



November 2022 Environmental Quality Board meeting packet

Wednesday, November 16, 2022 | 1:00–4:00 p.m.

Join in person or online

- In person: [520 Lafayette Road, St. Paul, MN 55155](#), lower level conference rooms
- [Join online](#)

Participating in meetings

Attending in person

The Environmental Review Implementation Subcommittee (ERIS) will convene its meeting in person in the lower level conference rooms at the Minnesota Pollution Control Agency St. Paul office building. All visitors must sign in at the front desk. Transportation options:

- Bicycle: Visit the [Saint Paul Bike Map](#) webpage for route information. Outdoor bicycle parking is available to the left of the front doors near the loading dock.
- Transit: Use [Metro Transit's Trip Planner](#) to determine the best routes and times.
- Car: You may park in a Visitor Parking space in the parking lot just outside the front door, or park in one of the visitor lots. The visitor lots are the Blue Lot (Olive St. and University Ave.) and the Jupiter Lot (on Grove St. across from the Ramsey County Law Enforcement Center); please see the [parking map](#). Parking in these lots is free of charge. You must register your vehicle at the front desk upon arrival.

Attending virtually

Members of the public may join the meeting virtually using the Webex link above. Please review the [Guide to Webex Participation](#) for additional information.

Accessibility

Please contact Environmental Quality Board (EQB) staff at least one week prior to the event at info.EQB@state.mn.us to arrange an accommodation. Meeting materials can be provided in different forms, such as large print, braille, or on a recording.

Public engagement opportunities at EQB meetings

EQB encourages public input and appreciates the opportunity to build shared understanding with members of the public. The opportunities for public engagement for this meeting are below.

Oral public comment

In this meeting, EQB will accept oral public comment during agenda items 4 and 5.

Procedure and guidelines for giving oral public comment:

- If you wish to speak:
 - In person: sign up at the welcome table before the meeting starts.
 - Virtual: when prompted, use the “raise hand” feature in Webex, located at the bottom of your screen.
- Your remarks will be limited to two (2) minutes. When necessary, the chairperson may limit commenters’ time for remarks to ensure there is equal opportunity for the public to comment.
- When the chairperson calls on you to speak:
 - Introduce yourself before beginning your comment.
 - Please keep your remarks to those facts which are relevant and specific, as determined by the chairperson, to the agenda item at hand.
 - Please be respectful of board members, staff, and other meeting participants. Avoid questioning motives. The chair, vice-chair, or other presiding officer will not tolerate personal attacks.
 - Please note that the chair will use their discretion for directing public comment to ensure the board’s ability to effectively conduct business.

Written public comment

You may submit written comment to EQB by emailing your letter to info.EQB@state.mn.us or mailing to: Environmental Quality Board, 520 Lafayette Road, Saint Paul, MN 55155. Comments must be received by EQB staff **by noon the day before the meeting**.

Staff will compile letters, make them available to members and the public online, and attach them to the public record. Any written comments received after this deadline will be included in the next EQB meeting packet.

Agenda

1. Welcome and roll call

- Nancy Daubenberger – Chair EQB, Commissioner, Department of Transportation

2. Approval of consent agenda

- Meeting minutes from the September 21, 2022, EQB meeting (packet page #4)
- Proposed agenda for the November 16, 2022, EQB meeting (packet page #3)

3. Executive Director's report

Erik Cedarleaf Dahl – Interim Executive Director, EQB

4. Approval of 2022 Minnesota State Agency Pollinator Report and discussion about the pollinator action framework (decision item)

The board will hear a presentation about the 2022 Minnesota State Agency Pollinator Report and the progress to develop an action framework to protect pollinators in Minnesota. The board will discuss next steps for the framework development process and will consider resolution to approve the 2022 Minnesota State Agency Pollinator Report (packet page #7).

Presenter: Rebeca Gutierrez-Moreno, State Pollinator Coordinator, EQB

Materials enclosed:

- Third proof of the 2022 Minnesota State Agency Pollinator Report (packet page #9)
- Draft resolution to approve the 2022 Minnesota State Agency Pollinator Report (packet page #7)
- Draft matrix of the pollinator action framework (packet page #27)

Public comment on Pollinator Report

EQB welcomes public comment on agenda item 4. Please see guidance and procedures on page 2

5. Discussion on the 2023 Environmental Congress

The board will discuss the intentions and format of the 2023 Environmental Congress event. The Environmental Congress is an EQB-hosted event that brings people together to learn about, discuss, and advance action to improve Minnesota's environmental quality.

Presenter: Faith Krogstad, Engagement and Communications Director, EQB

6. Public Comment

EQB welcomes public comment. Please see guidance and procedures on page 2.

7. Closing & adjournment

September 2022 Environmental Quality Board meeting

Wednesday, September 21 from 1 – 4 p.m.

In person: 520 Lafayette Road, St. Paul, MN 55155, lower level conference rooms

Minutes (draft)

1. Welcome and introductions

Chair Nancy Daubenberger called to order the regular meeting of the environmental quality board.

