



# To List or Not: What the U.S. Fish and Wildlife Service Needs to Know to Make Decisions Under the ESA

*The U.S. Fish and Wildlife Service will make decisions whether to provide federal protection to hundreds of southeastern species over the next several years as a result of litigation and petitions. Because the decisions are tied to legal timelines under the Endangered Species Act (ESA), we need to gather as much information on these species as possible from States, conservation partners, industry, and researchers, among others. The following information is needed to make these determinations. While we understand that no one partner is likely to have all the information noted below, many will have one portion that we can combine with other submitted information, and data in our files, to generate a more complete picture of the species' status.*

## Data Needs

### *Basic Biology*

This includes natural history and ecology information related to the species, such as a description of the species and its current versus historical range, population status, life cycle, results of monitoring, and genetic information. It is critical to understand the current status of the species, which will help us more accurately evaluate the species' ability to withstand threats. For some species, this could result in finding substantially more resiliency and occurrences than expected, potentially precluding the need for federal protection.

### *Habitat*

These are areas essential to the species across its range, including habitat needed for breeding, shelter and food needs.

### *Threats*

A species is not listed on rarity alone. An analysis of the threats facing the species is integral to our listing decision. The analysis should include both domestic and international threats. This is done through the five-factor analysis outlined in the ESA, where we take into account:

- Factor A. Present or threatened destruction, modification, or curtailment of a species' habitat or range. Examples include development that could impact a species or its habitat, stream modification, fire suppression and clearing trees.
- Factor B. Overutilization for commercial, recreational, scientific, or educational purposes. Examples include hunting and over-collection for commercial purposes (ginseng, butterflies, horseshoe crabs).
- Factor C. Disease or predation. An example is white-nosed syndrome in bats, which is decimating some species of bats in the eastern United States.
- Factor D. Inadequacy of existing regulatory mechanisms. An example is ongoing declines in some aquatic species despite protections afforded by the Clean Water Act.
- Factor E. Other natural or manmade factors affecting the species' continued existence. These could include any other threat not captured in the previous categories, such as small populations, inbreeding depression and sea level rise.

Detailed threat information will greatly help us in our determinations. We are working to improve upon this current process by also looking carefully at causes and effects; linking threats to actual impacts to individuals, populations, and species; and evaluating how those threats that cross factors work together to drive changes.

### *Conservation efforts/agreements*

These include all existing conservation actions and formal agreements that are already helping to offset the threats listed above and future or planned conservation efforts. We also consider the effectiveness of the efforts and agreements, and the likelihood of whether they will continue long-term.

### *Viability*

A characterization of a species' ability to persist in the wild over time. This determination is made by considering the threats to the species, conservation efforts, and the species' resiliency, redundancy and representation. This is essentially a prediction of how a species will fair under various scenarios.

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## *Data Management Needs*

The Service needs a data management system, accessible by all partners who monitor and measure populations of unlisted species, which will allow us to quickly and efficiently find, store, and analyze critical information. The Service needs access the best available scientific and commercial information in the most efficient manner possible, ensuring biologically sound and legally defensible decisions to list a species, or determine that listing is not warranted.

We are currently working to clear a backlog of listing decisions on candidate species as required under a 2011 court-ordered settlement agreement. When that work is done, by the end of 2016, the Southeast Region will focus our efforts on more than 400 species that advocacy organizations have petitioned us to list under the ESA. In order to efficiently and effectively address those determinations, we envision forming teams of species experts that will gather to evaluate multiple similar species (e.g., upper Tennessee River mussels) simultaneously. Ideally, we would have the data management system in place, allowing us to mine datasets and quickly consolidate key information, prior to formation of the species teams.

For additional information regarding data needs for listing decisions, please contact:

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