



## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS-R5-ES-2021-0163; FF09E21000 FXES1111090FEDR 223]

#### RIN 1018-BG15

### Endangered and Threatened Wildlife and Plants; Endangered Species Status for Tricolored Bat

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

**ACTION:** Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to list the tricolored bat (*Perimyotis subflavus*), a bat species from Guatemala, Honduras, Belize, Nicaragua, Mexico, a small part of southeastern Canada, and all or portions of the following 39 States and the District of Columbia: Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Wisconsin, West Virginia, and Wyoming, as an endangered species under the Endangered Species Act of 1973, as amended (Act). This determination also serves as our 12-month finding on a petition to list the tricolored bat. After a review of the best available scientific and commercial information, we find that listing the species is warranted. Accordingly, we propose to list the tricolored bat as an endangered species under the Act. If we finalize this rule as proposed, it will add this species to the List of Endangered and Threatened Wildlife and extend the Act's protections to the species. We find that designating critical habitat for this species is not

prudent. 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., eastern time, followed by a public hearing from 7:30 p.m. to 8:30 p.m., eastern time, on October 12, 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-R5-ES-2021-0163, which is the docket number for this rulemaking. 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-R5-ES-2021-0163, 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:** Sonja Jahrsdoerfer, Field Supervisor, U.S. Fish and Wildlife Service, Pennsylvania Field Office, 110 Radnor Rd, Suite 101, State College, PA 16801; telephone 814-234-4090. 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.

(5) The reasons why we should or should not designate habitat as “critical habitat” under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including information to inform the following factors that the regulations identify as reasons why designation of critical habitat may be not prudent:

(a) The species is threatened by taking or other human activity (including vandalism and disturbance of winter habitat) and identification of critical habitat can be expected to increase the degree of such threat to the species; or

(b) Such designation of critical habitat would not be beneficial to the species. In determining whether a designation would not be beneficial, the factors the Services may consider include but are not limited to: Whether the present or threatened destruction, modification, or curtailment of a species’ habitat or range is not a threat to the species, or whether any areas meet the definition of “critical habitat.”

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 determinations 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 is threatened instead of endangered, or we may conclude that the species does not warrant listing as either an endangered species or a threatened species.

#### *Public Hearing*

We have scheduled a public informational meeting with a public hearing on this proposed rule for the tricolored 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/tricolored-bat-perimyotis-subflavus>.

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.

### **Previous Federal Actions**

On June 14, 2016, we received a petition from the Center for Biological Diversity and Defenders of Wildlife requesting that the tricolored bat be listed as endangered or threatened and that critical habitat be designated for this species under the Act. On December 20, 2017, we published a finding that the petition presented substantial scientific or commercial information indicating that the petitioned action may be warranted (82 FR 60362).

### **Supporting Documents**

A species status assessment (SSA) team prepared an SSA report for the tricolored bat. The SSA core team included Service biologists, who consulted with other species and analytical experts (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 review from six species experts regarding the SSA report. We received responses from two of the six experts. We also sent the SSA report to State, Federal, Tribal, and other

(e.g., nongovernmental organizations) entities with expertise in bat biology or threats to the species for review.

## **I. Proposed Listing Determination**

### **Background**

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

The tricolored bat is a wide-ranging bat species found in 39 States, the District of Columbia, 4 Canadian provinces, Belize, Guatemala, Honduras, Nicaragua, and Mexico. Tricolored bat is one of the smallest bats in eastern North America and is distinguished by its unique tricolored fur that appears dark at the base, lighter in the middle, and dark at the tip (Barbour and Davis 1969, p. 115). Tricolored bats often appear yellowish (varying from pale yellow to nearly orange), but may also appear silvery-gray, chocolate brown, or black (Barbour and Davis 1969, p. 115). Males and females are colored alike, and females consistently weigh more than males (LaVal and LaVal 1980, p. 44). Newly volant (able to fly) young are much darker and grayer than adults (Allen 1921, p. 55). Other distinguishing characteristics include 34 teeth (compared with 38 teeth in eastern North American *Myotis* spp. for which this species is sometimes confused), a calcar (i.e., spur of cartilage arising from the inner side of the ankle) with no keel (ridge along the breastbone to which the flight muscles are attached), and only the anterior third of the uropatagium (i.e., the membrane that stretches between the legs) is furred (Barbour and Davis 1969, p. 115; Hamilton and Whitaker 1979, p. 85).

