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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**[Docket No. FWS-R3-ES-2021-0140; FF09E21000 FXES1111090FEDR 223]**

**RIN 1018–BG14**

# Endangered and Threatened Wildlife and Plants; Endangered Species Status for Northern Long-eared Bat

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION**: Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to reclassify the northern long-eared bat (*Myotis septentrionalis*), a bat species found in all or portions of 37 U.S. States, the District of Columbia, and much of Canada, as an endangered species under the Endangered Species Act of 1973, as amended (Act). The northern long-eared bat is currently listed as a threatened species with an accompanying rule issued under section 4(d) of the Act ("4(d) rule"). This document complies with a court order, which requires the Service to make a new listing decision for the northern long-eared bat. After a review of the best available scientific and commercial information, we find that the northern long-eared bat meets the Act's definition of an endangered species. Accordingly, we propose to list the northern long-eared bat as an endangered species under the Act. If we finalize this rule as proposed, it would reclassify this species as an endangered species on the List of Endangered and Threatened Wildlife and remove its species-specific 4(d) rule. Additionally, this proposed rule serves as our 5-year review of the species. We also are notifying the public that we have scheduled an informational

meeting followed by a public hearing on the proposed rule.

**DATES:** We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date.

*Public informational meeting and public hearing:* We will hold a public informational meeting from 6:00 p.m. to 7:30 p.m., Central Time, followed by a public hearing from 7:30 p.m. to 8:30 p.m., Central Time, on April 7, 2022.

**ADDRESSES:** You may submit comments by one of the following methods:

(1) *Electronically*: Go to the Federal eRulemaking Portal: *https://www.regulations.gov*. In the Search box, enter FWS-R3-ES-2021-0140. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on "Comment."

(2) *By hard copy*: Submit by U.S. mail to: Public Comments Processing, Attn: FWS-R3-ES-2021-0140, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on *https://www.regulations.gov*. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more information).

*Public informational meeting and public hearing:* The public informational meeting and the public hearing will be held virtually using the Zoom platform. See *Public Hearing*, below, for more information.

**FOR FURTHER INFORMATION CONTACT:** Shauna Marquardt, Field Supervisor, U.S. Fish and Wildlife Service, Minnesota Wisconsin Ecological Services Field Office,

4101 American Boulevard East, Bloomington, MN 55425; telephone 952–252–0092. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

**SUPPLEMENTARY INFORMATION:**

**Information Requested**

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule.

We particularly seek comments concerning:

(1) The species' biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) Factors that may affect the continued existence of the species, which may include habitat modification or destruction, overutilization, disease, predation, the inadequacy of existing regulatory mechanisms, or other natural or manmade factors.

(3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and existing regulations that may be addressing those threats.

(4) Additional information concerning the historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or a threatened species must be made "solely on the basis of the best scientific and commercial data available."

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via *https://www.regulations.gov*, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *https://www.regulations.gov*.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *https://www.regulations.gov*.

Because we will consider all comments and information we receive during the comment period, our final determination may differ from this proposal. Based on the new information we receive (and any comments on that new information), we may conclude

that the species should remain listed as a threatened species instead of reclassified as an endangered species, or we may conclude that the species does not warrant listing as either an endangered species or a threatened species.

*Public Hearing*

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. For the immediate future, we will provide these public hearings using webinars that will be announced on the Service's website, in addition to the *Federal Register*. The use of these virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3). See **DATES** and **ADDRESSES** for information on a public hearing that we have scheduled for this rulemaking action.

**Previous Federal Actions**

On October 2, 2013, we proposed to list the northern long-eared bat as an endangered species under the Act (78 FR 61046); please refer to that proposed rule for a detailed description of previous Federal actions concerning this species.

On January 16, 2015, we proposed to create a 4(d) rule to provide measures that are necessary and advisable to provide for the conservation of the northern long-eared bat should we determine the species warrants listing as a threatened species under the Act (80 FR 2371). That document also reopened the public comment period on the October 2, 2013, proposed rule for another 60 days, ending on March 17, 2015.

On April 2, 2015, we finalized a rule listing the northern long-eared bat as a threatened species and established an interim 4(d) rule for the species (80 FR 17974). We solicited public comment on the interim 4(d) rule for 90 days, ending on July 1, 2015. On January 14, 2016, we finalized the 4(d) rule for the northern long-eared bat (81 FR 1900). On April 27, 2016, we published a not-prudent determination for critical habitat (81 FR 24707).

A January 28, 2020, court order requires the Service to make a new listing

decision for the northern long-eared bat (*Center for Biological Diversity* v. *Everson*, 435 F. Supp. 3d. 69 (D.D.C. 2020)). The court order remanded our April 2, 2015, listing decision (80 FR 17974) but did not vacate that rule. This document complies with the court order.

