



THE WILDLIFE SOCIETY

Leaders in Wildlife Science, Management and Conservation

04 September 2020

Public Comments Processing
Attention: FWS-HQ-ES-2020-0047
U.S. Fish and Wildlife Service
MS: PRB(3W)
5275 Leesburg Pike
Falls Church, VA 22041– 3803

RE: Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat
[Docket No. FWS-HQ-ES-2020-0047]

Dear U.S. Fish and Wildlife Service and National Marine Fisheries Service,

The Wildlife Society appreciates the opportunity to comment on the newly proposed definitions of “habitat” under the Endangered Species Act.

Founded in 1937, The Wildlife Society (TWS; wildlife.org) and our network of affiliated chapters and sections represents over 15,000 wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to inspire, empower, and enable wildlife professionals to sustain wildlife populations and their habitat through science-based management and conservation.

TWS has several concerns and recommendations to address the shortcomings of the definition and alternate definition as proposed by the Services:

Services’ proposed definition: The physical places that individuals of a species depend upon to carry out one or more life processes. Habitat includes areas with existing attributes that have the capacity to support individuals of the species.

Services’ proposed alternate definition: The physical places that individuals of a species use to carry out one or more life processes. Habitat includes areas where individuals of the species do not presently exist but have the capacity to support such individuals, only where the necessary attributes to support the species presently exist.

Habitat as a concept

As noted in the Federal Register, “habitat” is species-specific. No two species’ habitats can be described in the same way. The definition of each species’ habitat is embedded in their natural history, and encompasses their evolutionarily developed traits and interactions with abiotic components in the environment and the biotic community of which they are a part.

Biotic components (e.g., vegetation, conspecifics, food, etc.), ecological relationships (e.g., predator-prey, pollinator-plant, parasite-host) and a suite of other interspecies interactions can be necessary for the survival of a species. Abiotic components of the environment and landscape like elevation, topography, weather, climate, water, soil, and others all contribute to a species’ habitat. Species do not exist in a vacuum, and ensuring that both biotic and abiotic factors, including those that we may not yet be aware of, are accounted for in defining a species’ habitat is necessary.

The geographic location of habitat can also change over time, particularly in regard to abiotic factors, like climatic conditions, that alter the biotic and abiotic components in a given area and thereby affect the distribution of the species in question.

Habitat as key to species recovery

A definition of “habitat” that will be used to inform the regulatory framework that drives the conservation and restoration of threatened and endangered species must be able to accommodate each of these components.

The ESA is a vital tool to conserve biological diversity (see [TWS' Position Statement on the U.S. Endangered Species Act](#)). The loss, fragmentation, and degradation of species' habitat is a leading cause of population declines that necessitate listing of threatened and endangered species. Indeed, damage and destruction of habitat is one of only five criteria used by the Services when considering to list species. Identifying and protecting a listed species' habitat, and restoring lost and degraded habitat, is key for species' recovery and ultimate delisting.

With the recent *Weyerhaeuser Co. v. USFWS* decision, the Supreme Court determined that for critical habitat to be designated for a species, the Services must first determine a species' habitat. With this ruling, the Services were faced with the task of defining a term regularly and discordantly used by government agencies, environmental organizations, academia, and the general public.

Despite the term's ubiquity, there have been no previous attempts to codify the definition of habitat into federal statute or regulation. As a result, **it is necessary for the Services to consider the broader implications of this definition.** The codification of this definition will become the benchmark in federal statute, and become a reference for other federal agencies and members of the judiciary who are seeking to make sense of the term for their own application.