### **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. On July 5, 2022, the U.S. District Court for the Northern

District of California vacated regulations that the Service (jointly with the National Marine Fisheries Service) promulgated in 2019 modifying how the Services add, remove, and reclassify threatened and endangered species and the criteria for designating listed species' critical habitat (*Center for Biological Diversity v. Haaland*, No. 4:19-cv-05206-JST, Doc. 168 (*CBD v. Haaland*)). As a result of that vacatur, regulations that were in effect before those 2019 regulations now govern species classification and critical habitat decisions. Our analysis for this proposal applied those pre-2019 regulations. However, given that litigation remains regarding the court's vacatur of those 2019 regulations, we also undertook an analysis of whether the proposal would be different if we were to apply the 2019 regulations. We concluded that the proposal would have been the same if we had applied the 2019 regulations. The analyses under both the pre-2019 regulations and the 2019 regulations are included in the decision file for this proposal.

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 species' expected response 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.” Because the decision in *CBD v. Haaland*

vacated our 2019 regulations regarding the foreseeable future, we refer to a 2009 Department of the Interior Solicitor’s opinion entitled “The Meaning of ‘Foreseeable Future’ in Section 3(20) of the Endangered Species Act” (M–37021). That Solicitor’s opinion that foreseeable future “must be rooted in the best available data that allow predictions into the future” and extends as far as those predictions are “sufficiently reliable to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the Act.” *Id.* at 13.

It is not always possible or necessary to define the 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’ 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 species, including an assessment of the potential threats to the species. The SSA report does not represent our decision 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-R5-ES-2021-0163 on <https://www.regulations.gov>.

To assess tricolored bat 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, 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**

The individual, population-level, and species-level needs of the tricolored 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 TRICOLORED BAT INDIVIDUALS

Life Stage	Season
Pups	Summer—roosting habitat with suitable conditions for lactating females and for pups to stay warm and protected from predators while adults are foraging.

<b>Juveniles</b>	<p><u>Summer</u>—other maternity colony members (colony dynamics, thermoregulation); suitable roosting and foraging habitat near abundant food and water resources.</p> <p><u>Fall</u>—suitable roosting and foraging habitat near abundant food and water resources.</p> <p><u>Winter</u>—habitat with suitable microclimate conditions.</p>
<b>Reproductive Females</b>	<p><u>Summer</u>—other maternity colony members (colony dynamics); network of suitable roosts (i.e., multiple summer roosts in close proximity) near conspecifics and foraging habitat near abundant food and water resources.</p>
<b>All Adults</b>	<p><u>Spring</u>—suitable roosting and foraging habitat near abundant food and water resources; habitat connectivity and open-air space for safe migration between winter and summer habitats.</p> <p><u>Summer</u>—roosts and foraging habitat near abundant food and water resources.</p> <p><u>Fall</u>—suitable roosting and foraging habitat near abundant food and water resources; cave and/or mine entrances (or other similar locations, e.g., culvert, tunnel) for conspecifics to swarm and mate; habitat connectivity and open-air space for safe migration between winter and summer habitats.</p> <p><u>Winter</u>—habitat with suitable microclimate conditions.</p>

TABLE 2—POPULATION-LEVEL REQUIREMENTS FOR A HEALTHY POPULATION OF TRICOLORED BATS

<b>Parameter</b>	<b>Requirements</b>
Population growth rate, $\lambda$	At a minimum, $\lambda$ must be $\geq 1$ for a population to remain stable over time.
Population size, $N$	Sufficiently large $N$ to allow for essential colony dynamics and to be 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 habitat	A matrix of habitat of sufficient quality and quantity to support bats as they exit hibernation (lowest body condition) or as they enter into 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 OF TRICOLORED BATS: REQUISITES FOR LONG-TERM VIABILITY (ABILITY TO MAINTAIN SELF-SUSTAINING POPULATIONS OVER A BIOLOGICALLY MEANINGFUL TIMEFRAME)