**Supporting Documents**

A species status assessment (SSA) team prepared an SSA report for the northern long-eared bat (Service 2021, entire). The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species. In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought the expert opinions of five species experts regarding the SSA report. We received responses from three of the five experts. We also sent the SSA report to approximately 150 State, Federal, Tribal, and other (for example, nongovernmental organizations) partners with expertise in bat biology or threats to the species for review. We received reviews from approximately 35 partners.

**Proposed Listing Determination**

**Background**

A thorough review of the taxonomy, life history, and ecology of the northern long-eared bat is presented in the SSA report (Service 2021, entire).

The northern long-eared bat is a wide-ranging bat species found in 37 States (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), the District of Columbia, and 8 Canadian provinces. The species typically overwinters in caves or mines and spends the remainder of the year in forested habitats. As its name suggests, the northern long-eared bat is distinguished by its long ears, particularly as compared to other bats in its genus, *Myotis*. The bat is medium to dark brown on its back, with dark brown ears and wings, and tawny to pale-brown fur on its ventral side. Its weight ranges from approximately 5 to 8 grams (0.2 to 0.3 ounces). Female northern long-eared bats produce a maximum of one pup per year; therefore, loss of one pup results in missing one year of recruitment for a female.

The individual, population-level, and species-level needs of the northern long-eared bat are summarized below in tables 1–3. For additional information, please see the SSA report (Service 2021, chapter 2).

TABLE 1—THE ECOLOGICAL REQUISITES FOR SURVIVAL AND REPRODUCTIVE SUCCESS OF NORTHERN-LONG-EARED BAT INDIVIDUALS

| LIFE STAGE | SEASON | | | |
|---|---|---|---|---|
| | **Spring** | **Summer** | **Fall** | **Winter** |
| **Pups (non-flying juveniles)** | | Roosting habitat with suitable conditions for lactating females and for pups to stay warm and protected from predators while adults are foraging. | | |
| **Juveniles** | | Other maternity colony members (colony dynamics, thermoregulation), and suitable roosting and foraging habitat near abundant food and water resources. | Suitable roosting and foraging habitat near abundant food and water resources. | Habitat with suitable conditions for prolonged bouts of torpor and shortened periods of arousal. |
| **All adults** | Suitable roosting and foraging habitat near abundant food and water resources, and habitat connectivity and open-air space for safe migration between winter and summer habitats. | Summer roosts and foraging habitat near abundant food and water resources. | Suitable roosting and foraging habitat near abundant food and water resources, cave and/or mine entrances or other similar locations (for example, culvert, tunnel) for conspecifics to swarm and mate, and habitat connectivity and open-air space for safe migration between winter and summer habitats. | Habitat with suitable conditions for prolonged bouts of torpor and shortened periods of arousal. |
| **Reproductive females** | | Other maternity colony members (colony dynamics), a network of suitable roosts (i.e., multiple summer roosts in close proximity) near conspecifics, and foraging habitat near abundant food and water resources. | | |

TABLE 2—POPULATION-LEVEL REQUISITES FOR A HEALTHY NORTHERN LONG-EARED BAT POPULATION

| Parameter | Requirements |
|---|---|
| Population growth rate, λ | At a minimum, λ must be ≥1 for a population to remain stable over time. |
| Population size, N | Sufficiently large N to allow for essential colony dynamics and to be adequately resilient to environmental fluctuations. |
| Winter roosting habitat | Safe and stable winter roosting sites with suitable microclimates. |
| Migration habitat | Safe space to migrate between spring/fall habitat and winter roost sites. |
| Spring and fall roosting, foraging, and commuting (i.e., traveling between habitat types) habitat | A matrix of habitat of sufficient quality and quantity to support bats as they exit hibernation (lowest body condition) or as they enter hibernation (need to put on body fat). |
| Summer roosting, foraging, and commuting habitat | A matrix of habitat of sufficient quality and quantity to support maternity colonies. |

TABLE 3—SPECIES-LEVEL ECOLOGY: REQUISITES FOR LONG-TERM VIABILITY (ABILITY TO MAINTAIN SELF-SUSTAINING POPULATIONS OVER A BIOLOGICALLY MEANINGFUL TIMEFRAME)

| 3 Rs | Requisites for long-term viability | Description |
|---|---|---|
| Resiliency (populations able to withstand stochastic events) | Healthy populations across a diversity of environmental conditions | Self-sustaining populations are demographically, genetically, and physiologically robust, and have enough suitable habitat |
| Redundancy (number and distribution of populations to withstand catastrophic events) | Multiple and sufficient distribution of populations within areas of unique variation (representation units) | Sufficient number and distribution of populations to guard against population losses |
| Representation (genetic and ecological diversity to maintain adaptive potential) | Maintain adaptive diversity of the species | Populations maintained across a range of behavioral, physiological, ecological, and environmental diversity |
| | Maintain evolutionary processes | Maintain evolutionary drivers—gene flow, natural selection—to mimic historical patterns |