Members present: Grace Arnold, Peter Bakken, Joseph Bauerkemper, Nancy Daubenberger, Julie Goehring, Rylee Hince, Mehmet Konar-Steenberg, Paul Nelson, Thom Petersen, Sarah Strommen, Gerald Van Amburg

Proxies: Daniel Huff for Jan Malcolm, Kevin McKinnon for Steve Grove, and Sue Vento for Charles Zelle

Excused: Steve Grove, Katrina Kessler, Jan Malcolm, Nicholas Martin, Alice Roberts-Davis

2. Approval of consent agenda

- Meeting minutes from May 18, 2022, Environmental Quality Board meeting.
- Preliminary agenda for September 21, 2022, Environmental Quality Board meeting.

Motion: Mehmet Konar-Steenberg moved the consent agenda, Julie Goehring seconded. Motion carries with an unanimous voice vote.

3. Executive Director's report

Erik Cedarleaf Dahl – Interim Executive Director, EQB

4. Update on climate change and water in Minnesota

Dr. Kenneth Blumenfeld, Senior Climatologist from the Minnesota Department of Natural Resources, gave a presentation to break down observed trends in Minnesota's climate to its essential points, particularly emphasizing the ongoing changes in the quantity, timing, and intensity of precipitation, the rapid rate of winter warming, and how these changes vary across the state.

This presentation gave context for the ongoing work of the 2020 State Water Plan implementation, which focuses on the intersection of water and climate change, as well as Minnesota's Climate Action Framework.

5. Update from the Climate Change Subcabinet on Minnesota's Climate Action Framework

Craig McDonnell and Frank Kohlasch from the Minnesota Pollution Control Agency gave an update on the release of the Minnesota's Climate Action Framework, which outlines the body of work needed to build a carbon-neutral, resilient, and equitable future for Minnesota. The Climate Change Subcabinet developed the framework in response to Executive Order 19-37. Membership of the Subcabinet includes EQB's executive director and leaders of all state agencies represented on the board.

6. Update on 2020 State Water Plan implementation

A group of presenters gave a progress update on the [2020 State Water Plan](#). A panel of people working on the plan was available for answering if the board had questions.

Project leads

- Erik Cedarleaf Dahl – Interim Executive Director, EQB
- Suzanne Rhees – Special Projects Coordinator, Board of Water and Soil Resources

Panel:

- Alycia Overbo – Drinking Water Strategic Initiatives and Communications Planner, Department of Health
- Randall Doneen – Conservation Assistance and Regulation Section Manager, Department of Natural Resources
- Jeff Berg – Water Policy Specialist, Department of Agriculture
- Andrea Hendrickson – State Hydraulic Engineer, Department of Transportation
- Melissa King – Water Programs Coordinator, Board of Water and Soil Resources
- Jennifer Kostrzewski – Environmental Analyst, MCES Water Resources Planning, Metropolitan Council
- Eric Wojchilk -- Planning Analyst, Local Planning Assistance, Metropolitan Council
- Lanya Ross – Environmental Analyst, MCES Water Supply Planning, Metropolitan Council
- Pooja Kanwar – Water Policy Consultant, Depart of Natural Resources
- Jeff Risberg – Planning Director, Impaired Waters Program, Minnesota Pollution Control Agency
- Laura Milberg – Climate Change Resilience Coordinator, Minnesota Pollution Control Agency
- Jesse Martus – Lake Area Management Plan Coordinator, Minnesota Pollution Control Agency
- Jennifer Davis – State Hazard Mitigation Officer, Homeland Security Emergency Management, Department of Public Safety
- Luigi Romolo – State Climatologist, Department of Natural Resources

7. Update from Clean Water Council on the Clean Water Fund

Paul Gardner, administrator of the clean council, gave highlights of the draft fiscal year 2024–2025 Clean Water Fund recommendations, and how they fit into broader strategies to protect and restore surface water and protect drinking water sources.

8. Discussion on celebrating the fiftieth anniversary of the Minnesota Environmental Policy Act

Faith Krogstad, Engagement and Communications Director of the EQB lead a discussion of ideas for marking the fiftieth anniversary of a landmark environmental law in Minnesota, the Minnesota Environmental Policy Act (MEPA), in 2023. MEPA established protections for Minnesota’s natural resources and encouraged “productive and enjoyable harmony between human beings and their environment” (Minn. Stat. ch. 116D.01). The legislation created EQB and a state-level environmental review program, and tasked EQB with governing and implementing its requirements.

9. Public comment

There was no public comment.

10. Closing and adjournment

Motion: Grace Arnold moved to adjourn the meeting, seconded by Rylee Hince. Motion carries with unanimous voice vote.