<b>3 Rs</b>	<b>Requisites for Long-term Viability</b>	<b>Description</b>
Resiliency (populations able to withstand stochastic events)	Demographic, physically, and genetically healthy populations across a diversity of environmental conditions	Self-sustaining populations are demographically, genetically, and physiologically robust; have sufficient quantity of suitable habitat

Redundancy (number and distribution of populations to withstand catastrophic events)	Multiple and sufficient distribution of populations within areas of unique variation, i.e., representation units	Sufficient number and distribution to guard against population losses and losses in species adaptive diversity, i.e., reduce covariance among populations; spread out geographically but also ecologically
Representation (genetic and ecological diversity to maintain adaptive potential)	Maintain adaptive diversity of the species	Populations maintained across breadth of behavioral, physiological, ecological, and environmental diversity
	Maintain evolutionary processes	Maintain evolutionary drivers—gene flow, natural selection—to mimic historical patterns

In this discussion, we review the biological condition of the species 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 tricolored 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 tricolored bat's viability include wind-energy-related mortality, habitat loss, and effects from climate change. These stressors and their effects to tricolored bat are summarized below:

#### White Nose Syndrome

For over a decade, WNS has been the foremost stressor on tricolored bat. WNS is a disease of bats that is caused by the fungal pathogen *Pseudogymnoascus destructans* (*Pd*). *Pd* invades the skin of bats, initiating a cascade of physiological and behavioral processes that often lead to mortality. Infection leads to increases in the frequency and duration of arousals during hibernation and raises energetic costs during torpor bouts, both of which cause premature depletion of critical fat reserves needed to survive winter (Turner et al. 2011, p. 15; Reeder et al. 2012, p. 5; Carr et al. 2014, p. 21; McGuire et al. 2017, p. 682; Cheng et al. 2019, p. 2). Bats that do

not succumb to starvation in hibernacula often seek riskier roosting locations near entrances to roosts or emerge from roosts altogether, where they face exposure to winter conditions and scarce prey resources on the landscape (Langwig et al. 2012, p. 2).

*Pd* continues to spread driven by natural interactions among bats and their environment, despite effective conservation measures to reduce human contributions to its spread. The fungus arrives on a few bats and spreads through the colony as a result of swarming and roosting interactions until most individuals are exposed to the pathogen. Such interactions may occur in hibernacula or at nearby roosts where conspecifics (members of the same species) engage in mating activity (Neubaum and Siemers, 2021, p. 2). Once *Pd* arrives, WNS soon develops in these infected populations. Since the arrival of *Pd* in 2006 and the writing of this proposed rule, it has spread to 40 States in the United States and 8 provinces in Canada.

#### Wind-energy-related Mortality

Wind-energy-related mortality of tricolored bat is a consequential stressor at local and regional levels. Tricolored bats are killed at wind energy projects primarily through collisions with moving turbine blades. Wind power is a rapidly growing portion of North America's energy portfolio in part due to changes in State energy goals (NCSL 2021, entire) and recent technological advancements (Berkeley Lab 2020, entire) and declining costs (Wiser et al. 2021, entire), allowing turbines to be placed in less windy areas.

Bat fatality varies across facilities, between seasons, and among species. Analyses suggest that the impact of wind related mortality is discernible from the effects of WNS in the ongoing decline of tricolored bat (Wiens et al. 2022, pp. 215–251; Whitby et al. 2022, pp. 145–163). Abundance of tricolored bat is projected to decrease by 19–21 percent by 2030 under current wind development scenarios (Wiens et al. 2022, pp. 215–251). As the wind energy risk index (the overall result of a risk assessment) increased,

there is a decline in the predicted relative abundance of tricolored bats (Whitby et al. 2022, pp. 145–163). In other words, as wind energy installations increase in size, number, or distribution, tricolored bat survey counts declined.

