

Habitat Enhancement Landscape Pilot boosts biodiversity, benefits at-risk species



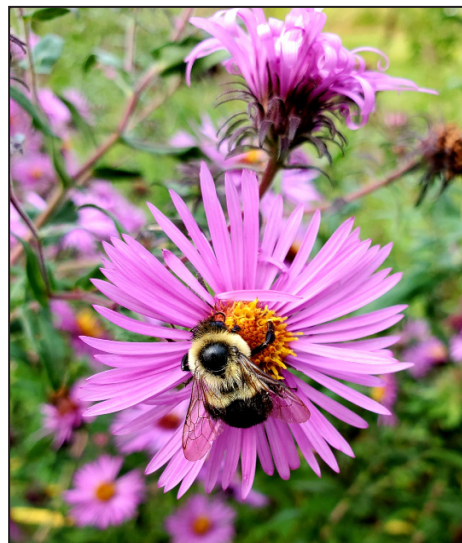
The Habitat Enhancement Landscape Pilot is made possible through an appropriation from the Environment and Natural Resources Trust Fund.



A new Minnesota Board of Water and Soil Resources (BWSR) program aims to improve habitat to address declining populations of pollinators.

The [Habitat Enhancement Landscape Pilot \(HELP\)](#) program was funded through the Environment and Natural Resources Trust Fund in 2021 to restore and enhance strategically located, biodiverse native habitats on conservation lands, natural areas and open spaces throughout Minnesota.

The program emphasizes helping pollinators and other beneficial insects — plus plant species — that are in decline. Secondary benefits include carbon sequestration, improved soil health and water quality, increased landscape resiliency, and the establishment of habitat corridors. Another key benefit involves testing innovative methods of habitat establishment

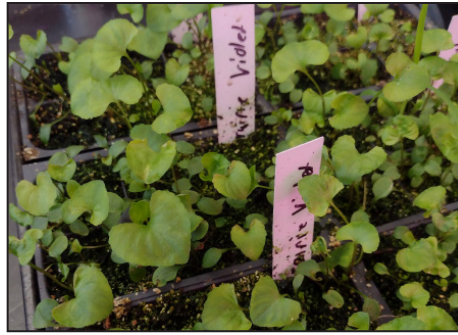


and management, the positive results of which will be made widely available via BWSR's [What's Working for Conservation](#) webpage.

Among those eligible to apply for HELP are soil and water conservation

Above: A yellow-banded bumblebee, a declining Minnesota bumblebee species, clings to a goldenrod. **Photo Credit:** Tony Ernst

Left: A common Eastern bumblebee visits a New England aster. **Photo Credit:** Dan Shaw



At the Lake Middle School in Woodbury, a prairie bloomed, **left**; prairie violets sprouted, **middle**; and students collected seeds, **right**. Photo Credits: Tony Randazzo, SWWD

districts, watershed districts, watershed management organizations and counties. This cost-share grant program provides funding for projects on conservation easements, nonprofit conservation preserves, city and county parks, and protected natural areas.

Declining numbers of bees, butterflies, dragonflies and other at-risk species that support ecosystems and crop production have raised significant concerns among scientists and conservation professionals both locally and globally. Minnesota's state bee — the rusty patched bumblebee — has declined by about 80% over the past 20 years. Eight of the state's 24 bumblebee species are in significant decline, according to the [Union of Concerned Scientists](#).

"We may be most concerned about what we don't know, which is the status of many of Minnesota's 500 native bee species and many other beneficial insects that support agriculture and ecosystems," said BWSR Senior Ecologist and Vegetation Specialist Dan Shaw.

The need to support at-risk species led to the [BWSR Living Landscapes](#)

[Initiative](#), which strives for innovative ways to establish and enhance biodiversity across BWSR's programs. The BWSR Living Landscapes Initiative expands upon BWSR's 2016 Pollinator Initiative, recognizing that the state needs to address declines in a wide range of plant and animal species, build partnerships and establish important habitat corridors. New BWSR programs — including HELP, [Lawns to Legumes](#) and [Minnesota Habitat Friendly Solar](#) — now support the Living Landscapes Initiative.

To promote innovative approaches, the HELP program includes a wide range of habitat enhancement and restoration activities. Examples include site preparation, invasive species removal, seedling production, rescuing plants that would have been destroyed by development, inter-seeding, mowing, prescribed burning, conservation grazing and conservation haying.

Non-herbicide methods of site preparation and management are preferred. The Xerces Society's "[Organic Site Preparation Methods](#)" guide serves as a key resource in that regard.