RESOLUTION OF THE MINNESOTA ENVIRONMENTAL QUALITY BOARD

Reason for looking into the issue

Executive Order 19-28: Restoring Healthy, Diverse Pollinator Populations that Sustain and Enhance Minnesota's Environment, Economy, and Way of Life directs the Environmental Quality Board (EQB or Board) to:

1. Convene agency leadership to implement the executive order;
2. Convene the Interagency Pollinator Protection Team to provide operational support, ensure interagency coordination, develop cross-agency policies and programs, and report on progress toward statewide goals in a report to the Board by December 1 of each year; and
3. Establish a public engagement process, consistent with the vision for One Minnesota, to ensure public participation in pollinator policy and program development and build cross-sector partnerships.

The fiscal year 2021-2022 EQB work plan directs interagency pollinator protection and public engagement efforts, with the desired long-term outcomes of increased public awareness and implementation of efforts to address pollinator stressors.

What was done

- The EQB convened the Interagency Pollinator Protection Team (IPPT). The IPPT held monthly meetings and ad-hoc meetings to discuss inter-agency coordination, develop a Pollinator Action Framework draft and the 2022 Minnesota State Agency Pollinator Report.
- The IPPT implemented a public engagement process to invite public input into the Pollinator Action Framework. The process included a direct approach to connect with external subject-matter experts and a broad approach with the use of an engagement website to capture ideas from the general public. This public input was considered in the draft Pollinator Action Framework.

The Board resolves to:

- Approve the 2022 Minnesota State Agency Pollinator Report, to be released by December 1, 2022.
- Support cross-agency collaboration to finalize the development of the Pollinator Action Framework by the summer of 2023.

- Support cross-agency collaboration to continue strategic work to protect pollinators and advance public engagement efforts.
- Convene future meetings to monitor progress and invite public input.

The Board approves and adopts the 2022 Minnesota State Agency Pollinator Report on November 16, 2022.

Nancy Daubenger, Chair
Minnesota Environmental Quality Board

DRAFT

Minnesota State Agency Pollinator Report

2022 | ANNUAL REPORT



Cover photo: A wild bee (*Andrena* sp.) coming out of its nest in the ground.

Photo by Rachel Kranz

Contents

Charge	3
Introduction	3
2022 highlights	5
Equity and pollinators	8
GOAL 1	9
GOAL 2	11
GOAL 3	13
Desired outcome	15
Acknowledgements	17

The matrix draft of the pollinator action framework is available at www.eqb.state.mn.us/pollinators

Charge

Executive Order 19-28 directs state agencies to work toward restoring healthy, diverse pollinator populations in Minnesota. The order charges the Environmental Quality Board (EQB) with convening the Interagency Pollinator Protection Team (IPPT) to provide operational support, ensure interagency coordination, develop cross-agency policies and programs, and report on progress toward statewide pollinator protection goals in a report to the board by December 1 of each year.

The IPPT consists of staff from the Departments of Administration, Agriculture, Corrections, Education, Health, Natural Resources (DNR), Transportation (MnDOT), the Board of Water and Soil Resources (BWSR), the Minnesota Pollution Control Agency, and the Minnesota Zoological Garden (Minnesota Zoo).



University of Minnesota researcher setting a trap to study ground-nesting bees.

Photo by Amanda Sames

Introduction

Pollinators play a crucial role in Minnesota's economy, environment, and way of life. Yet, they continue to experience declines in our state and across the country. Some of the main threats to pollinators include loss of habitat, pesticides, diseases and parasites, and climate change. These stressors interact and amplify each other's negative effects on pollinator populations.

Over the past six years, we laid the foundation for a coordinated interagency approach to pollinator protection, agencies are working together and individually to help pollinators in Minnesota. Additionally, through interagency collaboration and engagement with outside experts and members of the public, we identified pollinator protection goals, key outputs, key challenges, and metrics to measure progress toward healthy pollinators in the state.

In 2022, we began to draft a pollinator action framework. Once completed, the framework can serve as a guide for strategically protecting Minnesota's pollinators.

The 2022 Minnesota State Agency Report features highlights of state-led pollinator protection efforts, provides context for opportunities and challenges, and gives an overview of the draft action framework for our desired outcome of healthy pollinator populations and each of our pollinator protection goals.

Minnesota pollinator action framework

Purpose

To guide the strategic alignment of resources, policies, and programs to help Minnesota’s pollinators.

About the draft

This report contains a narrative overview of the draft pollinator action framework for the desired outcome and each goal. The draft proposes actions state agencies can lead directly by taking administrative action; actions the Minnesota Legislature can enact by writing laws and allocating funds; and actions the state can encourage individuals, communities, and organizations to do.

We are sharing the draft to promote conversations about ways to help pollinators. Visit our pollinator webpage (www.eqb.state.mn.us/pollinators) to view the full draft framework. We plan to release the final action framework during the summer of 2023.

Developing the draft

During the development of the draft pollinator action framework, we sought input from external experts, individuals, and pollinator protection organizations through our engagement platform (engage.eqb.state.mn.us), and through direct document review.