#### Habitat Loss and Disturbance

Habitat loss and disturbance may result in the loss of suitable roosting or foraging habitat or loss of hibernacula. There are a variety of causes of habitat loss and disturbance that affect the tricolored bat such as (but not limited to) forest removal or conversion and anthropogenic hibernacula disturbance or destruction from human entry into hibernation sites. Loss of roosting, foraging, and commuting habitat may vary in the impacts to tricolored bats depending on the timing, location, and extent of the removal (Service 2021, pp. 49, 50). Although there have been losses of tricolored bat habitat and impacts could be high in the future, we find the current impact of habitat loss to be “Low” because the severity of population-level declines is slight. (Service 2021, p. 43). Forest removal may result in the following impacts to tricolored bats: loss of suitable roosting or foraging habitat, longer flights between suitable roosting and foraging due to habitat fragmentation of remaining forest patches, fragmentation of maternity colonies due to removal of travel corridors, and direct injury or mortality (during active season tree removal). Loss or modification of winter habitats may also result in negative impacts to tricolored bat, especially given the species’ high site fidelity and narrow microclimate requirements for hibernation.

Additionally, disturbance (e.g., human entry) during hibernation results in increased arousals in tricolored bat, which leads to increased energy expenditure at a time when food and water resources are scarce or unavailable. Disturbance is more impactful in hibernacula where a species is affected by WNS because more frequent arousals from torpor increases the probability of mortality in bats with limited fat stores (Boyles and

Willis 2010, p. 96) and human entry is likely to contribute to the spread of *Pd* in both long and short distances (Bernard et al. 2020, p. 5–6).

While temporary or permanent habitat loss may occur throughout the species' range, impacts to tricolored bat and its habitat typically occur at a more local scale (i.e., individuals and potentially colonies). However, mortality resulting from the loss of summer roosting and foraging habitat, winter hibernacula, or both may compound the impacts from WNS.

### Climate Change

Climate change factors that may impact bats include changes in extreme drought, cold, or excessive rainfall, which may lead to changes in hibernation patterns or direct mortality from extreme events (Jones et al. 2009, p. 94). Potential impacts of climate change that include effects to bat foraging, roosting, reproduction, and biogeography have also been reviewed and discussed (Sherwin et al. 2013). Additionally, climate change is likely to influence disease dynamics (for example, *Pd* survival) as temperature, humidity, phenology and other factors affect the interactions between *Pd* and hibernating bats (Hayman et al. 2016, p. 5; McClure et al. 2020, p. 2; Hoyt et al. 2021, p. 8).

Changing climatic conditions, including changes in temperature and precipitation, influence tricolored bat's resource needs, such as suitable summer and winter roosting habitat, foraging habitat, and prey availability. Although pervasive across tricolored bat's range, the magnitude, direction, and seasonality of climate change will vary geographically (e.g., some regions will experience more frequent droughts, which may lead to reduced tricolored bat survival or reproductive success; alternatively, some regions will experience heavier and more frequent precipitation events that may lead to decreased foraging bouts and insect availability). In addition, the resiliency of populations and inherent differences (e.g., genetics) among populations may result in differing ability for tricolored bat to respond to the same types of changes across the



range. Therefore, the overall impact of climate change for such a wide-ranging species is challenging to describe. Although there may be some benefit to tricolored bat from a changing climate, overall negative impacts are anticipated.

In evaluating current conditions of the tricolored bat, we used the best available data (further described in the SSA report; Service 2021, pp. 51–57). 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 (mist-net capture data and mobile and stationary acoustic 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 tricolored bat abundance has and will continue to decline substantially under current demographic and stressor conditions, primarily driven by the effects of WNS. To assess changes in diversity (genetic and ecological), we identified and delineated the variation across tricolored bat's range into three geographical representation units using the following proxies: variation in biological traits, genetic diversity, peripheral populations, habitat niche diversity, and steep environmental gradients (marked change in bioclimate such as temperature or precipitation) (Service 2021, p. 27).

