or 10 feet parallel to the lakeshore and 35 feet landward. Each of the 350 $ft.^2$ native planting options that follow showcases a different native garden shape to give you sense of the flexibility and possible look of the planting for your site over time.

# Step 2: Determine sun exposure and soil type.

## How much sun will your planting get, and how wet is your soil?

**Full Sun**
At least 6 hours of direct, unfiltered sunshine daily

**Partial Sun**
4-6 hours of direct sunlight OR Filtered sunlight all day



**Shade**
Less than 4 hours of direct sunlight and heavily shaded

**Dry-Medium Soil**
Drains well and has no standing water

**Moist-Wet Soil**
Regularly damp with standing water in the spring

*Most of the options include two native plant lists - one for each of these soil types.*

Healthy soil is the foundation of any productive landscape planting. Good quality soil holds water but drains well, is well-aerated, and is fertile enough to support plant growth. Soil serves many functions in a lakeshore landscape. Most importantly, it provides a place for the exchange of water, nutrients, and air among plants, the earth, and the atmosphere. Soil anchors plants to the ground and filters out many pollutants before they reach groundwater or surface water.

**Healthy Lakes Resources**

Soil assessment tools are described on pages 19-21 of the booklet *Controlling Runoff and Erosion from Your Waterfront Property: A Guide for Landowners* listed as the technical guidance under the Diversion best practice on the Healthy Lakes website at healthylakeswi.com. The *Web Soil Survey* provides soil data and information produced by the National Cooperative Soil Survey. (http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm) The website is updated and maintained as the single authoritative source of soil survey information.

Choose 1 Option

# Step 3: Select a planting option.

## What do you want your native planting to do?

Choose the option that best fits your goals, sun exposure and soil type.

### Lakeshore Edge

**Restore Vegetation at the Water's Edge**

*Go to page 8*

### Bird/ Butterfly

**Attract Birds and Butterflies**

*Go to page 10*

### Bare Soil

**Stabilize Areas of Bare Dirt**

*Go to page 12*

### Low-growing

**Maintain a View of the Lake (Ideal for Access Corridor)**

*Go to page 14*

### Deer Resistant

**Deter Deer and Other Critter Browsing**

*Go to page 16*

### Woodland

**Re-vegetate a Shady Area**

*Go to page 18*

**Healthy Lakes Tip**

In general, the more closely you match the environmental conditions of the source of your plant material to that of the planting site, the better it will grow. For example, a red maple from the deep south will not do well in northern Wisconsin. Also, a red maple from a lowland area will not do well if transplanted to an adjacent upland site.

# Step 4: Order your plants and schedule a planting day.

## Find a local native plant supplier or nursery.

- Contact your local county land and water conservation office http://wisconsinlandwater.org/files/pdf/WILandWaterDirectory.pdf
- Consult "Native plant nurseries in Wisconsin" http://dnr.wi.gov/files/pdf/pubs/er/er0698.pdf
- Find help from a native plant consultant, landscaper and/or nursery professional: "Restoration consultants in Wisconsin" http://dnr.wi.gov/files/pdf/pubs/er/er0699.pdf

*Native plants are often available in assorted pot sizes. If you are using smaller sized plant plugs from six-packs or 2-1/2" pots, you may get a little more mortality because the plants are not as mature or as vigorous as larger potted plants, like 4" deep pots or gallon-sized containers.*

# Step 5: Prepare your planting area.

## Eliminate current non-natives (including lawn/turf grass).

This will give you more control over the native planting area and will help limit the need for weeding. Preparation for a new planting may require up to a full growing season on difficult, weed-infested sites.

**Healthy Lakes Tip**

Diggers Hotline helps identify costly and dangerous utilities that can be buried just inches beneath your yard's surface. Call or click three working days before digging and have your lines marked so you can dig freely and safely. Dial 811 or http://www.diggershotline.com

### CUTTING SOD

Non Toxic | Labor | *Plant in same growing season*

**How-to Tips**

- Blade depth should be set deep to cut all grass roots. Be especially careful around tree roots.
- Either compost the cut sod or use it to patch open areas in the lawn elsewhere on the property.
- Erosion damage is a possible problem. You can utilize an assortment of erosion control blankets (coir fiber; wood fiber blanket; straw mat), biodegradable landscape fabric, or clean (weed seed free) straw mulch immediately after removing the sod to protect the bare soil.

**Healthy Lakes Tip**

Be sure to avoid using heavy equipment because it will compact the soil and make it difficult for new plants to grow.

### SMOTHERING EXISTING TURF AND NON-NATIVES

Non Toxic | Labor | *Plant in next growing season*

**How-to Tips**

- Cover the soil with heavy black plastic (at least 4mm thick), old carpet, cardboard, plywood, tarps or a thick layer of leaves or newspaper for an entire growing season.
- Make sure to secure the cover tightly. Seams should overlap about 6 inches to ensure complete coverage. It needs to remain intact in order to kill weeds and seeds near the soil surface. Do not cultivate or till deeper than 1-2 inches with this method to avoid bringing up weed seeds that will compete with the natives.

### APPLYING HERBICIDES

Toxic | Labor | *Plant in same growing season*

**How-to Tips**

- Apply a chemical herbicide, such as Rodeo, a short duration glyphosate herbicide, on upland areas. Obtain professional recommendations for a different formulation when working within 10 feet of the water's edge. A *DNR permit is required for use on aquatic or shoreline plants. For more information, contact your local DNR office.*
- Organic herbicides made from naturally occurring fatty acids are one option for eliminating grass. They kill plants by dehydrating the foliage. http://dnr.wi.gov/lakes/plants/factsheets/GlyphosateFactsheet.pdf

**Healthy Lakes Tip**

You can plant directly into dead turf or patchy, lackluster grass without removing it. By leaving the dead or patchy turf in place it will help to prevent soil erosion. Just make sure the live plants are planted into soil and not in dead thatch.

# Step 6: Plant your native garden.

The nursery where you purchase your material can provide detailed instructions for planting your native plants correctly. Here are a few general tips:

PREPARATION

- Plant within openings cut into erosion control fabric, or cover the area with shredded mulch and create small pockets within the mulch to plant the plugs, trees or shrubs.
- It is best to plant in spring or fall during cooler weather, but summer plantings can be successful if regularly watered.
- Use plugs and containerized plants.
- Keep plants watered and in the shade until planted.
- Soak thoroughly before removing from the container to plant. Tap the container upside down to remove the plant, and then gently pry the roots apart, and straighten and trim them, if necessary.

PLANTING DEPTH

- Dig a wide, shallow hole and make it a little shallower than the root ball so it rests about a half inch above the soil when planted. **Planting too deep can kill your precious native plants.**

WATERING

- Deep soaking is necessary to reach the root system. During the first year, water upland plants a minimum of one inch per week (unless there is rain). An empty tuna can set in the soil can help you gauge an inch of water. A good soaking (sprinkler for an hour) is better than frequent watering for briefer times. One of the great things about planting in the fall is that it rains frequently.

LABELING/STAKING

- Label a few plants of each species to avoid mistaking them later for weeds. Labeling allows you to track the success of your planting program.
- The bottom line is if the plant will stand up without a stake, don't give it one. Stake a plant only when it needs support, and connect the stake to the stem as low and loosely as possible. Staking a plant interferes with its natural ability to support itself.

