

What Can We Do to Help Pollinators?



Plant Pollinator Friendly Plants

Pollinator gardens with native plants replicate Minnesota's natural prairie and forest habitats. Native plants are adapted to Minnesota's climate and thus require minimal maintenance once established. Promoting a diverse collection of plants provides pollinators with abundant food and habitat resources year-round, and planting flowers in clusters makes them easier for pollinators to find.

Plant a Bee Lawn

Bee lawns incorporate native fescue grass and low-growing flowers such as Ground Plum, Lanceleaf Tickweed, and Calico American Aster into your yard. All are naturally resilient to weather fluctuations and can withstand mowing while still producing flowers. Bee lawns provide diverse forage with less maintenance than a typical lawn.



Provide Habitat

Trees, shrubs, tall grass, rock piles, and logs provide shelter from harsh weather and predators. Promoting patches of bare ground, fallen leaves, and standing dead vegetation in the fall provides habitat for overwintering insects. Many insects overwinter in hollow stems of dead vegetation, so be careful when trimming these back - waiting until late spring is best.



Provide Water Sources

All living things depend on clean water to survive; anything from a bird bath to a pond can greatly benefit pollinators and other wildlife, especially during periods of drought. Installing moving water features keeps water clean longer, prevents mosquitoes from breeding, and attracts wildlife. If using a stagnant water feature, be sure to replace the water frequently.

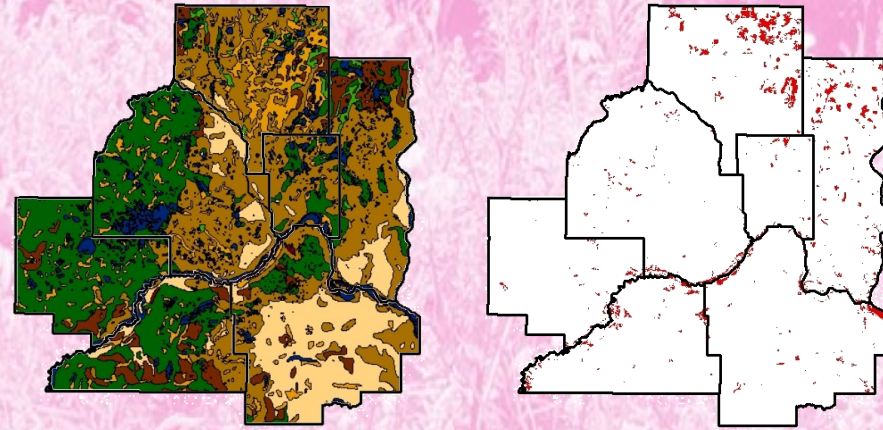


Eliminate Insecticides

Pollinator declines have been linked in part to widespread insecticide use. Products containing neonicotinoids and pyrethroids are particularly harmful to pollinators, attacking their nervous systems even at low quantities. Eliminating insecticides on your property helps ensure a safer habitat for bees and other pollinators.



Native Plant Communities



Native Plant Communities: Pre-Settlement to Present

The landscape around us contains a mosaic of ecosystems including oak savannas, tallgrass prairies, wetlands, and maple-basswood forests, each of which hosts diverse plant and pollinator communities. However, intact native plant communities occupy only 3.5% of the nearly 2 million acre seven-county metropolitan area. Restoring areas that reconnect these remaining intact ecosystems can help maximize habitat restoration benefits to pollinators and other native species.

Success Stories

As more residents adopt pollinator-friendly practices, many of Minnesota's insect populations are improving. These efforts also provide additional benefits that support many wildlife species while improving local soil health and water quality.

The Anoka Conservation District is involved in several efforts to increase habitat connectivity for pollinators and encourage diverse plantings of native flowers. One such effort is the *Lawns to Legumes* program, which provides cost-share funding and technical assistance to residents interested in establishing gardens supporting the Rusty patched bumble bee (*Bombus affinis*) and other at-risk pollinators.

To become involved in future pollinator projects with the Anoka Conservation District, visit our website for technical and financial assistance opportunities.



Bombus affinis in Anoka County

Anoka Conservation District
1318 McKay Drive NE, Suite 300
Ham Lake, MN 55304
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POLLINATORS

Helping Bees, Butterflies, and Other Beneficial Insects Thrive



Conservation Starts at Home

Prepared by the



Importance of Pollinators

Pollinators support the reproduction of approximately 85% of the world's flowering plants and 35% of global crop production. The majority of pollinators are insects, including bees, wasps, flies, beetles, ants, butterflies, and moths. Some bird and bat species are also pollinators.



Pollinators are keystone species in most terrestrial ecosystems, supporting plant reproduction and forming the foundation of food webs that support countless species and a thriving hunting, fishing, and recreating economy. Thus, the conservation of pollinating insects is critical to preserving both ecosystem biodiversity and agricultural production.

Pollinator Decline

The European honey bee, introduced to the Americas in the 1600s, is the most widely managed crop pollinator in the United States. However, the abundance of honey bee colonies has been in steady decline due to a phenomenon called colony collapse disorder.

Native insect pollinators also face a wide range of environmental stressors resulting from habitat loss and fragmentation, pesticide use, climate change, disease, and parasites. These stressors have contributed to declines in the abundance and distribution of several native pollinators, resulting in the absence of some once-common species across the state.

