



# Planting for Pollinators

Angie Hong, East Metro Water Education Program  
Cody Sipe, Prairie Restorations



**Angie Hong** is the coordinator for Minnesota's East Metro Water Resource Education Program (EMWREP), a local government partnership with 30 members in Ramsey, Washington, Chisago and Isanti Counties.

In her free time, she enjoys singing, gardening, and exploring the prairies, woods and waters of the St. Croix Valley.

angie.hong@mnwcd.org

651-796-2210



@mnnature\_awesome

Read the weekly blog articles! [eastmetrowater.org](https://eastmetrowater.org)



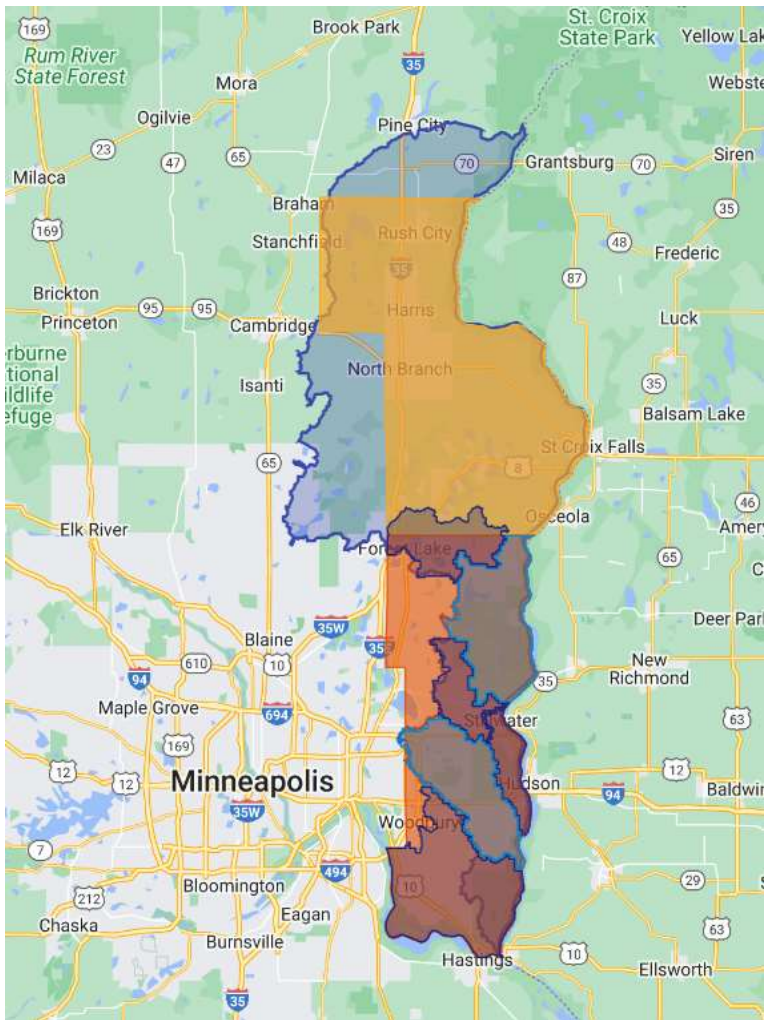
**Cody Sipe** is the Sales & Marketing Specialist for Prairie Restorations, Inc. (PRI), an Ecological Restoration contractor with over 45 years of experience in restoring Minnesota's native ecosystems.

In his free time, he enjoys traveling, hiking, and exploring the outdoors.

[csipe@prairieresto.com](mailto:csipe@prairieresto.com)

763-290-5775

@prairierestorations



Lower St. Croix Watershed Partnership  
[www.lsc1w1p.org](http://www.lsc1w1p.org)

East Metro Water Education Program  
[www.mnwcd.org/emwrep](http://www.mnwcd.org/emwrep)

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Support for locally-led conservation:

**Free Site Visits** for landowners

**Cost-share grants** to help offset costs of conservation projects

**Education:** Workshops, volunteer events, project tours, and community programs throughout the year

**Topics of expertise:** Lake, stream, river and wetland health, habitat restoration, invasive species management, conservation farming, sustainable yards and gardens

**500+ species of bees live in Minnesota**





**157 species of butterflies live in Minnesota**



**1 out of every 3 bites  
of food we eat is  
thanks to pollinators**



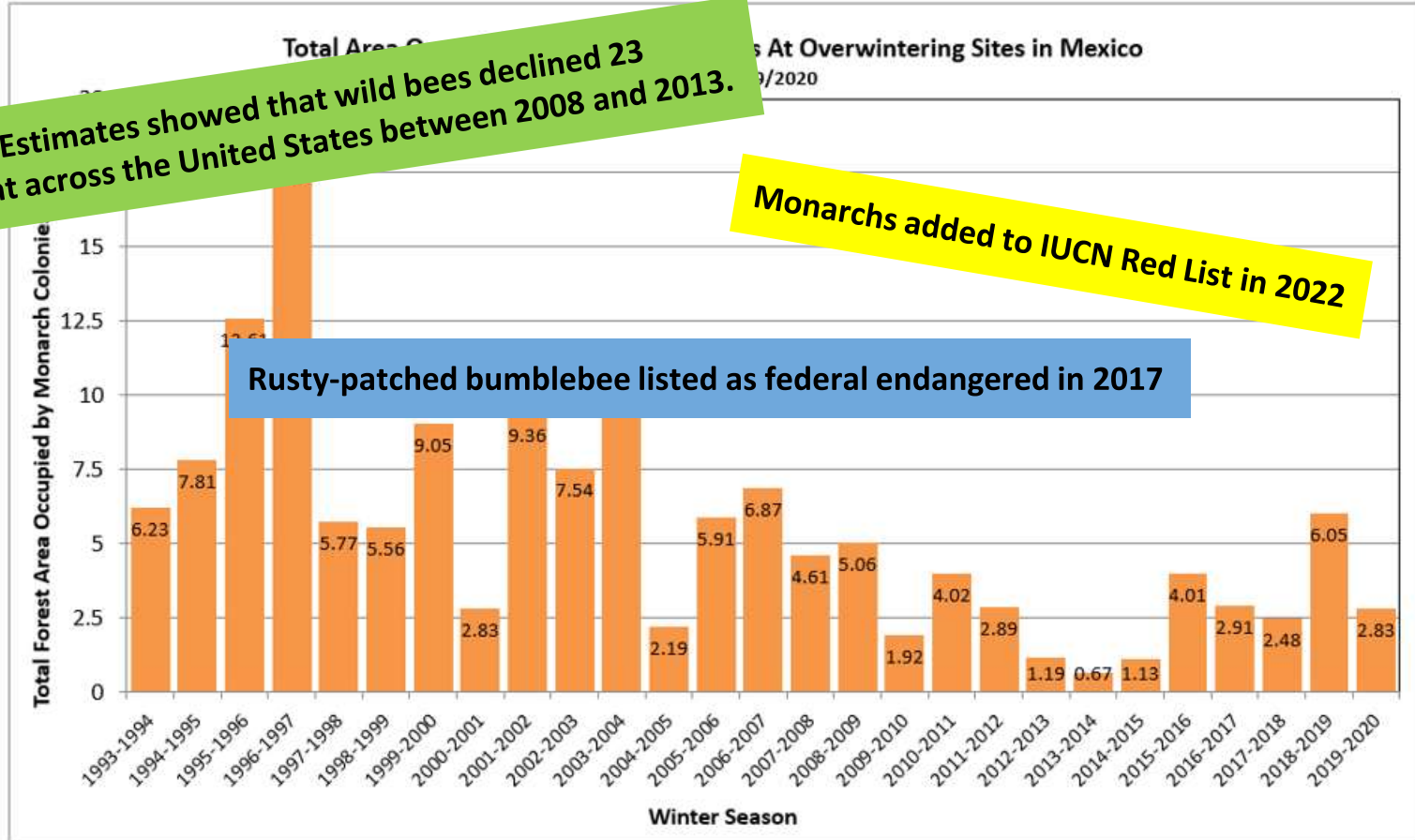
**80% of world's  
flowering plant  
species require  
pollinators to  
reproduce**

# Eastern Monarch Population Numbers Decrease 53% from 2019

USDA: Estimates showed that wild bees declined 23 percent across the United States between 2008 and 2013.

