Source document: *Pollinator Best Management Practices and Habitat Restoration Guidelines* ("Pollinator BMPs"), revised May 2026
Available at mndnr.gov/pollinators

Table 1. Best practices for ongoing management to support pollinators, applicable to any habitat type

CATEGORY	MANAGEMENT PRACTICE	ADDITIONAL INFORMATION
COMPLIANCE	Before undertaking management or restoration activities, determine whether rare insects are likely present in or near the activity area.	DNR project managers and contractors are required to ensure compliance with state and federal threatened and endangered species protections. The project manager completes a Natural Heritage screen to start this process. If there are records of threatened or endangered species in the activity area, the activity meets criteria for further review and the manager coordinates with regional or district DNR staff to determine next steps. Plan all further activities in compliance with state and federal protected species requirements.
GENERAL	Vary the frequency and seasonality of management activities. Time management activities to avoid sensitive times for at-risk species. Monitor responses to management activities and adjust subsequent activities accordingly.	Vary disturbance return intervals (burning, stand thinning, mowing, haying, grazing, etc.) based on plant growth, management goals, and natural disturbance regimes rather than a set calendar schedule. Vary the season when management activities occur, unless this interferes with other management goals or required species protections, as variation avoids repeated negative effects to the same set of species year after year. Observe and assess vegetation responses to disturbances, and adjust type, timing, frequency, and intensity of subsequent management activities to achieve desired results.
HERBICIDE USE	Use spot treatments for invasive plants where practical.	Encouraging diverse plant communities is the best way to resist invasive plant spread. Herbicide treatments may be warranted to prevent seed production and slow the spread of some species. To avoid adverse effects on nontarget species, use selective rather than broad spectrum formulations, choose spot rather than broadcast treatments, and time applications to be most effective, e.g., treating buckthorn in winter while other plants are dormant. Refer to Operational Order 113, DNR's policy for invasive species prevention and management, and Operational Order 59, DNR's policy on pesticide use.
INSECTICIDE USE	Minimize the use of insecticides on state lands.	Insecticides can be detrimental to non-target organisms including pollinators and are typically not needed to achieve habitat management goals. In cases where insect pests are a concern, use integrated pest management principles to identify and assess a course of action that prioritizes non-pesticide methods (Operational Order 59). For personal tick protection, refer to DNR's Tick Protection policy.

CATEGORY	MANAGEMENT PRACTICE	ADDITIONAL INFORMATION
PRESCRIBED FIRE	Set aside refugia during burns.	Prescribed fire can be used to meet many management objectives, including managing weedy species, promoting forb bloom and understory plant growth, and decreasing thatch or woody growth. Unburned areas of similar habitat type and quality as the burned areas may be considered refugia for pollinators. For each habitat type, leave at least half of the area within 1 km (0.6 mile) undisturbed. Refugia can be established by designating burn and unburned units within or adjacent to a management area, or by intentionally leaving unburned areas ("skips") within the burn boundary. See Operational Order 47 and the DNR Prescribed Burn Handbook for policies and procedures.
MOWING AND HAYING	Set aside refugia while mowing or haying. Set mower deck height as high as possible while still addressing management goals.	Mowing and haying can be used to release forbs from competition with tall grasses, particularly in mid summer. Unmowed/unhayed areas of similar habitat type and quality as the mowed/hayed areas may be considered refugia for pollinators. For each habitat type, leave at least half of the area within 1 km (0.6 mile) undisturbed. If mowing/haying the entire site is necessary, subdivide the site into at least two units and mow/hay the units several weeks apart.
GRAZING	Leave at least one third of the site ungrazed at any given time. Rest grazed sites long enough for full plant recovery.	Grazing is one way to diversify vegetation height and release forbs from competition with tall grasses. Diverse native plantings work well both as pollinator habitat and as nutritious forage for grazing. Ungrazed paddocks, and areas of similar habitat type and quality on adjacent ungrazed lands, may be considered refugia for pollinators. If grazing an entire site is necessary, subdivide the site into paddocks and rotate grazers across paddocks. For example, paddocks may be grazed rotationally at a high livestock density for short durations, followed by rest periods of 30-90 days. Grazing can be combined with other management techniques like prescribed fire, e.g. patch burn grazing.
GRAZING	Include livestock pest control BMPs in grazing contracts.	Some pesticides used to treat livestock pests can negatively affect beneficial insects and pollute water after being introduced to the environment via animal waste. The livestock pest control BMPs in Appendix 2 specify post-treatment lag times and other considerations to reduce these concerns for grazing on DNR lands.

CATEGORY	MANAGEMENT PRACTICE	ADDITIONAL INFORMATION
PLANT COMMUNITIES	Encourage the growth of native plant species that bloom in early, mid, and late periods of the growing season.	If fewer than five native plant species are in bloom in a season (spring, summer, fall), management should be adapted to encourage plant diversification. DNR's Pollinator Resource Tables list plants suited to many different habitat types in Minnesota.
PLANT COMMUNITIES	Encourage the growth of native plants that support specialist pollinators.	Specialist species are more vulnerable to change than generalist species because they rely on a narrower set of resources. The Minnesota Pollination Guide identifies plants that provide resources for specialist bees, moths, and butterflies in Minnesota.
PLANT COMMUNITIES	Retain unique or rare plants whenever possible and appropriate.	These include woodland spring ephemerals, old growth forests, remnant prairies, and wetlands. Note that some ecosystem types are protected by statute and would be identified during the Natural Heritage screen and review process.
NESTING HABITAT	Retain nesting and larval habitats, where appropriate. These may include areas of bare soil, bunch grasses, stems of grasses and shrubs, leaf litter, and standing dead and fallen trees. Minimize soil disturbance.	These features serve as nesting habitat for ground and cavity-nesting bees, sheltered areas for overwintering and nesting bumble bees, and larval food sources for many species of beetles and hoverflies.