Minnesota residents have the opportunity to help combat some of these challenges by establishing a variety of pollinator-friendly practices on their property, encouraging others to do the same, and participating in community pollinator surveys.

Why Native Plants?

Planting native vegetation when creating pollinator habitat is recommended. Native plants co-evolved with the pollinators and other native species in the area, and thus are well adapted to living alongside each other in Minnesota's climate and soils.

Many native trees and shrubs are also great food sources for pollinators; one mature flowering tree can provide as much nectar and pollen as an entire pollinator garden. Incorporating a variety of flowering species into your garden provides pollinators with food resources throughout the growing season.



Plants for Pollinators



Bee Balm

Monarda fistulosa

Ht: 36"-48" Flower: Purple Bloom: June-August
Habitat: Full sun to part sun. Dry to moist soils.
Forest edge, savanna, or prairie.

Purple Prairie Clover

Dalea purpurea

Ht: 12"-36" Flower: Purple Bloom: June-August
Habitat: Full sun. Dry soils.
Savanna or prairie.



Pale Purple Coneflower

Echinacea angustifolia

Ht: 12"-48" Flower: Purple Bloom: July-August
Habitat: Full sun. Dry soils. Prairie.

Goldenrod

Solidago spp.

Ht: 24"-60" Flower: Yellow Bloom: July-October
Habitat: Full sun to part sun. Dry soils.
Forest edge, savanna, or prairie.



New England Aster

Symphyotrichum novae-angliae

Ht: 36"-72" Flower: Purple Bloom: August-October
Habitat: Part shade to full sun. Moist soils.
Wet meadow, forest edge, or prairie.

Joe Pye

Eutrochium spp.

Ht: 48"-72" Flower: Purple Bloom: July-September
Habitat: Full sun to part sun. Moist soils.
Wet meadow or along shorelines.



Leadplant

Amorpha canescens

Ht: 12"-36" Flower: Purple Bloom: June-August
Habitat: Full sun. Moist to dry soils.
Savanna or prairie.

Red Osier Dogwood

Cornus sericea

Ht: 6-12 ft Flower: White Bloom: Spring
Habitat: Full sun. Wet to moist soils.
Wet meadow, wooded swamp, forest edge, or prairie.



Basswood

Tilia americana

Ht: 60-130 ft Flower: Yellow Bloom: Spring
Habitat: Part sun to full shade. Wet to moist soils.
Forest.

Types of Pollinators



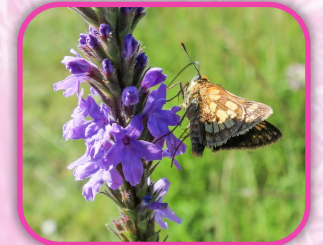
Native Bees

There are over 400 species of bees native to Minnesota, 70% of which nest underground and emerge at different times throughout the spring and summer months. Some species are social and live in hives, while others are solitary. Native bees alone support the production of approximately \$3 billion worth of crops annually in the United States and are a vital part of Minnesota's native ecosystems,

especially prairies. Reconnecting and reestablishing these prairie habitats is critical to supporting thriving bee populations and the plant communities dependent on them for pollination.

Butterflies and Moths

Minnesota is home to 150 species of butterflies and skippers and thousands of species of moths. 15 of these butterfly species are listed as endangered or threatened, and many others may have already gone extinct. When planting for butterflies, include habitat for all stages of life including host plants for egg laying and caterpillar food, nectar plants for adult butterflies, and protected areas such as tall grasses and shrubs on which butterflies can pupate and hide from predation.



Hummingbirds

Ruby-throated hummingbirds are the only native hummingbird species in Minnesota. They are especially attracted to tube or funnel-shaped red flowers, and because they have a very fast metabolism they must eat several times their weight in nectar every day. These hummingbirds nest in deciduous woodlands adjacent to open spaces such as streams and meadows, and migrate nearly

500 miles to overwinter in Central America. If supplementing native flowering plants with a hummingbird feeder, clean it frequently and only use refined white sugar.

Other Pollinators

There are several other native pollinators that are often overlooked, including many species of flies, ants, beetles, wasps, and even bats. Flies are especially important pollinators at times when bees are less active, and wasps provide additional benefits such as invasive pest control. Thus, adopting practices that promote healthy native habitats supports a diverse range of insects and other wildlife species that provide valuable ecosystem services.



What to do about nuisance insects?

Dealing with infestations of nuisance insects can be a challenge when striving for a pollinator-friendly yard. The need for insecticides can often be removed altogether with preventative methods such as eliminating sources of food waste, hanging fake wasp nests, and establishing habitat for birds and beneficial insects that consume pest species.

If insecticide use is necessary, opt for a product that is minimally toxic to pollinators, closely follow the label instructions, and use targeted spot treatment methods away from flowers at times when bees are not foraging, such as early mornings or late evenings. When in doubt, ask a professional for assistance.

Additional Plant Lists and Native Plant Suppliers can be found here:

<https://bluethumb.org/plants>

<https://www.minnesotawildflowers.info>

<https://www.dnr.state.mn.us/gardens/nativeplants/suppliers.html>