Monarchs added to IUCN Red List in 2022

Rusty-patched bumblebee listed as federal endangered in 2017



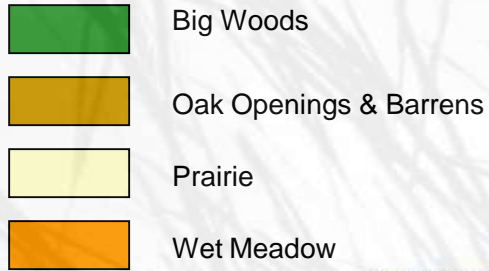


**75% of land in  
Minnesota is  
privately owned**

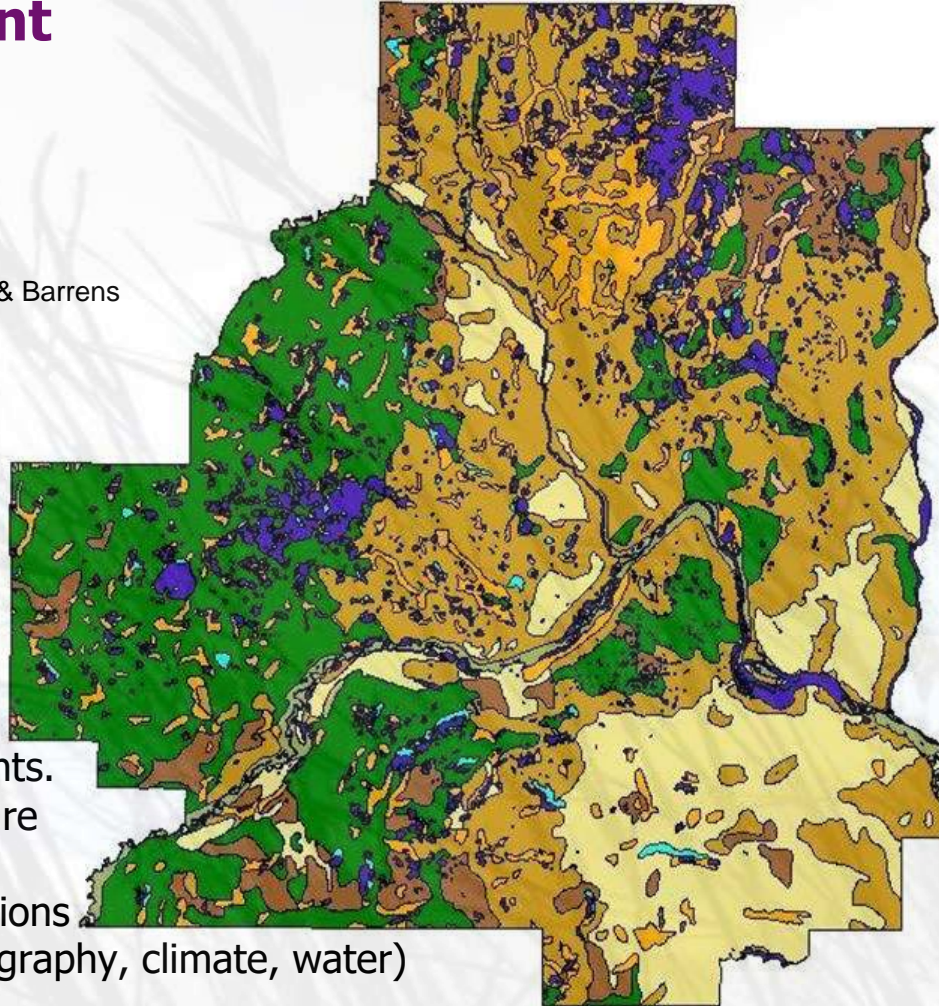
**You play a CRITICAL  
role in helping to  
rebuild habitat  
corridors for wildlife  
and clean water!**



# Pre-settlement Native Plant Communities

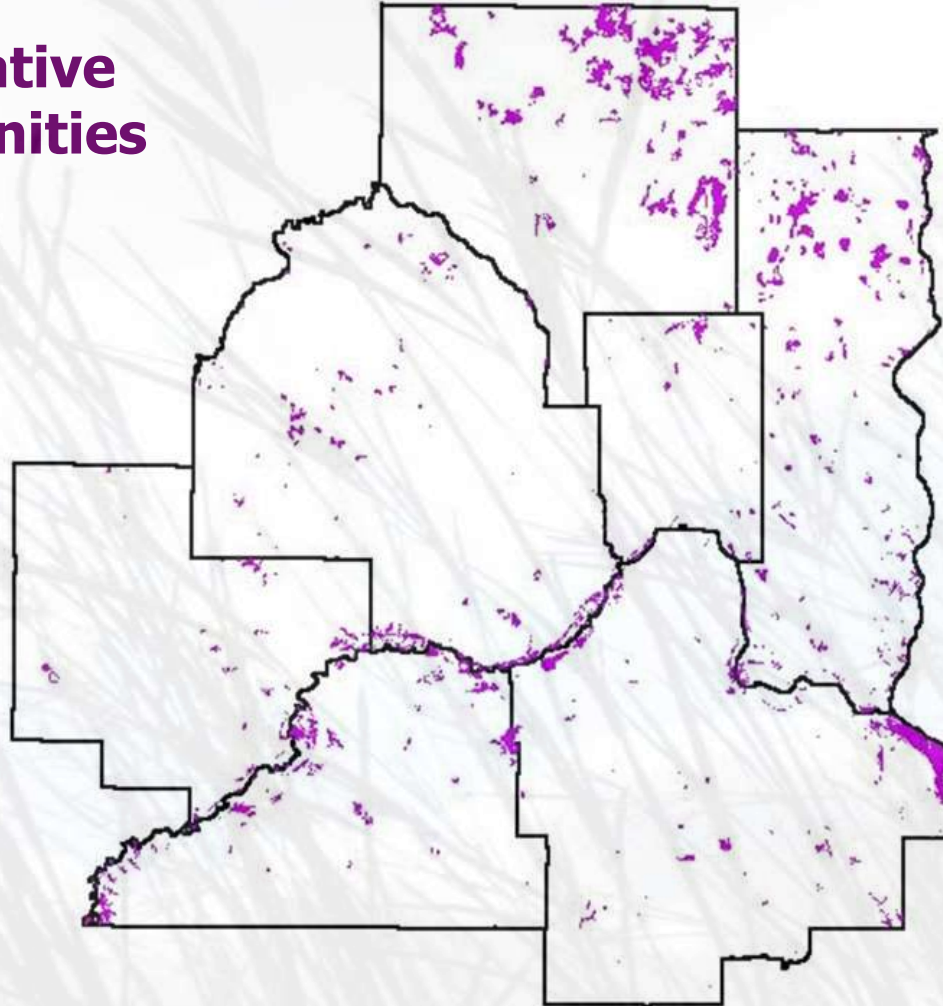


In nature, plants commonly grow in association with a particular group of other compatible plants. These communities are found where specific environmental conditions exist (e.g. soils, topography, climate, water)

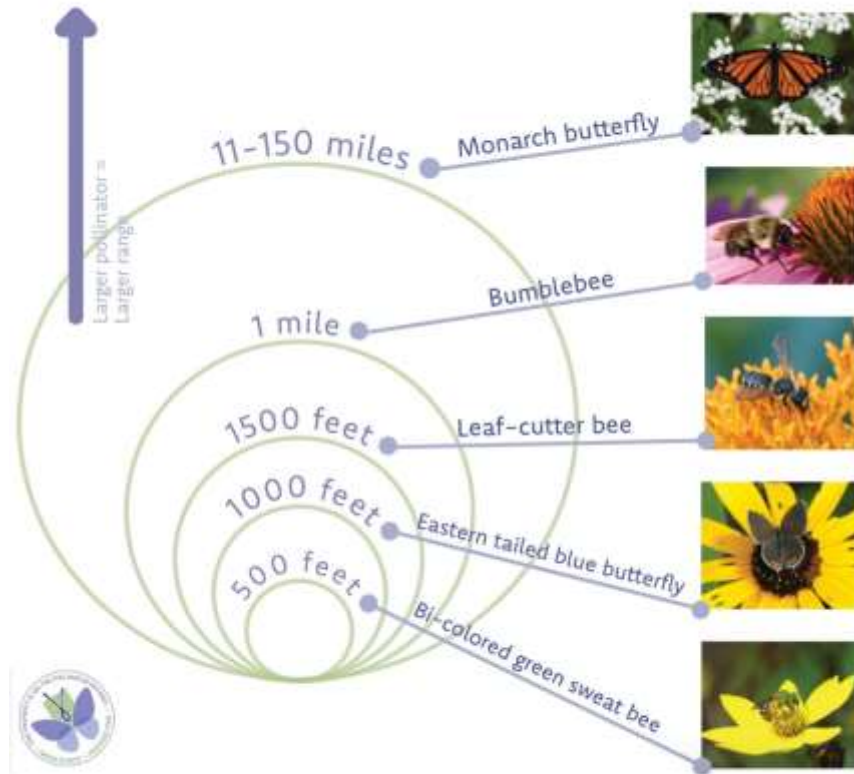


## Remaining Native Plant Communities

Vegetation removal and soil disturbance (and soil compaction) reduces the amount of runoff absorbed, increasing sediment-laden runoff into lakes, streams & wetlands.



