U.S. Fish & Wildlife Service

Final rule to reclassify the northern long-eared bat as endangered under the Endangered Species Act

Questions and Answers

1. What action is the U.S. Fish and Wildlife Service taking?

The U.S. Fish and Wildlife Service has published a final rule reclassifying the northern long-eared bat from threatened to endangered under the Endangered Species Act. The change is supported by a species status assessment of the northern long-eared bat and the best available science indicating the bat meets the definition of endangered under the Endangered Species Act. The final rule serves as our response to a court order requiring the Service to reconsider the previous listing decision for the northern long-eared bat within 18 months of completing a species status assessment, or by November 30, 2022. We have reclassified the northern long-eared bat as an endangered species on the List of Endangered and Threatened Wildlife, and we have removed its species-specific 4(d) rule.

2. When does the reclassification take effect?

The reclassification to endangered and the removal of the 4(d) rule become effective 60 days after publication of the final rule in the *Federal Register*, on January 30, 2022.

3. What is the northern long-eared bat and where is it found?

The northern long-eared bat is about 3 to 3.7 inches long with a wingspan of 9 to 10 inches. As its name suggests, it is distinguished by its long ears, particularly compared to other bats in its genus, *Myotis*. It emerges at dusk to fly primarily through the understory of forest areas, feeding mostly on moths, flies, leafhoppers, caddisflies and beetles. It catches these insects while in flight using echolocation or by using gleaning behavior, catching motionless insects from vegetation.

Northern long-eared bats predominantly spend winter hibernating in caves and abandoned mines, collectively called hibernacula. During summer months, they roost alone or in small colonies underneath bark or in cavities or crevices of both live and dead trees.

The northern long-eared bat is found in 37 states and the District of Columbia in the eastern and north central United States and all Canadian provinces from the Atlantic Coast west to the southern Northwest Territories and eastern British Columbia. The species' range in the United States includes Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North

Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin and Wyoming, and the District of Columbia.

4. Why did the Service change the status of the northern long-eared bat from threatened to endangered under the ESA?

White-nose syndrome (WNS), a fungal disease known to affect only bats, was first detected in New York in 2006 and is the predominant threat to the northern long-eared bat. The effect of white-nose syndrome on northern long-eared bat has been extreme, such that most winter colonies experienced severe declines following its arrival. Just four years after the discovery of the disease, for example, the northern long-eared bat experienced a 98% decline in winter counts across 42 sites in Vermont, New York and Pennsylvania. Similarly, the arrival of white-nose syndrome led to a 10–fold decrease in northern long-eared bat colony size.

Most recently, the northern long-eared bat species status assessment found white-nose syndrome continues to be the predominant threat to the species. Winter data from 27 states and two provinces indicate white-nose syndrome has caused estimated population declines of 97–100% across 79% of northern long-eared bat's entire range and almost all of the species' U.S. range.

Summer data also reveal dramatic declines since the arrival of WNS, with an 80% decline in rangewide occupancy from 2010 to 2019. Relative abundance, a measure of how common or rare a species is relative to other species, dropped 79% from 2009 to 2019. Quantitative and qualitative assessments of the species condition indicate that the northern long-eared bat's viability has declined steeply since it was listed as a threatened species in 2015.

We will continue to work with partners using best management practices and other practical means to manage risks to sensitive life stages for the remaining populations of northern long-eared bats, including hibernation and maternity roosting/pup rearing, while providing regulatory predictability.

5. Are there other threats to the northern long-eared bat besides white-nose syndrome?

The primary factor threatening the northern long-eared bat is white-nose syndrome. However, because populations of the bat are depressed by this disease, human activities that were not significant before may be so now. Mortality of northern long-eared bats at wind energy facilities is an additional stressor, especially in combination with impacts from white-nose syndrome. Most bat mortality at wind energy projects is caused by direct collisions with moving turbine blades. Wind energy mortality may currently occur over 49% of northern long-eared bat's range and wind energy development is expanding.

Climate change variables, such as changes in temperature and precipitation, may influence northern long-eared bat resource needs, such as suitable roosting habitat for all seasons, foraging habitat and availability of prey and water. Although there may be some benefit to northern long-eared bat from a changing climate, overall negative impacts are anticipated.