### Healthy Lakes Tip

When planting large areas, a cordless drill equipped with a bulb auger can make the job easier and quicker. It works well to have one person do the drilling and others follow along and plant the plugs. Bulb augers can be purchased at your local nursery supply or home supply store. The cordless drill must be at least 12 volts. For those less inclined to go the power tool route, a hand trowel works well too.

# Step 7: Maintain your native garden.

Taking care of a natural shoreline takes less time and money than maintaining a lawn. Not to mention, it is more beneficial to your lake and the creatures that live there. However, all projects require some initial care. Here are some tips to help your Healthy Lakes native garden thrive:

- Water the plants a minimum of one inch per week (more during dry periods) for 1-2 years.
- Become familiar with weeds and invasive species, in particular, and remove them frequently.
- The standing dead plants may be left in place through the winter for wildlife cover and food and then cut back when the new spring growth emerges.
- Native Plantings must remain in place according to local zoning specifications, if within the vegetation protection area (i.e. buffer).
- The 350 ft2 native plantings must remain in place for 10 years if funded through a Healthy Lakes grant.
- Preventing critter damage will be important if you live in an area with abundant wildlife. We suggest a deer fence or wildlife repellent sprays to limit damage to your native plants (depending on where you live, this may be a requirement).
- Now, sit back and enjoy the scenery!

PROJECT TIMELINE

| SITE PREP | INSTALLATION | MAINTENANCE | ENJOY THE SCENERY |
|---|---|---|---|
| 6 WEEKS - 6 MONTHS | 1-2 DAYS | 2 YEARS | 3 YEARS |

Ongoing weeding may be necessary in subsequent years.

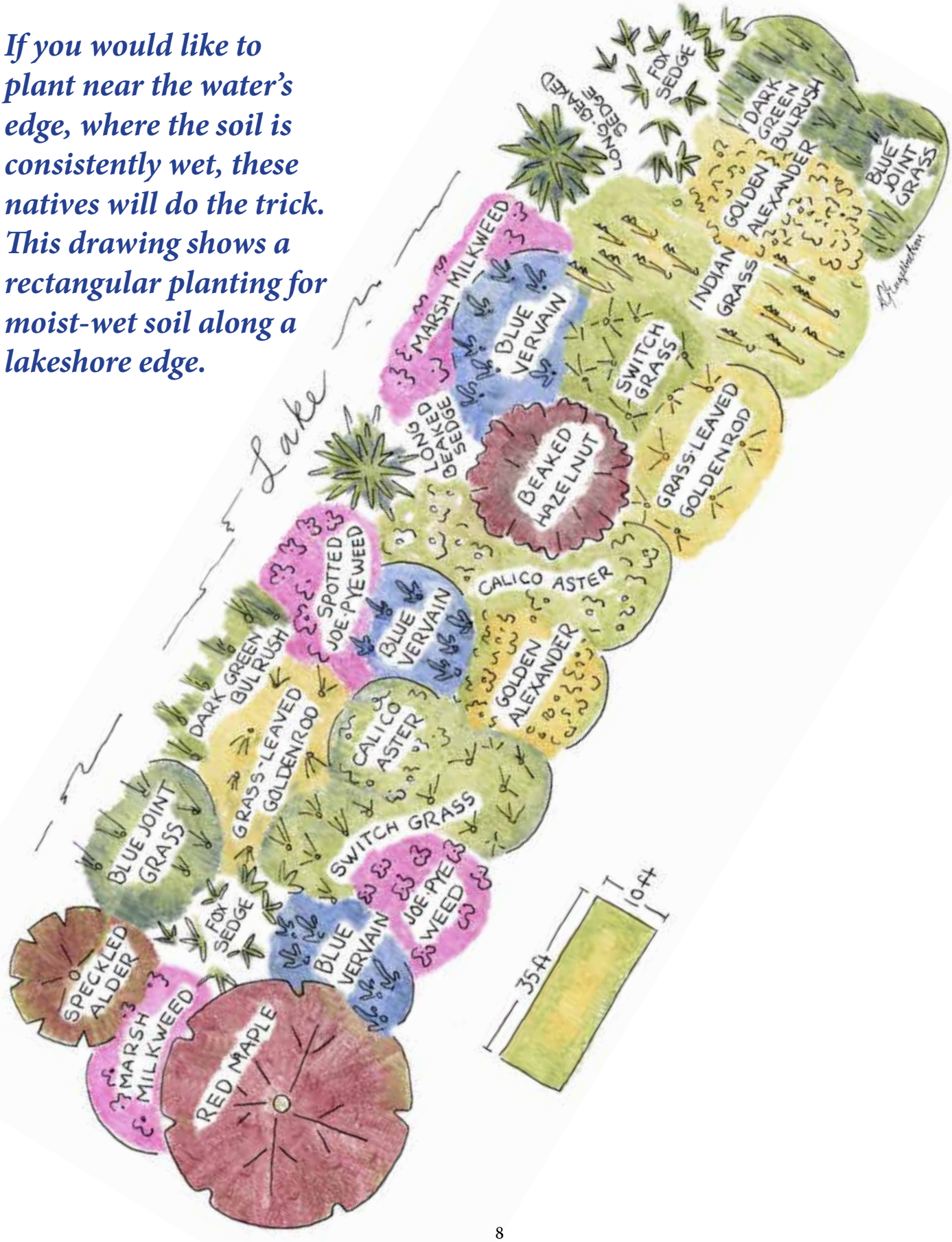
*The Foley's installed this 350 ft2 native garden on Beaver Dam Lake in 2015 with the help of a Healthy Lakes grant.*

# Lakeshore Edge

**Restore vegetation at the water's edge.**

Full Sun  Partial Sun

***If you would like to plant near the water's edge, where the soil is consistently wet, these natives will do the trick. This drawing shows a rectangular planting for moist-wet soil along a lakeshore edge.***



Healthy Lakes grant funding requires all the plants in the list to be used unless an approved substitution is made (page 20).

## Moist-Wet Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Red maple (*Acer rubrum*) | Pink/red | May-June | 70-90 feet | 1 tree |
| | Beaked hazelnut (*Corylus cornuta*) | Reddish-brown | March-May | 10-16 feet | 1 shrub |
| | Speckled alder (*Alnus incana*) | Reddish-brown | March-May | 12-24 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Blue-joint grass *(Calamagrostis canadensis)* | Green leaves | June-Aug. | 3-6 feet | 6/spot x 2 spots = 12 total |
| | Dark-green bulrush (*Scirpus atrovirens*) | Green leaves | July-Aug. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Fox sedge (*Carex vulpinoidea*) | Green leaves | April-May | 4-6 feet | 6/spot x 3 spots = 18 total |
| | Indian grass (*Sorghastrum nutans*) | Green leaves | Aug.-Sept. | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Long-beaked sedge (*Carex sprengelii*) | Green leaves | May-July | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Switchgrass (*Panicum virgatum*) | Green leaves | May-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | | | | | 84 grasses, rushes, & sedges |
| Wildflowers | Blue vervain (*Verbena hastata*) | Blue | July-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Calico aster (*Aster lateriflorus*) | White | Aug.-Sept. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Grass-leaved goldenrod (*Euthamia graminifolia*) | Yellow | July-Aug. | 1-3 feet | 6/spot x 3 spots = 18 total |
| | Spotted Joe-pye-weed (*Eupatorium maculatum*) | Pink | July-Sept. | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Marsh/red milkweed (*Asclepias incarnata*) | Red | June-Aug. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Golden Alexanders (*Zizia aurea*) | Yellow | May-July | 2-4 feet | 6/spot x 2 spots = 12 total |
| | | | | | 84 Wildflowers |

