

Green blueprint: Developing new seed mixes



The Pollinator Plots Southeast state seed mix contains more than 30 native plant species including, clockwise from top left, common milkweed, New England aster, smooth aster, stiff goldenrod, lead plant and Canada milk vetch. Designed for conservation pollinator plantings in southeastern Minnesota, the mix is one of 12 being reviewed by a group of more than 90 stakeholders. **Photo Credits:** BWSR

State seed mix updates offer options for pollinator habitat, climate change mitigation, landscape resiliency

The Minnesota Board of Water and Soil Resources (BWSR) is working with partners to update more than 70 state seed mixes that will diversify options for conservation restoration, protection and habitat projects.

State seed mixes contain a variety of native species designed to achieve a specific purpose. Some target specific conservation goals, such as stabilizing streambanks, rehabilitating wetlands, implementing cover crops or creating pollinator habitat. Others suit specific ecological features and conditions, such as deep marshes, forest groundcover and wet or dry prairies.

According to BWSR Senior Ecologist

and Vegetation Specialist Dan Shaw, climate adaptation, climate mitigation and landscape resiliency are taken into consideration for each mix.

For example, stormwater mixes are developed to manage the extreme precipitation events that are becoming more frequent because of climate change.

Local conservation staff can tailor mixes to specific site conditions. For example, wetland mixes are commonly adjusted to account for existing species, or for existing seeds that may germinate once sufficient water levels return.

Among those contributing to the

update are state, federal and local agencies, tribal nations, nonprofits, consultants and landowners.

The mixes serve as a sort of menu for the conservation professionals and landowners who order seeds from native seed vendors across the state. Shaw said Minnesota is fortunate to have well-established companies that grow a wide range of native plants for seed.

In Minnesota, most of the acreage where state seed mixes are planted consists of conservation prairie plantings, road ditches and wetland mitigation project sites. Meanwhile, plans to incorporate state seed mixes

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— Dan Shaw, BWSR senior ecologist and vegetation specialist

into several large habitat solar projects and pollinator plantings are being developed.

The recent seed mix revisions mark the first update to the primary state seed mixes in more than 10 years. BWSR started working with Minnesota Department of Transportation (MnDOT) and Minnesota Department of Natural Resources (DNR) staff in about 2006 to develop state seed mixes — a collaboration that produced a catalog of more than 30 standard state seed mixes. Ten years later, about 40 experimental pilot mixes were developed. Standard mixes consider common scenarios such as prairie restoration and forest protection. Pilot mixes focus on emerging uses for native plants, such as incorporating beneficial vegetation into solar projects, landfill caps, lawn alternatives and pollinator plantings.

“As a conservation community, we are facing significant challenges as we

work to address the loss of biodiversity in landscapes and natural areas across Minnesota,” Shaw said. “These mixes represent our collective experience and knowledge, and act as models for conservation project planning — providing a blueprint for how native plants can be effectively incorporated into a wide range of landscapes.”

More than 90 stakeholders from 40 organizations provide input and help guide decision making during the ongoing revision process. This group — whose members represent cities, counties, conservation districts, watershed districts, tribes, nonprofits, state and federal agencies and seed vendors — began revising state seed mixes in January after a virtual kickoff meeting.

Stakeholders are currently reviewing 12 pollinator mixes.

Wetland, prairie, woodland and other types of mixes

are slated for revision in the near future. Besides tweaking the mixes themselves, the group is developing fact sheets that will guide site preparation, planting and management activities for each mix. The partners also help to update BWSR’s Native Vegetation Establishment and Enhancement Guidelines, which deal with all vegetation-related aspects of BWSR’s programs and initiatives.

“The goal is to develop a complete package of information for each seed mix to help guide selection of mixes, adapting mixes for site conditions, and their ultimate planting and management,” Shaw said.

Updated pollinator seed mixes will relate to BWSR’s Lawns to Legumes program, which offers grants, workshops, coaching and planting resources for creating pollinator habitat in residential spaces. Shaw said he expected the new mixes will play a role in

developing the Pollinator and Beneficial Insect Strategic Habitat program, a new program created via legislation this year.

Individual seed mix lists and their fact sheets will appear in one document on BWSR’s Seed Mix webpage.

Shaw said one long-term goal for the seed mix project is to develop an interactive tool that contractors, local governments and landowners can use to adapt existing seed mixes to fit specific site conditions and program requirements.

“We are also looking for opportunities to develop partnerships to monitor mixes over time and determine if they are meeting project goals — this would help guide future updates,” Shaw said. “Ultimately, we will need to keep updating our resources to protect and restore biodiversity as we gain new information and identify new ways that we can benefit at-risk species.”