



# Protecting Rare Species of Grasslands

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# **Grassland Species Listed as Endangered/Threatened/Special Concern in Wisconsin**

- 64 plants
- 20 birds
- 3 mammals
- 17 herptiles (reptiles & amphibians)
- 24 butterflies/moths\*
- ?? leafhoppers & other invertebrates\*



## **Grassland Types in Wisconsin**

- **Dry Prairie**
- **Dry-mesic Prairie**
- **Mesic Prairie**
- **Wet Prairie**
- **Wet-mesic Prairie**
- **Sand Prairie**
- Bracken Grassland
- Surrogate Grassland



## Grassland Types in Wisconsin

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## **Determining What You've Got**

- Natural Heritage Inventory websites
- Prairie Enthusiasts volunteers
- Local birding group volunteers



# Protecting Rare Species

- Plants
- Birds
- Herptiles
- Invertebrates

# Protecting Plants

- Burning
- Mowing
- Tree/Brush Removal
- Herbicide Application

# Burning

- Avoid burning during flowering
- For monocarpic plants, avoid burning more than 25% of population at one time



# Mowing

- May get away with mowing perennial rare plants once in a growing season.
- Even better: Hand weed around rare plants, then mow the rest!



- For monocarpic plants, avoid mowing at all, unless you can set the blade height above the rare plant's height.
- Avoid annual mowing in excess of five years.



## Tree & Brush Removal

- Frozen ground conditions are best
- Burn pile sterilizes soil
- Hand work with light equipment outside of flowering/fruited season okay





# Herbicide Application



- Triclopyr (*e.g.*, Garlon) produces a kill zone
- Beware of herbicide drift
- Direct protection (cover with a bucket)



# Protecting Plants

1. Determine the following:
  - a. Life history (monocarpic or perennial)
  - b. Blooming time
  - c. Plant height
2. Use above information when determining management method and timing.





# Protecting Birds

1. Determine the following:
  - a. Habitat Needs
  - b. Nest Locations
  - c. Breeding Time
  - d. Fledging Time
2. Use above information when management

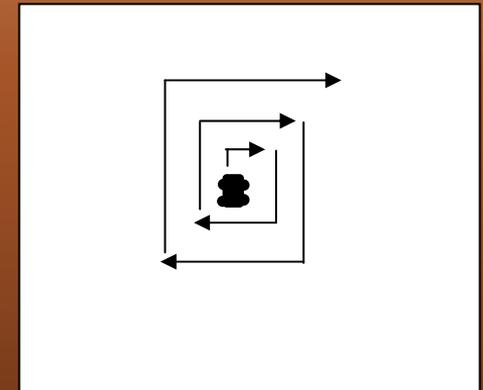


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## Mowing

- General Rule: Avoid mowing until after July 15
- Even better: Avoid mowing until after August 1
- Alternatives/Modifications:
  - Mow fields from the inside out
  - Leave intact nesting cover adjacent to mowed area





# Grassland Birds and Wild Parsnip



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# Tree & Brush Removal

- Avoid cutting during nesting
  - May 25 and July 20 for Bell's vireo
- Consider immediate versus delayed impacts



## Bell's Vireo Restoration Protocol

- Clusters of two or three thickets, about 50 feet apart
- Thickets of dense growing native shrubs
- Best if vegetation creates continuous vertical cover
- Six to 12 feet in height
- About 350 square feet in area





# Protecting Reptiles & Amphibians

- Conduct during hibernation
- Conduct surveys in burn units and temporarily sequester rare herps or move outside of burn unit or into water.
- Conduct surveys ahead of mower.
- Use herbicides judiciously.



## Protecting Invertebrates

- Avoid herbiciding larval host plants
- Leave refugia with specific host plants when burning
- Divide up a site into rotational burn units
- Avoid burning any unit more than once every 3-5 years





**Don't  
Forget  
Monitoring!!**