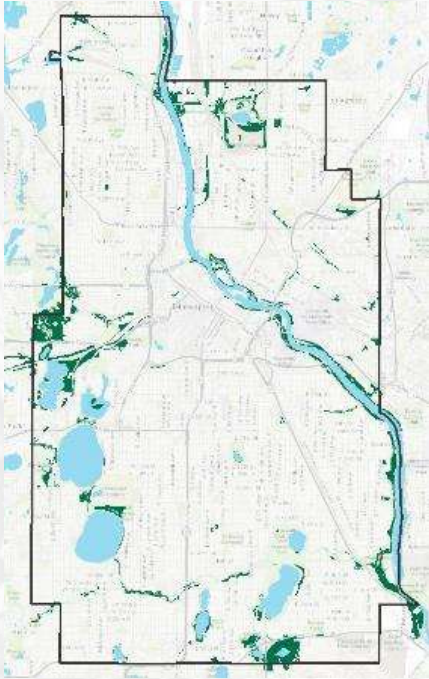
## How far can a pollinator fly to find food?



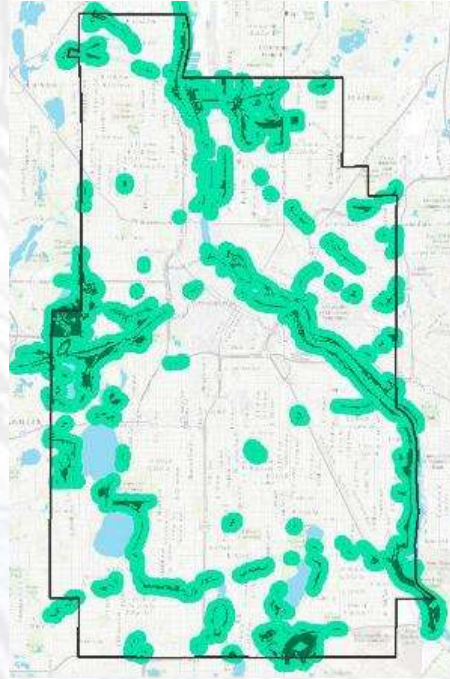
Connecting our pollinator gardens along a pathway helps bees and butterflies thrive.

# Re-building Pollinator Connections

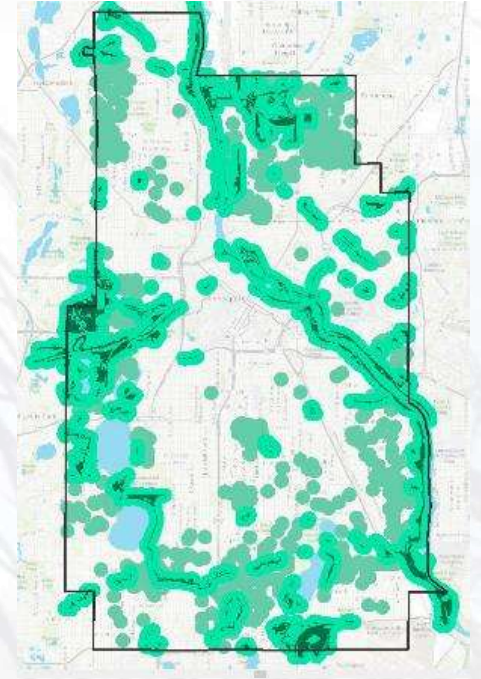
## Pollinator Patches and Corridors in Minneapolis



**Existing Known High  
Quality Habitat**



**+ 200 Meter Buffer  
(the distance small pollinators can fly)**



**+ Metro Blooms and workshop  
raingardens with Buffers**



What is  
your vision  
for your  
yard?

1



2



3



4



## **Types of Pollinator Planting Projects:**

1. Flowering trees and shrubs
2. Pocket plantings
3. Prairies and meadows
4. Bee-friendly lawns



# 1. Flowering trees and shrubs



Trees & Shrubs provide maximum foraging in a small area and are one of the first early blooming groups to provide food for emerging bees.

## **Trees:**

Willows  
American Basswood  
Serviceberry-Edible  
Pagoda Dogwood  
Plum  
Cherry  
Hawthorn  
Apple

## **Shrubs:**

Blueberry  
Raspberry  
Dwarf Bush Honeysuckle  
Black Chokeberry  
Elderberry  
Red Twig Dogwood  
Ninebark  
Buttonbush  
Cranberry  
Spirea / Meadowsweet  
Wild Currants