Through our engagement platform, we received 922 contributions from members of the public. People shared their ideas for helping pollinators and voted and commented on the ideas shared by other participants. Additionally, we received direct feedback from the Monarch Joint Venture, the Xerces Society, the University of Minnesota Bee Lab, and the Natural Resources Conservation Service of the United States Department of Agriculture. We considered the ideas we received and incorporated many into the draft.

Next steps

We will host a second round of public engagement in early 2023 to inform the final pollinator action framework.



2022 Highlights

- **Pollinators in summer school programs.** The departments of Education and Natural Resources developed pollinator webinars for schools to incorporate pollinator education in their summer programs.
- **Educational videos about protecting pollinators from pesticide use.** The Department of Agriculture produced educational videos about pollinator habitat, integrated pest management (IPM), and protecting pollinators when using pesticides. The University of Minnesota and other sponsors are using them at pesticide applicator recertification workshops. At least 11,000 applicators will see these educational videos over the next three years.



School children learning to plant pollinator-friendly native plants.

Photo: Janine Kohn, DNR

- **Collaboration to educate about IPM and pollinator protection.** The Department of Agriculture, in collaboration with the University of Minnesota Extension reached approximately 1,100 people at the Field School for Ag Professionals, Horticulture Night, and Farmfest with materials about IPM and protecting pollinators. Additionally, the Department of Agriculture and the University created 40 permanent educational signs to provide long-lasting information about pollinators and IPM on the University's St. Paul campus.
- **Recognition of commitment to conservation practices.** As of September 2022, the Department of Agriculture's Minnesota Agricultural Water Quality Certification Program has endorsed 62 farms for IPM practices and 43 farms for wildlife conservation.
- **BWSR's Living Landscapes Initiative improves pollinator habitat and raises awareness.** BWSR administers programs to help declining populations of pollinators, other wildlife, and plant species. These programs highlight the role of biodiversity in meeting BWSR's soil and water conservation goals.
 - › **Lawns to Legumes.** Since 2019, BWSR awarded over 2,700 grants to Minnesotans to install pollinator plantings in their residential spaces. There are 26 Demonstration Neighborhood grantees working across the state to establish community pollinator projects and corridors, raise awareness for pollinator protection, and showcase best practices.
 - › **New Habitat Enhancement Landscape Program.** This program provides cost-share funds to restore and enhance strategically located diverse habitats across Minnesota to benefit pollinators, beneficial insects, and biodiversity. During the first year of this pilot program, BWSR awarded grants to 11 organizations.

- › **Habitat Friendly Solar Program.** Over 55 sites across Minnesota have met the program’s habitat standards, providing pollinator habitat and renewable energy on over 1,300 acres. In 2022, BWSR convened the second Habitat Friendly Solar Summit, bringing together a diverse group of practitioners to discuss shared goals of pollinator-friendly practices and co-benefits of community and utility-scale solar projects.
- **Updated state seed mixes.** BWSR, DNR, MnDOT, and conservation partners continue to create and update more than 70 state seed mixes for habitat restoration and conservation guidance documents that consider pollinator needs, soil health, and climate change and landscape resiliency. The state seed mix update is expected to wrap up by spring 2023.
- **Progress toward MnDOT’s sustainability goals.** On large projects, MnDOT planted over 60% of acres with Minnesota-native seed, which benefits pollinators.
- **Fire as a habitat management tool.** MnDOT utilizes prescribed burns as the preferred management tool on over 900 acres of roadside vegetation to maintain and improve prairie pollinator habitats.
- **Releases of imperiled butterflies.** In July 2022, the Minnesota Zoo continued reintroducing Dakota skippers from their breeding program to a prairie preserve managed by The Nature Conservancy in southwest Minnesota. Over the next few years, the Minnesota Zoo will use the survey data to inform habitat management for prairies with Dakota skipper populations.

Attendees of the “Follow the Sun Tour” in August learning about the Habitat Friendly Solar Program.

Photo by Paul Erdmann



Progress in understanding the diversity of Minnesota's wild bees

The DNR's Minnesota Biological Survey, in collaboration with the University of Minnesota Bee Lab, have documented upwards of **490 species of bees** in the state. In 2022, the survey team wrapped up the final year of the wild bee survey, recording bees from the Laurentian Mixed Forest area with a focus on Koochiching County. In addition, researchers began monitoring species of potential conservation concern, in particular those that have specific floral hosts. The results from these monitoring efforts help us understand which bee species are present in Minnesota.



Dufourea novaeangliae bees found during 2022 direct surveys. This species hadn't been recorded in Minnesota since 1934!

Photo by Rachel Kranz



Surveying for bees in Savanna Portage State Park.

Photo by Rachel Kranz



Planting pollinator gardens can foster community collaboration.

Photo: Urban Roots

Equity and pollinators

Pollinator declines negatively impact our environment, food systems, and way of life. All Minnesotans feel these impacts, but not everyone is affected equally. Structural inequities have historically influenced land access, ownership, and management, creating systems where some communities have less access to land to connect with nature, grow healthy food, and plant gardens.