Indian grass (*Sorghastrum nutans*)

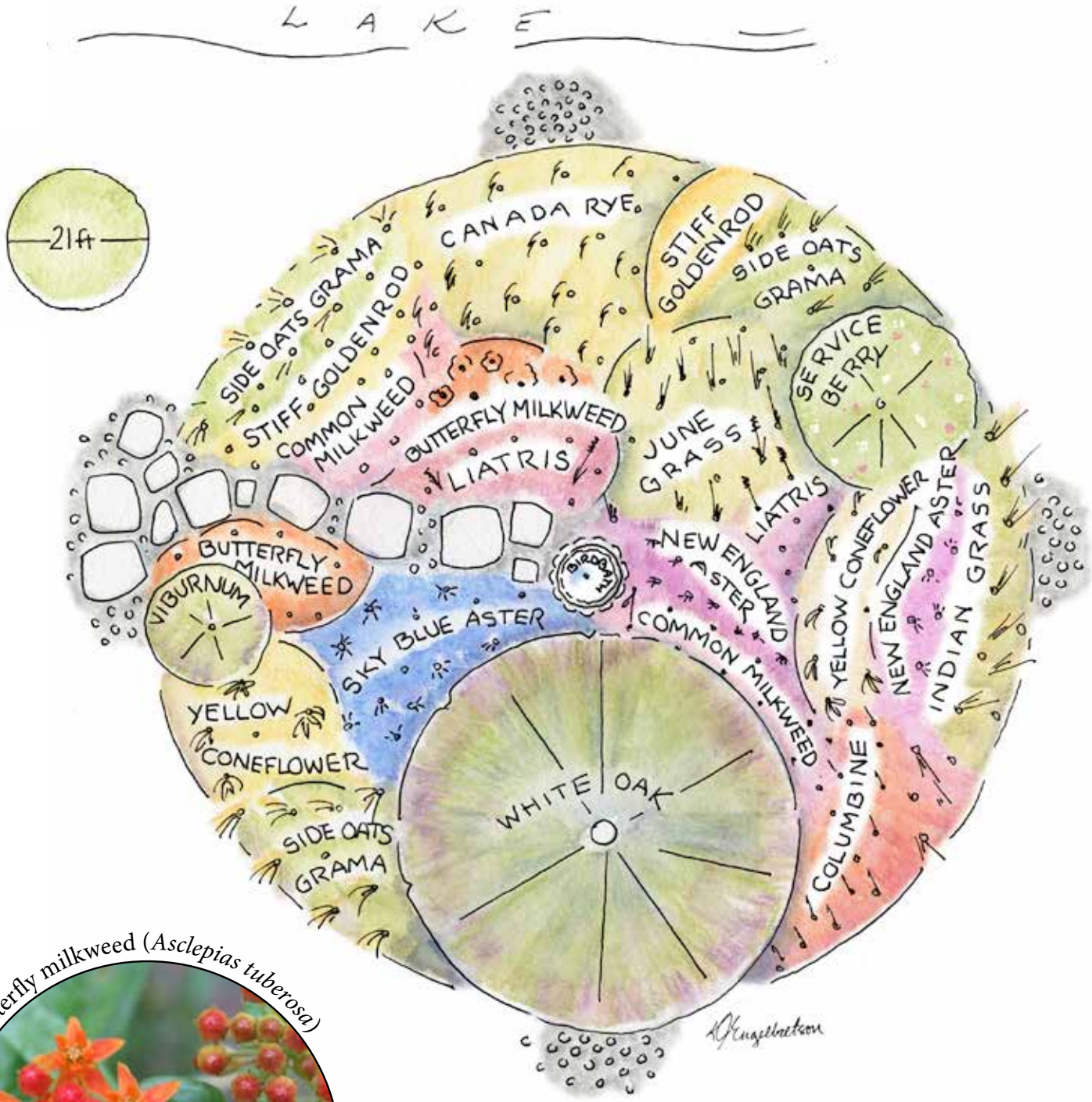
Calico aster (*Aster lateriflorus*)

Blue vervain (*Verbena hastata*)

# Bird/Butterfly

**Attract birds and butterflies.**

Full Sun  Partial Sun



Butterfly milkweed (*Asclepias tuberosa*)

***If you would like to attract songbirds, moths, butterflies, and hummingbirds, this option has flowering plants that will do just that. This circular drawing for dry-medium soil invites a flow of pollinators and migratory birds.***

Healthy Lakes grant funding requires all the plants in the list to be used unless an approved substitution is made (page 20).

## Dry-Medium Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | White oak (*Quercus alba*) | Pink/red | May-June | 70-80 feet | 1 tree |
| | Shadblow/service berry (*Amelanchier canadensis*) | White | April-May | up to 20 feet | 1 shrub |
| | American highbush cranberry (*Viburnum opulus L. subsp. trilobum*) | White | May-June | 3-15 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Side oats grama grass (*Bouteloua curtipendula*) | Tan leaves | June-Aug. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | June grass (*Koeleria cristata*) | Tan leaves | July-Aug. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Indian grass (*Sorghastrum nutans*) | Brown leaves | Aug.-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | Canada wild rye grass (*Elymus canadensis*) | Tan leaves | June-Oct. | 3-5 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Butterfly milkweed (*Asclepias tuberosa*) | Orange | July-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Common milkweed (*Asclepias syriaca*) | Pink to cream | June-Aug. | 3-6 feet | 6/spot x 2 spots = 12 total |
| | New England aster (*Aster novae-angliae*) | Purple | Aug.-Oct. | 1-7 feet | 6/spot x 2 spots = 12 total |
| | Rough blazing star (*Liatris aspera*) | Purple | Aug.-Oct. | 2-4 feet | 6/spot x 2 spots = 12 total |
| | Sky-blue aster (*Aster oolentangiensis*) | Blue | Aug.-Oct. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Stiff goldenrod (*Solidago rigida*) | Yellow | July-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Yellow coneflower (*Ratibida pinnata*) | Yellow | July-Sept. | 4-5 feet | 6/spot x 2 spots = 12 total |
| | Wild columbine (*Aquilegia canadensis*) | Red | April-June | 1-3 feet | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

