

# Rare species & forestry in Wisconsin in 2018

DREW FELDKIRCHNER, WISCONSIN DNR



# Background

NATURAL HERITAGE INVENTORY,  
STATE AND FEDERAL LAWS

# Natural Heritage Inventory

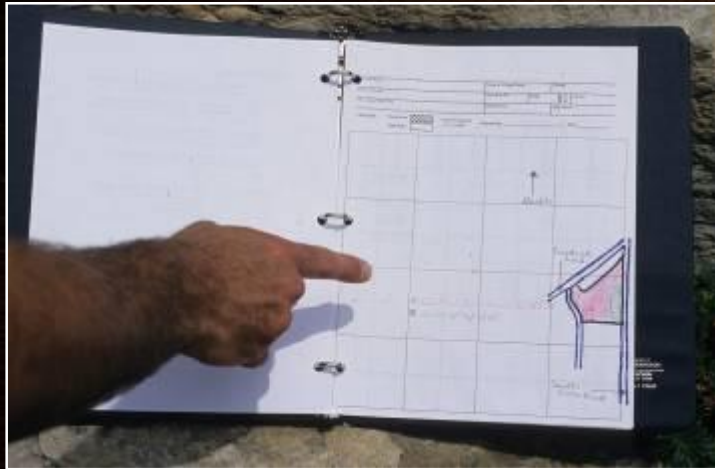
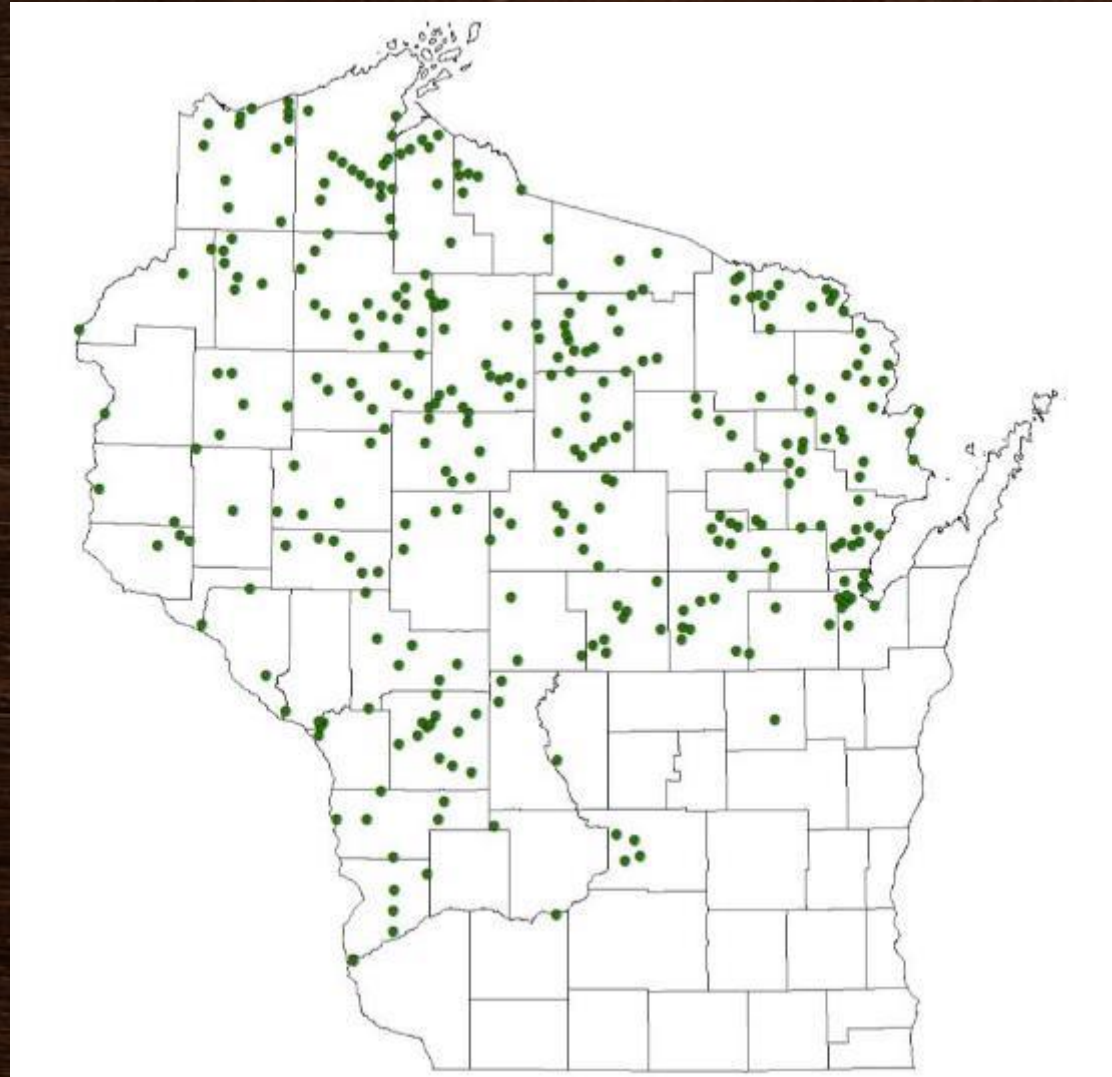


# Data and Interpretation

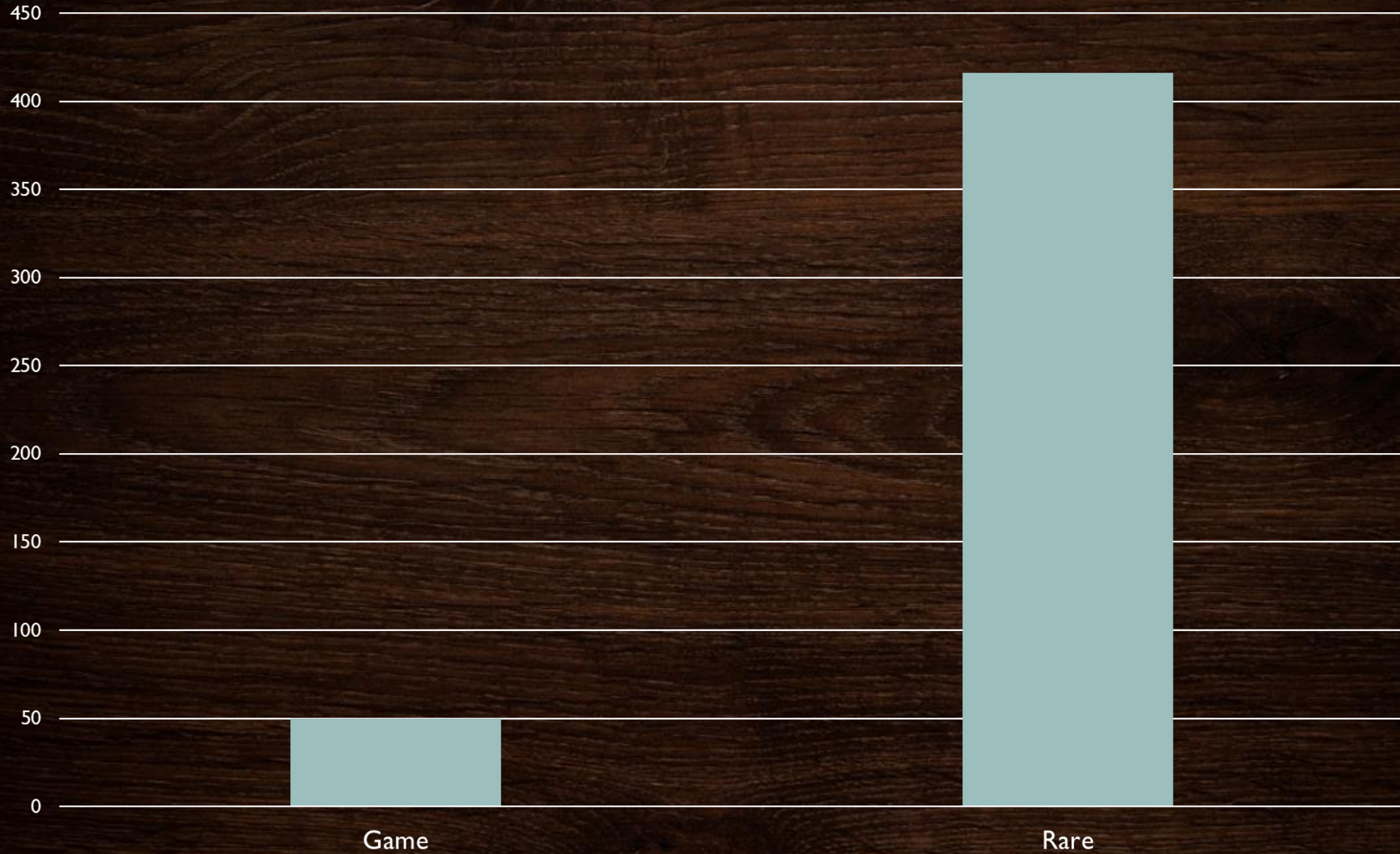
1. How rare?
2. Locations
3. Which are priorities?