**Regulatory and Analytical Framework**

*Regulatory Framework*

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an endangered species or a threatened species. The Act defines an "endangered species" as a species that is in danger of extinction throughout all or a significant portion of its range, and a "threatened species" as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether any species is an endangered species or a threatened species because of any of the following factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term "threat" to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term "threat" includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or

required resources (stressors). The term "threat" may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an "endangered species" or a "threatened species." In determining whether a species meets either definition, we must evaluate all identified threats by considering the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an "endangered species" or a "threatened species" only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term "foreseeable future," which appears in the statutory definition of "threatened species." Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term "foreseeable future" extends only so far into the future as the Service can reasonably determine that both the future threats and the species' responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. "Reliable" does not mean "certain"; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and

commercial data available and should consider the timeframes applicable to the relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

*Analytical Framework*

The SSA report documents the results of our comprehensive biological review of the best scientific and commercial data regarding the status of the northern long-eared bat, including an assessment of the potential threats to the species. The SSA report does not represent a decision by the Service on whether the species should be proposed for listing as an endangered or threatened species under the Act. However, it does provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and its implementing regulations and policies. The following is a summary of the key results and conclusions from the SSA report; the full SSA report can be found at Docket No. FWS–R3–ES–2021–0140 on *https://www.regulations.gov*.

To assess the northern long-eared bat's viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency supports the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry or 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 SSA 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 SSA 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 use this information to inform our regulatory decision.

**Summary of Biological Status and Threats**

In this discussion, we review the biological condition of the northern long-eared bat and its resources, and the threats that influence the species' current and future condition, in order to assess the species' overall viability and the risks to that viability. For a full description, see the SSA report (Service 2021, entire).

Although there are other stressors affecting the northern long-eared bat, the primary factor influencing its viability is white-nose syndrome (WNS), a disease of bats caused by a fungal pathogen. Some of the other factors that influence the northern long-eared bat's viability (though to a far lesser extent than the influence of WNS) include wind energy mortality, effects from climate change, and habitat loss. These stressors and their effects to the northern long-eared bat are summarized below:

- WNS has been the foremost stressor on the northern long-eared bat for more than a decade. The fungus that causes the disease, *Pseudogymnoascus destructans* (*Pd*), invades the skin of bats. Infection leads to increases in the frequency and duration of

arousals during hibernation and eventual depletion of fat reserves needed to survive winter, and results in mortality. Since its discovery in New York in 2006, *Pd* has been confirmed (or presumed) in 37 States and 7 Canadian provinces. There is no known mitigation or treatment strategy to slow the spread of *Pd* or to treat WNS in bats. WNS has caused estimated northern long-eared bat population declines of 97–100 percent across 79 percent of the species' range.

- Wind energy-related mortality of the northern long-eared bat is a stressor at local and regional levels, where northern long-eared bat populations have been impacted by WNS. In 2020, northern long-eared bats were at risk from wind mortality in approximately 49 percent of their range, based on the areas where wind turbines were in place and operating (using known northern long-eared bat occurrences, average migration distance, and the spatial distribution of wind turbines) (Service 2021, p. iv). Most bat mortality at wind energy projects is caused by direct collisions with moving turbine blades.

- Climate change variables, such as changes in temperature and precipitation, may influence the northern long-eared bat's resource needs, such as suitable roosting habitat for all seasons, foraging habitat, and prey availability. Although a changing climate may provide some benefit to the northern long-eared bat, overall negative impacts are anticipated, especially at local levels.

- Habitat loss (including but not limited to forest conversion or hibernacula disturbance or destruction) may include loss of suitable roosting or foraging habitat, resulting in longer flights between suitable roosting and foraging habitats due to habitat fragmentation, fragmentation of maternity colony networks, and direct injury or mortality. Loss or modification of winter roosts (i.e., making hibernaculum no longer suitable) can result in impacts to individuals or at the population level. However, habitat

loss alone is not considered to be a key stressor at the species level, and habitat does not appear to be limiting.

In evaluating current conditions of the northern long-eared bat, we used the best available data. Winter hibernacula counts provide the most consistent, long-term, reliable trend data and provide the most direct measure of WNS impacts. We also used summer data in evaluating population trends, although the availability and quality of summer data varies temporally and spatially.