Proposed definitions of “habitat”

TWS has several concerns and comments related to the appropriateness, completeness, and application of the two proposed definitions:

- “one or more life processes” – TWS is pleased to see the Services' recognition that the definition of habitat for a species must encompass the entire life cycle for a species. The ecological attributes that are necessary for a species' survival may change throughout the species' life cycle, and different attributes and conditions are necessary to meet the needs for the species' life processes (e.g., breeding, brood rearing, foraging, dispersal). The definition of “habitat” should enable the Services to identify all of these ‘life-cycle habitat’ variations for each species to ensure its entire life-cycle needs are met. **An important concept that the Services should note is that the juxtaposition and relative ratios of different ‘life-cycle habitats’ is an important aspect of species' survival and the definition should attempt to encompass that idea.**
- “existing attributes” and “presently exists” terminology – TWS is concerned that the inclusion of these phrases in the definition of habitat undercuts the statutory definition of “critical habitat” and **fails to recognize that habitat loss is a leading cause of species' declines.** By including these phrases in the definition of habitat, the Services are preventing the necessary action of identifying, preserving, and restoring *potential* habitats outside of a species' current distribution that may be necessary for the conservation of a species in the critical habitat designation process. Since loss of habitat is a leading contributor of a species'

endangerment, restoration of habitats is necessary for their recovery and should be a part of the Services' species recovery efforts. A species' habitat does require that the combination of particular attributes exists together at the same time – however, as a step used to inform critical habitat designation, **the definition of “habitat” must enable the identification of areas that have a reasonable *potential* to contain the attributes that support a species.** Some of these areas may not currently contain all of the attributes due to simple anthropogenic actions that could be altered to produce the appropriate attributes (e.g., water pumping preventing appropriate water depth, or mowing preventing appropriate grass height). Though potential habitat and habitat are two different concepts, the current framework of critical habitat – which includes areas that are not presently habitat but could be with active management – requires that the definition of habitat do so as well.

Additionally, these phrases could fail to recognize the temporal variation in on-the-ground conditions. As the Services note in the Federal Register Notice, the conditions in an area can change seasonally, and may constitute “habitat” for a species' during a relatively brief period of time. The phrases “presently exist” and “existing attributes” may fail to recognize these temporal variations.

As a result, **these phrases make the proposed definitions too narrow** to adequately define a species' habitat for the purposes of informing critical habitat designations.

- **“physical places” terminology** – This phrase emphasizes spatial location and may fail to fully recognize the various elements that compose a species' habitat. The Services' definition of habitat should emphasize the biotic and abiotic components that compose a species' habitat, rather than a physical place. Indeed, these components must occur in a physical place and identifying the spatial location is a key component of identifying critical habitat and implementing regulations. However, identifying the quality and composition of the various features – including space – that compose a habitat is an important step in the process, particularly this non-regulatory part of the process. **TWS recommends the Services consider a definition that enables them to identify species' habitat without the requirement of spatially locating that habitat.** When determining a species' habitat, a descriptive definition would enable the Service to identify the critical elements – ecological relationships, biotic/abiotic components, etc. – that combine to create a species' habitat. Such a definition would empower the Services to locate and identify critical habitats that 1) meet the description of the species' habitat, and 2) may be missing one or a few select key elements that could be restored to create a species' habitat and thus aid the recovery of the species. **TWS cautions the Services to not conflate a species' range with its habitat.** A species' current range is the spatial distribution of individuals across the landscape. A species' habitat necessarily occurs within that range, but can also occur outside of that range because habitat is a set of ecological attributes (biotic and abiotic components and interactions). Whether or not a particular location is occupied by the species does not affect the categorization of the attributes in that location as that species' “habitat.” This phenomenon will be particularly true as climate change continues to affect ecosystems and the distribution of species on the landscape.
- **Climate change implications** – TWS is concerned that the proposed definitions do not empower the Services to recover listed species in the context of climate change. Emphasizing the “existing attributes” and “physical places” could place limitations on the

ability of the Services to identify a species' habitat under future anticipated conditions. Such limitations would undercut the intentions of the ESA and the Services' efforts.