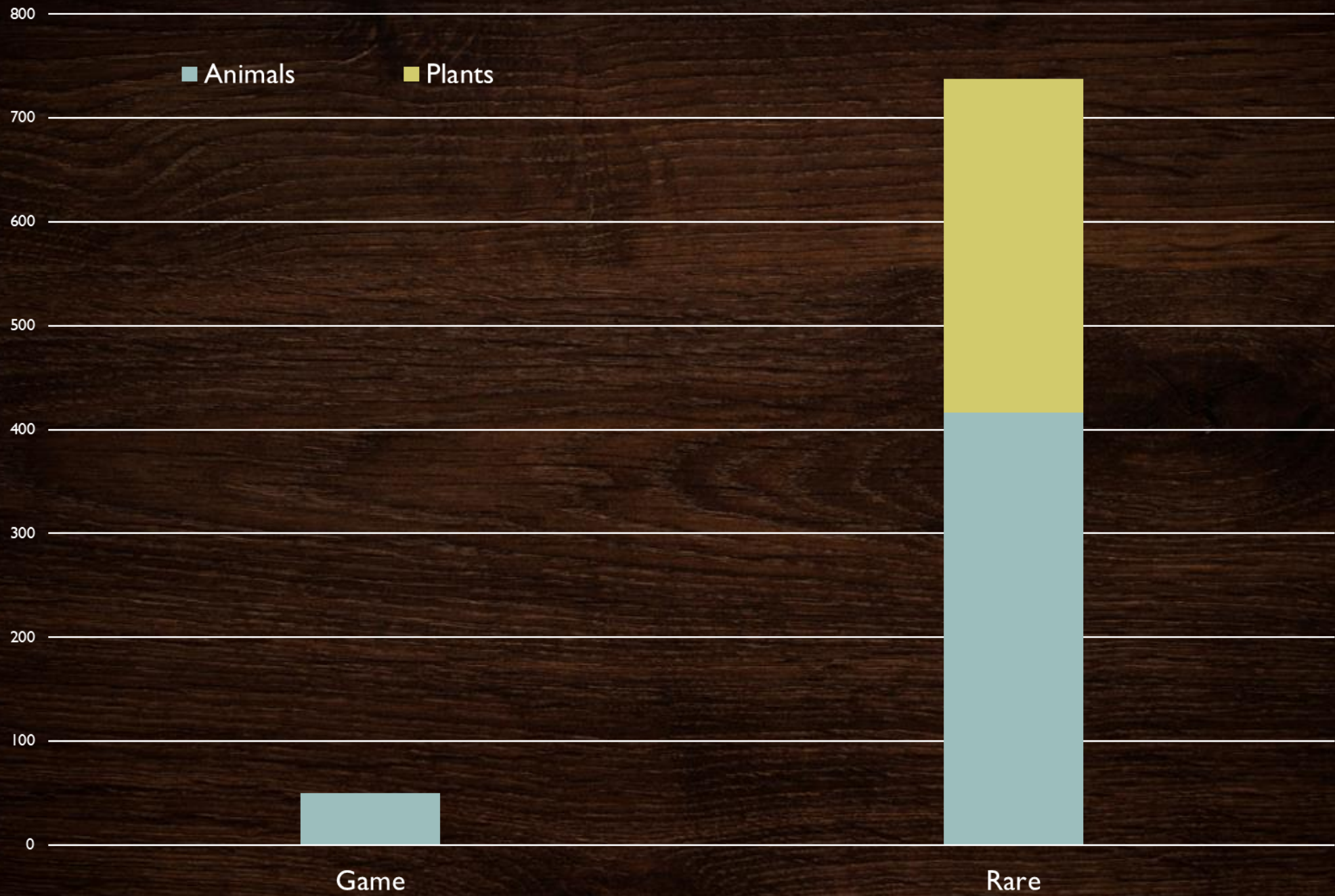


# Rare Species “Occurrences”



# Program Responsibilities - Animals





# Wisconsin Threatened & Endangered



J. Lyons



L. Hays



T. Meyer



A. Badje



# State legal protection

- Animals – everywhere
- Plants – public lands only, except
  - Agriculture
  - Forestry
  - Utility activity
  - Bulk mine sampling