Available evidence, including both winter and summer data, indicates northern long-eared bat abundance has and will continue to decline substantially under current demographic and stressor conditions, primarily driven by the effects of WNS. As part of our assessment of the current condition of northern long-eared bat's representation, we identified and delineated the variation across the northern long-eared bat's range into geographical representation units (RPUs) using the following proxies: variation in biological traits, genetic diversity, peripheral populations, habitat niche diversity, and steep environmental gradients.

Winter abundance (from known hibernacula) has declined rangewide (49 percent) and declined across all but one RPU (declines range from 0 to 90 percent). The number of extant winter colonies also declined rangewide (by 81 percent) and across all RPUs (40–88 percent). There has also been a noticeable shift towards smaller colony sizes, with a 96–100 percent decline in the number of large hibernacula (≥100 individuals) across the RPUs (figure 1.). We created projections (highest plausible and lowest plausible scenarios) for the species using its current condition and the current rates of mortality from WNS effects and wind energy. Rangewide abundance is projected to decline by 95 percent and the spatial extent to decline by 75 percent from historical conditions by 2030. Declines continue to be driven by the catastrophic effects of WNS.

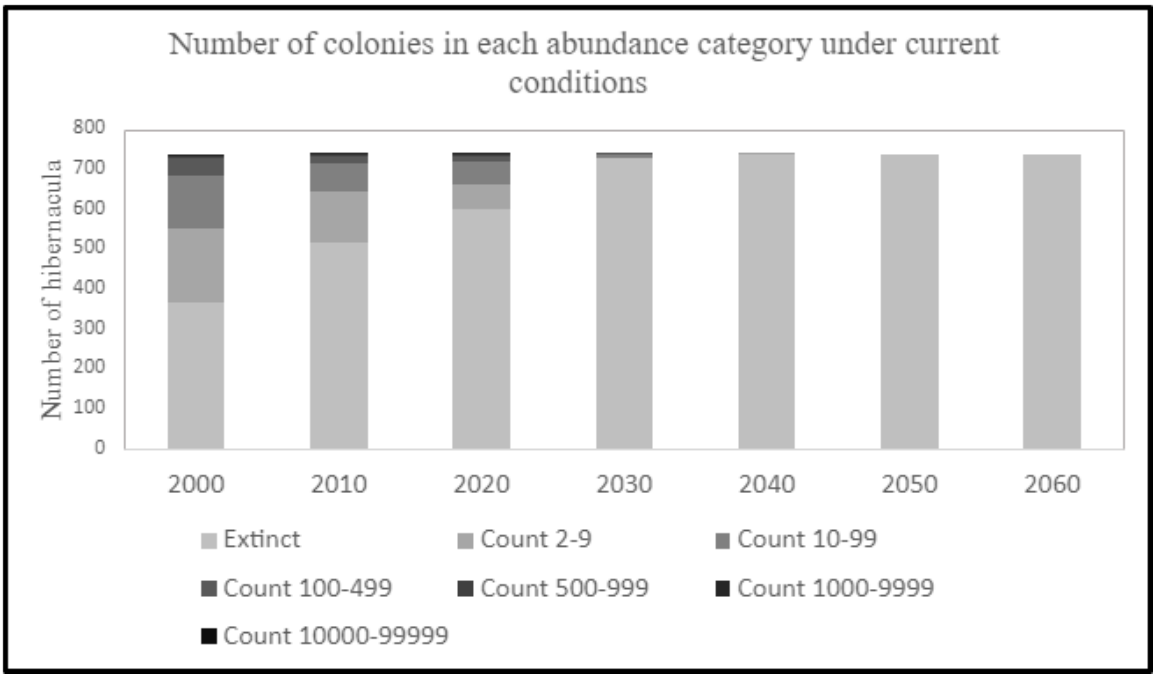

Figure 1. The number of hibernacula in each colony abundance category under current conditions.

Declining trends in abundance and extent of occurrence are also evident across much of the northern long-eared bat's summer range. Rangewide occupancy has declined by 80 percent from 2010–2019. Data collected from mobile acoustic transects found a 79 percent decline in rangewide relative abundance from 2009–2019, and summer mist-net captures declined by 43–77 percent (across RPUs) compared to pre-WNS capture rates.