Habitat loss may include loss of suitable roosting or foraging habitat, resulting in longer flights between suitable roosting and foraging habitats due to habitat fragmentation.

6. What is the difference between endangered and threatened under the ESA?

The ESA describes two categories of declining species that warrant federal protections – "endangered" and "threatened"– and provides these definitions:

> **Endangered:** Any species that is in danger of extinction throughout all or a significant portion of its range.
>
> **Threatened:** Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

In simple terms, endangered species are in danger of extinction now; threatened species are likely to become in danger of extinction in the foreseeable future. Therefore, the definition of each term hinges on the time element, now versus the future.

7. Why is the 4(d) rule no longer available for the northern long-eared bat?

A 4(d) rule is a tool provided by the ESA to allow for flexibility in the ESA's implementation and to tailor prohibitions to those that make the most sense for protecting and managing at-risk species. This rule, which may be applied only to species listed as threatened, directs the Service to issue regulations deemed "necessary and advisable to provide for the conservation of threatened species." Since the ESA does not allow application of 4(d) rules for species listed as endangered, once the endangered reclassification is finalized, the 4(d) rule will be nullified.

8. How will the reclassification affect federal projects in the range of the northern long-eared bat?

Section 7 of the ESA requires federal agencies to consult with the Service to ensure that actions they fund, authorize, permit, or otherwise carry out will not jeopardize the continued existence of any listed species. When we finalized the 4(d) rule in 2016, we provided an optional framework to streamline section 7 consultations for federal actions that may affect the northern long-eared bat but would not cause prohibited take. We also issued a biological opinion that determined the 4(d) rule (both implementation of the rule and the streamlined consultation framework) was not likely to jeopardize the species. Federal agencies were able to rely upon the finding of this biological opinion to fulfill their project specific section 7 responsibilities by using the optional framework.

With the removal of the 4(d) rule, this framework and biological opinion no longer apply and therefore are not available to project proponents. However, we are developing other streamlining tools to assist project proponents with consultations for northern long-eared bat. One of these

tools is a rangewide northern long-eared bat determination key (available through the Service's Information for Planning and Consultation, or IPaC) that allows project proponents to receive automatic verification or concurrence for some actions. This key replaces the northern long-eared bat 4(d) rule determination key. Another streamlining tool is the Interim Consultation Framework we are developing to help project proponents ensure that projects in compliance with the 4(d) rule are not delayed. It is a new formal consultation framework that will facilitate the transition from the 4(d) rule to typical Section 7 consultation procedures for federally endangered animals, until spring 2024. The strategy applies to a wide variety of ongoing projects, such as (but not limited to) timber harvest, prescribed fire, and infrastructure projects.

We have also been working with other federal agencies to update and streamline re-initiation of consultations. We have updated the programmatic consultation with the Federal Highway Administration, the Federal Railroad Administration and the Federal Transit Administration that covers transportation projects throughout the entire range of the northern long-eared bat. The U.S. Forest Service (USFS) and the Service are developing a Bat Conservation Strategy that would be implemented across the Forest Service's Eastern and Southern regions.

9. How will the reclassification affect private landowners carrying out timber management on their property?

Private forest landowners play a pivotal role in the conservation of wildlife including forest-dwelling bat species. For non-federal landowners and activities, "take" of a listed species can be authorized through development of a habitat conservation plan and issuance of an incidental take permit by the Service; the standard for determining if activities are likely to result in incidental take is whether that take is "reasonably certain to occur." Landowners can keep their risk of impacts to bats low by implementing sustainable forestry practices. Although the determination of how to proceed would ultimately rest with the private landowner, we are developing general timber management guidance that will aid in assessing risk and provide recommendations to avoid and minimize impacts to northern long-eared bats.

10. How will the reclassification affect wind energy projects in the range of the northern long-eared bat?

The 4(d) rule allowed incidental take that results from operating wind turbines, and now all incidental take from wind energy-related mortality is prohibited without an incidental take permit. The wind energy industry currently has 22 habitat conservation plans in place and more in development, and many wind energy projects already have ESA compliance in place for northern long-eared bats. Wind energy projects may move forward after companies develop a habitat conservation plan to minimize and mitigate their impacts to northern long-eared bats. There is a short-term habitat conservation plan template in use for streamlining the permitting process. We are also developing voluntary guidance for wind facilities that allows them to operate in a manner that promotes bat conservation and avoids take.