# U.S. Threatened & Endangered



J & K Hollingsworth



E & P Bauer



J. M. Lockhart



J. Mayer



# Federal legal protection



J & K Hollingsworth



E & P Bauer

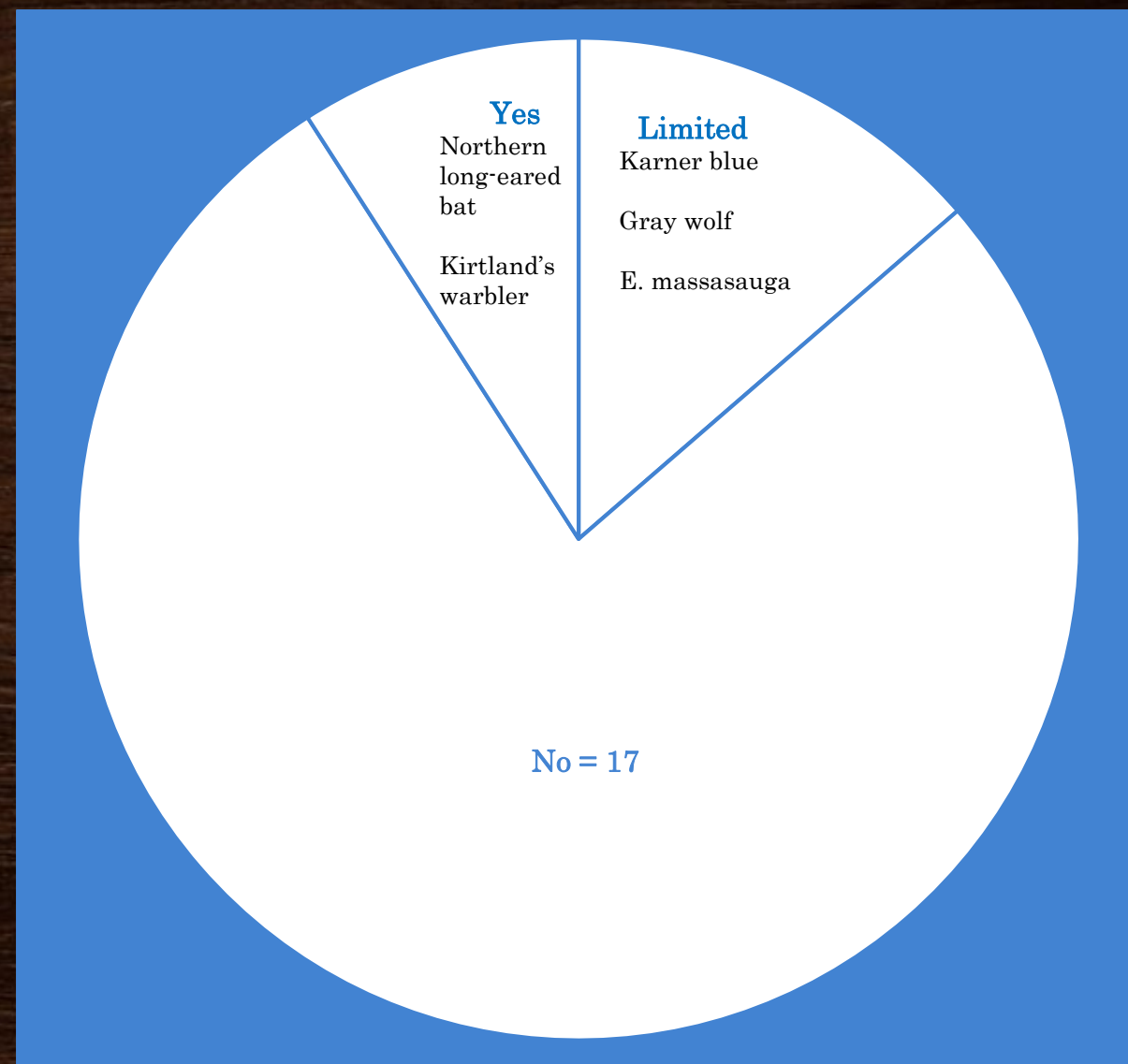


J. M. Lockhart



J. Mayer

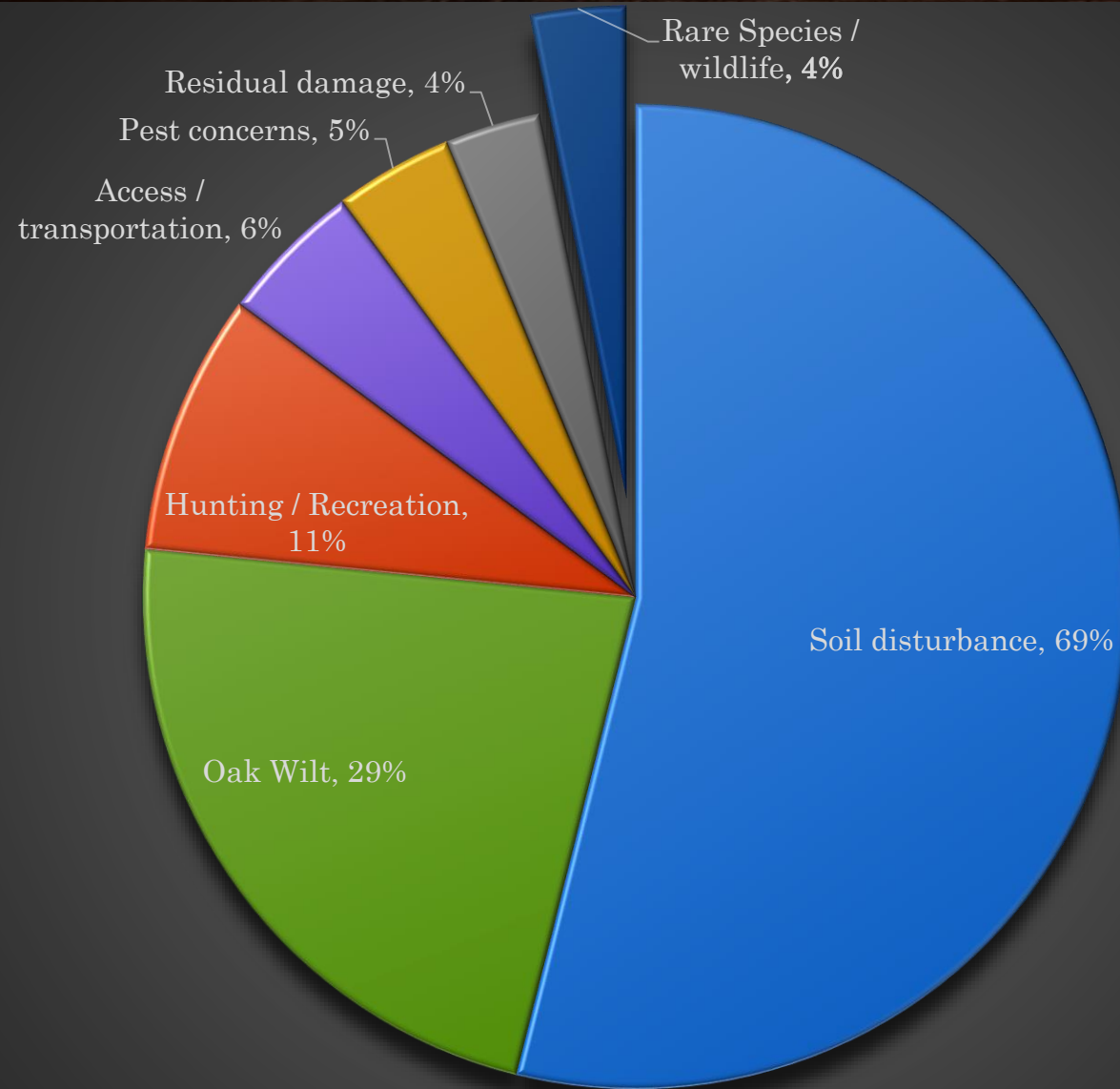
# Federal species in forests



# The Issue

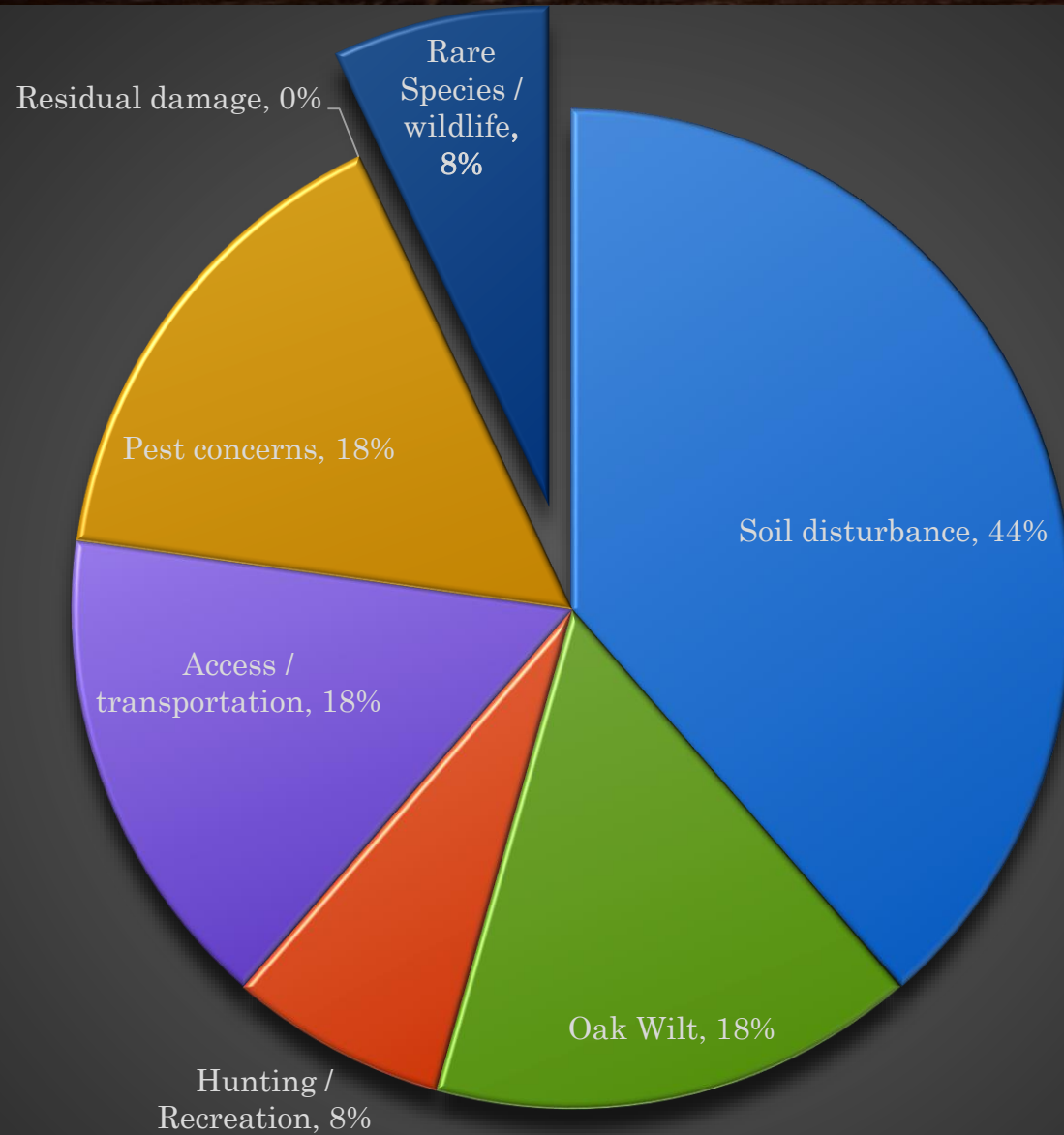
WISCONSIN FOREST PRACTICES STUDY  
RECOMMENDATIONS

# Seasonal harvest restrictions



- WDNR
- 143 sales
- 69% of total

# Seasonal harvest restrictions



- M. Demchik
- 445 sales
- 67% of total

Of most consequence were wood turtle (*Glyptemys insculpta*) or Blanding's turtle (*Emydoidea blandingii*), which resulted in restrictions on 3% of sites. Northern goshawks (*Accipiter gentilis*) and Karner blue butterflies (*Lycaeides melissa samuelis*) resulted in restrictions on less than 1% of sales each. Bats were listed as NHI hits on three sites, but none resulted in a seasonal restriction. Of course, the timber sales that were analyzed were conducted prior to the federal listing of the northern long-eared bat (*Myotis septentrionalis*). Overall, NHI detections were of much less importance to seasonal harvest restriction than originally expected.



# Blanding's turtle

May 20 - October 15

Avoid **open** sandy or well-drained areas within  
900 ft. of the stream or wetland



# Modern strategies



Bureau of Natural Heritage C  