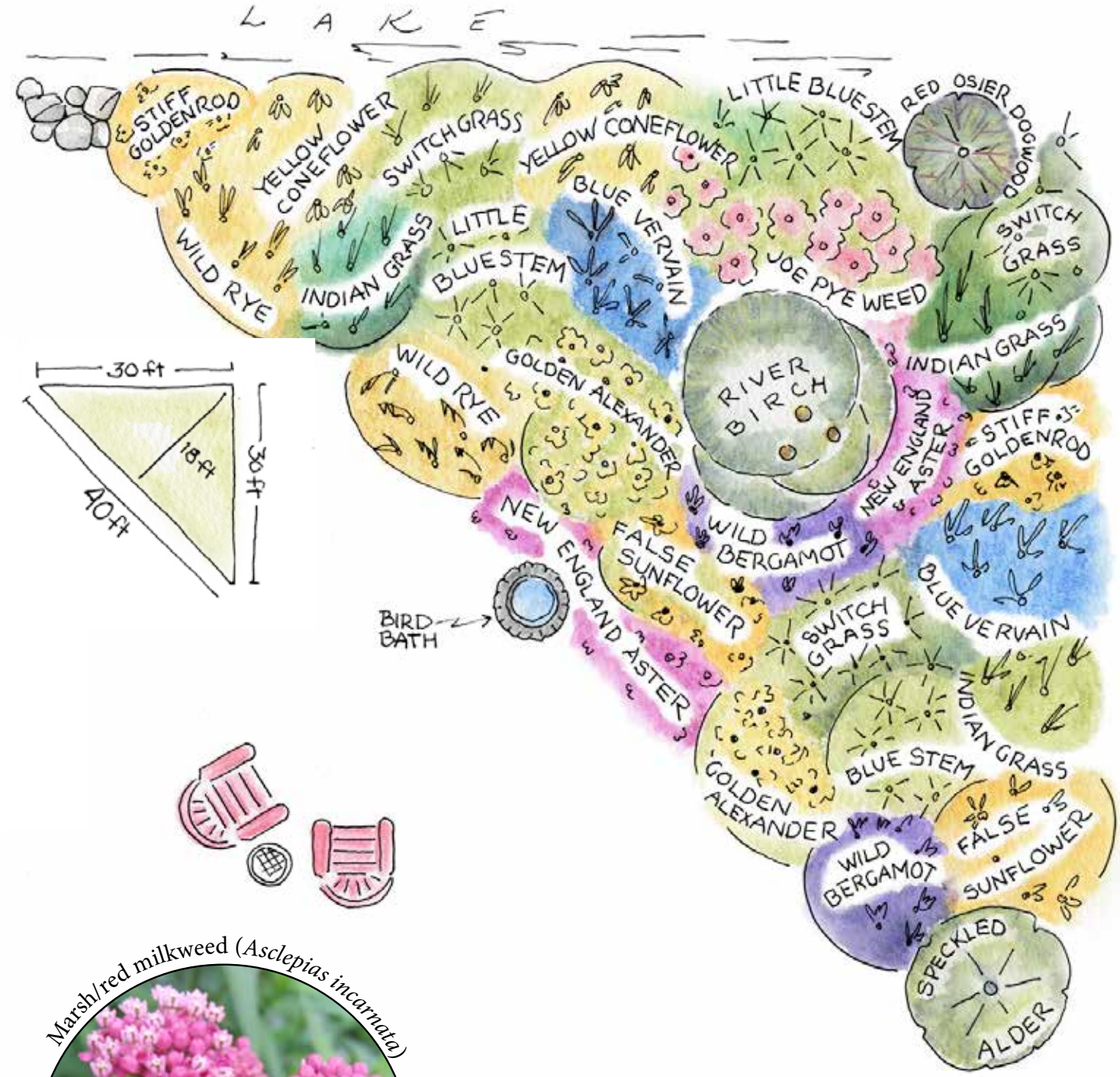
## Moist-Wet Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Swamp white oak (*Quercus bicolor*) | Pink/red | May-June | 80-100 feet | 1 tree |
| | American hazelnut (*Corylus americana*) | Reddish-brown | April | 6-8 feet | 1 shrub |
| | Virgin's bower (*Clematis virginiana*) | White | July-Sept. | up to 9 feet | 1 vine |
| | Pagoda dogwood (*Cornus alternifolia*) | White | May-July | 15-25 feet | 1 shrub |
| | | | | | 1 Tree and 3 Shrubs/vines |
| Grasses | Fox sedge (*Carex vulpinoidea*) | Brown leaves | April-May | 2-3 feet | 6/spot x 4 spots = 24 total |
| | Prairie brome grass (*Bromus kalmii*) | Tan leaves | June-July | 2-3 feet | 6/spot x 4 spots = 24 total |
| | Switchgrass (*Panicum virgatum*) | Tan leaves | May-Sept. | 4-6 feet | 6/spot x 4 spots = 24 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Black-eyed Susan (*Rudbeckia hirta*) | Yellow | June-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Cup-plant (*Silphium perfoliatum*) | Yellow | July-Sept. | 4-9 feet | 6/spot x 2 spots = 12 total |
| | Culver's root (*Veronicastrum virginicum*) | White | July-Aug. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Golden Alexanders (*Zizia aurea*) | Yellow | May-July | 2-4 feet | 6/spot x 2 spots = 12 total |
| | Great St. John's wort (*Hypericum pyramidatum*) | Yellow | May-July | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Marsh/red milkweed (*Asclepias incarnata*) | Red | June-Aug. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Spotted Joe-Pye-Weed (*Eupatorium maculatum*) | Pink | July-Sept. | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Wild bergamot (*Monarda fistulosa*) | Lavender | June-Aug. | 2-4 feet | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

# Bare Soil

**Stabilize areas of bare dirt.**

Full Sun  Partial Sun



***These natives will help to stabilize exposed ground or other soil with erosion challenges. This triangular drawing for moist-wet soils shows how you can beautify a bare lot corner along the lakeshore.***

Healthy Lakes grant funding requires all the plants in the list to be used unless an approved substitution is made (page 20).

## Dry-Medium Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Hill's oak/northern pin oak (*Quercus ellipsoidalis*) | Pink/red | May-June | 55-65 feet | 1 tree |
| | Nannyberry (*Viburnum lentago*) | White | May-June | 18-24 feet | 1 shrub |
| | Speckled alder (*Alnus incana*) | Reddish-brown | March-May | 12-24 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Little bluestem (*Schizachyrium scoparium*) | Green leaves | June-Aug. | 3-6 feet | 6/spot x 3 spots = 18 total |
| | Sand bracted sedge (*Carex muhlenbergii*) | Green leaves | July-Aug. | 3-5 feet | 6/spot x 3 spots = 18 total |
| | June grass (*Sorghastrum nutans*) | Green leaves | Aug.-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | Prairie dropseed (*Panicum virgatum*) | Green leaves | May-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Blue vervain (*Verbena hastata*) | Blue | July-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Calico aster (*Aster lateriflorus*) | White | Aug.-Sept. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Grass-leaved goldenrod (*Euthamia graminifolia*) | Yellow | July-Aug. | 1-3 feet | 6/spot x 3 spots = 18 total |
| | Spotted Joe-pye-weed (*Eupatorium maculatum*) | Pink | July-Sept. | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Marsh/red milkweed (*Asclepias incarnata*) | Red | June-Aug. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Golden Alexanders (*Zizia aurea*) | Yellow | May-July | 2-4 feet | 6/spot x 2 spots = 12 total |
| | | | | | 84 Wildflowers |