Locating projects away from pesticide exposure is also encouraged. Project leaders should consider ways to minimize the effects of pesticides by following the "[Protecting Conservation Plantings from Pesticides](#)" fact sheet produced by BWSR and the Xerces Society. Additional key resources being used for the program include a new [HELP conservation plan template](#), BWSR's [Native Vegetation Establishment and Enhancement Guidelines](#) updated in fall 2022, and BWSR's [Pollinator and Biodiversity Toolbox](#).

The 15 organizations currently funded through the program are working on many innovative approaches. In addition to enhancing larger natural areas, many projects are being implemented at parks, nature centers, schools and arboretums — where they will educate in addition to establishing habitat.

The HELP program was based, in part, on research that showed pockets of highly diverse habitat can have a significant benefit for pollinators and other wildlife.

"Nodes of high diversity are particularly beneficial when they are part of a matrix of habitat plantings

across landscapes. This approach to sustaining biodiversity is particularly important at a time when we see decreasing plant diversity across our landscapes from climate change, invasive species, development and many other causes," Shaw said.

To accomplish the goals of boosting biodiversity, the program is funding new floral-rich plots or riparian plantings, converting existing non-native cover to native vegetation, and enhancing prairie, savanna, wetland and shoreline communities.

In Woodbury, a HELP grant is being used to enhance and diversify recently restored prairie and savanna areas at Lake Middle School.

The Campus Greening Program, a partnership between South Washington County Schools and the South Washington Watershed District (SWWD), is using an ecosystem approach to address stormwater quality by expanding natural areas on campuses. The program has converted, enhanced and restored approximately 50 acres of prairie, savanna and woodland on seven campuses including Lake Middle School.

The Lake Middle School prairie and savanna are in their fifth year of restoration and, like many urban restoration sites, could benefit from higher plant diversity. Project planners are using HELP funding to enhance the plantings with species that are most often found in remnant prairies, as well as species that support Species of Greatest Conservation Need (SGCN). The watershed and school district have installed greenhouse shelving in four classrooms. Students have grown more than 4,000 potted plugs of 34 different species of flowering plants to put in the ground this spring. Teachers, students and staff are collaborating to identify the best techniques and species. In 2024, they will refine the program to enhance the learning experience. Future steps for the project will include working with contractors to reduce weed competition through burning, mowing and integrated pest management; and further enhancing the natural areas to support the additional diversity added through the program.

“The HELP grant has provided the opportunity to support a wider range of pollinators through the enhancement of existing restored prairie, and to do so in a way that brings students and staff directly into the restoration



Above: A prescribed burn kick-started the restoration project at Grams Regional Park near Zimmerman in July 2022. **Below:** Goats grazed in Grams Regional Park to manage the park’s overgrown understory. Conservation grazing eliminates the need for herbicide, reduces unwanted plants, recycles nutrients and helps reduce the quantity of invasive species. **Photos courtesy of Sherburne SWCD**



process,” said SWWD watershed restoration specialist Tony Randazzo, who managed the Woodbury projects.

BWSR awarded a HELP grant to Sherburne Soil and Water Conservation District (SWCD) in partnership with Sherburne County Parks & Recreation to restore 24 acres of native prairie habitat at Grams Regional

Park near Zimmerman. Grams Regional Park is one of the most visited in the county parks system.

“Since the first time I laid eyes on the landscape of Grams Park, I have wanted to find a way to establish native prairie on the rolling hills of this expansive field,” Sherburne County Parks Coordinator Gina Hugo said. “The HELP grant provided us with

the perfect opportunity to work with partners and develop a creative way to prepare the site without chemicals and threat of erosion.”

The parks department and SWCD, with guidance from the Xerces Society, BWSR and the U.S. Fish & Wildlife Service, selected grazing as a non-chemical treatment before seeding with a diverse mix of native grasses, sedges and forbs.

“This approach may mean a slower establishment, but with the benefits of protecting people and pollinators, we are content to allow the prairie to evolve more slowly and implement management that makes sense based on how the system responds,” Hugo said.

After a midsummer burn, sheep and goats were brought to the park in August and October 2022 to graze on the new flush of brome grass. The park was seeded in spring 2023; another grazing is planned to help ensure seed-to-soil contact, and to remove weeds.

“It has been encouraging to see excitement about this program across the state. We are facing big challenges, but strong partnerships and innovative approaches will help us support biodiversity and the species that need our help,” Shaw said.