Hawthorn

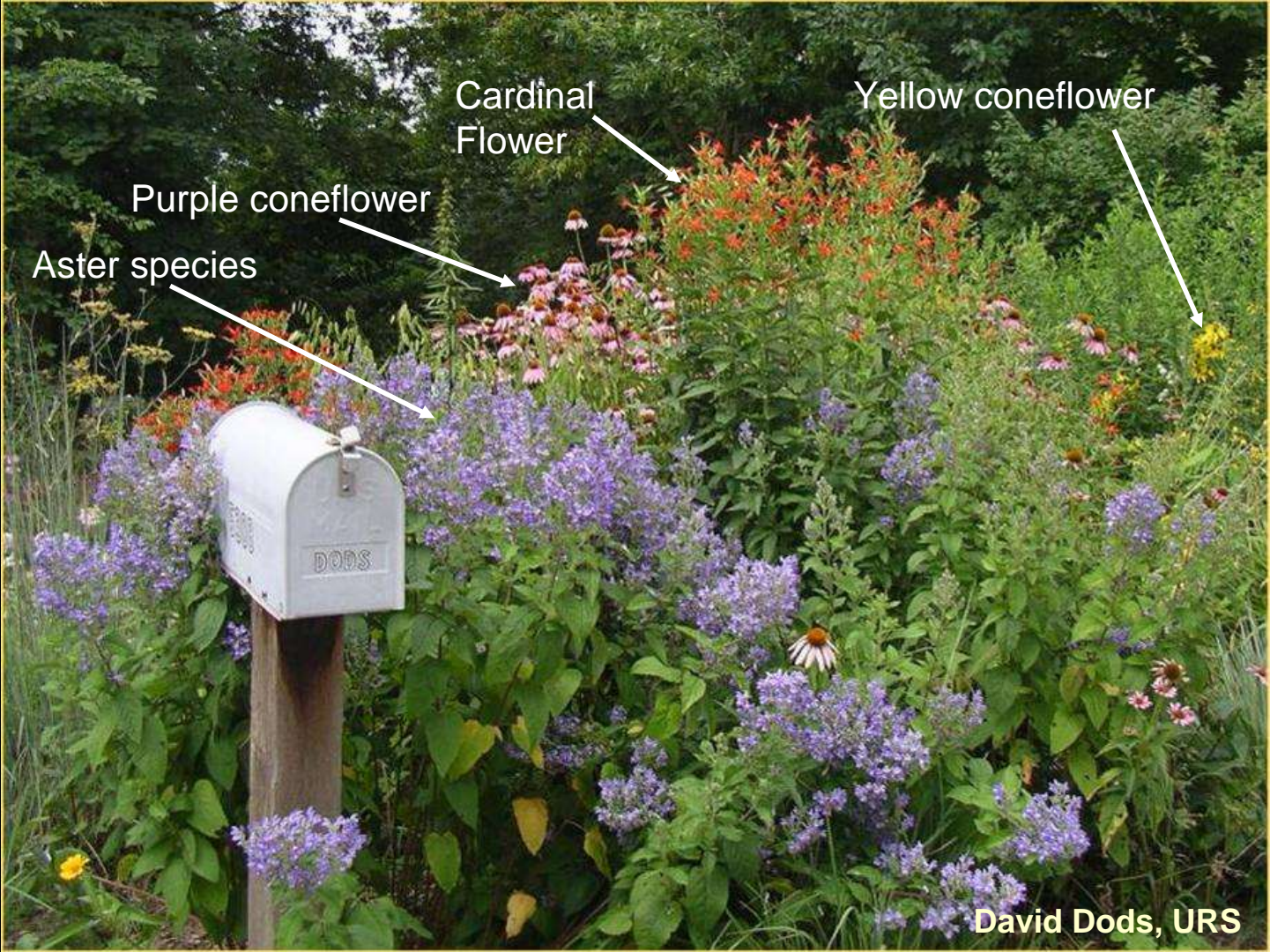


# SWCD Tree Sales!



## 2. Pocket plantings





Cardinal  
Flower

Yellow coneflower

Purple coneflower

Aster species

David Dods, URS

# Shade to Partial Shade



# Partial Shade to Partial Sun



Culver's Root



Blue Lobelia



Turtlehead



Sprengel's Sedge



Bottle Gentian

# Full Sun





# Full Sun



**Prairie Blazing Star**



**Azure Aster**



**'Karl Foerster'  
Feather Reed  
Grass**



**Meadow Blazing**



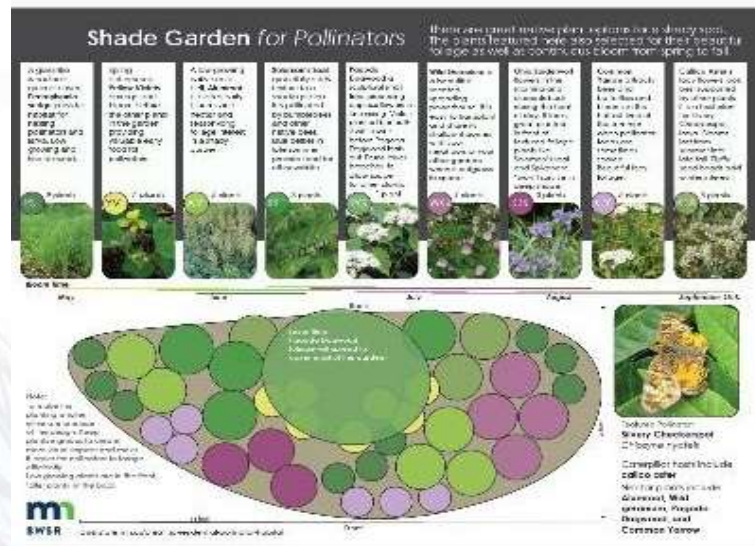
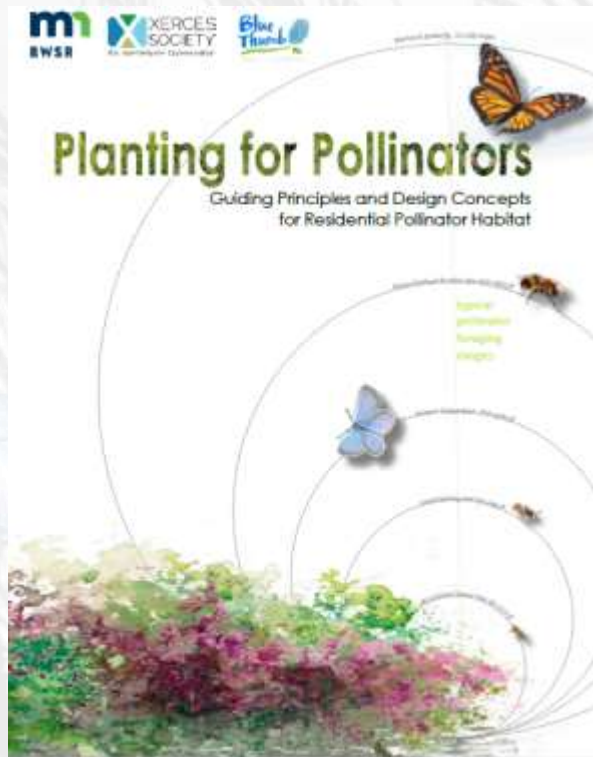
**Side Oats**



**Early**

# Lawns to Legumes

## Habitat Guide and planting templates



# Pollinator gardens for sun and shade



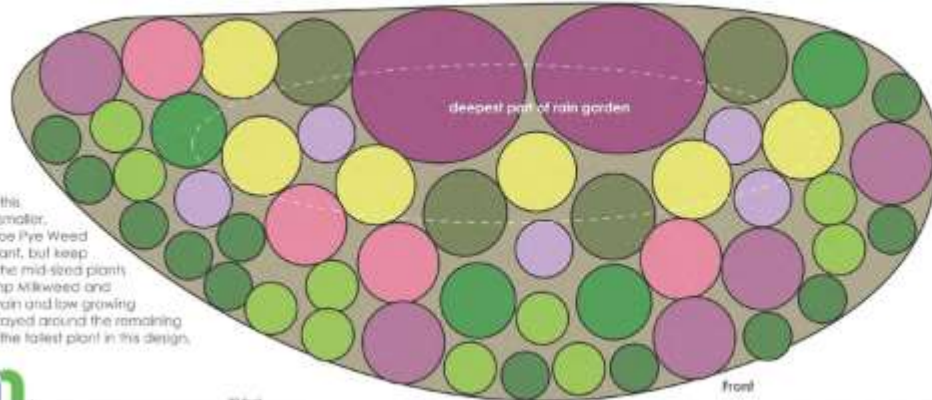
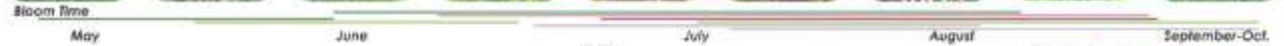
# Lawns to Legumes

## Habitat Guide and planting templates

### Rain Garden for Pollinators

Your pollinator planting can do double duty and improve water quality if it is also a rain garden! These plants will also work well in most garden conditions. The selected species in this garden and bloom times make it a great butterfly garden.

<p><b>Fox Sedge</b> Adds texture and beautiful seed heads to a rain garden. It is a tough plant that can easily handle the saturated conditions of a rain garden basin.</p> <p><b>FS</b> 5 plants</p> 	<p><b>Pussy Toes</b> These low-growing fuzzy plants slowly form carpets of foliage. In the spring their flowers rise up gracefully 6"-8" above their leaves.</p> <p><b>PT</b> 12 plants</p> 	<p><b>Blue Eyed Grass</b> is a bunch forming early summer bloomer. Not a true grass, its dainty sky blue flowers brighten the early summer garden, and is a great edging plant.</p> <p><b>BE</b> 10 plants</p> 	<p><b>Hoary Vervain</b> Bright spikes of color to the summer garden that look great against the bright green of Fox Sedge. It is a host to Common Buckeye butterfly larva.</p> <p><b>HV</b> 4 plants</p> 	<p><b>Swamp Milkweed</b> The bright flowers of Swamp Milkweed are unforgettable, and much loved by pollinators. It tends to spread, plan to divide this plant when it outgrows your garden space.</p> <p><b>SM</b> 4 plants</p> 	<p><b>Pratie Onion</b> Lavender colored starry blooms in mid-summer rise from bright green clump forming flat-topped foliage. Will slowly create colonies as the plants become more established.</p> <p><b>PO</b> 5 plants</p> 	<p><b>Joe Pye Weed</b> Covered with mid to late summer blooms, Joe Pye is a butterfly magnet, it will spread, be prepared to divide this plant by the third year to share with others!</p> <p><b>JP</b> 2 plants</p> 	<p><b>Blue Lobelia</b> flowy spikes attract bees and butterflies and bloom in well into the fall. Can take part shade conditions, but needs moist soil.</p> <p><b>BL</b> 5 plants</p> 	<p><b>Flat-Topped Aster</b> Enjoyed by diverse pollinators as well as rabbits and deer, if you have trouble with browsing wildlife, consider substituting with Rattlesnake Master.</p> <p><b>FT</b> 3 plants</p> 
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**Note:**  
To make this planting smaller, reduce Joe Pye Weed to one plant, but keep some of the mid-sized plants like Swamp Milkweed and Blue Vervain and low growing plants arrayed around the remaining Joe Pye, the tallest plant in this design.



Featured Pollinator:  
**American Lady**  
*Vanessa virginensis*

Caterpillar hosts include  
**Pussy Toes**  
Nectar plants include  
**Swamp Milkweed, Joe Pye Weed, Blue Lobelia, and Flat-Topped Aster**

# 3. Prairies and meadows



# Pollinator Meadow | Project Example



Project Location: Stillwater

Project Size: 1 acre

Design considerations:

- Reduce regular mowing
- Steep slopes
- Transitions from dry to wet
- Create habitat and LOTS of color

# Prairies



## 4. Bee friendly lawns







**Bee lawn = fine fescues + low-growing flowering plants**

Find resources and how-to's at:

**[bluethumb.org/turf-alternatives/pollinator-lawn](https://bluethumb.org/turf-alternatives/pollinator-lawn)**



**BEE LAWNS AND LAWN ALTERNATIVES WORKSHOP**

Monday, April 3, 6-7:30pm

Register at: **[tinyurl.com/beelawn2023](https://tinyurl.com/beelawn2023)**



# What about No Mow May?



**Attracting species of interest**

BEES

BUTTERFLIES

MOTHS



# POLLINATORS OF NATIVE PLANTS

Attract, Observe and Identify  
Pollinators and Beneficial Insects  
with Native Plants



WASPS

FLIES

BETLES

Heather Holm

Copyrighted Material

Includes Tree, Shrub, and Perennial  
Plant Profiles for the Midwest,  
Great Lakes, and Northeast Regions



# BEEES

An Identification and Native Plant Forage Guide

HEATHER HOLM Author of *Pollinators of Native Plants*

Copyrighted Material

# Monarch butterflies



Whorled milkweed (*Asclepias verticillata*)



Butterfly milkweed (*Asclepias tuberosa*)



Purple milkweed (*Asclepias purpurascens*)



Poke milkweed (*Asclepias exaltata*)



Green comet (*Asclepias viridiflora*)



Showy milkweed (*Asclepias speciosa*)



Swamp milkweed (*Asclepias incarnata*)

Common milkweed (*Asclepias syriaca*)