DNRERReview@wiscons

## ERReview

Endangered Resources  
Incidental Take

### Wisconsin's Endangered Species Law

Wisconsin's Endangered Species Law (s. 29.604, Wis. Stats.) pertains to wild plants and animals on the Wisconsin endangered and threatened species lists. It is illegal to take, transport, possess, process or sell any wild animal on public or private property. It is also illegal to remove, transport or carry away a wild plant from the place where it is growing; or cut, root up, sever, injure or destroy a wild plant on public property except for the following activities: 1) forestry practices, 2) agricultural practices, 3) construction, operation or maintenance of a utility facility or 4) as part of bulk sampling activities associated with mining.

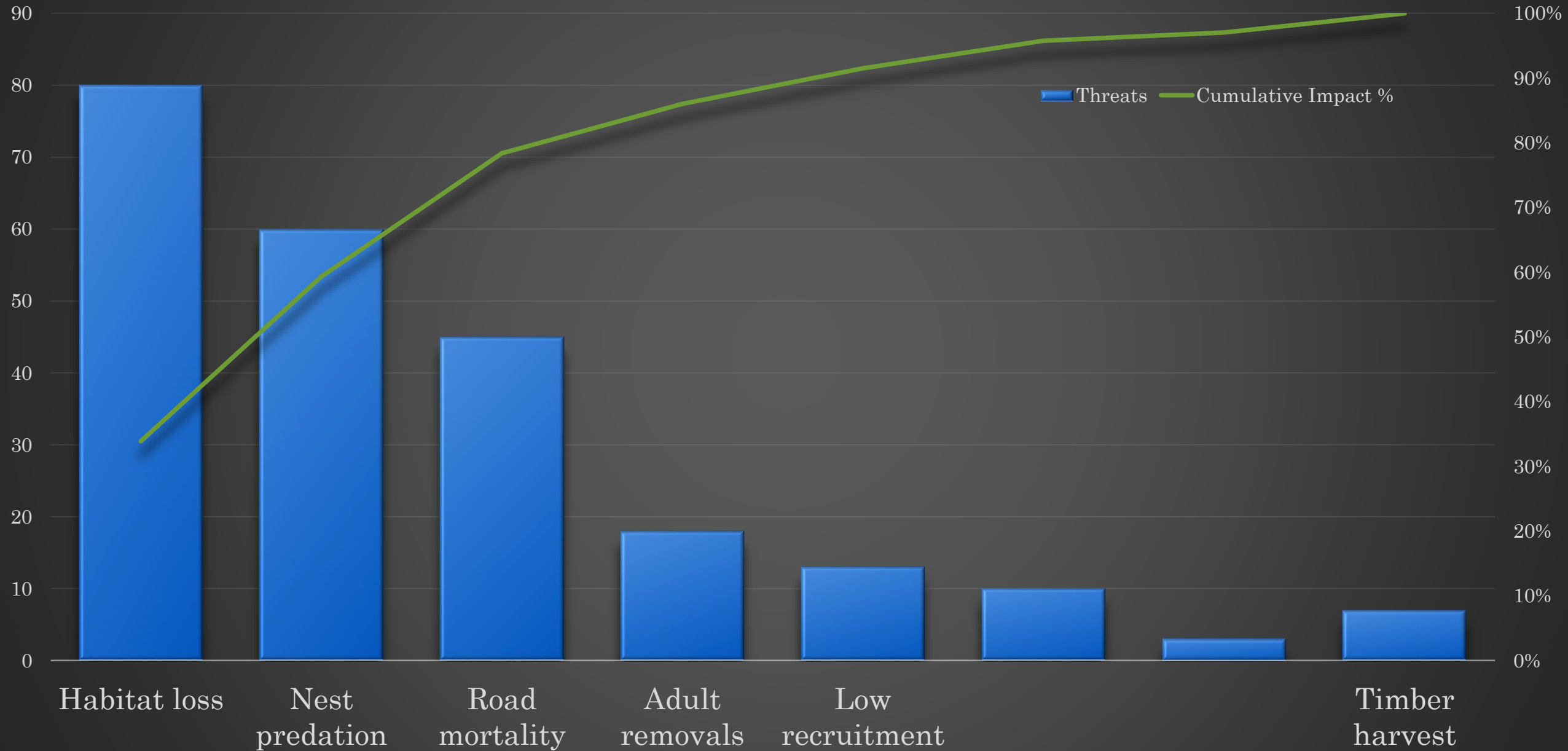


Eastern Ribbonsnake by Rori Paloski, Wisconsin DNR

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### What is "incidental take?"

# (HYPOTHETICAL) Wood Turtle Threats



# Nesting Areas



Wood turtle IT:  
not covered

- Permanent land conversion
- Disturb nesting areas (5/20 – 9/18)
- Burn nesting areas (5/20 – 7/5)
- Instream work (10/1 – 4/30)

# Wood turtle IT: required measures

- Move turtles
- Herbicide list



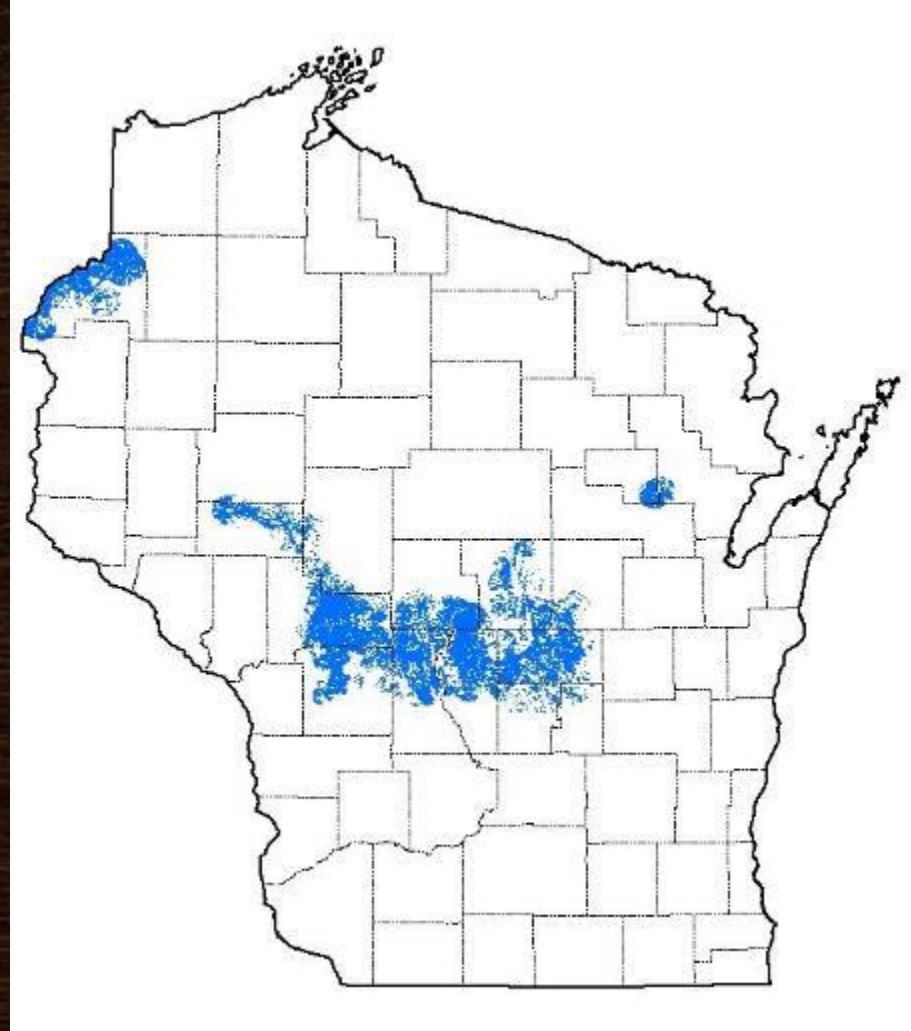
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# Northern Goshawk