Actions that help pollinators can also help address inequities. For instance, with the creation of community gardens, families can grow a diversity of vegetables and flowering plants that benefit

pollinators, create a space to connect with nature, and have access to healthy food.

Diverse pollinator habitat has broad positive environmental effects, such as reducing soil erosion, improving water quality, and sequestering carbon to help in the fight against climate change. Trees and shrubs that provide flower resources for pollinators can also provide shade and reduce the urban heat island effect, which disproportionately affects children, older adults, and low-income communities.

When thinking about the work needed to protect pollinators, we must reflect on how we are engaging marginalized communities and considering their priorities. The draft pollinator action framework includes action ideas to help pollinators, and it offers an opportunity for state agencies and Minnesotans to think about developing pollinator protection actions with equity in mind.

GOAL 1. Lands throughout Minnesota support healthy, diverse, and abundant pollinator populations

Key output: More food sources, nesting and overwintering sites for pollinators

The challenge

Loss and fragmentation of habitat reduce the availability of high quality food resources and nesting and overwintering sites for pollinators.

Context

Pollinator habitat can take different forms

Pollinators thrive where abundant flowering plants bloom throughout the growing season. In addition to flowers, pollinators also need undisturbed places to build their nests, food for their larvae, and safe areas to overwinter. Some pollinators make use of areas we might consider untidy or unusual: bare areas of earth, dead wood, old rodent burrows, and hollow stems.

Threats to pollinator habitat

Human activities that can have a direct negative impact on pollinator habitat include urban sprawl, monocultures, intensive agrochemical use, pollution, and overuse of fossil fuels. Additionally, cultural norms that favor fewer plant species and nesting sites reduce the quality and quantity of habitat in urban, suburban, and rural landscapes.

Habitats are shifting rapidly due to the changing climate. In North America, some plant species are moving toward northern regions and higher elevations. This can reduce the availability and diversity of food resources for pollinators. Additionally, warmer temperatures can cause a mismatch between when pollinators emerge in the spring and when flowers bloom.



Diverse prairie flowers provide high quality food resources to pollinators.

Photo by Deborah Rose

Minnesotans can support pollinator habitat

Minnesotans can increase the size and diversity of habitat wherever plants grow and land is managed. Whether in rooftop gardens, window boxes, boulevard plantings, lawns, golf courses, farms, marginal lands, parks, wildlife areas, and prairie restorations, our actions can make a large difference to these important animals.

Important definition

- **Urban sprawl:** the rapid expansion of geographic extent of cities and towns, characterized by low-density residential housing, single-use zoning, and increased reliance on the private automobile for transportation.



A Lawns to Legumes program grant recipient describes her pollinator meadow and rain garden to Lawns to Legumes Demonstration Neighborhood tour attendees.

Photo by Paul Erdmann

Goal 1 in the Minnesota pollinator action framework draft

The pollinator action framework draft proposes actions to protect, restore, and enhance pollinator habitat in public and private lands. Additionally, it includes actions to design and implement strategic policy and programs, to improve the quality of habitat restorations, connect habitat in highly fragmented landscapes, and develop guidance about integrated habitat management approaches.

Visit www.eqb.state.mn.us/pollinators to download the full list of actions included in the current pollinator action framework draft.

GOAL 2. Minnesotans use pesticides judiciously and only when necessary, to reduce harm to pollinators from pesticides while retaining economic strength

Key output: Reduced impacts to pollinators from pesticides through integrated pest management (IPM)

The challenge

Pesticide exposure can negatively impact pollinators and their habitat.

Context

Many factors influence pesticide use

The use of pesticides depends on many factors. In some cases, pests can cause a predictable level of economic loss, so clear thresholds can guide when to take action to manage a pest. Other factors that can influence how and when pests are managed include things like cost, efficacy, safety, personal values, or aesthetics.

Many types of people use pesticides in many settings

Pesticides have a broad range of uses, such as for crop production, yard and lawn care, disease vector and nuisance control, and invasive species management. Some pesticides require licensing or certification to buy and use.

Pesticide risk to pollinators is variable

Both toxicity and exposure are important in understanding pesticide risk to pollinators. Research on estimates of realistic exposure and species-specific toxicity helps regulators assess risk and design protective mitigation actions.

A balanced approach to pest management is important and possible

Pesticides play a key role in pest management. However, pesticides can directly and indirectly harm pollinators. Using pesticides judiciously and only when necessary, such as through IPM,

can reduce risks to pollinators. Minnesota state agencies use and encourage others to use IPM to mitigate the risks of pest management on pollinators. Balancing pesticide use with pollinator protection can reduce harm while retaining economic strength.

