

USACE Natural Resource Management

Mammals



Northern Long-eared Bat

FAST FACTS

REASONS FOR CURRENT STATUS: The northern long-eared bat was listed under the Endangered Species Act by the U.S. Fish and Wildlife Service (USFWS) as threatened in April 2015 primarily due to devastating population decline associated with white-nose syndrome. According to the USFWS, numbers of northern long-eared bats have declined by up to 99% in the Northeast US. Additionally, the Service published a final 4(d) rule in September 2016. The 4(d) rule specifically defines the “take” prohibitions.

MANAGEMENT AND PROTECTION: The USFWS notes that it is unlikely the northern long-eared bat would be federally protected if white-syndrome had not emerged. Several important factors now affect the species viability including impacts to hibernacula such as gates or other structures installed at cave and mine entrances that can alter the microclimate. Additionally, the loss and degradation of suitable summer habitat has resulted from highway construction, commercial development, surface mining, and wind farm operations.

HABITAT NEEDS: Northern long-eared bats occupy two different habitat types.

- Winter habitat for this hibernating species consists of caves or mines with small cracks and crevices that maintain constant temperatures, high humidity, and no air current. The USFWS advises that human disturbance by entrance into such places during species hibernation can arouse the bat resulting in additional use of energy reserves. Any structures installed at entrances to minimize human entry should be constructed in a manner that does not alter the cave or mine microclimate.
- Summer habitat is slightly variable with the species roosting singly or in colonies. They have been found to occupy spaces underneath tree bark or in cavities and crevices of both live and dead (snag) trees. Although rare, the species has been found to occupy structures such as barns and sheds. Proper forest management conducted outside of the summer roosting or non-volent season for pups, can provide beneficial habitat for the species.

Appearance: As suggested by its name, this bat is distinguished from other species in the *Myotis* genus by its long ears. The northern long-eared bat is considered to be a medium-sized bat, measuring 3 to nearly 4 inches in length with a wingspan of 9 to 10 inches.

Fur color is medium to dark brown on the back and tawny to pale-brown on the underside (USFWS).

Photos: USFWS, NY Dept of Environmental Conservation, USFWS, Illinois Dept of Nat. Resources

Natural Resource Management (NRM)

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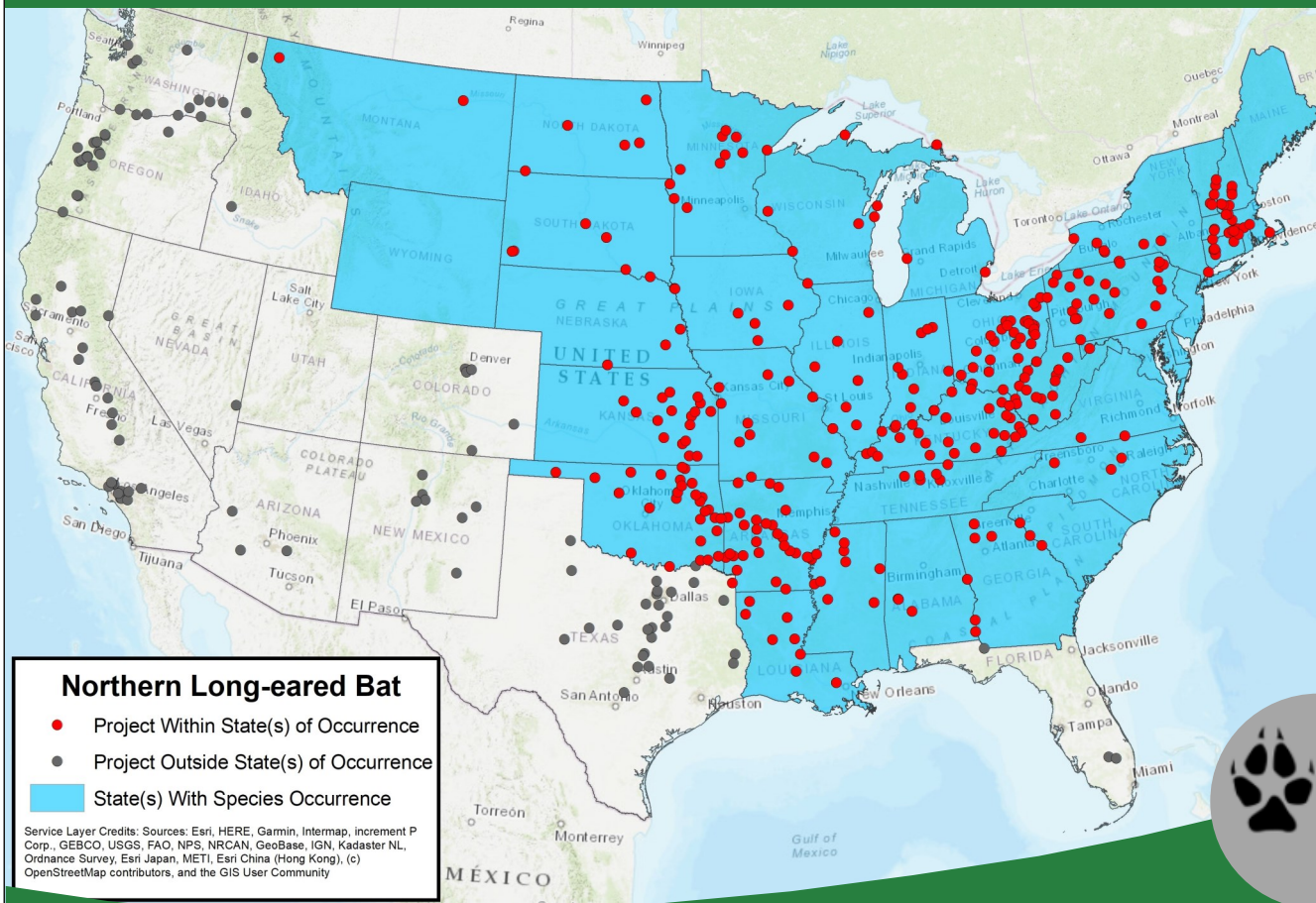
USACE NATURAL RESOURCE MANAGEMENT ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$4,945,234 since 2013 on efforts related to the northern long-eared bat. The costs associated with this species have been incurred by multiple business lines including Navigation, Regulatory, Flood Risk Management, Environmental Stewardship, and Recreation.

WHAT IS USACE NRM DOING: Because of the large range associated with the northern long-eared bat, over 120 projects with an NRM mission spanning 20 districts reported potential, rare, and occasional occurrences of the species during the FY20 NRM Assessment. Additionally, 16 projects have consulted with the USFWS service on the northern long-eared bat that resulted in the issuance of a Biological Opinion.

Raystown Lake, Baltimore District, has voluntarily identified over 2,500 acres of forested land that will be managed specifically to enhance habitat for forest dwelling bat species including the federally endangered Indiana bat and the northern long-eared bat. Habitat improvements have included the removal of invasive species, the creation of snags, plantings of desired hardwood tree species, and the installation of artificial habitat nesting structures. Mist net and acoustic surveys have been conducted routinely through various contract methods to monitor species presence/absence.



Photo Above: An alternative artificial habitat structure to promote summer habitat roosting opportunities similar to a bat box at the Raystown Lake Project.



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 Source: Map provided by Ashleigh Boss, ORISE Fellow, Institute for Water Resources