Prairie blazing star



Maximilian sunflower



Joe-pye weed



Cup plant



Wild bergamot



Stiff goldenrod



Common boneset

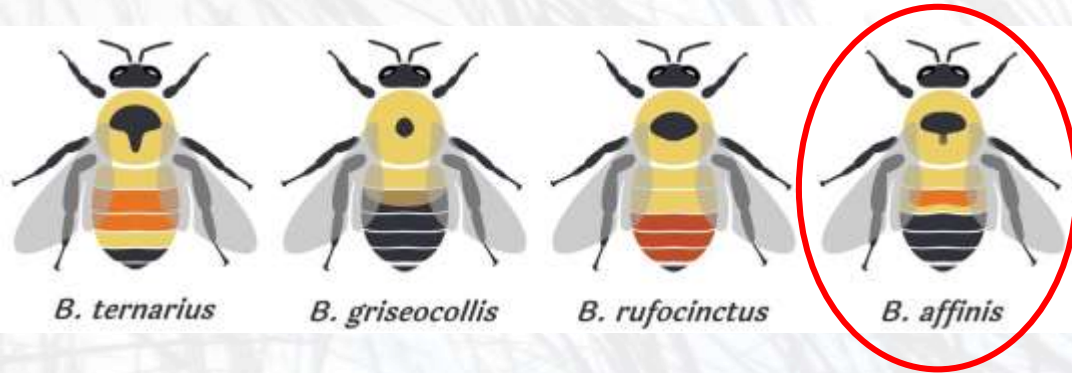
# Our New State Bee

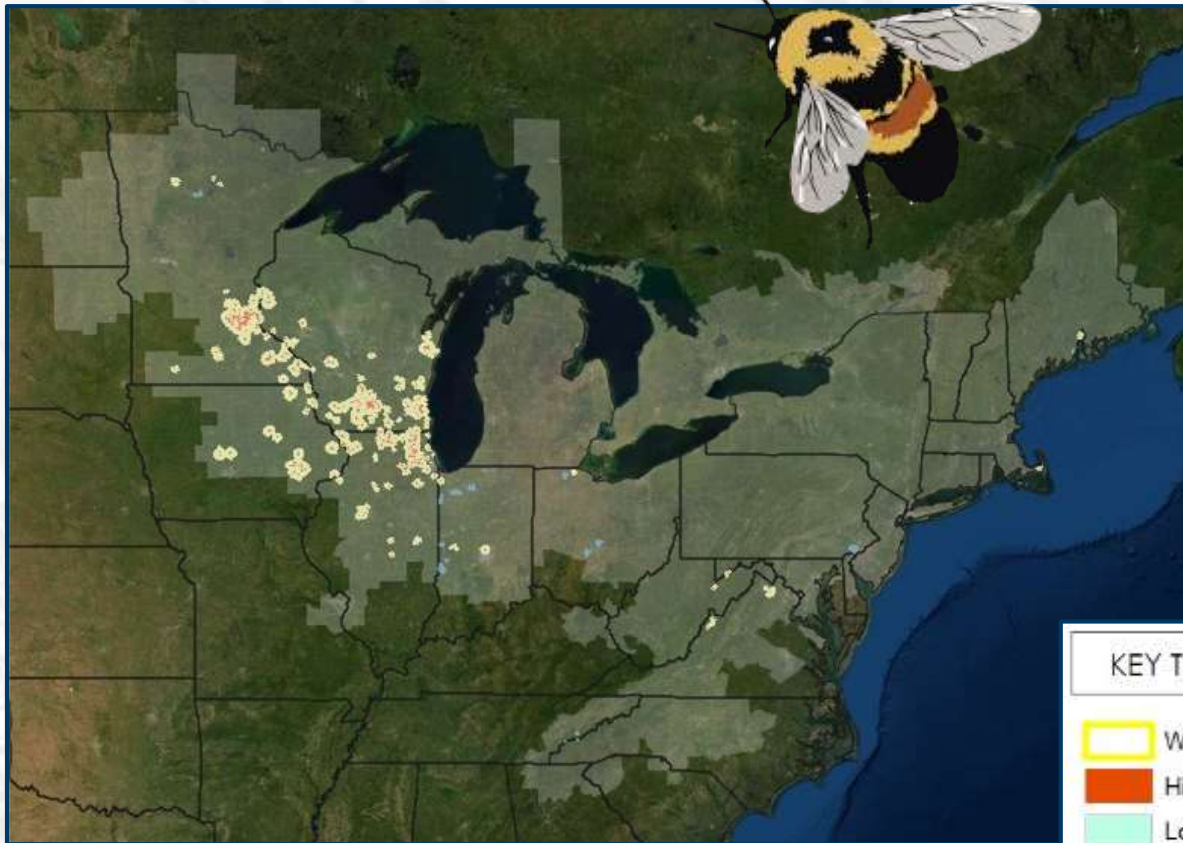
## Rusty Patched Bumble Bee *Bombus affinis*



### Bumble Bees Need:

- Nests in the ground
- Blooming native flowers throughout the growing season. It is active from April to October
- Connected, high quality habitat
- Protection from insecticides and fungicides. Many chemicals that promote a dense lawn have adverse and even unintended effects on wildlife.





KEY TO FEATURES

-  Wash Co Boundary
-  High Potential Zones
-  Low Potential Zones





## Spring – Early Summer

Include early-blooming plants and maintain a diversity of flowers in your landscape.

To protect overwintering queens, avoid early raking or mowing; raking is best done in April and May.

Keep large patches of land unmowed and untilled to provide secure nesting sites; healthy ground-nesting mammal populations help create future nesting sites.

Because queens are still foraging and colonies are usually very small, avoid the use of pesticides.

## Summer – Fall

Include mid- and late-blooming plants such as goldenrod, milkweed, and aster in your landscape.

Leave leaf litter, downed wood, and uncut bunch grasses to serve as potential overwintering sites.

As colonies are producing new queens at this time of year, avoid using pesticides. If pesticides are necessary, choose products that are less harmful to bumble bees, and do not use them at times when bees are active or when plants are flowering.

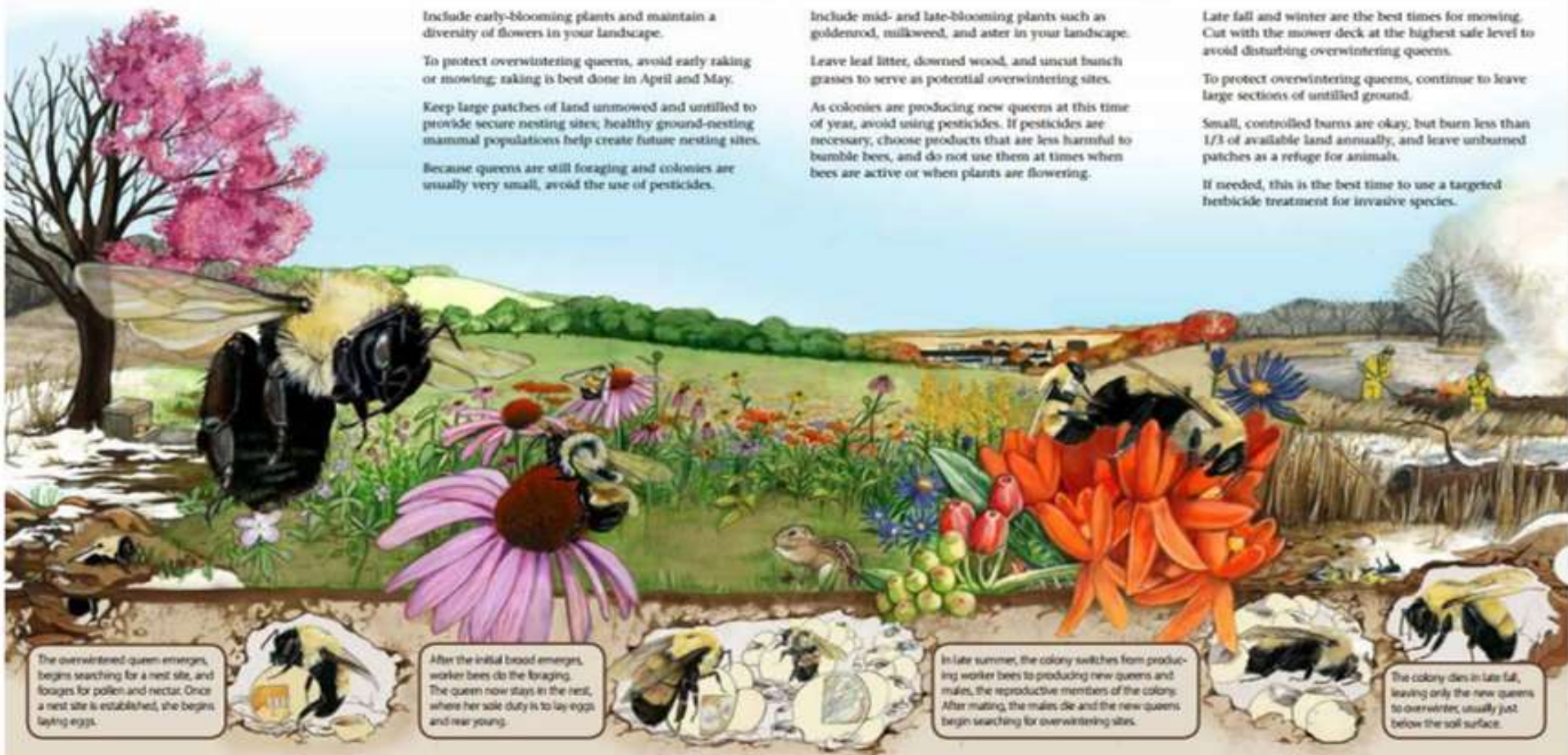
## Winter

Late fall and winter are the best times for mowing. Cut with the mower deck at the highest safe level to avoid disturbing overwintering queens.