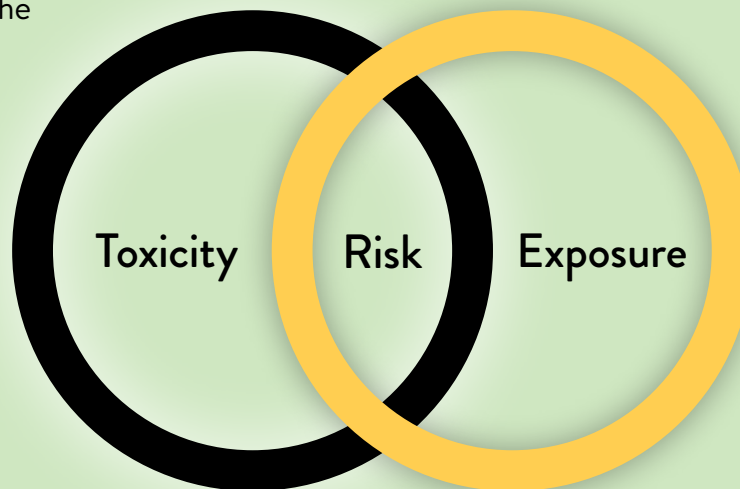


Scouting for and counting pests is integral to practicing integrated pest management. With this approach, management is tailored specifically to which and how many pests are present. Spotted wing drosophila flies, an invasive species that primarily eats soft-skinned fruits, can be monitored using apple cider vinegar traps shown here.

Photo credit: Theresa Cira

Important definitions

- **Integrated pest management:** an approach to managing pests that seeks to prevent the buildup of pest populations, identify pest species to use species-specific management strategies, monitor for pests to know when management action thresholds have been reached, and use a combination of management techniques to address the pest problem by the most effective and economical means, and with the least possible hazard to people, property, and the environment.
- **Pesticide:** the Federal Insecticide, Fungicide, and Rodenticide Act defines a pesticide as “any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest; any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; and any nitrogen stabilizer.”
- **Pesticide risk:** the risk a pesticide poses to pollinators depends on its toxicity (potential to damage or kill) and the exposure (time and frequency of contact with the pesticide) the pollinator has to the pesticide. Both toxicity, measured in laboratories, and exposure, measured in the field or modeled, are used by the Environmental Protection Agency to help determine how pesticides can be used.



Goal 2 in the Minnesota pollinator action framework draft

The pollinator action framework draft proposes actions to develop, promote, and encourage the adoption of IPM in agricultural and non-agricultural lands and in managed pollinator colonies. Additionally, it includes actions to protect pollinators from pesticide exposure, such as promoting mitigation strategies to reduce pollinators' exposure to pesticides, supporting and conducting research focused on pesticide risk to pollinators, and increasing awareness about pesticide misuse reporting.

Visit www.eqb.state.mn.us/pollinators to download the full list of actions included in the current pollinator action framework draft.

GOAL 3. Minnesotans understand, value, and actively support pollinators

Key output: More action through community commitments

The challenge

Lack of awareness, funding, and knowledge of pollinators and their needs are barriers that prevent some Minnesotans from participating in pollinator-related programs.

Context

Minnesotans care about pollinators

Individuals and organizations continue to commit to learning about pollinators and finding ways to help them. Many Minnesotans participate every year in pollinator celebrations and in community science programs that generate vital information about native pollinator populations in the state. Additionally, several communities and schools have made pollinator resolutions and pledges to follow pollinator-friendly practices on their landscapes.

We can take advantage of this continued momentum to increase public participation in pollinator conservation efforts. Agencies need to evaluate current pollinator-related programs for opportunities to increase equitable access to information and resources. Equity must also be considered when creating new programs that connect pollinators with broader environmental and social issues.

Building strong relationships

Progress toward healthy pollinators requires the participation of different individuals and organizations in Minnesota, in addition to well-coordinated efforts by state agencies. IPPT member agencies have ongoing initiatives with external partners that expand agencies' capacity. However, there is still room for building intentional relationships with organizations that are not yet involved in pollinator protection, which can influence their communities toward action.



Neighbors gathering to check out a pollinator garden installation in a residential garden.

Photo credit: Melissa Wenzel



The beekeeping exhibition at the 2022 Minnesota State Fair sparked the interest of the public.

Photo by James Havens

Goal 3 in the Minnesota pollinator action framework draft

The pollinator action framework draft is an opportunity for us to evaluate the 2020 civic engagement process. The actions proposed in this draft reflect the lessons we have learned while working to help pollinators and encouraging Minnesotans to take action. The framework draft includes actions to build strong relationships and partnerships, to increase awareness and educational resources about different ways to help pollinators, to collaborate with communities that have adopted pollinator resolutions to find new ways to engage communities who haven't taken that important step.

Visit www.eqb.state.mn.us/pollinators to download the full list of actions included in the current pollinator action framework draft.

Desired outcome—healthy, diverse pollinator populations that sustain and enhance Minnesota’s environment, economy and way of life

The challenge

Researchers have made progress in understanding pollinator diversity, their status, needs, and the factors affecting their survival. But there is still a long way to go to fill existing knowledge gaps and improve state protections for imperiled pollinator species.

