



Ecology Update

News you can use from BWSR's staff about the ecological health of Minnesota's landscapes.

Summer 2017

Updates on BWSR Programs and Resources

Action on Pollinators

Following development of Governor Dayton's [Executive Order \(16-07\)](#) that is focused on pollinator protection, state agencies have been developing a "[Minnesota State Agency Pollinator Report](#)" to coordinate efforts and a Governor's Committee on Pollinator Protection has been formed to guide future direction. BWSR is also in the process of updating their [Pollinator Toolbox and Webpage](#).



Solar site planted with prairie vegetation

Solar Guidance for Pollinators

About a year ago, new legislation was passed to allow permit owners of large, ground-mounted solar sites to publicly declare them beneficial habitat for pollinating insects. Solar developers need to meet standards on a new [pollinator assessment form](#) developed by BWSR to claim pollinator benefits. [DNR guidance](#) for solar projects has also been developed to guide the restoration of prairie vegetation as part of these projects. [Seed mixes](#) have been developed for the establishment of prairie vegetation in solar sites and a wide range of conservation partners, consultants and seed vendors have been collaborating on recent projects. Local ordinance that promote pollinator habitat on solar sites is also playing an important role.

"Pollinator Zone" Mapping

BWSR is currently working with a graduate student and a wide range of conservation partners to develop pollinator zone maps for Washington County. These maps will focus on areas of pollinator refuge, corridors and plantings in a larger matrix across the county to help guide future habitat efforts. The mapping effort will also help guide future mapping efforts across Minnesota.



Lakeshore planting in Washington County

Pollinator Seed Packets

There is a wide range of pollinator seed packets that are being distributed to landowners in Minnesota and across the United States, unfortunately many of these mixes include non-native species that could lead to management problems. A partnership of conservation professionals has developed a

[fact sheet](#) as a first step to conducting outreach to gardeners and to groups developing and distributing seed packets.

Minnesota CREP

Minnesota is implementing a [Conservation Reserve Enhancement Program](#) (CREP) that will directly address resource problems with strategic, long-term solutions. Farmers and agricultural landowners who choose to voluntarily enroll in the CREP will not only provide significant progress for the state's water quality goals and habitat needs, but will also be part of a national model for local-state-federal partnerships. This program continues to develop with a goal of restoring around 60,000 acres over five years while providing important habitat for pollinators and other wildlife.



Buffer Planting

A new fact sheet about "[What to Plant in Buffers](#)" summarizes planting options for Minnesota's Buffer Law. This fact sheet is a companion to BWSR's [Buffer Establishment and Management Toolbox](#) that was developed to help guide efforts to establish buffers and consider ways to combine ecological functions and other landscape opportunities and to provide information about local decision making such as when non-native vegetation can be approved for buffer projects. New documents have been developed about alternative practices for the Buffer Program [website](#).

New Native Seed Mixes

BWSR has developed around 45 new "[pilot seed mixes](#)" that focus on pollinator habitat as well as a wide range of conservation uses. Some of the new mixes have been revised following additional discussions with conservation partners. We are looking for partnership opportunities around the state to test these new mixes. These new mixes, as well as the current state mixes, are intended to be a starting point for project planning and to be adapted as needed for specific site conditions.



Wetland Restoration

Information continues to be added and updated in the [Minnesota Wetland Restoration Guide](#). A new technical guidance sheet on incorporating pollinator habitat into wetland restoration projects is being developed and will be added to the guide this fall.

Minnesota Public Drainage Manual

The [Minnesota Public Drainage Manual](#) (MPDM) has been updated. The manual is used by a variety of practitioners as a practical guide for navigating Minnesota's public drainage law process. The manual was first published in 1991 and had not been updated since its original publication in a three-ring binder. Since that time, there have been changes to the governing statutes, judicial decisions, and advances in technology that have been incorporated into the MPDM.