To protect overwintering queens, continue to leave large sections of untilled ground.

Small, controlled burns are okay, but burn less than 1/3 of available land annually, and leave unburned patches as a refuge for animals.

If needed, this is the best time to use a targeted herbicide treatment for invasive species.



The overwintered queen emerges, begins searching for a nest site, and forages for pollen and nectar. Once a nest site is established, she begins laying eggs.

After the initial brood emerges, worker bees do the foraging. The queen now stays in the nest, where her sole duty is to lay eggs and rear young.

In late summer, the colony switches from producing worker bees to producing new queens and males, the reproductive members of the colony. After mating, the males die and the new queens begin searching for overwintering sites.

The colony dies in late fall, leaving only the new queens to overwinter, usually just below the soil surface.

**Figure 2:** Illustration of the rusty patched bumble bee life cycle by Alix Lucas, courtesy of the Xerces Society, with some general management recommendations for bumble bee conservation by season.

# A FLOWER PATCH FOR THE RUSTY PATCHED



The Endangered Rusty-patched Bumble Bee was once historically common throughout its large range in Canada (ON & QC) and the USA. In the past three decades it has become rare with only a handful of individuals spotted each year.

This species is one of the first to emerge in the spring and the colony finishes up in the fall.

Here are some native examples you can plant to help support this bee on the brink of extinction throughout its long colony life.



A rusty-patched bumble bee queen looks like the rusty-patched found among the workers and males.



Workers are about half the size of the queen. Make the distinctive rusty-patched in the second set of legs.