# Federal ESA Coordination



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# Final 4(d) Rule

- Purposeful take prohibited (w/ exceptions)
- All take within hibernacula prohibited

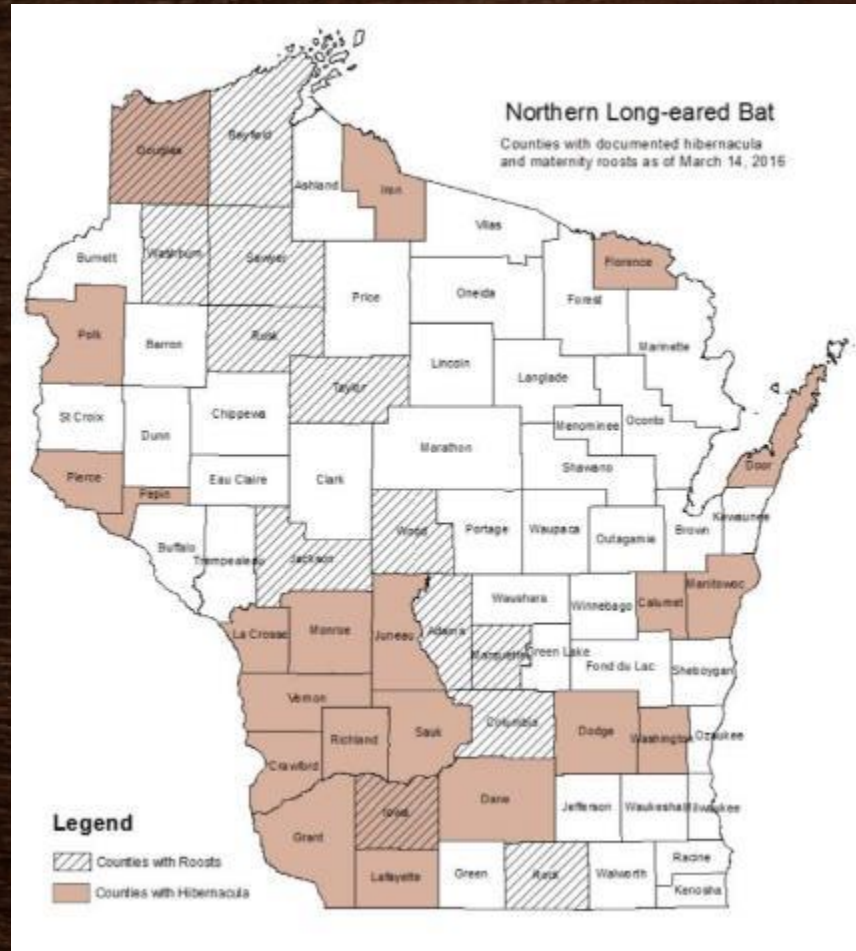


# Final 4(d) Rule: tree removal restrictions



- 0.25 miles from hibernaculum (any time)
- 150 ft. from known maternity roost trees (June 1 – July 31)

# Known Locations



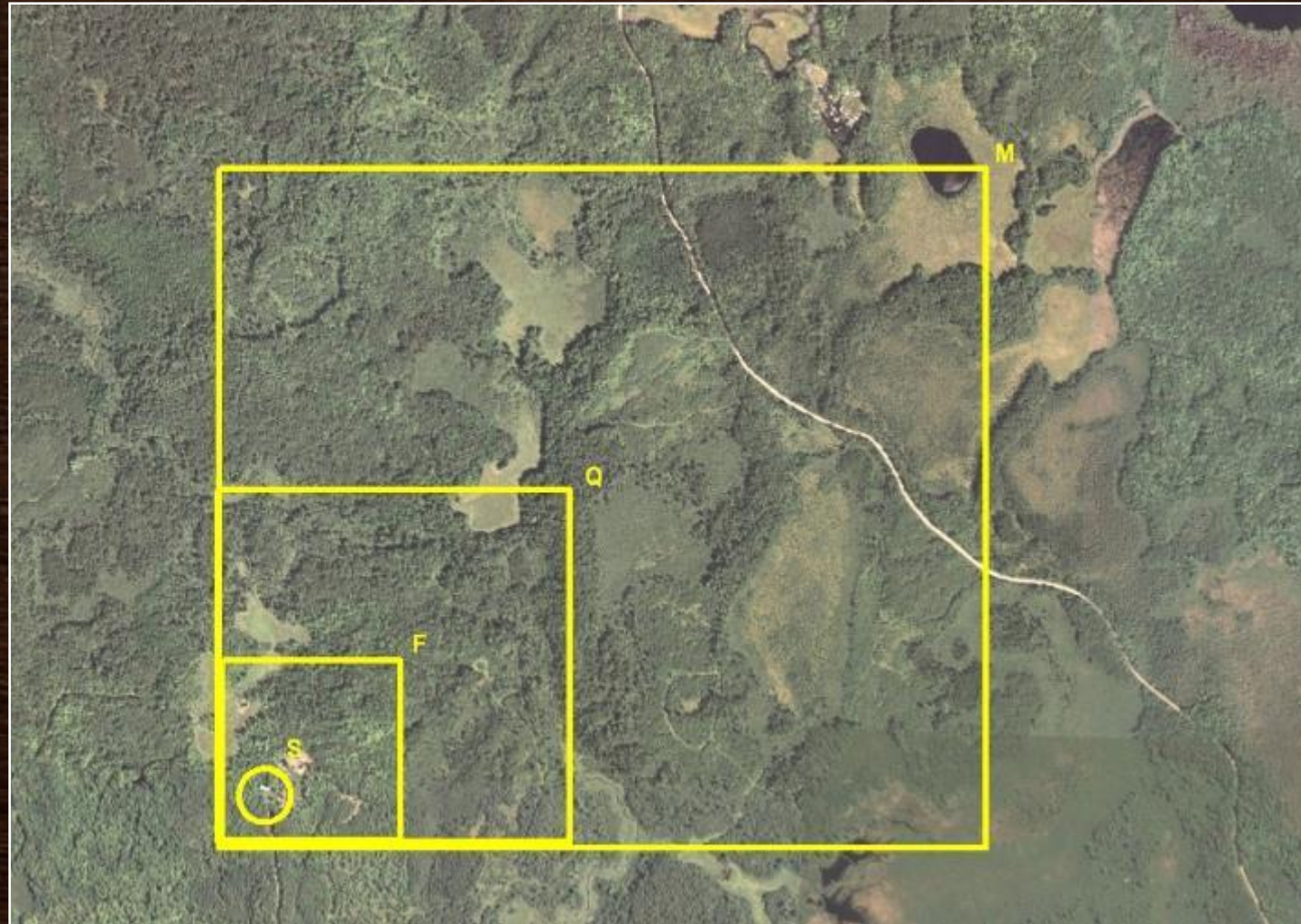
76 hibernacula, ~20 maternity roost sites