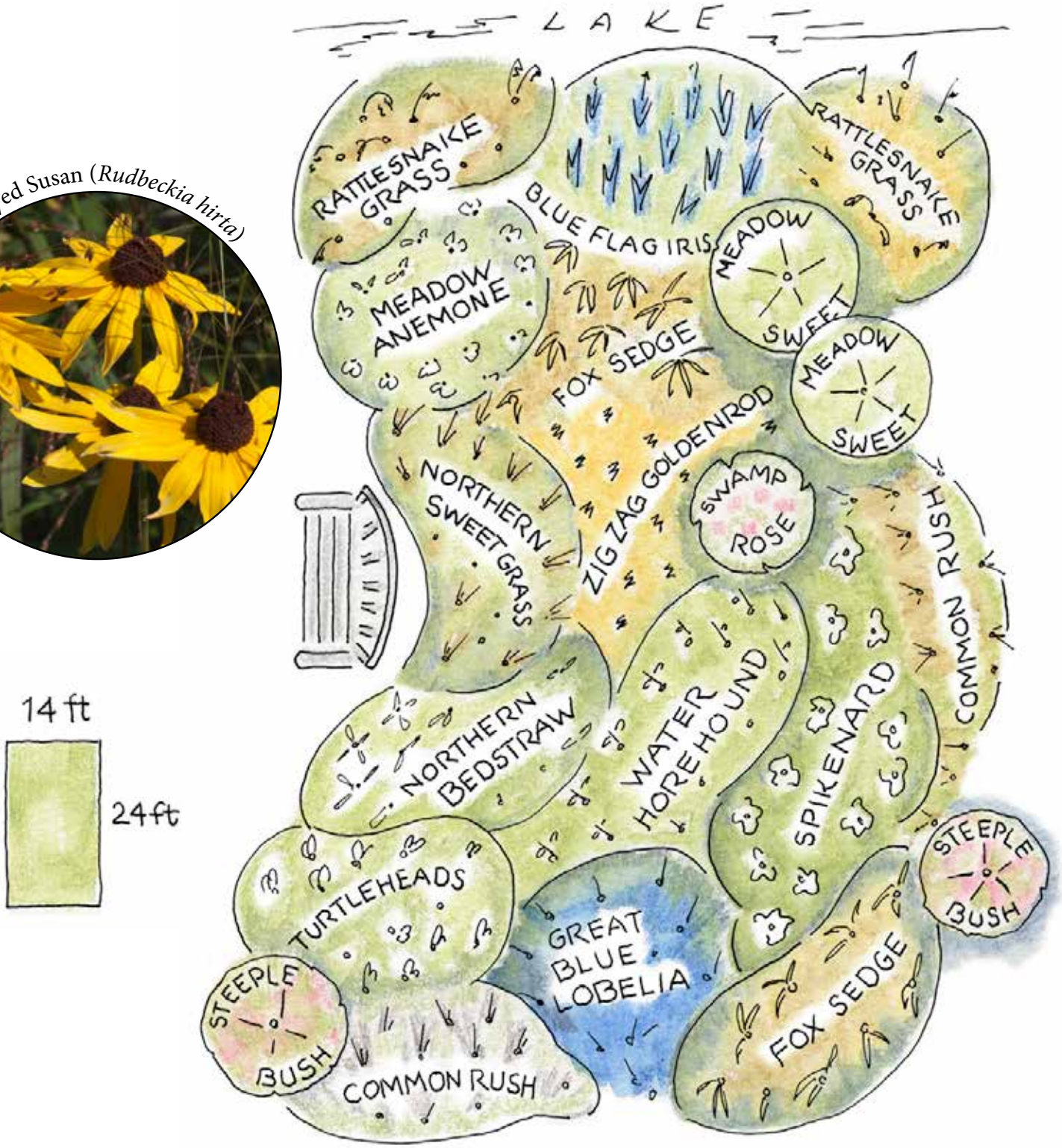
## Moist-Wet Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | River birch (*Betula nigra*) | Pink/red | May-June | 70-80 feet | 1 tree |
| | Red osier dogwood (*Cornus stolonifera*) | White | June-Sept. | 8-10 feet | 1 shrub |
| | Speckled alder (*Alnus incana*) | Reddish-brown | March-May | 12-24 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Little bluestem (*Schizachyrium scoparium*) | Green leaves | June-Aug. | 3-6 feet | 6/spot x 3 spots = 18 total |
| | Sand bracted sedge (*Carex muhlenbergii*) | Green leaves | July-Aug. | 3-5 feet | 6/spot x 3 spots = 18 total |
| | June grass (Sorghastrum nutans) | Green leaves | Aug.-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | Prairie dropseed (Panicum virgatum) | Green leaves | May-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Blue vervain (*Verbena hastata*) | Blue | July-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Calico aster (*Aster lateriflorus*) | White | Aug.-Sept. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Grass-leaved goldenrod (*Euthamia graminifolia*) | Yellow | July-Aug. | 1-3 feet | 6/spot x 3 spots = 18 total |
| | Spotted Joe-pye-weed (*Eupatorium maculatum*) | Pink | July-Sept. | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Marsh/red milkweed (*Asclepias incarnata*) | Red | June-Aug. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Golden Alexanders (*Zizia aurea*) | Yellow | May-July | 2-4 feet | 6/spot x 2 spots = 12 total |
| | | | | | 84 Wildflowers |

# Low-growing

## Maintain a clear view of the lake.

Full Sun  Partial Sun




***If your property is fairly flat and you only have a small amount of lakeshore frontage, this low-growing native garden is perfect to keep your view of the lake. This drawing shows low-growing plants for moist-wet soil.***

Healthy Lakes grant funding requires all the plants in the list to be used unless an approved substitution is made (page 20).

## Dry-Medium Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Northern bush-honeysuckle (*Diervilla lonicera*) | Yellow | June-July | .5-3 feet | 2 shrubs |
| | Pasture rose (*Rosa carolina*) | Pink | June-Aug. | 2 feet | 1 shrub |
| | Sweet fern (*Comptonia peregrina*) | Red | May-June | 2-3 feet | 2 shrubs |
| | | | | | 5 Shrubs |
| Grasses | Little bluestem grass (*Schizachyrium scoparium*) | Green leaves | June-Aug. | 2-3 feet | 6/spot x 3 spots = 18 total |
| | Path rush (*Juncus tenuis*) | Purple leaves | May-Aug. | up to 1 foot | 6/spot x 3 spots = 18 total |
| | Purple love grass (*Eragrostis spectabilis*) | Purple leaves | July-Sept. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Side oats grama grass (*Bouteloua curtipendula*) | Tan leaves | July-Aug. | 1-3 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Arrow-leaved aster (*Aster sagittifolius*) | Blue | Sept.-Oct. | 2-3 feet | 6/spot x 2 spots = 12 total |
| | Black-eyed Susan (*Rudbeckia hirta*) | Yellow | June-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Calico aster (*Aster lateriflorus*) | White | Aug.-Sept. | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Gray goldenrod (*Solidago nemoralis*) | Yellow | Aug.-Oct. | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Harebell (*Campanula rotundifolia*) | Blue | June-Oct. | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Hoary vervain (*Verbena stricta*) | Blue | July-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Golden Alexanders (*Zizia aurea*) | Yellow | May-July | 2-4 feet | 6/spot x 2 spots = 12 total |
| | Wild geranium (*Geranium maculatum*) | Purple | July-Sept. | up to 1 foot | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