SPRING



EARLY SUMMER



FALL



LATE SUMMER



Art by Ann Sankaran  
www.ann-sankaran.com

# Lawns to Legumes

Species for Rusty Patched Bumble Bee



Wild Bergamot



Virginia Bluebells



Goldenrod



Blazingstar



Giant Hyssop



Columbine



Asters

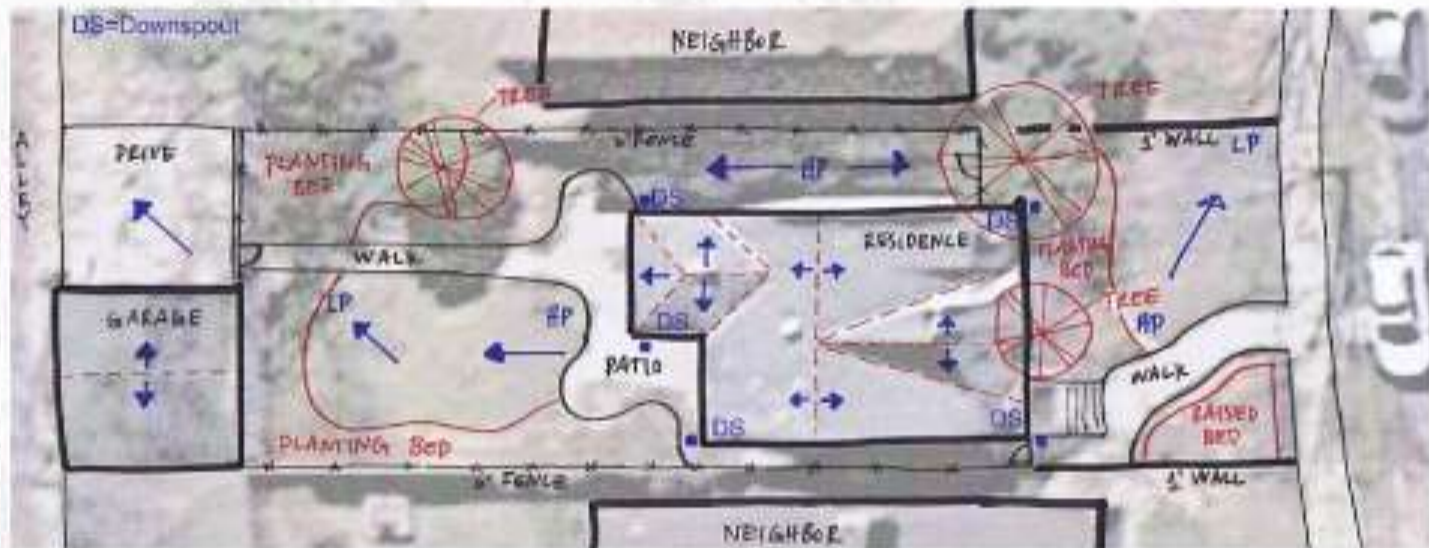


# Other powerhouse plants





# Site Assessment

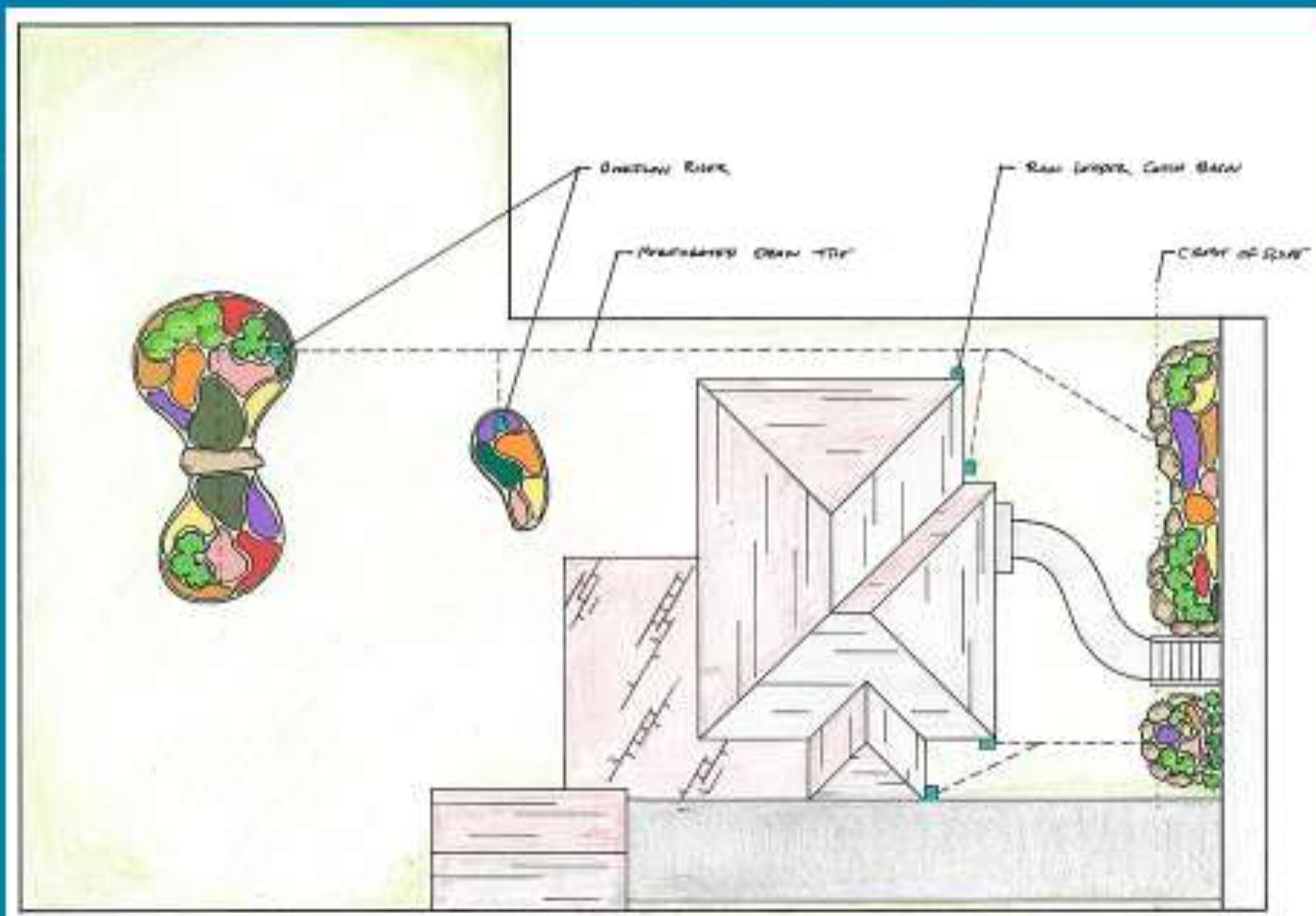


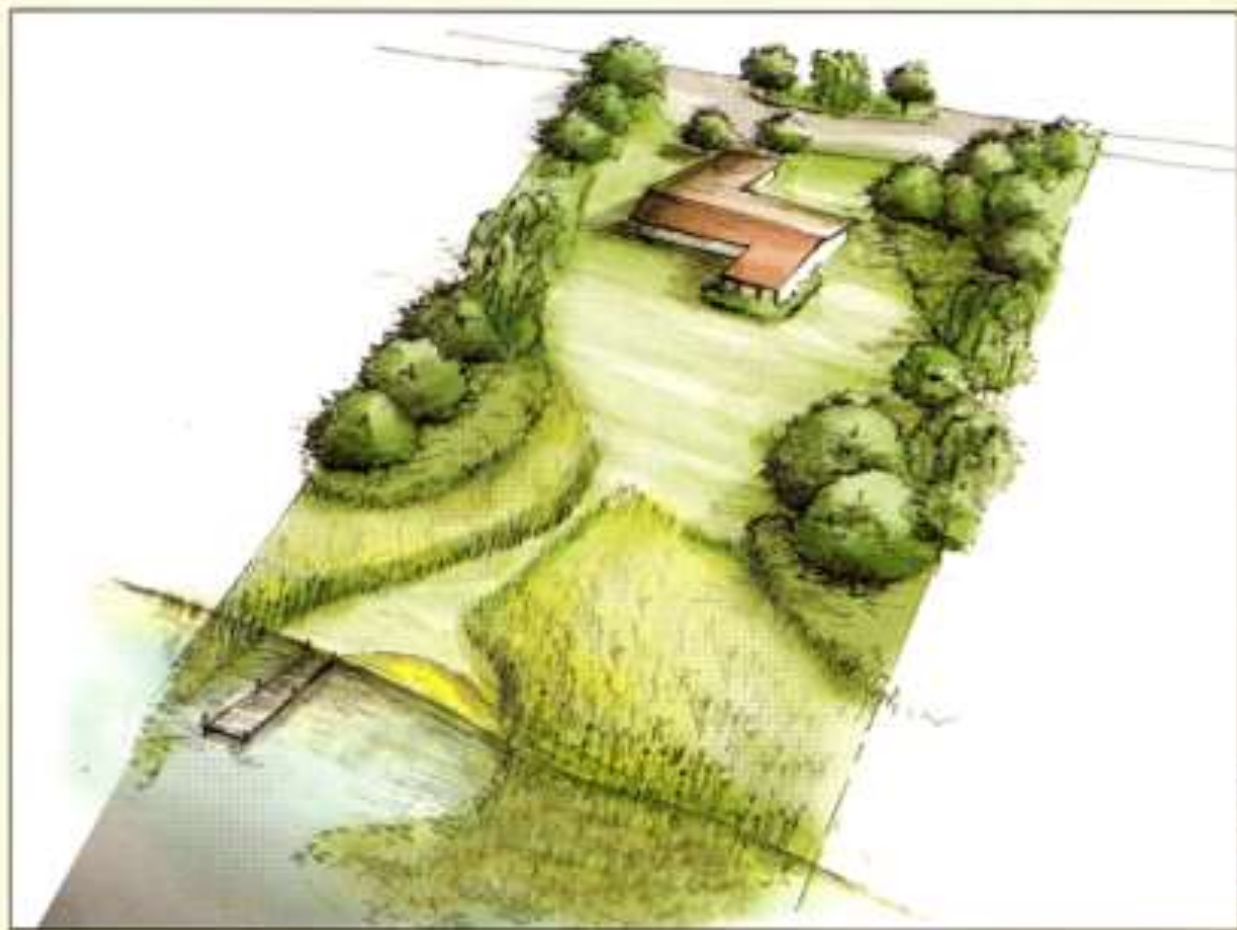
*What should you consider when assessing your yard?*

- Function
- Existing Trees and Plants
- Drainage-where does the water go?
- Sun/Shade



## Project planning & Garden design





Rozanna Esperza



# Cues for care



Clean edges display “intent” and help keep a space from looking messy

Mowed turf edges along streets and sidewalks create edges as well



Cues for care

- Walking paths
- Edges
- Garden blended with more natural areas
- Front-loaded flowers



## Cues for care

- Hard edge
- Front-loaded flowers
- Species grouped



Haider Shoreline Planting — Forest Lake

## Maintenance: Plant Establishment

- Water during dry periods – **at least 1"** per week
- Pull weeds! Get them while they are small
- Keep plantings clear of debris
- Replace mulch and plants as needed

*Which one of these would you rather pull?*





# Maintenance during Growing Season

- Memorial Day
- July 4<sup>th</sup>
- Labor Day

## Main Points

- Pull weeds
- Divide, transplant or add new plants
- Mulch as needed
- Inspect for erosion/trouble spots
- Spring: cut back plants after avg. temp is 50° F, leave some hollow stems for pollinators to nest in.



## Maintenance - Fall

- Clean up excess leaves for use in other gardens
- Disperse seeds if desired
- Trim shrubs
- Leave plant duff to provide habitat and seeds until spring

## Weed to watch for



Common Ragweed  
*Ambrosia artemisiifolia*

Blooms: Summer

Management:

- Pull taproot
- Frequent mowing
- Remove flowers
- Use other plants to compete

## Maintenance - Winter

- Leave duff through the winter
- Keep de-icing salts out of the garden
- Prune dead or diseased branches from woody plants.
- Plan for next year's projects.



## Plants with Pithy and Hollow



- Coneflower
- Perennial Grass
- Rushes
- Boneset
- Penstemon
- Hosta
- Joe Pye Weed
- Mountain Mint
- Goldenrod
- New England Aster



"Leaf" some  
for the bees  
please



**Wait until the daytime  
temps are consistently  
above 50°F to cut down  
stems and rake leaves out  
of garden beds.**

# Resources to help you get started



- **Blue Thumb – Planting for Clean Water** – [www.bluethumb.org](http://www.bluethumb.org)
  - Plant selector tool; native plant suppliers and contractors; workshops and events; info on pollinator gardens, raingardens, shoreline plantings and turf alternatives
- **Washington Conservation District (Washington County, MN)**
  - Free site visits [www.mnwcd.org](http://www.mnwcd.org)
  - Planting for Clean Water - [www.mnwcd.org/planting-for-clean-water](http://www.mnwcd.org/planting-for-clean-water)
    - Slides and recordings from previous workshops; Print resources; Local project examples; Garden with native plants video series
    - [Blue Thumb Guide to Year Round Yard Care](#) (booklet)

# Resources to help you get started

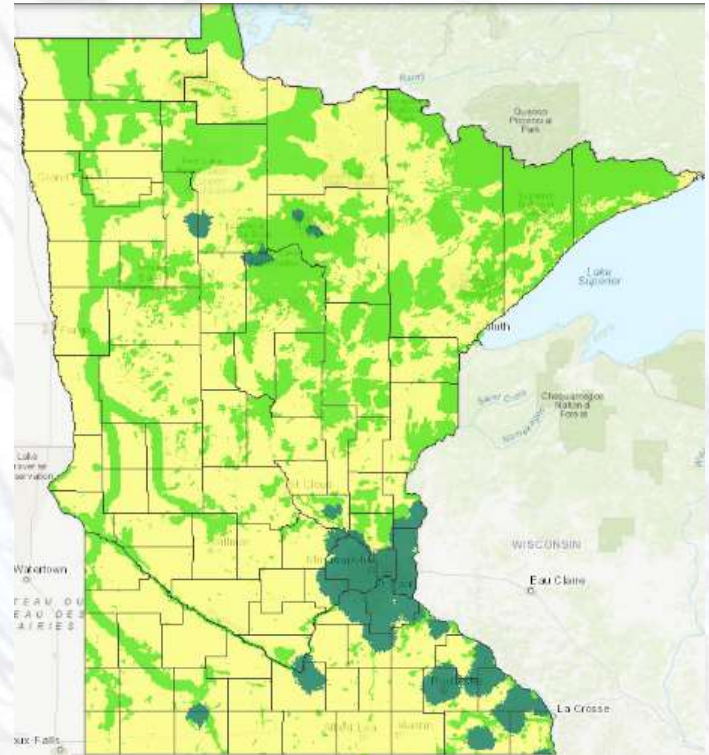


- **Anoka SWCD**  
[www.anokaswcd.org](http://www.anokaswcd.org)
- **Dakota SWCD**  
<https://dakotaswcd.org>
- **Chisago SWCD**  
<https://chisagoswcd.org>
- **Isanti SWCD**  
<https://www.isantiswcd.org>
- **Ramsey Conservation District**  
[www.ramseycounty.us/residents/environment/soil-water-conservation](http://www.ramseycounty.us/residents/environment/soil-water-conservation)

# Lawns to Legumes

[bluethumb.org/lawns-to-legumes](http://bluethumb.org/lawns-to-legumes)

- Up to \$350 for installing pollinator habitat
  - Dark green areas are highest priority
- Currently accepting applications for fall grants.
- Minnesota Legislature is considering making this a permanent program.