As discussed above, multiple data types and analyses indicate downward trends in northern long-eared bat population abundance and distribution over the last 14 years, and the best available information indicates that this downward trend will continue. Northern long-eared bat abundance (winter and summer), number of occupied hibernacula, spatial extent, and summer habitat occupancy across the range and within all RPUs are decreasing. Since the occurrence of WNS, northern long-eared bat abundance has steeply declined, leaving populations with small numbers of individuals. At these low population sizes, colonies are vulnerable to extirpation from stochastic events and the deleterious effects of reduced population sizes such as limiting natural selection processes and decreased genetic diversity. Furthermore, small populations generally cannot rescue one

another from such a depressed state because of the northern long-eared bat's low reproduction output (one pup per year) and its high philopatry (tending to return to a particular area). These inherent life-history traits limit the ability of populations to recover from low abundances. Consequently, effects of small population sizes exacerbate the effects of current and future declines due to continued exposure to WNS, mortality from wind turbines, and impacts associated with habitat loss and climate change.

Therefore, northern long-eared bat's resiliency is greatly compromised in its current condition. Because northern long-eared bat's abundance and spatial extent have so dramatically declined, it has also become more vulnerable to catastrophic events. In other words, its redundancy has also declined dramatically. The steep and continued declines in abundance have likely led to reductions in genetic diversity, and thereby reduced northern long-eared bat adaptive capacity, and a decline in the species' overall representation. Moreover, at its current low abundance, loss of genetic diversity will likely accelerate. Consequently, limited natural selection processes and decreased genetic diversity will further lessen the species' ability to adapt to novel changes and exacerbate declines due to continued exposure to WNS, mortality from wind turbines, and impacts associated with habitat loss and climate change. Thus, even without further WNS spread and additional wind energy development (northern long-eared bat's current condition), its viability is likely to continue to rapidly decline over the next 10 years.

Future Condition

As part of the SSA, we also developed two future condition scenarios to capture the range of uncertainties regarding future threats and the projected responses by the northern long-eared bat. Our scenarios included a plausible highest impact scenario and a plausible lowest impact scenario for each primary threat. Because we determined that the current condition of the northern long-eared bat is consistent with an endangered species (see Determination of Species Status, below), we are not presenting the results of the

future scenarios in this proposed rule. Please refer to the SSA report (Service 2021) for the full analysis of future scenarios.

We note that, by using the SSA framework to guide our analysis of the scientific information documented in the SSA report, we have not only analyzed individual effects on the species, but we have also analyzed their potential cumulative effects. We incorporate the cumulative effects into our SSA analysis when we characterize the current and future condition of the species. To assess the current and future condition of the species, we undertake an iterative analysis that encompasses and incorporates the threats individually and then accumulates and evaluates the effects of all the factors that may be influencing the species, including threats and conservation efforts. Because the SSA framework considers not just the presence of the factors, but to what degree they collectively influence risk to the entire species, our assessment integrates the cumulative effects of the factors and replaces a standalone cumulative effects analysis.

*Conservation Efforts and Regulatory Mechanisms*

Below is a brief description of conservation measures and regulatory mechanisms currently in place. Please see the SSA report for a more detailed description (Service 2021, Appendix 4).

Multiple national and international efforts are underway in an attempt to reduce the impacts of WNS. Despite these efforts, there are no proven measures to reduce the severity of impacts of WNS. More than 100 State and Federal agencies, Tribes, organizations, and institutions are engaged in this collaborative work to combat WNS and conserve affected bats. Partners from all 37 States in the northern long-eared bat's range, Canada, and Mexico are engaged in collaborations to conduct disease surveillance, population monitoring, and management actions in preparation for or response to WNS.

To reduce bat fatalities, some wind facilities "feather" turbine blades (i.e., pitch turbine blades parallel with the prevailing wind direction to slow rotation speeds) at low

wind speeds at times when bats are more likely to be present. The wind speed at which the turbine blades begin to generate electricity is known as the "cut-in speed," and this can be set at the manufacturer's recommended speed or at a higher threshold, typically referred to as curtailment. The effectiveness of feathering below various cut-in speeds differs among sites and years (Arnett et al. 2013, entire; Berthinussen et al. 2021, pp. 94–106); nonetheless, most studies have shown all-bat (based on dead bats detected from all bat species) fatality reductions of greater than 50 percent associated with raising cut-in speeds by 1.0–3.0 meters per second (m/s) above the manufacturer's cut-in speed (Arnett et al. 2013, entire; USFWS unpublished data). The effectiveness of curtailment at reducing fatality rates specifically for the northern long-eared bat has not been documented.

All States have active forestry programs with a variety of goals and objectives. Several States have established habitat protection buffers around known Indiana bat hibernacula that will also serve to benefit other bat species by maintaining sufficient quality and quantity of swarming habitat. Some States conduct some of their forest management activities in the winter within known listed bat home ranges as a measure that would protect maternity colonies and non-volant (non-flying) pups during summer months. Depending on the type and timing of activities, forest management can be beneficial to bat species (for example, maintaining or increasing suitable roosting and foraging habitat). Forest management that results in heterogeneous (including forest type, age, and structural characteristics) habitat may benefit tree-roosting bat species such as northern long-eared bat (Silvis et al. 2016, p. 37). Silvicultural practices can meet both male and female northern long-eared bats' roosting requirements by maintaining large-diameter snags in early stages of decay, while allowing for regeneration of forests (Lacki and Schwierjohann 2001, p. 487).