WNS has caused estimated tricolored bat population declines of 90–100 percent across 59 percent of the species' range (Cheng et al. 2021, p. 7). Current demographic conditions based on past declines indicate the rangewide number of tricolored bat's known extant winter colonies has declined by 29 percent; in other words, almost one third of the species known hibernacula are extirpated but steep declines have been observed across a larger portion of its range. For the purposes of our analysis an extant winter colony is one in which at least two tricolored bats have been found; therefore, although the number of extant winter colonies has declined by 29 percent, the number of bats within winter colonies across the range has declined substantially. Tricolored

bat winter abundance has declined across all representation units but varies spatially (24–89 percent). Declining trends in tricolored bat occurrence and abundance is also evident from summer data: (1) tricolored bat rangewide occupancy declined 28 percent in the period 2010–2019; (2) mobile acoustic detections decreased 53 percent in the period 2009–2019; and (3) summer mist-net captures declined 12 to 19 percent compared to pre-WNS capture rates. Based on current demographic and stressor conditions, future projections of tricolored bat abundance, number of hibernacula, and spatial extent will continue to decline. Under these current conditions (no expansion or increase in threats), by 2030, rangewide abundance declines by 89 percent, the number of known winter colonies declines by 91 percent, and tricolored bat’s spatial extent declines by 65 percent (Service 2021, entire). Projected declines in tricolored bat’s abundance, number of winter colonies, and spatial extent are widespread across all representation units under current conditions.

As discussed above, multiple data types and analyses indicate downward trends in tricolored bat population abundance and distribution over the last 14 years, and the best available information indicate that this downward trend will continue. Tricolored bat abundance (winter and summer), number of known occupied hibernacula, spatial extent, and summer habitat occupancy across the range and within all representation units are decreasing.

Since the first detection of WNS in 2006, tricolored bat abundance has declined, leaving many individual colonies with small numbers of individuals. At these low population sizes, colonies are vulnerable to individual extirpations from stochastic events and are vulnerable to the effects of cumulative impacts from multiple stressors. Furthermore, small populations generally cannot rescue one another from such a depressed state owing to the tricolored bat’s low reproductive output (two pups per year) and high philopatry (tending to return to or remain near a particular site or area). These

inherent life-history traits limit the ability of populations to recover from these 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.

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. Using the SSA framework, we considered the cumulative impacts of white nose syndrome, wind energy-related mortality, habitat loss, and impacts of climate change on the tricolored bat. 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 that are 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. To date, there are no proven measures to reduce the severity of impacts. 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 39 States in the tricolored bat range, Canada, and Mexico are engaged

in collaborations to conduct disease surveillance, population monitoring, and management actions in preparation for or response to WNS; however, there are currently no conservation measures known to reduce the severity of WNS impacts.

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 when bats are more at risk. 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 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 involving all bat species have shown 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).

All States have active forestry programs with a variety of goals and objectives. Several States have established habitat protection buffers around known Indiana bat (*Myotis sodalis*) 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 to protect maternity colonies and non-volant pups during summer months. Depending on the type and timing of activities, forest management can be beneficial to bat species (e.g., 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 (Silvis et al. 2016, p. 37). Silvicultural practices can meet both male and female tricolored bat 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; these closures also reduce disturbance to bats 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 those implementing 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 permanently protected, which consequently benefits tricolored bats also occupying these hibernacula.

Tricolored bat is listed as endangered under Canada's Species at Risk Act (COSEWIC 2013, entire). In addition, tricolored bat receives varying degrees of protection through State laws as it is designated as endangered in Connecticut, Indiana, Massachusetts, New Hampshire, Ohio, Pennsylvania, Vermont, and Virginia; State-threatened in Tennessee and Wisconsin; and special concern in Alabama, Georgia, Iowa, Maine, Michigan, Minnesota, Missouri, South Carolina, and West Virginia.