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# Old records

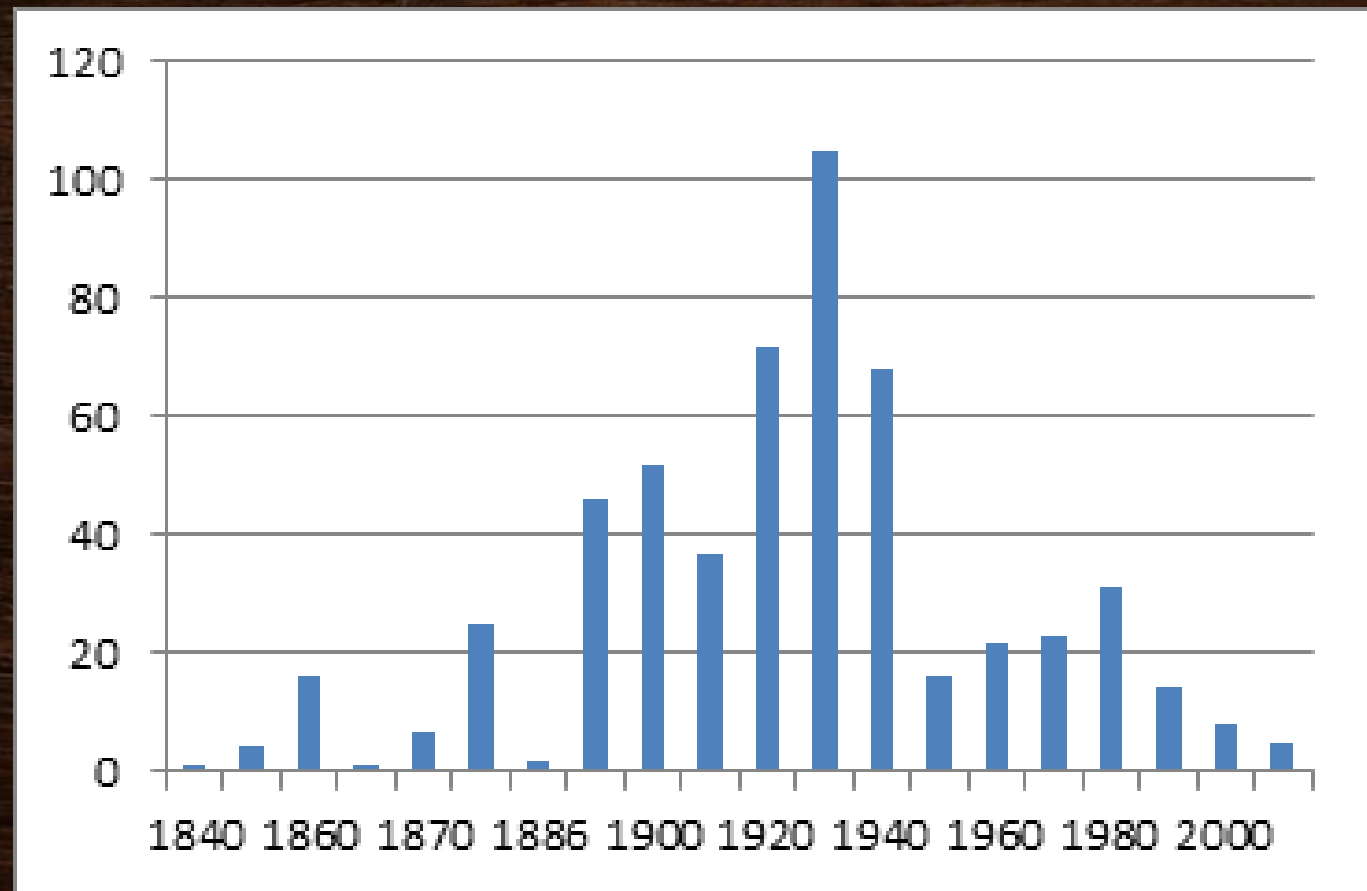
WFPS COMMENTS / RECOMMENDATIONS

# Record precision





# Low-precision records



# Misunderstanding the data

WFPS COMMENTS / RECOMMENDATIONS



# Example: June harvest

HOODED WARBLER (THR)







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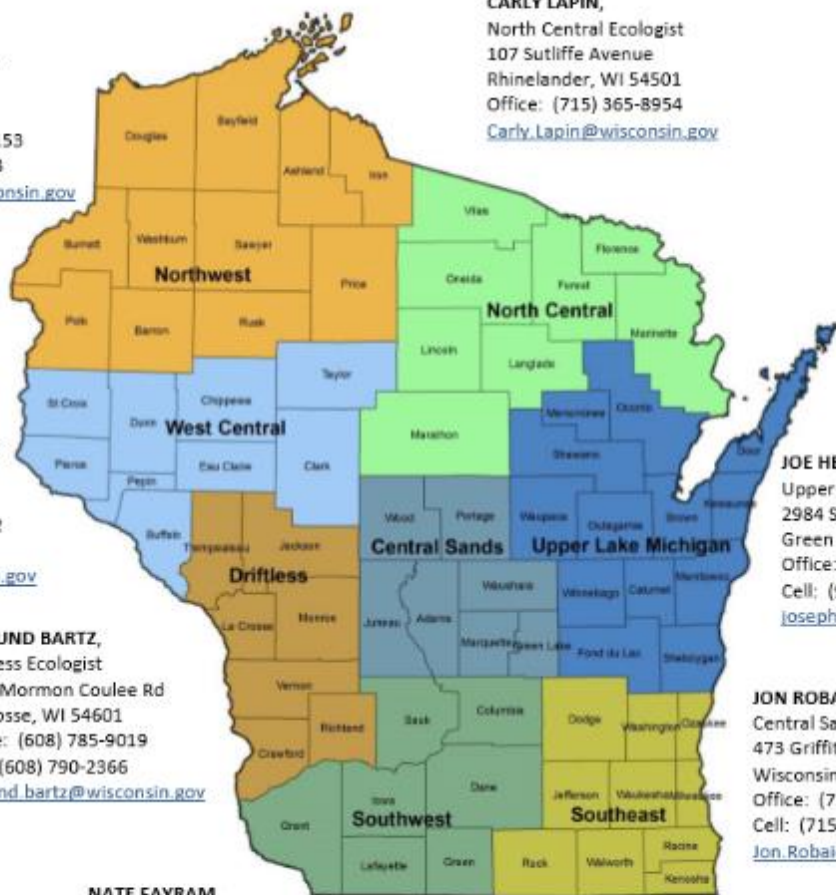
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## Hooded Warbler (*Setophaga citrina*) Species Guidance

Family: Parulidae – the wood-warblers

State Status: [Threatened](#) (1989)

State Rank: [S2S3B](#)

Federal Status: [None](#)

Global Rank: [G5](#)

Wildlife Action Plan

Mean Risk Score: [3.3](#)

Wildlife Action Plan Area

Importance Score: [2](#)



Counties with documented locations of Hooded Warbler breeding or breeding evidence in Wisconsin. Source: Natural Heritage Inventory Database, August 2012.



Photo by Lana Hays

### Species Information

**General Description:** The Hooded Warbler is approximately 13 cm (5.1 in) long, with olive-green upperparts, bright yellow underparts, and white outer tail feathers. All individuals show a dark loreal spot and large dark eye. Adult males have a bright yellow face encircled by a black hood and bib. Adult females have a plain yellow face with an olive crown and nape. Some females have a variable amount of black on the head, ranging from a border around the face to an entirely black crown and breast. Plumages are similar throughout the year. Immature males resemble adult males but have more extensive olive to yellow tipping on their black hood feathers. Immature females resemble adult females but with little to no black on the crown and throat (Howell and Webb 1995, Dunn and Garrett 1997, Dunn and Alderfer 2006).