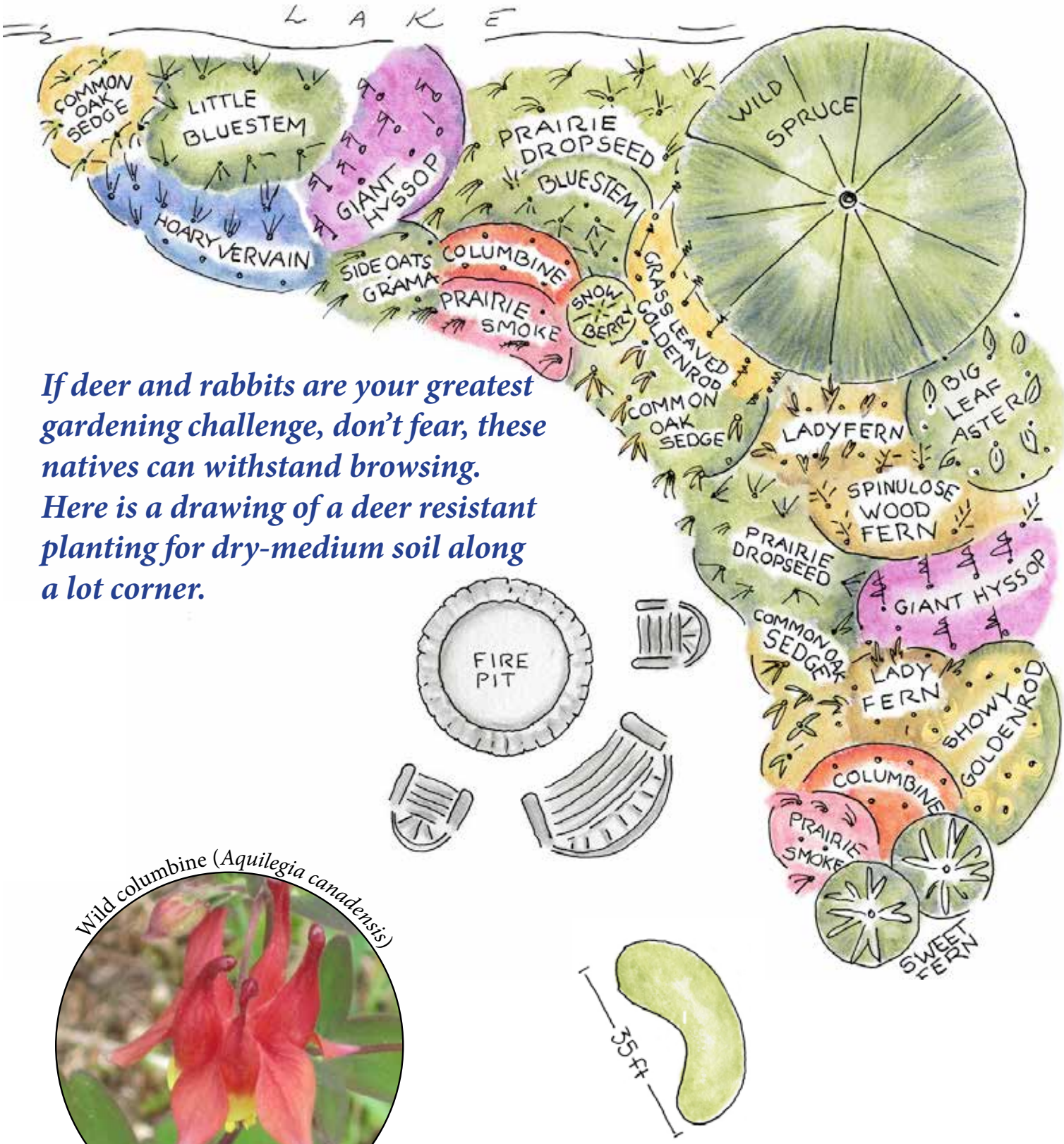
## Moist-Wet Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Meadowsweet (*Spiraea alba*) | White | July-Aug. | 5-6 feet | 2 shrubs |
| | Steeplebush (*Spiraea tomentosa*) | Pink | July-Sept. | 3-4 feet | 2 shrubs |
| | Swamp rose (*Rosa palustris*) | Pink | June-Aug. | 4-5 feet | 1 shrub |
| | | | | | 5 Shrubs |
| Grasses | Common rush (*Juncus effusus*) | Brown | May-July | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Fox sedge (*Carex vulpinoidea*) | Brown | April-May | 2-3 feet | 6/spot x 3 spots = 18 total |
| | Northern sweet grass (*Hierochloe odorata*) | Tan | May-Sept. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Rattlesnake grass (*Glyceria canadensis*) | Tan | May-July | 1-3 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Blue flag iris (*Iris versicolor-north*; *Iris virginica-south*) | Blue | May-July | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Great blue lobelia (*Lobelia siphilitica*) | Blue | July-Oct. | 2-3 feet | 6/spot x 2 spots = 12 total |
| | Meadow anemone (*Anemone canadensis*) | White | May-July | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Northern bedstraw (*Galium boreale*) | White | June-July | 2 feet | 6/spot x 2 spots = 12 total |
| | Spikenard (*Aralia racemosa*) | Green | July-Aug. | 3-4 feet | 6/spot x 2 spots = 12 total |
| | Turtlehead (*Chelone glabra*) | Cream | Aug.-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Water horehound (*Lycopus americanus*) | White | July-Sept. | 2 feet | 6/spot x 2 spots = 12 total |
| | Zig zag goldenrod (*Solidago flexicaulis*) | Yellow | April-June | 2-3 feet | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

# Deer Resistant

## Deter deer and other critter browsing.

Full Sun  Partial Sun




*If deer and rabbits are your greatest gardening challenge, don't fear, these natives can withstand browsing. Here is a drawing of a deer resistant planting for dry-medium soil along a lot corner.*

Wild columbine (*Aquilegia canadensis*)

## Dry-Medium Soil

Healthy Lakes grant funding requires all the plants in the list to be used unless an approved substitution is made (page 20).