#### Future Condition

As part of the SSA, we also developed future condition scenarios to capture the range of uncertainties regarding future threats and the projected responses by the tricolored bat. To project future installed wind capacity, we relied upon National Renewable Energy Laboratory's (NREL; Cole *et al.* 2020) and Canadian Energy Regulator's (CER 2020) projections for the U.S. and Canada. To project future impacts

of WNS, we relied on (1) predicted current and future occurrence of Pd on the landscape using two different models and (2) the WNS impacts schedule, both created from empirical Pd spread rates and WNS impact data. Because we determined that the current condition of the tricolored bat was consistent with an endangered species (see **Determination of Tricolored Bat 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

### **Determination of Tricolored 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 tricolored 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, often resulting in mortality. WNS has caused estimated tricolored bat population declines of 90

to 100 percent across 59 percent of the species' range (Factor C). Winter abundance (from known hibernacula) has declined rangewide (52 percent) and across all representation units (24 to 89 percent), and the number of extant winter colonies also declined rangewide (29 percent). Rangewide summer occupancy (from mobile and stationary acoustic and mist-net capture data) declined by 28 percent from 2010 to 2019. Summer data collected from mobile acoustic transects found a 53-percent decline in rangewide relative abundance from 2009 to 2019, and summer mist-net captures declined by 12 to 19 percent (across representation units) compared to pre-WNS capture rates.

Tricolored bat abundance and spatial extent has also substantially declined. Consequently, the species is more vulnerable to catastrophic events because the risk is no longer spread across as large an area as it once was. For example, the number of known extant winter colonies has declined 29 percent since the year 2000 and there has been a shift to smaller colony sizes in those that remain. Lastly, as populations have been extirpated and areas occupied by the species have declined, so has redundancy.

Tricolored bat representation has also been reduced with declines in abundance in all representation units and habitat types (loss of extent of occurrence). The steep declines in abundance and reductions in extent of occurrence have likely led to corresponding steep reductions in genetic diversity, and thereby has reduced tricolored bat adaptive capacity as the species loses inherent genetic material and variation in ecological settings.

As discussed above, multiple data types and analyses indicate downward trends in tricolored bat population abundance and distribution over the last 14 years, and to the best available scientific information indicates that this downward trend will change near term to the extent that we predict a decrease in rangewide abundance of 89 percent over the next decade. Additionally, the number of winter colonies will likely decline by 91 percent, and the species' spatial extent will likely decline by 65 percent by 2030. 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 the tricolored bat's ability to adapt to changing environmental conditions, more so as populations continue to decline in health and distribution. Moreover, at its current low abundance, loss of genetic diversity via genetic drift (random fluctuations in the numbers of gene variants in a population) will likely accelerate. Consequently, decreasing genetic diversity will further lessen tricolored 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.

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, we find that the tricolored bat's current population status indicates that this species is currently in danger of extinction. The species continues to experience the catastrophic effects of WNS and the compounding effects of other stressors. These threats and their effects on the species are highly likely to continue.

Since the first detection of white nose syndrome in 2006, tricolored bat abundance declined, on average, by 93 percent in known hibernacula with WNS, with most (93%) winter colonies having fewer than 100 individuals (Cheng et al. 2021, p. 7). At these low population sizes, colonies are vulnerable to extirpation from stochastic events (resiliency). Furthermore, tricolored bat's ability to recover from low population size is limited given their low reproductive output (two pups per year). Therefore, tricolored bat's resiliency is greatly compromised in its current condition.

Additionally, under current conditions, tricolored bat's spatial extent has declined and is projected to continue decline, with a 65 percent reduction by 2030. As the tricolored bat's abundance and spatial extent declined, the species has become more vulnerable to catastrophic events (declined redundancy).



In addition to reduced redundancy and resiliency, the bat's representation has also been reduced. Tricolored bat's capacity to adapt is constrained by its life history and the current level of its intraspecific diversity (e.g., genetic, phenotypic, behavioral, ecological variability). The declines in abundance have likely led to reductions in genetic diversity, and thereby reduced tricolored bat adaptive capacity and therefore its representation.

