



Pollinator Habitats

Overview

A pollinator habitat is an area of permanent vegetation which is located in an agricultural landscape and can be placed on field edges, field middles, odd corners, or any location which is suitable. It is meant to provide wildlife food and cover, reduce soil erosion from water, and protect the quality of the water and soil. Pollinator habitats support pollinators including birds, bats, bees, butterflies and beetles, which carry pollen on their bodies from plant to plant which results in the transfer of genetic material for the reproduction of most flowering plant.

Why It Matters

- Animals pollinate over 75% of all flowering plants, including human food sources such as fruits, vegetables, nuts, squash and almonds.
- They play a vital role pollinating around 70-80 percent of flowering plants in the Midwest region, which contributes to seed production and environmental functions such as filtering storm water, providing wildlife habitat, and improving soil quality.
- Habitat loss, pesticide use, and other factors have contributed to the decline in native bee populations in recent years.

How to Provide Support

- Increase awareness about the issue among the community
- Protect and restore pollinator habitats



Making a Plan

Key considerations for establishing a pollinator habitat include an area which is away from pesticide use or any other disturbances which may impact pollinators, adequate water, food, and nesting sources, and natural passageways. At least three flowering species should be included in each bloom period to provide sufficient food source throughout the season. The Minnesota Board of Water & Soil Resources' Pollinator Plan (2017) includes instructions and information to maximize your pollinator habitat.

Pollinator Habitats in Solar Facilities

Pollinator habitats have potential to be established throughout solar facilities (i.e., under and around the solar panels), in undeveloped regions of the solar facility, or within adjacent off-site areas. Decisions regarding the type of pollinator habitat is dependent on the geographic region, which vary in abiotic processes, native vegetation, and insect pollinator communities.

Minnesota Board of Water & Soil Resources. (2017). Pollinator Plan.

Natural Resources Conservation Service. (2011). Pollinator Habitat: Conservation Reserve Program Job Sheet CP42. United States Department of Agriculture.

Pollinator Partnership. (2019, March 18). About Pollinators. Retrieved March 19, 2019, from <https://pollinator.org/pollinators>

Walston, L. J., Mishra, S. K., Hartmann, H. M., Hlohowskyj, I., McCall, J., & Macknick, J. (2018). Examining the Potential for Agricultural Benefits from Pollinator Habitat at Solar Facilities in the United States. *Environmental Science & Technology*, 52(13), 7566–7576. <https://doi.org/10.1021/acs.est.8b00020>

Pollinator Habitats

Cass Clay Community Snapshot
April 2019

INTRODUCTION

Pollinators play a vital role pollinating around 70-80 percent of flowering plants in the Midwest region, which contributes to seed production and environmental functions such as filtering storm water, providing wildlife habitat, and improving soil quality. However, habitat loss, pesticide use, and other factors have contributed to the decline in native bee populations in recent years.¹ Understanding the vital role that pollinators play in our ecosystem has sparked efforts in Minnesota and North Dakota to support and protect pollinators. Additionally, there are several pollinator habitat funding programs available.

INITIATIVES TO SUPPORT POLLINATORS IN MINNESOTA AND NORTH DAKOTA

Public Art Saint Paul: Bee Real Bee Everywhere. Promotes awareness and habitat for pollinating insects in Saint Paul's urban areas. The three sculptural pollinator sky rises act as a home and research site for native nesting bees, monitored by University of Minnesota's Bee Lab. The sites provide information and data on the patterns and preferences of wild, solitary pollinators in an urban environment.

http://publicartstpaul.org/project/bee-real-bee-everywhere/#about_the_project

University of Minnesota Bee Lab. The mission of Bee Lab is to promote the conservation, health, and diversity through research, education, and hands-on mentorship. They provide education on beekeeping, queen rearing, types of bees, plants for Minnesota bees, and much more. Research efforts focus on restoration ecology, pollination biology, and invasive plant management.

<https://www.beelab.umn.edu/>

The Longspur Prairie Fund Annual Bee Hunt. This event is one part research project and one part family prairie field trip bee scholar D. Bryan Bishop (Associate Professor, Concordia College). The bee hunt allows participants to photograph bees in their native environment on Ulen Prairie, and learn about pollinator ecology along with other aspects of the Red River Valley's natural history.

<https://www.longspurprairie.org/bee-hunt>

Pesticide Action Network North America. Works to replace hazardous pesticides with ecologically sound alternatives to ensure the transition to a viable society. The organization works to link local and international consumer, labor, healthy, environment and agriculture groups. Midwest office located in Minneapolis, MN.

<http://www.panna.org/>

¹ Minnesota Board of Water & Soil Resources. (2017). Pollinator Plan.