Many State and Federal agencies, conservation organizations, and land trusts have installed bat-friendly gates to protect important hibernation sites. All known hibernacula within national grasslands and forestlands of the Rocky Mountain Region of the U.S. Forest Service (USFS) are closed during the winter hibernation period, primarily due to the threat of WNS, although this will reduce disturbance to bats in general inhabiting these hibernacula (USFS 2013, unpaginated). Because of concern over the importance of bat roosts, including hibernacula, the American Society of Mammalogists developed guidelines for protection of roosts, many of which have been adopted by government agencies and special interest groups (Sheffield *et al.* 1992, p. 707). Also, regulations, such as the Federal Cave Resources Protection Act (16 U.S.C. 4301 *et seq*.), protect caves on Federal lands by limiting access to some caves, thereby reducing disturbance. Finally, many Indiana bat hibernacula have been gated, and some have been permanently protected via acquisition or easement, which provides benefits to other bats that also use the sites, including the northern long-eared bat.

The northern long-eared bat is listed as endangered under Canada's Species at Risk Act (COSEWIC 2013, entire). In addition, the northern long-eared bat receives varying degrees of protection through State laws, which designate the species as endangered in 9 States (Arkansas, Connecticut, Delaware, Indiana, Maine, Massachusetts, Missouri, New Hampshire, and Vermont); as threatened in 10 States (Georgia, Illinois, Louisiana, Maryland, New York, Ohio, Pennsylvania, Tennessee, Virginia, and Wisconsin); and as a species of special concern in 10 States (Alabama, Iowa, Michigan, Minnesota, Mississippi, Oklahoma, South Carolina, South Dakota, West Virginia, and Wyoming).

**Determination of Northern Long-eared Bat Status**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition

of an endangered species or a threatened species. The Act defines an "endangered species" as a species in danger of extinction throughout all or a significant portion of its range, and a "threatened species" as a species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether a species meets the definition of an endangered species or a threatened species because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

*Status Throughout All of Its Range*

WNS has been the foremost stressor on the northern long-eared bat for more than a decade and continues to be currently. The fungus that causes the disease, *Pd*, invades the skin of bats and leads to infection that increases the frequency and duration of arousals during hibernation that eventually deplete the fat reserves needed to survive winter and results in mortality. There is no known mitigation or treatment strategy to slow the spread of *Pd* or to treat WNS in bats. WNS has caused estimated northern long-eared bat population declines of 97–100 percent across 79 percent of the species' range (Factor C). Winter abundance (from known hibernacula) has declined rangewide (49 percent) and declined across all but one RPU (declines range from 0 to 90 percent), and the number of extant winter colonies also declined rangewide (81 percent) and across all RPUs (40–88 percent). There has also been a noticeable shift towards smaller colony sizes, with a 96–100 percent decline in the number of large hibernacula (≥100 individuals). Rangewide summer occupancy has declined by 80 percent from 2010–2019. Summer data collected from mobile acoustic transects found a 79 percent decline in rangewide relative abundance from 2009–2019, and summer mist-net captures declined

by 43–77 percent (across RPUs) compared to pre-WNS capture rates. We created projections for the species using its current condition and the current rates of mortality from WNS effects and wind energy. Rangewide abundance is projected to decline by 95 percent and the spatial extent is projected to decline by 75 percent from historical conditions by 2030.

As a result of these steep population declines, the northern long-eared bat's resiliency is greatly compromised in its current condition. Because the northern long-eared bat's abundance and spatial extent substantially declined, its redundancy has decreased such that northern long-eared bats are more vulnerable to catastrophic events. The northern long-eared bat's representation has also been reduced, as the steep and continued declines in abundance have likely led to reductions in genetic diversity, and thereby reduced the northern long-eared bat's adaptive capacity. Further, the projected widespread reduction in the distribution of occupied hibernacula under current conditions will lead to losses in the diversity of environments and climatic conditions occupied, which will impede natural selection and further limit the northern long-eared bat's ability to adapt to changing environmental conditions. Moreover, at its current low abundance, loss of genetic diversity via genetic drift will likely accelerate. Consequently, limiting natural selection process and decreasing genetic diversity will further lessen the northern long-eared bat's ability to adapt to novel changes (currently ongoing as well as future changes) and exacerbate declines due to continued exposure to WNS and other stressors. Thus, even without further *Pd* spread and additional pressure from other stressors, the northern long-eared bat's viability has declined substantially and is expected to continue to rapidly decline over the near term.