- Gaps and evolution in knowledge – The application of the Services' definition of "habitat" should recognize that knowledge about some species – particularly rare species – can be lacking or evolve over time as our scientific understanding of a species' needs advances. At the time of a species' listing or during the critical habitat designation process, we may not fully know or understand which attributes compose a species' habitat or which are most critical for a species' survival. It may take years or decades to comprehensively define a particular species' habitat considering all the components (e.g., elevation, topography, conspecifics, competitors, weather, climate, vegetation, water, soil attributes, ground cover, anthropogenic stressors, etc.) involved. The definitions used by the Services should account for potential gaps or changes in information by relying on the best-available science at the time and ensure that knowledge gaps do not hinder progress towards species recovery nor invite litigation of a critical habitat designation.
- Population variances in habitat for a single species – A species' habitat requirements may vary across the range of the species. The definition, when applied, should recognize that populations of some species may have different habitat requirements than other populations of the same species found in a different geographical area. The current definitions focus on "individuals of a species" rather than of a population. Similarly, the focus on individuals could fail to recognize outliers in a population. The conditions in which a particular individual is found and is able to survive may not be emblematic of the appropriate conditions for the population or species. **TWS recommends that the definition be focused on populations**, rather than individuals or species.
- "Use" vs. "depend upon" – These phrases are unnecessarily limiting when combined with the need to associate them with "physical places". It is rare that all habitat is fully occupied, as this assumes our ability to delineate habitat is accurate. Unoccupied habitat or potential habitat may play an important role in facilitating recruitment, immigration and emigration. In cases where habitat degradation is a root cause of listing, some amount of unoccupied habitat may be necessary to support conservation to provide for expansion of the listed species.

Proposed changes and new definition to consider

We find the proposed definitions too narrow and lacking appropriate consideration of the diverse ecological and broader legal considerations that must be examined when defining habitat. A complete definition and its implementation should:

- Be broad and meet the regulatory needs of the Services
- Build from peer-reviewed definitions of the term
- Recognize that habitat is a species-specific concept, and that there are population-level variances in habitat needs
- Encompass the full life-cycle needs of a species. Allow for seasonal variation in species' needs and habitat availability
- Emphasize "ecology" and the necessary ecological interactions between the species and the environment in which it lives – both biotic and abiotic
- Allow for consideration of areas where species do not currently exist or where all necessary conditions are not yet being met – but could be met with specific management actions
- Recognize and buffer against uncertainties or lack of knowledge

- Address climatic changes and allow species to respond to emerging threats. Provide for the ability of species to disperse and expand their range
- Specify that the definition applies to free-ranging, wild species
- Provide for scope and scale, both spatially and temporally
- Focus on populations rather than individuals or species

To improve the proposals put forth by the Services, The Wildlife Society offers these four suggestions of potential definitions to consider when drafting the final rule:

“Habitat is the combination of spatial, temporal, biotic and abiotic factors and interactions that create the conditions necessary to support free-ranging population(s) of a species through one or more life processes. The spatial location of habitat can shift over time – either naturally or through anthropogenic actions - and is not limited to the present range of a species.”

“Habitat includes the specific attributes (including space), processes (biotic and abiotic) and ecological interactions that support free-ranging population(s) of a species through one or more life processes. The spatial location of habitat can shift over time – either naturally or through anthropogenic actions - and is not limited to the present range of a species.”

“Habitat is the combination of resources and conditions necessary to support free-ranging population(s) of a species through reproduction, recruitment, and survival. The location of habitat can shift over time and it includes areas that are not currently occupied by individuals of the species.”

“Habitat is the combination of resources and conditions necessary to support free-ranging population(s) of a species through one or more life processes. Habitat can vary spatially and temporally in its presence, quality, and occupation by the species.”

Thank you for the opportunity to submit comment. Please contact Caroline Murphy, AWB®, government relations manager at The Wildlife Society (cmurphy@wildlife.org; 301-897-9770 x 308), with any questions regarding the recommendations outlined above.

Sincerely,



Gary C. White, PhD, CWB®
President