We will continue to work with stakeholders to develop and provide additional opportunities for conservation of the northern-long eared bat. Learn more about HCPs and other ESA landowner tools.

11. What are the Service and partners doing to conserve the northern long-eared bat?

WNS Research and Response

The Service leads the coordinated national response to combat white-nose syndrome (WNS), alongside more than 150 partnering non-governmental organizations, institutions, Tribes, and state and federal agencies that are organized under the White-nose Syndrome National Response Team. The partnership works cooperatively to identify and conduct critical research into WNS in order to develop management strategies that minimize current and future impacts of the disease and recover affected bat populations. The collaborative response effort has yielded scientific advancements and innovative treatments to slow the disease and improve survival of bats. Through coordinated research, management and monitoring, and partnerships, the White-nose Syndrome National Response is working together to apply our combined knowledge to conserving the nation's bats.

Between 2008 and 2021, the Service awarded more than $46 million to states, Tribes, federal agencies, research institutions and nongovernmental organizations to address critical information needs and advance research and development of tools needed to combat WNS. These efforts include conducting experimental field treatments and implementing adaptive management strategies for affected bats. These funds have supported the testing of WNS treatments including experimental vaccinations; investigations into the health and persistence of chronically impacted bats and estimating vulnerability of bats newly exposed; efforts to study the potential for bats to evolve genetic resistance to WNS; and identification and protection of roosts important to recovering populations. Past and current research addresses critical life history information of affected species, including northern long-eared bat, and tests effectiveness of different management activities for the species. Future work will also benefit the species through continued research and development of management options to minimize or eliminate the threat of WNS to North American bats.

The Service led development of the National Plan for Assisting States, Federal Agencies, and Tribes in Managing White-nose Syndrome in Bats (2011) and subsequent White-nose Syndrome Implementation Plan (2015). The national plan outlines actions necessary for state, federal and Tribal coordination, and provides an overall strategy for addressing this threat to hibernating bats, including the northern long-eared bat. The plan is a framework for coordinating and managing the investigation and response to WNS and establishes the framework through which emerging management options can be implemented efficiently and effectively as they become available. That framework includes five working groups: surveillance and diagnostics, data management, conservation and recovery, communications and outreach, and disease management.

The White-nose Syndrome Conservation and Recovery Working Group developed several products that may benefit northern long-eared bat (and all bats impacted by WNS. For example, recommended bat-friendly management practices have been developed for transportation agencies working with bats roosting under bridges, wildlife control officers, wildlife rehabilitators and forest managers. Learn more about these products.

Wind
In addition to working with wind energy companies to develop habitat conservation plans, the Service used radar to document bird and bat migratory pathways in and around the Great Lakes coastlines. While not specific to northern long-eared bats, this information will help address wind development issues along Great Lakes shorelines. Furthermore, wind energy stakeholders are collaborating on research at wind farms to minimize impacts to northern long-eared bats and other at-risk species.

Abundance and Trend Studies
Many entities (e.g., states, U.S. Forest Service, national wildlife refuges) are conducting both acoustic and colony-count surveys as part of a larger effort to help determine bat species trends. The North American Bat Monitoring Program (NABat) is a multi-national, multi-agency coordinated bat monitoring program across North America. This collaborative bat monitoring program is made up of an extensive community of partners across the continent who leverage their bat monitoring data to help assess population status and trends of bat populations, understand their responses to stressors and management actions, and enact effective management strategies. Learn more about the North American Bat Monitoring Program.

12. How does reclassifying the northern long-eared bat as endangered benefit the species?

This reclassification indicates that the bat requires additional conservation efforts to address the impacts of its primary threat of white-nose syndrome. Therefore, this action will draw greater attention to the plight of the bat, demonstrate the need for continued research and development on mitigation strategies for white-nose syndrome, and help focus collective conservation efforts on the surviving bats that remain on the landscape.