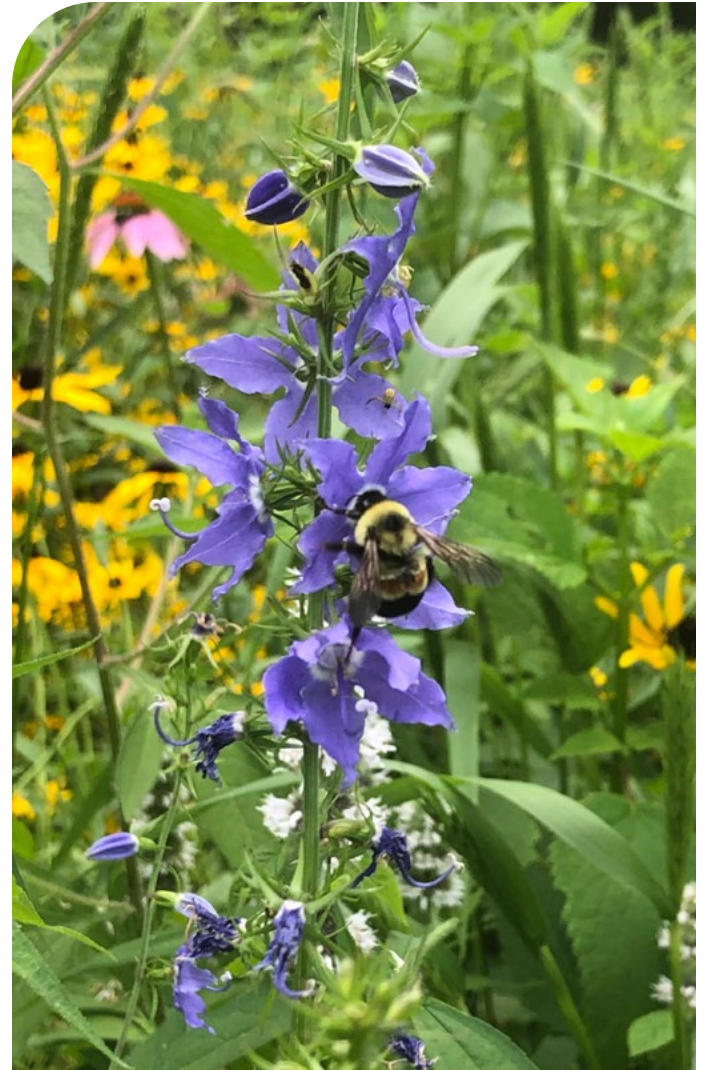
Context

Status of Minnesota’s insect pollinators

Minnesota is home to thousands of insect pollinator species, many of which have experienced declines. Several pollinator species that were once common in the state are now rarely seen. For example, the Dakota skipper, once a common Minnesota prairie butterfly, was listed as state-endangered in 2013 and federally threatened in 2014. Similarly, the rusty patched bumble bee was granted federal endangered species status in 2017. Many other species have not been found in the state in recent years, such as the Karner blue butterfly and the Poweshiek skipperling.

Pollinator-specific research

Many organizations conduct research to understand different aspects about pollinators and their needs, such as habitat requirements for different pollinator species, honey bee health and foraging preferences, and effects of pesticides on pollinator behavior and fitness. State agencies and external organizations have conducted monitoring efforts to learn what pollinator species are present in the state.



A rusty patched bumble bee, Minnesota’s state bee, forages on American bellflowers in a pollinator planting that is part of the Pleasant Valley Pollinator Corridor, an Lawns to Legumes Demonstration Neighborhood in Winona, Minnesota.

Photo by Jen Quarberg

A large part of this pollinator-specific research is funded by the Environmental and Natural Resources Trust Fund through competitive grants. This funding has allowed state agencies and others to learn important information about pollinators

and develop relevant programs to protect them. There is still a long way to address the large knowledge gaps on pollinators, thus we must seek stable funding to generate the information we need to respond effectively to pollinator needs.



Aerial photo of experimental seed mix plots at the University of Minnesota.

Photo by Maggie Anderson

Desired outcome in the Minnesota pollinator action framework draft

In this section, the pollinator action framework draft proposes actions including planning, producing and sharing the information that state agencies and external organizations need to make important decisions, and developing strategic protections for imperiled pollinators.

Visit www.eqb.state.mn.us/pollinators to download the full list of actions included in the current pollinator action framework draft.

Acknowledgements

We want to thank the organizations that reviewed and provided input during the development of the draft pollinator action framework, including the University of Minnesota Extension Service and Bee Lab, the Natural Resources Conservation Service of the United States Department of Agriculture, the Monarch Joint Venture, and the Xerces Society.

A grateful acknowledgement to the people and organizations that participated in our public engagement platform, sharing their ideas for action to protect pollinators in our state. Your input helped inform the actions in the draft framework.