The song is composed of 4-5 musical notes, often with the last note strongly emphasized: *ta-wit ta-wit ta-wit TEE-yo*. The call is a loud, metallic *chink* (Howell and Webb 1995, Dunn and Garrett 1997, Dunn and Alderfer 2006). An example of a typical song can be heard here: [http://www.allaboutbirds.org/guide/Hooded\\_Warbler/sounds](http://www.allaboutbirds.org/guide/Hooded_Warbler/sounds)

**Definitive Identification:** Olive-green upperparts, bright yellow underparts, and an extensive black hood make males unmistakable. White tail spots and the dark loreal spot distinguish female Hooded Warblers from other similar species.

**Similar Species:** Female Hooded Warblers resemble female Wilson's Warblers (*Cardellina pusilla*). Wilson's Warblers, however, lack white tail spots and the dark loreal spot, and have olive cheeks instead of the Hooded Warbler's yellow cheeks. Male Hooded Warblers resemble Kentucky Warblers (*Geothlypis formosa*) but have a black throat, a longer tail with white outer feathers and more extensive yellow on the face (Dunn and Garrett 1997).

**Associated Species:** Within appropriate upland hardwood forest types, Hooded Warblers can occur with the following Species of Greatest Conservation Need: Yellow-billed Cuckoo (*Coccyzus americanus*), Acadian Flycatcher (*Empidonax vireescens*), Least Flycatcher (*Empidonax minimus*), Wood Thrush (*Hylocichla mustelina*), Cerulean Warbler (*Setophaga cerulea*), Worm-eating Warbler (*Helminthos vermivorum*), and Kentucky Warbler.

**State Distribution and Abundance:** The Hooded Warbler is an uncommon breeding resident in the southern two-thirds of the state, mostly south of a line from St. Croix to Portage to Manitowoc counties (Bielefeldt and Rosenfield 2006). Highest known concentrations of this species occur in the Baraboo Hills and the northern and southern units of the Kettle Moraine State Forest. In recent years Hooded Warblers in Wisconsin have been documented as far north as Polk, Burnett, Marinette, and Florence counties. Distribution information for this species may not reflect its full extent in Wisconsin, because many areas of the state have not been thoroughly surveyed.



Global range map for Hooded Warbler. (NatureServe 2013)

## Wisconsin Natural Heritage Inventory Training for Foresters





## Wisconsin's rare animals



Slender glass lizard (*Ophisaurus attenuatus*), photo © Nick Walton.

All of Wisconsin's rare species are found on the [Natural heritage working list](#). Species become rare for a number of reasons, including habitat loss, habitat degradation, highly specialized habitat needs, disturbance sensitivity, genetic problems, exploitation, persecution, predation, competition and parasitism. Some rare species are present here at the edges of their main ranges. Invasive species and climate change are also impacting rare species and expected to become even bigger factors in the future.



### Explore rare species pages

These pages contain information about Wisconsin's rare animals, including where they are found in the state, their level of legal protection and photos. Life history and management considerations are available for many species, and new information is continually being added.

**Vertebrates**



- + [Amphibians](#)
- + [Birds](#)
- + [Fishes](#)
- + [Mammals](#)
- + [Reptiles](#)

**Invertebrates**



+ <a href="#">Ants, wasps, and bees</a>	+ <a href="#">Flies</a>
+ <a href="#">Aquatic and terrestrial snails</a>	+ <a href="#">Grasshoppers and allies</a>
+ <a href="#">Beetles</a>	+ <a href="#">Leafhoppers and true bugs</a>
+ <a href="#">Butterflies and moths</a>	+ <a href="#">Mayflies</a>
+ <a href="#">Caddisflies</a>	+ <a href="#">Mussels and clams</a>
+ <a href="#">Crustaceans</a>	+ <a href="#">Spiders</a>
+ <a href="#">Dragonflies and damselflies</a>	+ <a href="#">Stoneflies</a>

### Share your observations

Share your observations of plants or non-game animals with the Natural Heritage Inventory.

[Get started here](#) [\[exit DNR\]](#)

### Biodiversity

#### Rare animals

Find rare and non-game animals.

#### Rare plants

Learn about plants on the Natural Heritage Working List.

#### Rare lichens

Discover Wisconsin's lichens.

#### Natural communities

Explore Wisconsin's natural communities.

#### Other features

Discover unique resources.



Help care for rare plants and animals by ordering an Endangered Resources plate.

### Related links

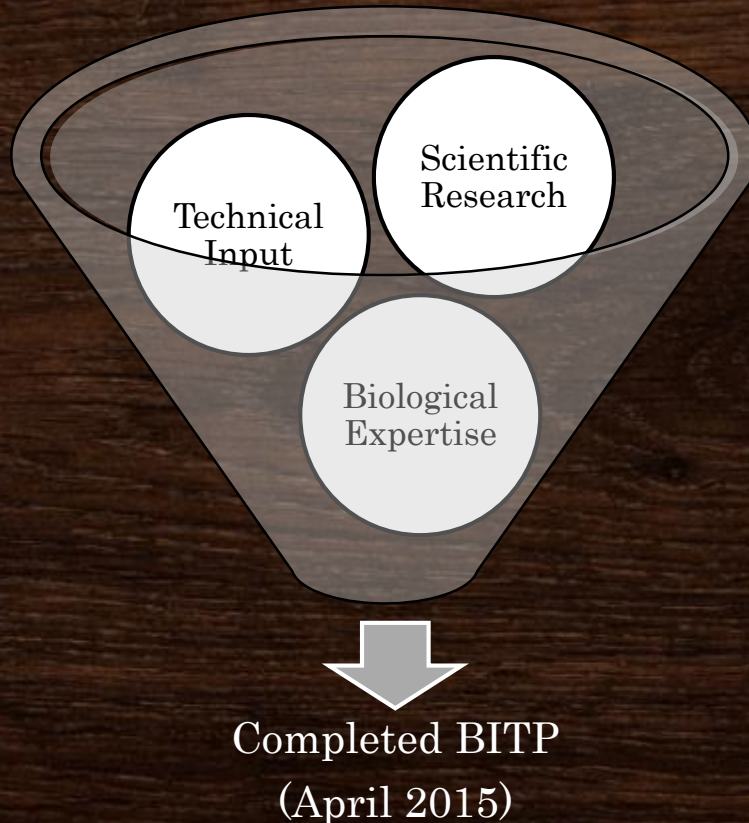
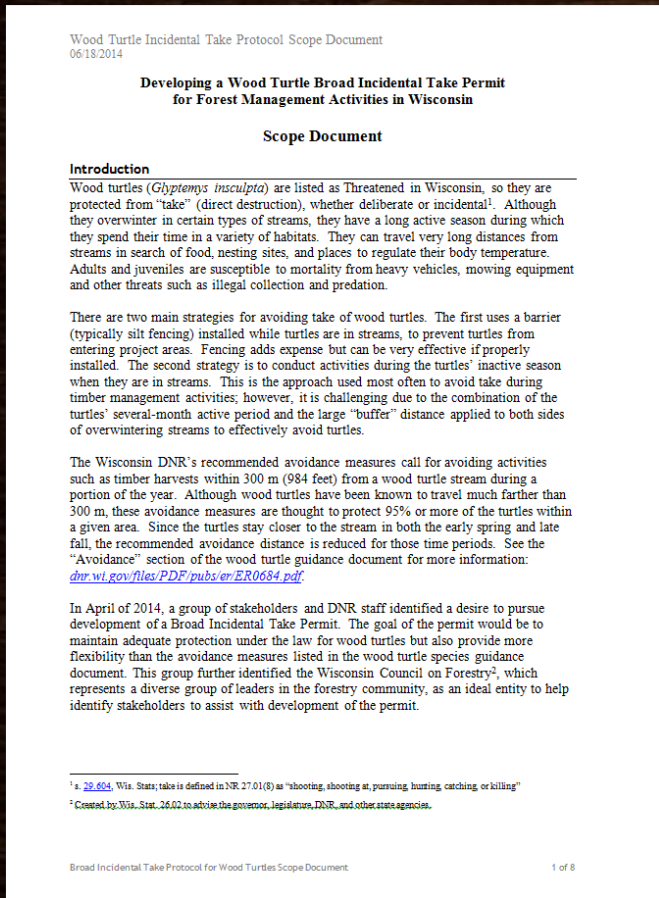
- + [Endangered species laws](#)
- + [Natural Heritage Inventory](#)
- + [Colonial Waterbird Survey reporting form](#)
- + [Trumpeter Swan observation reporting form](#)
- + [Wildlife Action Plan](#)
- + [Report a rare species](#)
- + [Wisconsin's endangered resources](#)

# Include stakeholders

WFPS COMMENTS / RECOMMENDATIONS



# Wood Turtle Incidental Take Permit



- Technical committee
- Advisory committee

# Northern Long-eared Bat

(US Threatened 2015)





## Lake States Forest Management Bat Habitat Conservation Plan

Forest bat populations are rapidly declining, and one or more species may soon be reclassified as endangered. If reclassified, the U.S. Fish and Wildlife Service provides the opportunity to develop a Habitat Conservation Plan (HCP). An HCP helps endangered species recover by conserving their habitat during land management activities. In preparation, Wisconsin and neighboring states are developing a forest management bat HCP that will maintain bat habitat and allow important forest management activities to continue.