Current population trends and status indicate this species is currently in danger of extinction. The species continues to experience the catastrophic effects of WNS and the compounding effect of other stressors from which extinction is now a plausible outcome

under the current conditions. Therefore, the species meets the Act's definition of an endangered species rather than of a threatened species. Thus, after assessing the best available information, we determine that the northern long-eared bat is in danger of extinction throughout all of its range.

*Status Throughout a Significant Portion of Its Range*

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. We have determined that the northern long-eared bat is in danger of extinction throughout all of its range and accordingly did not undertake an analysis of any significant portion of its range. Because the northern long-eared bat warrants listing as endangered throughout all of its range, our determination does not conflict with the decision in *Center for Biological Diversity* v. *Everson*, 2020 WL 437289 (D.D.C. Jan. 28, 2020), because that decision related to significant portion of the range analyses for species that warrant listing as threatened, not endangered, throughout all of their range.

*Determination of Status*

Our review of the best available scientific and commercial information indicates that the northern long-eared bat meets the Act's definition of an endangered species. Therefore, we propose to list the northern long-eared bat as an endangered species in accordance with sections 3(6) and 4(a)(1) of the Act.

**Available Conservation Measures**

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and conservation by Federal, State, Tribal, and local agencies, private organizations, and individuals. The Act encourages cooperation with the States

and other countries and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Section 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning consists of preparing draft and final recovery plans, beginning with the development of a recovery outline, and making it available to the public within 30 days of a final listing determination. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery plan also identifies recovery criteria for review of when a species may be ready for reclassification from endangered to threatened ("downlisting") or removal from protected status ("delisting"), and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. When completed, the recovery outline, draft recovery plan, and the final recovery plan will be available on our

website (*https://www.fws.gov/species/northern-bat-myotis-septentrionalis*), or from our Minnesota Wisconsin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (for example, restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

For listed species, funding for recovery actions is available from a variety of sources, including Federal budgets, State programs, and cost-share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the States of 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 will continue to be eligible for Federal funds to implement management actions that promote the protection or recovery of the northern long-eared bat. Information on our grant programs that are available to aid species recovery can be found at: *https://www.fws.gov/grants*.

Please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species

whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as described in the preceding paragraph include, but are not limited to, management and any other landscape-altering activities on Federal lands administered by the U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management, National Park Service, and other Federal agencies; issuance of section 404 Clean Water Act (33 U.S.C. 1251 *et seq*.) permits by the U.S. Army Corps of Engineers; and construction and maintenance of roads or highways by the Federal Highway Administration.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to endangered wildlife. The prohibitions of section 9(a)(1) of the Act, codified at 50 CFR 17.21, make it illegal for any person subject to the jurisdiction of the United States to take (which includes harass, harm, pursue, hunt, shoot,

wound, kill, trap, capture, or collect; or to attempt any of these) endangered wildlife within the United States or on the high seas. In addition, it is unlawful to import; export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of commercial activity; or sell or offer for sale in interstate or foreign commerce any species listed as an endangered species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to employees of the Service, the National Marine Fisheries Service, other Federal land management agencies, and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22. With regard to endangered wildlife, a permit may be issued for the following purposes: For scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. The statute also contains certain exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

It is our policy, as published in the *Federal Register* on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of the species proposed for listing.

At this time, we are unable to identify specific activities that would not be considered to result in a violation of section 9 of the Act because the northern long-eared bat occurs in a variety of habitat conditions across its range and it is likely that site-specific conservation measures may be needed for activities that may directly or indirectly affect the species.

Based on the best available information, the following activities may potentially result in a violation of section 9 of the Act if they are not authorized in accordance with applicable law; this list is not comprehensive:

(1) Unauthorized collecting, handling, possessing, selling, delivering, carrying, or transporting of the species, including import or export across State lines and international boundaries, except for properly documented antique specimens of these taxa at least 100 years old, as defined by section 10(h)(1) of the Act.

(2) Incidental take of the species without authorization pursuant to section 7 or section 10(a)(1)(B) of the Act.

(3) Disturbance or destruction (or otherwise making a hibernaculum no longer suitable) of known hibernacula due to commercial or recreational activities during known periods of hibernation.

(4) Unauthorized destruction or modification of suitable forested habitat (including unauthorized grading, leveling, burning, herbicide spraying, or other destruction or modification of habitat) in ways that kills or injures individuals by significantly impairing the species' essential breeding, foraging, sheltering, commuting, or other essential life functions.

(5) Unauthorized removal or destruction of trees and other natural and manmade structures being used as roosts by the northern long-eared bat that results in take of the species.