The species meets the definition of endangered rather than threatened. Thus, after assessing the best available information, we determine that tricolored 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 tricolored 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 tricolored 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*, 435 F. Supp. 3d 69 (D.D.C. 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 tricolored bat meets the definition of an endangered species. Therefore, we propose to list the tricolored 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 as a listed species, planning and

implementation of 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 goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

The recovery planning process begins with development of a recovery outline made available to the public soon after a final listing determination. The recovery outline guides the immediate implementation of urgent recovery actions while a recovery plan is being developed. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) may be established to develop and implement recovery plans. The recovery planning process involves the identification of actions that are necessary to halt and reverse the species' decline by addressing the threats to its survival and recovery. The recovery plan 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. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery outline, draft recovery plan, final recovery plan, and any revisions will be available on our website as they are completed (<https://www.fws.gov/program/endangered-species> or <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>) or from our Pennsylvania 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 (e.g., 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.

If this species is listed, funding for recovery actions will be 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, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Wisconsin, West Virginia, and Wyoming would be eligible for Federal funds to implement management actions that promote the protection

or recovery of the tricolored bat. Information on our grant programs that are available to aid species recovery can be found at: <https://www.fws.gov/grants>.

Although the tricolored bat is only proposed for listing under the Act at this time, 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 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; forest management activities funded by Federal agencies on private lands (e.g., Natural Resources Conservation

Service); 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, as described below.

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 tricolored 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) Disturbance or destruction (or otherwise making unsuitable) of known hibernacula due to commercial or recreational activities during known periods of hibernation.

(3) 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 kill or injure individuals by significantly impairing the species' essential breeding, foraging, sheltering, commuting, or other essential life functions.

(4) Unauthorized removal or destruction of trees and other natural and manmade structures being used as roosts by the tricolored bat that results in take of the species.

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

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

(7) Within areas used by the species, unauthorized building and operation of wind energy facilities that result in take of the species.

(8) Unauthorized discharge into sinkholes of chemicals, fill, or other materials that may lead to contamination of known tricolored bat hibernacula.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the appropriate field office (see <https://www.fws.gov/our-facilities?program=%5B%22Ecological%20Services%22%5D>).

## **II. Critical Habitat**

### **Background**

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (e.g., migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened

species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation also does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement “reasonable and prudent alternatives” to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act’s definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations



identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat).

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. We note that the court in *CBD v. Haaland* vacated the provisions from the 2019 regulations that had modified the criteria for designating critical habitat, including designating critical habitat in areas outside the geographical area occupied by the species at the time of listing. Therefore, the regulations that now govern designations of critical habitat are the implementing regulations that were in effect before the 2019 regulations.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information from the SSA report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan for the species; articles in peer-

reviewed journals; conservation plans developed by States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of the species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of those planning efforts calls for a different outcome.

### **Prudency Determination**

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered

or threatened species. Our regulations (50 CFR 424.12(a)(1)) currently in effect state that designation of critical habitat is not prudent when any of the following situations exist:

(i) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species; or

(ii) Such designation of critical habitat would not be beneficial to the species. In determining whether a designation would not be beneficial, the factors the Services may consider include but are not limited to: Whether the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species or, whether any areas meet the definition of "critical habitat."

We examined the types of habitat that the tricolored bat uses for roosting and hibernating, such as live and dead leaf clusters of live or recently dead deciduous hardwood trees, Spanish moss (*Tillandsia usneoides*), *Usnea trichodea* lichen, pine needles, eastern red cedar, and artificial roosts (e.g., barns, beneath porch roofs, bridges, concrete bunkers). During the winter, tricolored bats hibernate predominately in caves and mines, although in the southern United States, where caves are sparse, tricolored bat often hibernate in road-associated culverts. Although individual bats are killed due to habitat loss, summer (roosting sites) and winter (hibernation sites) habitat is not limiting throughout the range of the species.

