



Advancing Wind Power in Illinois Conference 2011

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U.S. Fish & Wildlife Service

Indiana Bat & Eagles

Hot Topics Plenary Panel Session

Friday, July 22, 2011, 3:00 PM



Eagles, Bats and Wind in Illinois



Eagles are Protected



EAGLES:

- Golden Eagles
- Bald Eagles
- Bald and Golden Eagle Protection Act
 - Incidental Take Permits



Indiana Bats are Protected

BATS:

- Endangered Indiana Bat
- Positive 90-day finding (Potential Candidates)
 - Northern Long-eared bat
 - Eastern Small-Footed Bat
- Incidental Take Permits



NO LONGER ENDANGERED What is Take?

Bald and Golden Eagle Protection Act

- “*Take*” under the Eagle Act means to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.”



Definition of “Disturb”



72 FR 31132, June 5, 2007

Disturb means to **agitate or bother** a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available,

- 1) **injury** to an eagle,
- 2) a **decrease in its productivity**, by substantially interfering with normal breeding, feeding, or sheltering behavior, or
- 3) **nest abandonment**, by substantially interfering with normal breeding, feeding, or sheltering behavior.



Incidental or Non-purposeful Take Permit



One of two new permit types, new section CFR 22.26 would authorize

- Limited take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) under the Eagle Act, where the taking is associated with, but not the purpose of the activity, and cannot practicably be avoided

*Implementation of Rule outlined in FEA and FONSI



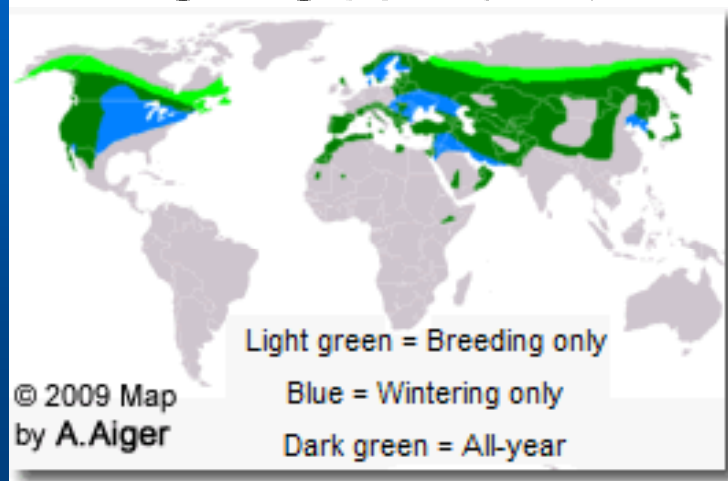
Golden Eagle



Golden Eagle



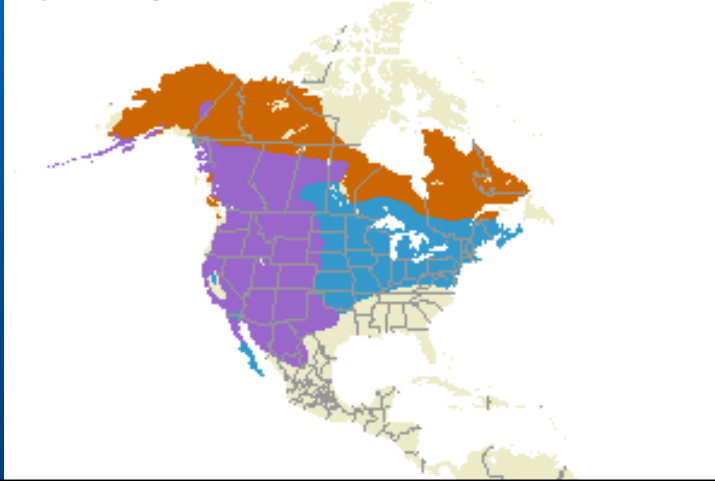
Golden Eagle Range (*Aquila chrysaetos*)





Golden Eagles

Golden Eagle
Aquila chrysaetos



Golden Eagle





Golden Eagle



Golden Eagle

“Until we have additional data to show that populations of golden eagles (*Aquila chrysaetos*) can withstand additional take, of those permits authorized under the new rule, we will only consider permits for safety emergencies, programmatic permits, and any other permits that will result in a reduction of ongoing take or a net take of zero.”