This page will keep you informed on the status of the HCP, share opportunities for involvement and gather your feedback as the plan is developed.



### What should I know?

- Fast-moving [white-nose syndrome](#) is increasing the likelihood that the federally threatened [northern long-eared bat](#) and other [bat species](#) will be reclassified as endangered in the near future.
- The Wisconsin, Minnesota and Michigan Departments of Natural Resources are developing a joint, large-scale HCP. The HCP describes the costs and benefits of forest management for bats, and details conservation measures to offset forest management impacts on bats.
- Wisconsin forest land owners—public or private—may voluntarily participate in the HCP and

### Forest Planning

#### Read

Wisconsin's Forest Action Plan.

#### View

the DNR Forestry Strategic Direction.

#### Find

property master plan information.

#### Learn

about the Karner Blue Butterfly Habitat Conservation Plan.

### Related links

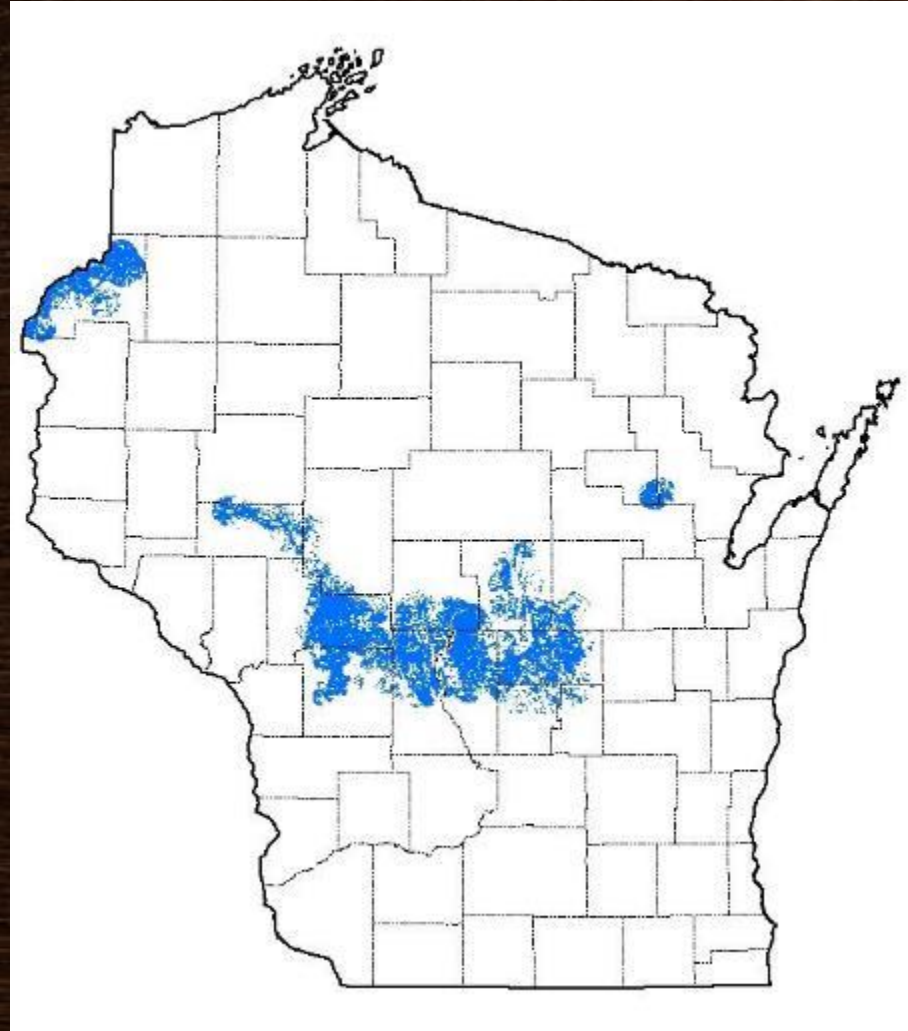
- [Saving Wisconsin bats](#)
- [Bat frequently asked questions](#)
- [Incidental take and conservation plan](#)
- [Northern long-eared bat screening guidance](#)
- [Wis. Bat Monitoring Program \[exit DNR\]](#)
- [Wis. Natural Resources Foundation's Bat Conservation Endowment Fund \[exit DNR\]](#)
- [Wis. Karner blue butterfly HCP](#)

### Contact information

For more information on the Lake States HCP, contact:

[Sarah Herrick](#)  
Forestry Specialist  
[608-267-7689](tel:608-267-7689)

# Federal ESA Coordination



# NHI Portal access

WFPS COMMENTS / RECOMMENDATIONS

# Empowering Customers

Bureau of Natural Heritage Conservation  
DNRERReview@wisconsin.gov

## ERReview

Endangered Resources  
Certification Program

### What is the ER Certification Program?

The certification program is part of the Endangered Resources (ER) Review Program which helps customers comply with endangered species laws and conserve the rare plants, animals and habitats found in Wisconsin. The certification program was created in response to stakeholder requests for a mechanism that would facilitate sharing of detailed Natural Heritage Inventory (NHI) data with a broader group of customers while ensuring the safety, security and correct interpretation and application of the data.

Once an individual takes the necessary training to become a Certified ER



# Increased Efficiency

The screenshot shows the homepage of the Natural Heritage Inventory. At the top, there is a navigation bar with links for Business, Licenses & Regulations, Recreation, Education, Contact, and Join DNR, along with a search bar. The main heading is "Natural Heritage Inventory" with the subtext "Tools for accessing data". Below this, a paragraph explains that the database is the most comprehensive source of rare species data for Wisconsin, used for research, land management, and planning. A second paragraph notes that some tools are for general planning only and should not be used for screening or reviewing proposed land development. On the left side, there are four tool icons with descriptions: "County tool" (rare species in each county), "Township tool" (rare species in a township), "Public Portal" (online mapping for landowners), and "Detailed data" (location-specific information). On the right side, there is a sidebar with sections for "Natural Heritage Inventory", "ACCESS NHI data", "Explore", "Report", "Review", "Related links" (Ecological landscapes, Endangered resources, Endangered resources review, Endangered and threatened species list), and "Contact information" (Dale Cassel, NHI data manager, 509-256-7300). At the bottom left, it says "Last revised: May 13, 2016".

The screenshot shows the "WIDNR - NHI Portal" interface. At the top, it says "Wisconsin Department of Natural Resources" and "WIDNR - NHI Portal". Below this is a navigation bar with links for Map, EO summary, Review, Projects, Portal and species questions, and Hints and FAQs. A "Set a project area" section includes a "Public Portal ID" input field and a "Go" button. Below this, there are instructions: "1. Zoom to your project area. Hint: hold 'shift' and draw a box to zoom" and "2. Draw the project boundary by selecting either Line or Polygon and single-clicking to create the vertices. Double-click to end the line or close the polygon." The main area features a map of Wisconsin with various layers overlaid. On the right side, there is a sidebar with "Zoom" controls (Zoom In, Zoom Out, Zoom To State, Back To Last Extent, Zoom To), "Draw Search Area" options (Line, Polygon), "EO Layers" (Terrestrial EOs, Wetlands EOs, Aquatics EOs), and "Other Layers" (Kamer HPR, Wetlands, Bald Eagle Nest Locations).

discussion