# MINNESOTA & WESTERN WISCONSIN NATIVE PLANT NURSERIES



SYMBOLS d: Design Services i: Installation Services m: Maintenance Services

## 1 Blazing Star Gardens

Phone: 507-402-8337  
 Email: blazingstargardens@gmail.com  
 Web: www.blazingstargardens.com

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## 2 Boreal Natives

3943 Munger Shaw Road, Cloquet, MN 55720  
 Phone: 218-729-7001  
 Email: borealnatives@prairieresto.com  
 Web: prairieresto.com/boreal\_natives.shtml

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## 3 Sogn Valley Farm

Phone: 763-614-8853  
 Email: dana@sognvalleyfarm.com  
 Web: www.sognvalleyfarm.com

Purchase at events & St. Paul Farmers' Market

## 4 Ecoscapes Sustainable Landscaping

Phone: 612-965-0848  
 Email: info@ecoscapes1.com  
 Web: www.ecoscapes1.com

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## 5 Glacial Ridge Growers

Phone: 320-634-0136  
 Email: glacalridgegrowers@aol.com  
 Web: www.glacialridgegrowers.com  
 St. Paul Farmers' Market on Saturdays

## 6 Shoreview Natives

1185 Shoreview Rd, Two Harbors, MN 55616  
 Phone: 218-341-5286  
 Email: shoreviewnatives@gmail.com  
 Web: www.shoreviewnatives.com

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## 7 Landscape Alternatives

25316 St. Croix Trail, Shafer, MN 55074  
 Phone: 651-257-4460  
 Email: landscapealt@frontiernet.net  
 Web: www.landscapealternatives.com

## 8 MN Native Landscapes

8740 77th St NE, Otsego, MN 55362  
 Phone: 763-295-0010  
 Email: bre@mnlcorp.com  
 Web: www.mnnativelandscapes.com

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## 9 Morning Sky Greenery

44804 East Highway 28, Morris, MN 56267  
 Phone: 320-795-6234  
 Email: info@morningskygreenery.com  
 Web: www.morningskygreenery.com

## 10 Natural Shore Technologies

1480 Cty Rd 90, Maple Plain, MN (new location)  
 Phone: 612-703-7581  
 Email: Rob.l@naturalshore.com  
 Web: www.naturalshore.com

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## 11 Naturally Wild

Phone: 612-922-9279  
 Email: info@naturallywildflowers.com  
 Web: www.naturallywildflowers.com  
 Purchase at website-listed events.

## 12 Out Back Nursery

15280 110th St S, Hastings, MN 55033  
 Phone: 651-438-2771  
 Email: sales@outbacknursery.com  
 Web: www.outbacknursery.com

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## 13 Bluprairie Native Plant Nursery

12975 32nd St, Watertown, MN 55388  
 Phone: 612-720-7941  
 Email: jdanie@bluprairie.com  
 Web: www.bluprairie.com

## 14 Prairie Moon Nursery

32115 Prairie Lane, Winona, MN 55987  
 Phone: 866-417-8156  
 Email: info@prairiemoon.com  
 Web: www.prairiemoon.com

Purchase online

## 15 Prairie Restorations Inc

31646 128th St NW, Princeton, MN 55371  
 21120 Ozark Court North, Scandia, MN 55012  
 Phone: 800-837-5986  
 Email: info@prairieresto.com  
 Web: www.prairieresto.com

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## 16 Native Sun Seeds and Plants

St. Croix Valley, MN  
 Phone: 651-318-8667  
 Email: nativesunseedsandplants@gmail.com  
 Web: www.nativesunseedsandplants.com

Purchase online or at website-listed events.

## 17 Shooting Star Native Seeds

20740 Cty Rd 33, Spring Grove, MN 55974  
 Phone: 888-983-3670  
 Email: info@ssns.co  
 Web: www.shootingstarnativeseed.com

## 18 Sunshine Gardens Nursery and Landscaping

1286 Shadywood Shores Dr NW  
 Pine River, MN 56474  
 Phone: 218-947-3154  
 Email: sgardens@uslink.net  
 Web: www.sunshinegardens.tripod.com

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## 19 Dragonfly Gardens

491 State Highway 46 Amery, WI  
 Phone: 715 268-7660  
 Email: info@dragonflygardens.net  
 Web: www.dragonflygardens.net

## 20 Lupine Gardens

880 155th St, Amery, WI 54001  
 Phone: 715-222-6669  
 Email: lupinegardens@yahoo.com  
 Web: www.lupinegardens.com

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## 21 Kinnickinnic Natives

235 State Road 65, River Falls, WI 54022  
 Phone: 715 425 7605 or 715 222 6910  
 Email: whuhnke@dishup.us  
 Web: www.kinninatives.com

## 22 Leaning Pine Natives

3130 S Camp Amnicon Rd, South Range, WI  
 Phone: 715-398-5453  
 Email: phlina@gmail.com

Call for appointment.



## Native Plantings United States

Land Area Acres 2,280,419,453.00

Count of all Users 35,594.00

Active States 51.00

Number of Plantings 26,642.00

Planted Area Acres 76,128.26

% of Land Area Planted 0%

Country Planting Goal 20 Million Acres

2023 Planting Goal 125,000.00 Acres

2023 Plantings 76,128.26 Acres (60.90%)



Hover over an area to see more data

Click on an area to jump to the map.

### Load Data for Country

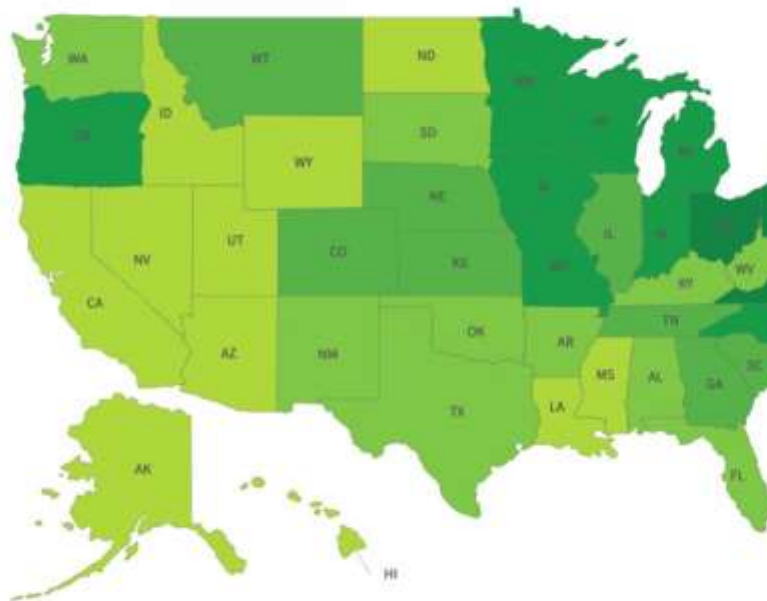
United States

### Map

Log in or Create an Account to view more information on native plants in your community!

## UNITED STATES

STATE Rankings based on Active Users as a percentage of total state population



"If you have a backyard, this book is for you."  
 —Richard Louv, author of *Last Child in the Forest*

# Bringing Nature Home

UPDATED AND EXPANDED

How You Can Sustain Wildlife with Native Plants

Douglas W. Tallamy

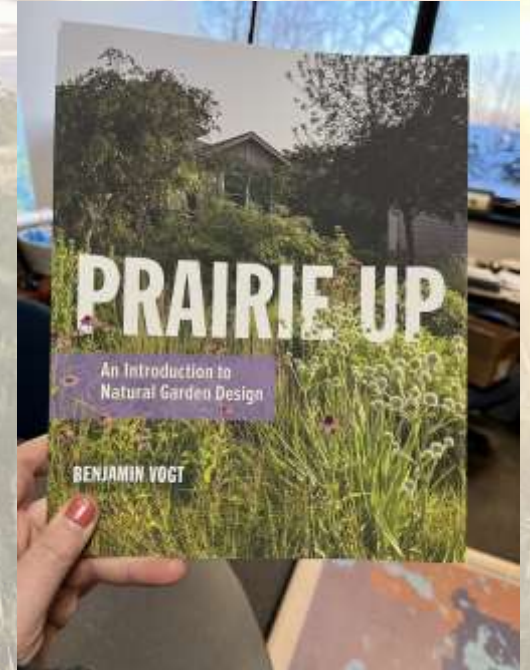
With a foreword by Rick Darke

# PRAIRIES OF MINNESOTA LANDOWNER HANDBOOK



**m** DEPARTMENT OF  
NATURAL RESOURCES

# PRAIRIE POD



*Prairie Up* by Benjamin Vogt



**Bee Lab**

[www.beelab.umn.edu](http://www.beelab.umn.edu)

**Pollinator Friendly Alliance**

[www.pollinatorfriendly.org](http://www.pollinatorfriendly.org)

**Honey Bee Club of Stillwater**

[honeybeeclubofstillwater.blogspot.com](http://honeybeeclubofstillwater.blogspot.com)

[honeybeeclubstillwater@gmail.com](mailto:honeybeeclubstillwater@gmail.com)

**Xerces Society**

<https://xerces.org/pollinator-conservation>



<https://monarchjointventure.org>

<https://www.fws.gov/savethemonarch>

# Have Hope!

- It is easy to feel overwhelmed by environmental problems. Where do we begin?
- Start small. Even small interventions can make a big difference when everyone works together.
- Know that you're not alone. Look around!





*Thank you!*