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Wild spruce (*Picea glauca*) | Cones | May-June | 90-110 feet | 1 tree |
| | Common snowberry (*Symphoricarpos albus*) | White | June-July | 2-3 feet | 1 shrub |
| | Sweet fern (*Comptonia peregrina*) | Red | May-June | 2-3 feet | 2 shrubs |
| | | | | | 1 Tree and 3 Shrubs |
| Grasses | Common oak sedge *(Carex pensylvanica)* | Green/Tan | May-June | .5-1 foot | 6/spot x 3 spots = 18 total |
| | Little bluestem grass (*Schizachyrium scoparium*) | White | June-Aug. | 2-3 feet | 6/spot x 3 spots = 18 total |
| | Prairie dropseed (*Sporobolus heterolepis*) | Tan | July-Aug. | 2-3 feet | 6/spot x 3 spots = 18 total |
| | Side oats grama grass (*Bouteloua curtipendula*) | Tan | July-Aug. | 1-3 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Big-leaved aster (*Aster macrophyllus*) | White | Aug.-Oct. | 1 foot | 6/spot x 2 spots = 12 total |
| | Common lady fern (*Athyrium filix-femina*) | Brown sori | n/a | 2-3 feet | 3/spot x 2 spots = 6 total |
| | Grass-leaved goldenrod (*Euthamia graminifolia*) | Yellow | July-Aug. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Hoary vervain (*Verbena stricta*) | Blue | July-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Prairie-smoke (*Geum triflorum*) | Pink to purplish | April-June | 4-16 inches | 6/spot x 2 spots = 12 total |
| | Purple giant hyssop (*Agastache scrophulariaefolia*) | Pink | Aug.-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Showy goldenrod (*Solidago speciosa*) | Yellow | July-Oct. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Wild columbine (*Aquilegia canadensis*) | Red | April-June | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Spinulose wood fern (*Dryopteris carthusiana*) | Brown sori | n/a | 2-3 feet | 3/spot x 2 spots = 6 total |
| | | | | | 96 Wildflowers |

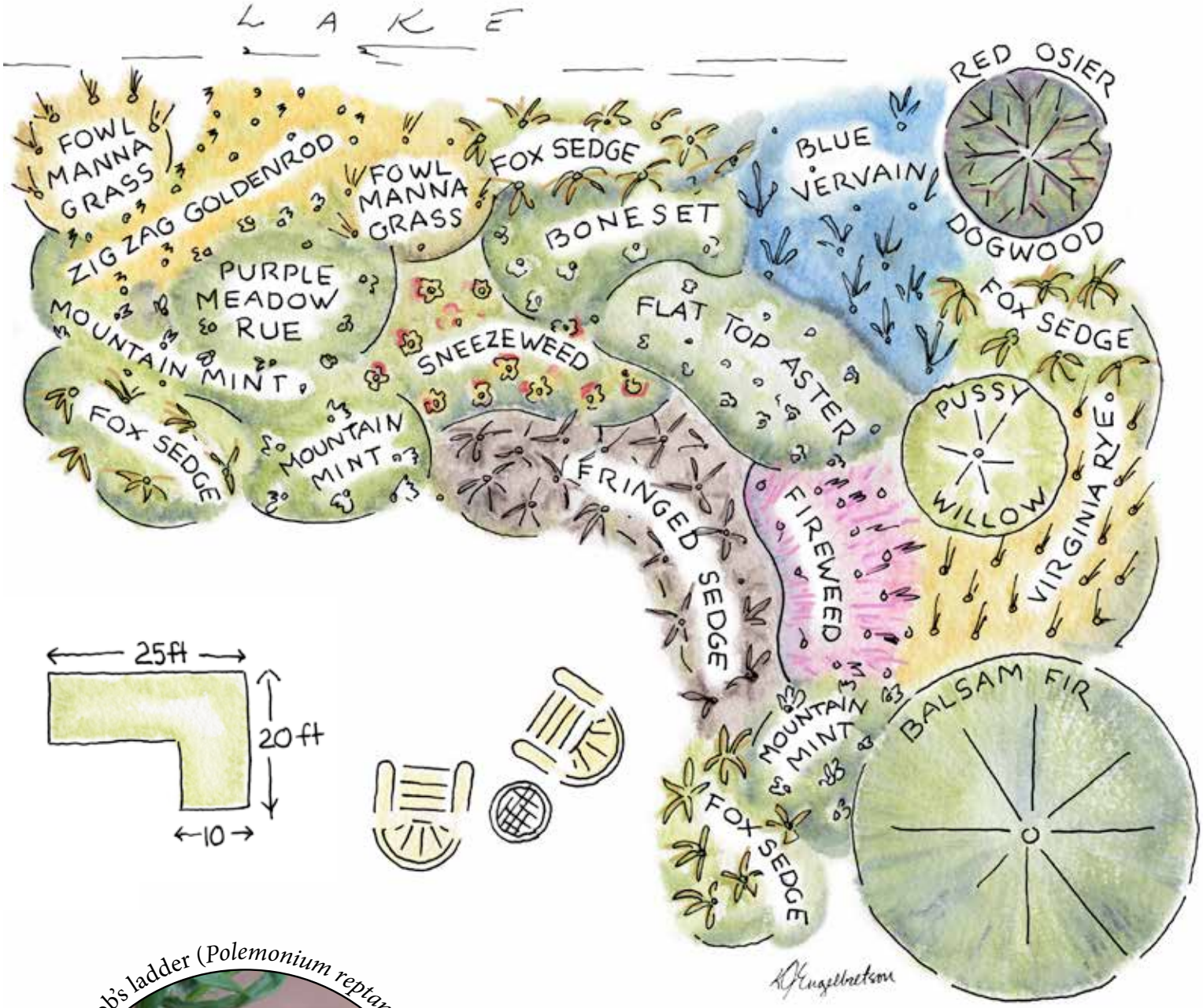
## Moist-Wet Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Tamarack (*Larix laricina*) | Cones | (pollen shed) | 40-80 feet | 1 tree |
| | Beaked hazelnut (*Corylus cornuta*) | Reddish-brown | March-May | 10-16 feet | 1 shrub |
| | Black chokeberry (*Aronia melanocarpa*) | White | May-July | 6-8 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Common fox sedge *(Carex stipata)* | Brown leaves | June-July | 1-3 feet | 6/spot x 3 spots = 18 total |
| | Fox sedge (*Carex vulpinoidea*) | Brown leaves | April-May | 2-3 feet | 6/spot x 3 spots = 18 total |
| | Indian grass (*Sorghastrum nutans*) | Brown leaves | Aug.-Sept. | 4-6 feet | 6/spot x 3 spots = 18 total |
| | Prairie cordgrass (*Spartina pectinata*) | Tan leaves | Aug.-Sept. | 6-8 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Blue vervain (*Verbena hastata*) | Blue | July-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Common ironweed (*Vernonia fasciculata*) | Violet / purple | July-Sept. | 2-6 feet | 6/spot x 2 spots = 12 total |
| | Great St. John's wort (*Hypericum pyramidatum*) | Yellow | May-July | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Interrupted fern (*Osmunda claytoniana*) | Brown sori | n/a | 4-6 feet | 3/spot x 2 spots = 6 total |
| | Ostrich fern (*Matteuccia struthiopteris*) | Brown sori | n/a | 3-4 feet | 3/spot x 2 spots = 6 total |
| | Spotted Joe-pye-weed (*Eupatorium maculatum*) | Pink | July-Sept. | 4-6 feet | 6/spot x 2 spots = 12 total |
| | Stiff goldenrod (*Solidago rigida*) | Yellow | Aug.-Oct. | 3-4 feet | 6/spot x 2 spots = 12 total |
| | Wild bergamot (*Monarda fistulosa*) | Lavender | June-Aug. | 2-4 feet | 6/spot x 2 spots = 12 total |
| | Yellow avens (*Geum aleppicum*) | Yellow | June-Aug. | 2-3 feet | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

# Woodland

## Re-vegetate a shady area.

Shade



Jacob's ladder (*Polemonium reptans*)

***If your lakeshore is wooded and shady, these native plants are hearty enough to survive with less than four hours of sunlight each day. This drawing shows what you would plant in moist-wet soil in a shady corner.***

Healthy Lakes grant funding requires all the plants in the list to be used unless an approved substitution is made (page 20).

