

Group convenes to set priorities for managing, protecting native vegetation



BWSR Senior Ecologist and Vegetation Specialist Dan Shaw shares his perspective on priorities set by the state's Native Vegetation and Biodiversity Advisory Team. He is the team's project coordinator.



Shaw

Native plants play a key role in protecting and restoring Minnesota landscapes by offering a wide range of benefits to ecosystems, wildlife, human health and local economies.

However, native plant diversity is in decline for several reasons including encroaching development, the impacts of a changing climate, changes to land management practices and the presence of invasive species, pollutants and excess nutrients.

Today, about [1% of Minnesota's native prairie remains](#) compared with pre-European settlement levels, while forested land in the state has decreased from [31.5 million acres to 18 million acres](#). According to the Minnesota Department of Natural Resources (DNR), Minnesota has [lost 40% to 50%](#) of its original natural shorelines. The DNR lists [90 native Minnesota plant species](#) as endangered or threatened; others are

being considered for listing.

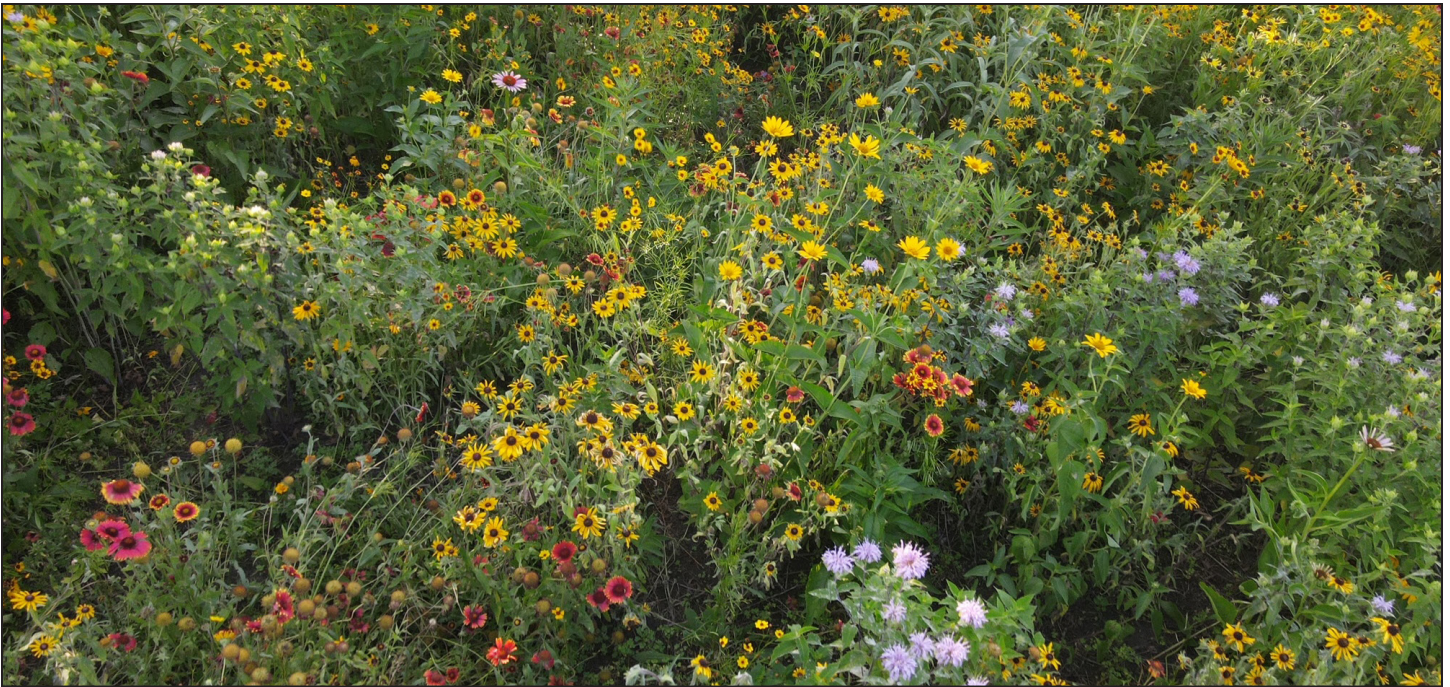
In spring 2023, the Minnesota Legislature passed a bill directing the Minnesota Board of Water and Soil Resources (BWSR) to “work with state and federal agencies, Tribal Nations, academic institutions, local governments, and stakeholders to foster mutual understanding and provide recommendations for establishing and enhancing native vegetation in order to provide benefits for water quality, soil conservation, energy conservation and climate adaptation, resiliency and mitigation.”

In 2024, BWSR convened an advisory team of about 100 conservation partners from state agencies, Tribal Nations, conservation organizations and seed suppliers to set priorities for establishing and enhancing native vegetation in Minnesota.

Conservation professionals witness changes to our natural landscapes firsthand as they visit project sites. They see fewer plant species, insects and birds, and declines in many other species. Finding common ground among conservation professionals and other stakeholders can be challenging — but the conservation community is united by a common understanding of the mounting challenges facing landscape restoration and is motivated to avoid

From left: *Rough blazing star; prairie sunflower (surrounded by goldenrod), and common milkweed are among the native plant species that contribute to landscape restoration and protection efforts in Minnesota.*

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A gardener planted this pollinator meadow in Hadley with support from the Lawns to Legumes Program. The BWSR-administered program offers workshops, coaching, planting guides and cost-share funding for installing pollinator-friendly native plantings in residential yards. **Contributed Photo**

losing more species.