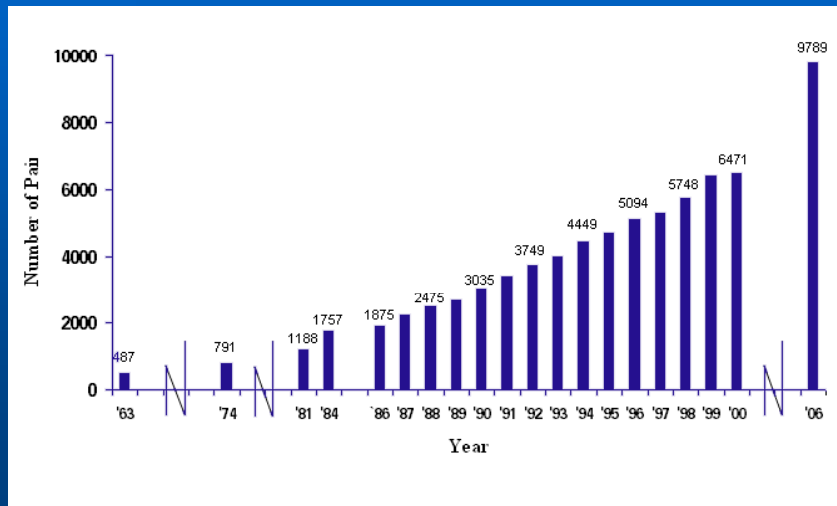
....FONSI, Eagle Act Regulations



Bald Eagle



Bald Eagle





Bald Eagle



Bald Eagle





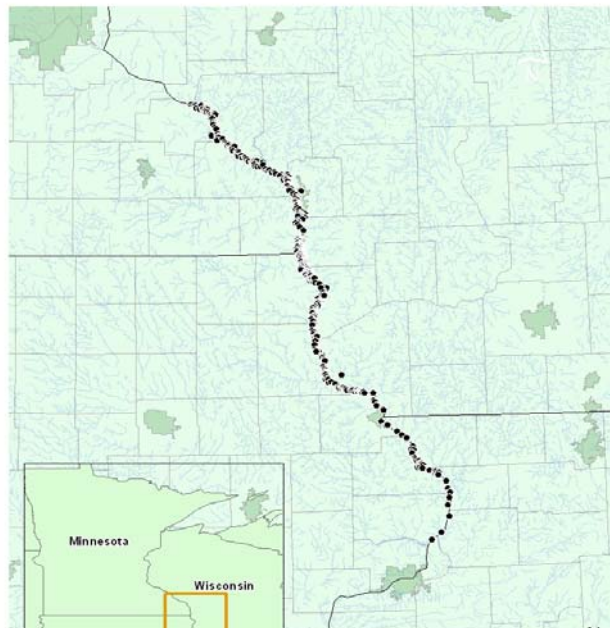
Bald Eagle



90 % nest within two miles of significant body of water: River, Lake



BAEA NESTS UMR NFWR





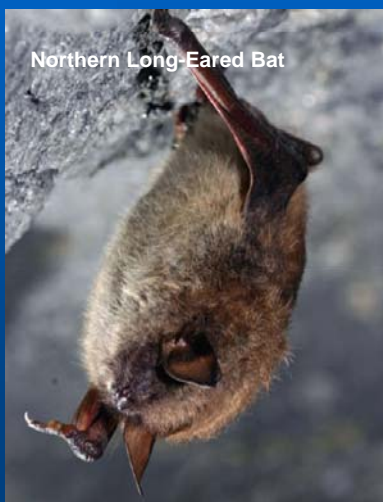
Federally Endangered Bat

Indiana Bat



Potential Candidates for Listing:

Northern Long-Eared Bat



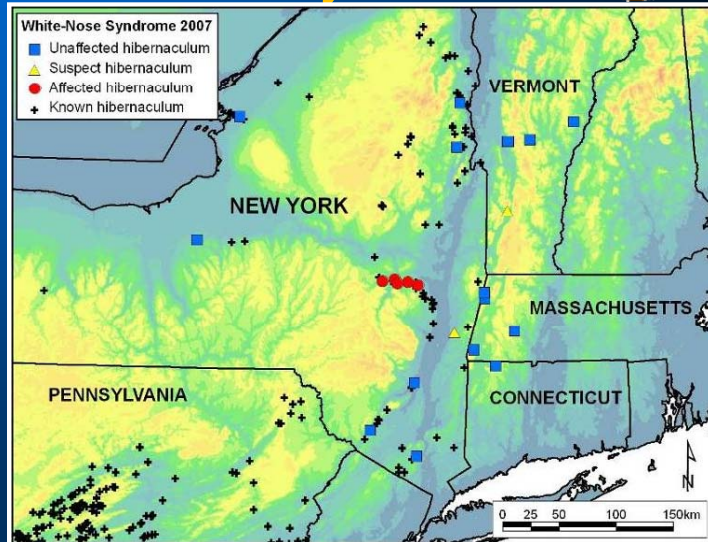
Eastern Small-Footed Bat



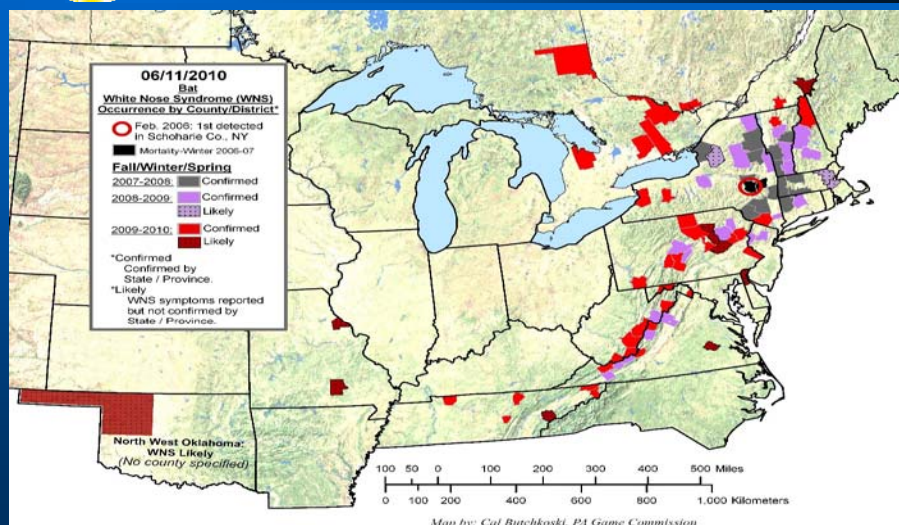


White-nose Syndrome

2007:
1 state,
4 sites

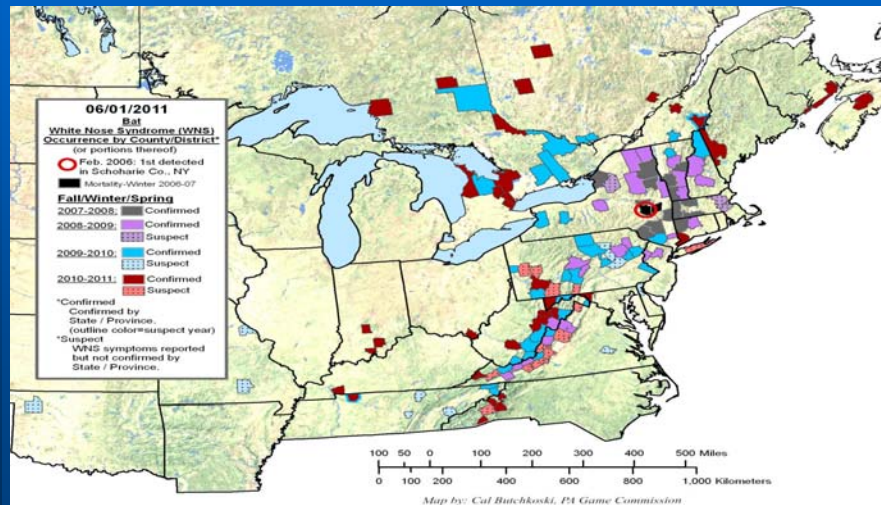


WNS: 2010





WNS: 2011



Bat Fatalities at Turbines

Average mortality/MW/year (Fowler Ridge, IN)
= **10.6 bats**

Total U.S. wind capacity now stands
at 40,180 MW (AWEA)

Estimated annual bat mortality = **425,908 bats**

Estimated bat mortality over 25-year project
life: **10,647,700 bats**



WHY DO WE CARE?



#10.....Pest-control services provided by
insect-eating bats in the United States likely
save the U.S. agricultural industry at least
\$3 billion a year

.....Boyles et al. in *Science*

1/18/09