The individual needs of the tricolored bat (outlined above in Table 1) may be met in a variety of forested habitats, as evidenced by the species' large historical range over 39 States, southeastern Canada, and central America, in which it occupied, prior to WNS, a wide variety of elevations, forest community types, latitudes, and climates. While temporary or permanent suitable forested habitat loss may occur throughout the species' range, impacts to tricolored bat typically occur at a more local scale (i.e., individuals and potentially colonies), and summer forested habitat continues to be widely available across the species' range. Based on this information, forested habitat loss is not a major driver of

the species' status, and suitable forest habitat is not limiting for tricolored bat now nor is it likely to be limiting in the future. Therefore, we conclude that designating the forest habitat of the tricolored bat as critical habitat is not prudent.

In addition, the primary forms of human disturbance to hibernating bats result from human entry such as recreational caving, vandalism, cave commercialization (cave tours and other commercial uses of caves), and research-related activities (Service 2007, p. 80). Human disturbance at hibernacula can cause bats to arouse more frequently, causing premature energy store depletion and starvation (Thomas 1995, p. 944; Speakman et al. 1991, p. 1103), leading to marked reductions in bat populations (Tuttle 1979, p. 3) and increased susceptibility to disease. WNS infection leads to increases in the frequency and duration of arousals during hibernation and raises energetic costs during torpor bouts, both of which cause premature depletion of critical fat reserves needed to survive winter. In our April 27, 2016, determination that designating critical habitat for the northern long-eared bat is not prudent, we outlined a wide array of disturbances to hibernating bats resulting from the above activities (81 FR 24707). Given tricolored bat's similar susceptibility to the above-mentioned threats and overlapping range, we find that our not-prudent determination for the tricolored bat is consistent with our not-prudent finding for northern long-eared bat critical habitat. Identifying wintering habitat (hibernacula) as critical habitat on published maps for the tricolored bat would likely increase the threat from human entry and could increase the spread of WNS by identifying specific sensitive areas.

This not-prudent determination is based on the regulations that preceded the Service's 2019 revisions of 50 CFR part 424 (84 FR 45020; August 27, 2019) because on July 5, 2022, the U.S. District Court for the Northern District of California vacated those 2019 regulations. However, we considered whether the analysis of the prudence of designating critical habitat and the conclusion drawn from that analysis contained in this

listing rule would be any different under the regulations at 50 CFR part 424 as they existed while the 2019 revisions were in place. We have concluded that our analysis and conclusion would not be different. To verify whether there would be a different outcome, we considered whether the tri-colored bat involves any of the circumstances in which designation of critical habitat may be not prudent under the 2019 revisions. We found that several of the circumstances for which designation of critical habitat would be not prudent under the 2019 revisions apply to the tri-colored bat. As a result of this analysis, we found that the outcome of the prudency determination would have remained the same under either situation.

Therefore, in accordance with 50 CFR 424.12(a)(1), we determine that designation of critical habitat is not prudent for the tricolored bat.

### **Public Hearings**

We have scheduled a public informational meeting with a public hearing on this proposed rule for the tricolored 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/tricolored-bat-perimyotis-subflavus>.

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/tricolored-bat-perimyotis-subflavus>. 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 a final rule for the tricolored bat.

### 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 Pennsylvania Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

### Authors

The primary authors of this proposed rule are the staff members of the U.S. Fish and Wildlife Service’s Species Assessment Team and the Pennsylvania 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. In § 17.11, amend paragraph (h) by adding an entry for “Bat, tricolored (*Perimyotis subflavus*)” in alphabetic order under Mammals to read as follows:

### **§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*

(h) \* \* \*

<b>Common name</b>	<b>Scientific name</b>	<b>Where listed</b>	<b>Status</b>	<b>Listing citations and applicable rules</b>
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MAMMALS				
* * * * *				
Bat, tricolored	<i>Perimyotis subflavus</i>	Wherever found	E	[ <i>Federal Register</i> citation when published as a final rule].
* * * * *				

\* \* \* \* \*

**Martha Williams,**  
*Director,*  
*U.S. Fish and Wildlife Service.*

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