Pollinator Garden at the Moorhead Country Club. A group of Moorhead eighth-graders called the Hooting Wolves from Horizon Middle School is part of Destination Imagination working to plant a pollinator garden at the Moorhead Country Club. This project was developed as part of a service learning challenge with the intent to attract a variety of pollinators such as bees and hummingbirds.

<https://www.inforum.com/news/education/995153-Eighth-graders-heading-for-global-competition-with-plan-to-establish-pollinator-garden-at-Moorhead-Country-Club>

<https://youtu.be/2u4CFMgcQa0>

Clay County Community Solar Gardens. Clay County Renewable Energy Ordinance was discussed at the Clay County Planning Committee meeting in August 2018. Minnesota Statute (216B.1642 Solar Site Management) allows native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators in ground-mounted solar sites with a generating capacity of more than 40 kilowatts. In January of 2019, five community solar gardens were discussed and approved at the Clay County Planning Commission meeting.

<https://www.revisor.mn.gov/statutes/cite/216B.1642>

Minnesota Board of Water and Soil Resources (BWSR) Pollinator Initiative. Provides resources and guidance to conservation partners to incorporate pollinator habitats into their programs. This involves identifying programs and funding, working with BWSR programs, assessing and prioritizing project sites, selecting plants and seed mixes, preparing for planting, planting, maintenance, and community outreach.

<http://www.bwsr.state.mn.us/practices/pollinator/>

Plains Art Museum Buzz Lab 6.0 Teen Internship. This paid internship provides interns an opportunity to engage in learning, teaching, creating, sustaining, and advocating for the wellbeing of pollinators in a healthy ecosystem. Buzz Lab interns partner with scientists, artists, and teachers to discuss the importance of pollinators, participate in gardening and research in the Pollinator Garden at Plains Art Museum, and create works of public art.

<https://plainsart.org/buzz-lab-5-0-teen-intership/>

NDSU Publication - Bee-utiful Landscapes: Building a Pollinator Garden (H1811). This publication through North Dakota State University provides information for individuals regarding the importance of pollinators, bee identification, and the basics of planting a pollinator habitat. It provides guidance for implementing a pollinator garden, including wise pesticide use.

<https://www.ag.ndsu.edu/publications/lawns-gardens-trees/bee-utiful-landscapes-building-a-pollinator-garden#section-12>

NDSU Master Gardener Program. In spring of 2016, NDSU Extension Master Gardener provided \$500 grants to 16 groups of Master Gardeners across the state for cultivating pollinator gardens. The Master Gardeners obtained permission from local entities to plant pollinator gardens across the state with the intent to teach through outreach, beautify communities, and create safe havens for pollinator insects.

<https://www.ag.ndsu.edu/mastergardener/demogardens>

FUNDING PROGRAMS FOR POLLINATOR HABITATS

United States Department of Agriculture (USDA). The USDA offers technical support for farmers, ranchers, local USDA logo government, citizen groups, and others to develop pollinator habitats. Assistance may include maintaining and improving private lands and their management, protecting and improving water quality and quantity, and maintaining and improving the aesthetic appeal of private land, among other things.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/>

USDA Natural Resources Conservation Service. Environmental Quality Incentives Program works to help agricultural producers confront challenges while conserving natural resources including soil, water, and air. USDA conservation programs work to address farming and ranching issues such as drinking water protection, reducing soil erosion, and wildlife habitat, forests, and wetlands preservation.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>

<https://www.fsa.usda.gov/programs-and-services/conservation-programs/index>

Land Conservation Assistance Network. Provides links to information about government and federal land grants that are available, loan programs, and other funding sources, which aim to restore or buy land.

<https://www.landcan.org/Grant-and-Assistance-Programs/>

Agriculture Improvement Act of 2018. The Agriculture Improvement Act of 2018 (P.L. 115-334), known as the “2018 farm bill” will allocate seven percent (\$29 billion) to conservation efforts. All major conservation programs will continue, although some are modified. Two of the largest working land programs are reauthorized including the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP). Land retirement and easement programs has increased enrollment from 24 million acres in FY2019 to 27 million by FY2023. These programs provide federal payments to private agricultural landowners for accepting permanent or long-term land-use restrictions.

<https://crsreports.congress.gov/product/pdf/R/R45525>

<https://www.ers.usda.gov/agriculture-improvement-act-of-2018-highlights-and-implications/>

Local USDA Resources. Local USDA Service Centers for Cass County are located in Fargo and Valley City, along with Clay County in Moorhead and Detroit Lakes. The Fargo and Moorhead Service Centers include contacts for the farm service agency, natural resources conservation service, and conservation district. The Valley City and Detroit Lakes Service Centers include a contact for rural development.

<https://offices.sc.egov.usda.gov/locator/app>