Conservation partnerships in Minnesota have made significant gains in restoring and managing landscapes and protecting endangered species — from rare plants to trumpeter swans. We know we can be effective through thoughtful planning, innovation, and partnerships focused on managing landscapes.

The Native Vegetation and Biodiversity Advisory Team met twice in 2024. A policy-focused subcommittee met several times to refine priorities.

The following priorities represent key components of the advisory team’s vision:

Build capacity to address ecological ecosystem

threats: There is an urgent need for habitat protection and management to address climate change and habitat loss. Advisory team members are committed to pursuing funding sources for long-

term management of native plant communities, as well as staffing to aid Tribal Nations, soil and water conservation districts, watershed districts and other local partners’ protection and restoration efforts.

Build and maintain biodiversity across

landscapes: Efforts are needed to establish prairies, manage forests, restore wetlands and establish habitat on solar sites, along roadsides and in utility corridors. We need to find innovative ways to incorporate biodiversity across landscapes. Fortunately, residents across Minnesota are motivated to be a part of the solution by supporting large-scale restoration and biodiversity efforts. One example: Minnesota residents have installed over 10,000 pollinator plantings in recent years through BWSR’s Lawns to Legumes Program.

Make landscape connections: Connected

landscapes build resiliency and provide refuge for pollinators and other at-risk species. Managing intact natural habitats is an important piece of landscape preservation since these habitats are essential for wildlife populations. However, we also need to establish new habitat corridors across landscapes, which can help mitigate the effects of climate change.

Restore multiple landscape

benefits: Projects need to rebuild ecological function and restore multiple landscape benefits such as clean water, flood retention, wildlife habitat, climate adaptation and mitigation, in addition to economic benefits.

Many working lands approaches such as haying and grazing support productive land uses that are compatible with restoration and protection goals. Linking ecosystem restoration efforts with watershed-scale planning and protection

will also play an important role in promoting landscape restorations that maximize multiple landscape benefits, support local economies and improve water quality.

Increase seed and plant production and collection:

There is a need for conservation professionals to identify opportunities to collect seed of species unavailable or in short supply at native plant nurseries. Increased seed collection and seedling production from more diverse genetic sources from Minnesota and adjoining states is needed to help ensure the resiliency of plantings as the climate changes.

Continue discussions about appropriate seed and plant

sources: Further guidance is needed about how far away seed should be gathered to ensure that plants will be resilient to Minnesota winters, and to prevent the introduction of invasive species from other geographic areas. Local



Solar installations that incorporate native plants, such as this site in Annandale, can help augment habitat. BWSR's Habitat Friendly Solar Program and Habitat Friendly Utilities Program support integrating biodiversity via native plants in tandem with solar projects and across utility corridors. **Photo Credit:** BWSR

technical teams should assist migration efforts using available state, federal, and Tribal resources as guidance.

Build relationships with Tribal communities: Tribal communities have valuable knowledge about how their ancestors managed their lands for thousands of years. Climate change is affecting plants and ecosystems that the Ojibwe, Dakota and other Indigenous peoples have relied on for centuries. Historically, Tribes have used native species — such as wild rice, blueberries, ostrich fern, and hazelnut — for subsistence. Plants such as sweetgrass, prairie sage and white cedar were used in ceremonies and for medicine, while black ash and cattail were used to make baskets and other practical items.

The advisory team acknowledges that it needs to treat this knowledge as a gift and that it must build respectful relationships with Tribal communities before requesting expertise and

knowledge. We believe these relationships can provide a deeper understanding and appreciation for traditional land-based practices that may be incorporated into contemporary land management.

Restore key landscape processes: We need to build capacity to restore and mimic key landscape processes such as prescribed burning and conservation grazing, which are critical to the ecological integrity of many plant communities. This will require increased capacity to conduct prescribed burns and provide infrastructure for grazing. To accomplish this, more training is needed for professionals who conduct prescribed burns.

Invasive species will continue to increase as they are effective at dispersal, giving them an advantage in adapting to climate change. We will need to combine practices such as water level management, prescribed burning, prescribed grazing,

mowing and haying to replicate natural disturbances and promote diversity, function and resiliency.

Pursue innovative restoration and rewilding strategies: We need to be innovative as we continue to improve landscape restoration and management practices. That might include using temporary covers to rebuild soil health, supplemental seeding to increase plant diversity and cover mixes to suppress invasive shrub seedlings. It might involve extended site preparation time, adding more cool-season grasses to suppress weeds, enhancing soil microorganisms, adopting culturally focused burning practices, cooperative prescribed burning, using non-herbicide site preparation methods, and haying and grazing to reduce nitrogen in ecosystems.

New information will be needed about bioengineering practices, urban development on poor soils, rewilding highly

disturbed landscapes, utility corridor enhancement to complement BWSR's Habitat Friendly Utilities Program, peatland restoration methods, diverse woodlands management, and managing volunteers.

Expand outreach and equity efforts: Further education and outreach is needed about how Minnesotans can play a role in establishing and managing resilient native plant communities. For example, Minnesotans could plant native gardens; restore prairies, forests, savannas and wetlands; and support conservation organizations. Educating young people through outreach and habitat projects at schools will be essential, as they are the next generation who will carry on this important work to preserve and enhance native landscapes across Minnesota.

BWSR staff members write and produce *Snapshots*, a monthly newsletter highlighting the work of the agency and its partners.