(6) Unauthorized release of biological control agents that attack any life stage of this taxon.

(7) Unauthorized removal or exclusion from buildings or artificial structures being used as roost sites by the species, resulting in take of the species.

(8) Unauthorized building and operation of wind energy facilities within areas used by the species, which results in take of the species.

(9) Unauthorized discharge of chemicals, fill, or other materials into sinkholes, which may lead to contamination of known northern long-eared bat hibernacula.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Minnesota Wisconsin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

**Effects of This Rule**

If this rule is adopted as proposed, it would reclassify the northern long-eared bat from a threatened species to an endangered species on the List of Endangered and Threatened Wildlife. It would also remove the species-specific section 4(d) rule for the northern long-eared bat, because 4(d) rules apply only to species listed as threatened species under the Act. The Act's full suite of prohibitions and exceptions to those prohibitions for endangered species (see sections 9 and 10 of the Act) would then apply to the northern long-eared bat.

**Public Hearings**

We have scheduled a public informational meeting with a public hearing on this proposed rule for the northern long-eared bat. We will hold the public informational meeting and public hearing on the date and time listed above under *Public informational meeting and public hearing* in **DATES**. We are holding the public informational meeting and public hearing via the Zoom online video platform and via teleconference so that participants can attend remotely. For security purposes, registration is required. To listen and view the meeting and hearing via Zoom, listen to the meeting and hearing by telephone, or provide oral public comments at the public hearing by Zoom or telephone, you must register. For information on how to register, or if you encounter problems joining Zoom the day of the meeting, visit *https://www.fws.gov/species/northern-bat-myotis-septentrionalis*. Registrants will receive the Zoom link and the telephone number for the public informational meeting and public hearing. If applicable, interested

members of the public not familiar with the Zoom platform should view the Zoom video tutorials *(https://support.zoom.us/hc/en-us/articles/206618765-Zoom-video-tutorials*) prior to the public informational meeting and public hearing.

The public hearing will provide interested parties an opportunity to present verbal testimony (formal, oral comments) regarding this proposed rule. While the public informational meeting will be an opportunity for dialogue with the Service, the public hearing is not: It is a forum for accepting formal verbal testimony. In the event there is a large attendance, the time allotted for oral statements may be limited. Therefore, anyone wishing to make an oral statement at the public hearing for the record is encouraged to provide a prepared written copy of their statement to us through the Federal eRulemaking Portal, or U.S. mail (see **ADDRESSES**, above). There are no limits on the length of written comments submitted to us. Anyone wishing to make an oral statement at the public hearing must register before the hearing *https://www.fws.gov/species/northern-bat-myotis-septentrionalis.* The use of a virtual public hearing is consistent with our regulations at 50 CFR 424.16(c)(3).

**Required Determinations**

*Clarity of the Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

*National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.), need not be prepared in connection with listing a species as an endangered or threatened species under the Endangered Species Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

*Government-to-Government Relationship with Tribes*

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We solicited information,

provided updates, and invited participation in the SSA process in emails sent to Tribes, nationally, in April 2020 and November 2020. We will continue to work with Tribal entities during the development of the northern long-eared bat final listing determination.

**References Cited**

A complete list of references cited in this rulemaking is available on the internet at *https://www.regulations.gov* and upon request from the Minnesota Wisconsin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

**Authors**

The primary authors of this proposed rule are staff members of the Fish and Wildlife Service's Species Assessment Team and the Minnesota Wisconsin Ecological Services Field Office.

**List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

**Proposed Regulation Promulgation**

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

**PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. Amend § 17.11, in paragraph (h), by revising the entry for "Bat, northern long-eared" under MAMMALS in the List of Endangered and Threatened Wildlife to read as follows:

**§ 17.11 Endangered and threatened wildlife.**

* * * * *

(h) * * *

| Common name | Scientific name | Where listed | Status | Listing citations and applicable rules |
|---|---|---|---|---|
| MAMMALS | | | | |
| * * * * * * * | | | | |
| Bat, northern long-eared | *Myotis septentrionalis* | Wherever found | E | 80 FR 17973, 4/2/2015; [*Federal Register* citation when published as a final rule]. |
| * * * * * * * | | | | |

**§ 17.40 [Amended]**

3. Amend §17.40 by removing and reserving paragraph (o).

**Signing Authority**

The Director, U.S. Fish and Wildlife Service, approved this document and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the U.S. Fish and Wildlife Service. Martha Williams, Director, approved this document on March 18, 2022, for publication.

**Madonna Baucum,**
*Regulations and Policy Chief,*
*Division of Policy, Risk Management, and Analytics of the Joint Administrative Operations,*
*U.S. Fish and Wildlife Service.*

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