13. What can I do to help the northern long-eared bat?

Support disease management efforts: Although spread of white-nose syndrome happens mainly from bats to other bats, humans visiting caves and other hibernacula can also inadvertently carry the fungus between caves and other bat habitats on their clothing and gear. Through our actions, people can play an important role in conservation efforts by observing recommendations and regulations designed to protect bat caves and mines where bats roost and hibernate. Restricting visits that involve contact with roosting and hibernation areas, avoiding movement of equipment and clothing among different hibernacula, and cleaning gear used in and around bat habitats can help prevent the spread of WNS and reduce risk to northern long-eared bats. Public participation in and support for the national WNS response plan is essential for the plan to be effective. Learn more about decontamination protocols and the national plan.

Visit local parks, refuges and sanctuaries: While you enjoy these areas, your entrance fees and donations provide essential funds to manage and conserve habitat for plants and animals that rely on these lands, including northern long-eared bats. Visiting parks and refuges also provides opportunities to learn more about wildlife in your area.

Avoid disturbing hibernating bats: Repeated interruption of hibernation can be harmful to bats. Minimizing activity in caves, mines and other locations where they spend the winter avoids disturbance that can cause excessive energetic demands and lead to mortality of bats. For the protection of bats and their habitats, respect all cave and mine closures and regulations. If you are in an area without a cave and mine closure policy, follow all approved decontamination protocols.

Install a bat box: Like most eastern bats, the northern long-eared bat moves to trees for the summer, often using dead and dying trees. When safe to do so, leave these standing, but if dead or dying trees are not available, bats may use bat boxes as replacement roost sites. Bat boxes are especially needed from April to August when females look for safe and quiet places to give birth and raise their pups.

Leave Dead and Dying Trees Standing: Like most eastern bats, the northern long-eared bat roosts in trees during summer. Where possible and not a safety hazard, leave dead or dying trees on your property. Northern long-eared bats and many other animals use these trees. If planning to cut trees observe the tree at dusk or use a bat detector to determine if the tree may be occupied by bats before cutting it.

Reduce outdoor lighting: When possible and safe, turn off outdoor lights to reduce light pollution around your home.

Maintain native yards and gardens: Plant native plants that foster healthy insect populations for bats to eat.

Support sustainabile living: Support efforts in your community, county and state to ensure that sustainability is a development goal. Making choices that aim to reduce our individual and collective environmental impact helps alleviate some of the pressures and threats on imperiled species, like the northern long-eared bat, and their habitat.

Spread the word: Understanding the important ecological role that bats play is a key to conserving the northern long-eared and other bats. Helping people learn more about the northern long-eared bat and other endangered species can lead to more effective recovery efforts.

Join and volunteer: Join a conservation group; many have local chapters. Volunteer at a local nature center, zoo, or national wildlife refuge. Many state natural resource agencies benefit greatly from public involvement in monitoring wildlife. Check your state agency websites and get involved in community science efforts in your area.

14. What scientific data and analysis did the Service use to evaluate the status of the northern long-eared bat?

The Service completed a species status assessment to evaluate current and future conditions of the bat. We reached out to Tribal, state, federal and other partners across the species' range to garner all relevant and available data to inform the assessment. Most of these data were collected by State and Federal agencies, and were submitted to the North American Bat Monitoring Program (NA Bat), or directly to the Service. We acknowledge partners' overwhelming contribution to this effort through submission of relevant data and information.

To assess the northern long-eared bat's viability, we used the three conservation biology principles of resiliency, redundancy and representation in developing the species status assessment. Briefly, resiliency supports the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years), redundancy supports the ability of the species to withstand catastrophic events (for example, droughts, large pollution events), and representation supports the ability of the species to adapt over time to long-term changes in the environment (for example, climate changes). In general, the more resilient and redundant a species is and the more representation it has, the more likely it is to sustain populations over time, even under changing environmental conditions. Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population and species levels, and described the beneficial and risk factors influencing the species' viability.

The species status assessment process can be categorized into three sequential stages. During the first stage, we evaluated the individual species' life-history needs. The next stage involved an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition. The final stage of the species status assessment involved making predictions about the species' responses to positive and negative environmental and anthropogenic influences. Throughout all of these stages, we used the best available information to characterize viability as the ability of a species to sustain populations in the wild over time. We used this information to inform our regulatory decision to reclassify the northern long-eared bat as endangered.

15. Where can I learn more about the northern long-eared bat and the final rule to list it as endangered?

Information on the northern long-eared bat is available online or from a U.S. Fish and Wildlife Service Ecological Services Field Office in your area.