2022 Interagency Pollinator Protection Team

Rebeca Gutierrez-Moreno, Minnesota Environmental Quality Board

Faith Krogstad, Minnesota Environmental Quality Board

Chris Guevin, Minnesota Department of Administration

Theresa Cira, Minnesota Department of Agriculture

Michelle Gage, Minnesota Department of Corrections

Angela Kolonich, Minnesota Department of Education

Eric Billiet, Minnesota Department of Education

Kristen Kellock, Minnesota Department of Health

Christina Locke, Minnesota Department of Natural Resources

Tina Markeson, Minnesota Department of Transportation

Christopher E. Smith, Minnesota Department of Transportation

Paul Erdmann, Board of Water and Soil Resources

Laura Marti, Minnesota Pollution Control Agency

Erik Runquist, Minnesota Zoological Garden

A native bee feeding on a flower.

Photo by Laura Marti



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2022 Minnesota Pollinator Action Framework-DRAFT

The following tables contain the latest draft categories and subcategories proposed by Minnesota’s state agencies to advance pollinator protection goals in the state. The tables are organized by the goals included in the Executive Order 19-28 and the desired outcome of healthy and diverse pollinator populations. Framework actions are undergoing review, so they are not shown here, some will be presented at the November EQB meeting. The actions are categorized as actions state agencies can **lead** on by administrative action alone, actions the state legislature can **enact** through their authorities to write laws and allocate funds, and actions state agencies can **encourage** others to do.

Goal 1. Lands support pollinators

Category	Subcategory	Action	Lead	Enact	Encourage
1.1. Intentional land stewardship	1.1.1. Protect pollinator habitat	TBD	TBD	TBD	TBD
	1.1.2. Restore and create pollinator habitat	TBD	TBD	TBD	TBD
	1.1.3. Enhance the quality of existing pollinator habitat	TBD	TBD	TBD	TBD
1.2. Strategic policy and programs to protect, restore, create, and enhance pollinator habitat	1.2.1. Develop policy and programs to increase native plant supply	TBD	TBD	TBD	TBD
	1.2.2. Design strategies to support pollinator habitat	TBD	TBD	TBD	TBD
1.3. Comprehensive research and data collection related to pollinator habitat	1.3.1. Understand pollinator habitat needs	TBD	TBD	TBD	TBD

Goal 2. Judicious use of pesticides

Category	Subcategory	Action	Lead	Enact	Encourage
2.1. Judicious use of pesticides	2.1.1. Support integrated pest management (IPM) on agricultural and non-agricultural lands	TBD	TBD	TBD	TBD

	2.1.2. Promote IPM on agricultural and non-agricultural lands	TBD	TBD	TBD	TBD
	2.3.1. Support IPM in managed pollinator colonies	TBD	TBD	TBD	TBD
2.2. Robust protections	2.3.1. Support or develop strategic policy and programs	TBD	TBD	TBD	TBD
	2.3.2. Reduce off target movement of pesticides	TBD	TBD	TBD	TBD
	2.3.4. Report pesticide misuse	TBD	TBD	TBD	TBD
2.3 Focused research	2.3.1. Understand pesticide exposures in the environment	TBD	TBD	TBD	TBD
	2.3.2. Study the effects of pesticides and pesticide inert on pollinators and their habitat	TBD	TBD	TBD	TBD

Goal 3. Minnesotans understand, value, and support pollinators

Category	Subcategory	Action	Lead	Enact	Encourage
3.1. Strong partnership and relationship building	3.1.1. Build intentional relationships with individuals and organizations for pollinator protection	TBD	TBD	TBD	TBD
	3.1.3. Build strategic partnerships to advance pollinator protection goals	TBD	TBD	TBD	TBD
3.2. Diverse and inclusive public participation	3.2.1. Increase participation in decision-making	TBD	TBD	TBD	TBD
	3.2.2. Increase participation in initiatives and programs	TBD	TBD	TBD	TBD
3.3. Informed communities	3.3.1. Effective public access to information	TBD	TBD	TBD	TBD
	3.3.2. Increase public awareness about pollinator needs and ways to help them	TBD	TBD	TBD	TBD

3.4. Sustained education and training	3.4.1. Strengthen programs with pollinator protection resources and information	TBD	TBD	TBD	TBD
	3.4.2. Make pollinator protection educational resources readily available for the public	TBD	TBD	TBD	TBD

Desired outcome

Category	Subcategory	Action	Lead	Enact	Encourage
4.1. Informed decision-making	4.1.1. Long-term monitoring	TBD	TBD	TBD	TBD
	4.1.2. Generate new information and create a framework for sharing information	TBD	TBD	TBD	TBD
4.2 Strategic protections	4.2.1. Develop effective policy to protect at-risk pollinator species	TBD	TBD	TBD	TBD
	4.2.2. Protect pollinators from diseases and parasites	TBD	TBD	TBD	TBD
4.3. Long-term planning	4.3.1. Improve interagency coordination	TBD	TBD	TBD	TBD
	4.3.2. Improve intra-agency coordination	TBD	TBD	TBD	TBD
	4.3.3. Improve coordination with non-agency organizations	TBD	TBD	TBD	TBD