## Dry-Medium Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Wild black cherry (*Prunus serotina*) | White | April-May | 75-80 feet | 1 tree |
| | Smooth serviceberry (*Amelanchier laevis*) | White | April-June | 10-16 feet | 1 shrub |
| | Downy arrow-wood viburnum (*Viburnum rafinesquianum*) | White | May-July | 10-15 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Bottlebrush grass (*Elymus hystrix*) | Green leaves | July-Aug. | 3-4 feet | 6/spot x 3 spots = 18 total |
| | Common oak sedge (*Carex pensylvanica*) | Green leaves | May-June | .5-1 foot | 6/spot x 3 spots = 18 total |
| | June grass (*Koeleria macrantha*) | Tan leaves | June-Sept. | 1-2 feet | 6/spot x 3 spots = 18 total |
| | Silky wild rye grass (*Elymus villosus*) | Tan leaves | June-July | 3-5 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Big-leaved aster (*Aster macrophyllus*) | White | Aug.-Oct. | 1 foot | 6/spot x 2 spots = 12 total |
| | Bishop's-cap (*Mitella diphylla*) | White | May-June | 3-4 feet | 6/spot x 2 spots = 12 total |
| | Early meadow rue (*Thalictrum dioicum*) | Green | April-May | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Grass-leaved goldenrod (*Euthamia graminifolia*) | Yellow | July-Sept. | 3-4 feet | 6/spot x 2 spots = 12 total |
| | Jacob's ladder (*Polemonium reptans*) | Blue | May-June | 1-2 feet | 6/spot x 2 spots = 12 total |
| | Wild geranium (*Geranium maculatum*) | Purple | July-Sept. | up to 1 foot | 6/spot x 2 spots = 12 total |
| | Wild ginger (*Asarum canadense*) | Red | April-June | .5 feet | 6/spot x 2 spots = 12 total |
| | Zig zag goldenrod (*Solidago flexicaulis*) | Yellow | April-June | 2-3 feet | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

## Moist-Wet Soil

| | Plant Type | Flower Color | Bloom Time | Height Range | Total Plants |
|---|---|---|---|---|---|
| Woody | Balsam fir (*Abies balsamea*) | Cones | (pollen shed) | 70-80 feet | 1 tree |
| | Pussy willow (*Salix discolor*) | White to green | April-May | up to 25 feet | 1 shrub |
| | Red osier dogwood (*Cornus stolonifera*) | White | June-Sept. | 8-10 feet | 1 shrub |
| | | | | | 1 Tree and 2 Shrubs |
| Grasses | Common fox sedge (*Carex stipata*) | Brown leaves | June-July | 1-3 feet | 6/spot x 3 spots = 18 total |
| | Fowl manna grass (*Glyceria striata*) | Tan leaves | May-June | 1-5 feet | 6/spot x 3 spots = 18 total |
| | Fringed sedge (*Carex crinita*) | Brown leaves | June-July | 1-3 feet | 6/spot x 3 spots = 18 total |
| | Virginia wild rye grass (*Elymus virginicus*) | Tan leaves | June-July | up to 4 feet | 6/spot x 3 spots = 18 total |
| | | | | | 72 grasses, rushes, & sedges |
| Wildflowers | Blue vervain (*Verbena hastata*) | Blue | July-Sept. | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Boneset (*Eupatorium perfoliatum*) | White | July-Sept. | up to 4 feet | 6/spot x 2 spots = 12 total |
| | Flat-topped aster (*Aster umbellatus*) | Cream | July-Sept. | 4-5 feet | 6/spot x 2 spots = 12 total |
| | Fireweed (*Epilobium angustifolium*) | Pink | June-Aug. | 3-4 feet | 6/spot x 2 spots = 12 total |
| | Mountain mint (*Pycnanthemum virginianum*) | White | July-Sept. | 1-3 feet | 6/spot x 2 spots = 12 total |
| | Purple meadow rue (*Thalictrum dasycarpum*) | Cream | June-July | 3-5 feet | 6/spot x 2 spots = 12 total |
| | Sneezeweed (*Helenium autumnale*) | Yellow | Aug.-Oct. | 3-4 feet | 6/spot x 2 spots = 12 total |
| | Zig zag goldenrod (*Solidago flexicaulis*) | Yellow | April-June | 2-3 feet | 6/spot x 2 spots = 12 total |
| | | | | | 96 Wildflowers |

# Substitution Policy

The plants utilized in these native planting options are suitable statewide because of their distribution and availability at most native plant nurseries. Sometimes you may not be able to find certain species locally or you may want to substitute a different native plant from one listed in the planting plan.

Native plant substitutions to the native planting options should follow these caveats:

- When substituting one native plant for another, please use a like species for the one you replace (I.e., a grass for grass; a sedge for a sedge; a woody plant for woody plant; etc.). These native planting options follow our state standards around lakeshore plantings, which specify using each of these plant types: grasses, sedges, rushes, wildflowers, ferns, shrubs, and trees.
- Match the substituted plant to roughly the same bloom time, flower color, growth form, and plant height of the replaced plant to fit in with the planting option theme.
- Utilize local lists generated by master gardeners, land and water conservation departments, and UW-Extension. Ask a DNR, Extension, or county professional if you are not sure if the list is legitimate.
- Document the chosen native planting option and any substitutions in the *Other* section of the grant application, or contact a Healthy Lakes Team member to verify it is acceptable.

# Resources

OVERVIEW VIDEOS FROM UNIVERSITY OF MINNESOTA EXTENSION

- **Shoreland restoration: A growing solution**
  This video outlines why natural shorelines help protect water quality and wildlife habitat, and introduces how shoreland property owners can restore natural functions to their shorelines. (Running time: 15:30). https://www.youtube.com/watch?v=n5o9xjFLnvs
- **Keeping our shores: Shoreland best management practices**
  Introduces best management practices that shoreland owners can use to protect the water quality in a lake or river, including shoreline filter strips, proper septic maintenance, and appropriate lawn care practices. (Running time: 15:20). https://www.youtube.com/watch?v=mfrSvWSKcIE

WISCONSIN NATIVE PLANT NURSERIES

- http://dnr.wi.gov/files/PDF/pubs/ER/ER0698.pdf
- http://grandprairiefriends.org/nurseriesWI.php
- http://findnativeplants.com/midwest/wisconsin-native-plants/

**WISCONSIN RESTORATION CONSULTANTS**
(native plant consultants, landscapers, and nursery professionals)

- http://dnr.wi.gov/files/PDF/pubs/ER/ER0699.pdf

PLANT FINDER ONLINE TOOLS

- Langlade County: http://lrrd.co.langlade.wi.us/shoreland/index.asp
- Prairie Nursery "plant finder" tool:
  http://www.prairienursery.com/store/advanced-search#.VDcFE7BOncs
- Minnesota Blue Thumb Program "Plant Selector": http://www.bluethumb.org/plants/

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