Featured Plants

BWSR's monthly [featured plant](#) articles have continued focusing on high quality pollinator species (44 pollinator species are in the archive) and will continue to focus on this topic through next spring. This month's featured plant is Common Blue Violet.

A recent featured plant article on [High bush cranberry](#) initiated discussion about the difference between the native and non-native species of this plant, as a European species is often sold in the nursery trade. As there are concerns that the two species can interbreed, influencing native populations, so it is important that only the native species is planted for conservation projects.



Common Blue Violet

What's Working

New information has been added to BWSR's [What's Working](#) webpage about pollinator habitat. New content is always welcome (send information to dan.shaw@state.mn.us).

Featured Information from the topic of "[Pollinator Habitat](#)"

Herbicide Free Methods: Solarization is one method that the Xerces Society and others have been demonstrating in the Upper Midwest in recent years. The goal of solarization is to trap heat under plastic, raising the temperature of the soil high enough to kill existing vegetation and also impact the viability of weed seeds. Solarizing the existing vegetation with clear UV stabilized plastic is an effective way to reduce weed competition on small patches of land ($\leq 1/4$ acre) in full sun (Sarah Foltz Jordan, Xerces Society). Additional information about solarization is provided in the document.



Solarization with clear plastic

Palmer Amaranth

BWSR's [Native Vegetation Establishment and Enhancement Guidelines](#) have been updated with new content on the invasive weed [Palmer Amaranth](#) (An invasive type of pigweed). For any BWSR or LCCMR funded project's seed vendors are required to provide proof to project managers/conservation staff that they have done genetic tests for any Pigweed seeds in their seed samples to ensure that the pigweed is not Palmer Amaranth. Conservation staff need to ensure that this information is provided. This applies to native mixes as well as any non-native mixes that will be used to meet Minnesota's Buffer Law. Seed vendors are also being asked to provide a seed tag once a mix is selected for a project that shows any weed seeds that were identified in seed samples for the mix.

Discussions are also underway about any additional assurance that may be needed for seed that is coming from counties within surrounding states that have populations of Palmer Amaranth.

Landscape Resiliency

A landscape resiliency toolbox is being developed by BWSR to provide guidance about ways to maintain landscape resiliency to climate change and a wide range of other landscape stressors. A draft of the toolbox has been developed and BWSR is looking for professionals that are interested in reviewing the document. If you are interested please contact Dan Shaw at dan.shaw@state.mn.us



Biomass/Biofuels

The legislature appropriated funds for BWSR to develop a program plan and feasibility study to determine how a program could be designed and implemented to incent the establishment and maintenance of perennial crops for use in biomass processing facilities. The study and stakeholder work will determine how to efficiently implement a pilot program to match perennial and cover cropping biomass establishment and harvest for use in processing facilities producing advanced biofuels, biobased chemicals, or thermal and electrical energy. Visit <http://www.betterenergy.org/blog/biomass-bright-spot-2016-minnesota-legislative-session> to learn more details.

Other News You Can Use

Monarch Population Update

New information is available about the status of [Monarch populations](#) showing a 27 percent decrease from last year's population partly due to a severe late winter storm in Mexico. BWSR is a recent member of the Monarch Joint Venture, a partnership working to restore Monarch populations.



Monarch on Meadow Blazingstar

Rusty Patch Bumblebee Listing

The [Rusty Patch Bumblebee](#) was recently listed as an endangered species by the United States Fish and Wildlife Service. The Rusty Patched Bumblebee is one of 47 bumble bee species found in North America. Before the mid- to late-1990s, it was considered abundant across a broad geographic range. Conserving remaining populations of the rusty patched bumble bee is key to preventing its extinction.



Rusty Patched Bumblebee

Noxious Weed Fact Sheets

The Minnesota Department of Agriculture has been developing fact sheets for each of the species currently on the Noxious Weed List. Visit their [Noxious Weed Webpage](#) to find an updated list of species as well as these fact sheets.



Palmer Amaranth seedling