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The Endangered Species Act: Overview and Implementation

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SUMMARY

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The Endangered Species Act: Overview and Implementation

The Endangered Species Act of 1973 (ESA; P.L. 93-205, 87 Stat. 884, 16 U.S.C. §§1531-1544) aims to conserve species listed as endangered or threatened under the act. Under the ESA, it is the policy of Congress that all federal agencies shall seek to conserve threatened and endangered species, use their authorities in furtherance of the ESA, and cooperate with state and local agencies to resolve water resource issues in concert with conserving endangered species. The ESA is administered by the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). Under the ESA, domestic and foreign species of animals (both vertebrate and invertebrate) and plants can be listed as either endangered or threatened, according to an assessment of the risk of their extinction. Once a species is listed, the act provides tools to aid the species' conservation and recovery and to protect its habitat.

The ESA and its predecessors have been in place since 1966. Since enactment, these acts have led to the listing of over 2,400 species as threatened or endangered. As of October 2020, 2,363 species were listed, the majority of which (71%) were listed in the United States; the remaining 29% were foreign species. Of all listed species in October 2020, 79% were endangered and 21% were threatened. As of October 2020, 91 species had been delisted under the ESA since it was enacted in 1973, which is approximately 3.7% of the total number of species ever listed under the act.

Many Members of Congress are interested in how the ESA is implemented, because states—as well as American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, the Virgin Islands, outlying Islands in the Pacific and the Caribbean, and Washington, DC—have species that are, or may be in the future, listed under the act. Congress also is interested in broader issues surrounding the ESA and oversight of its implementation, primarily because some stakeholders perceive the ESA as, at times, pitting economic development against the conservation of listed species.

This report discusses selected provisions of the ESA and selected federal regulations that implement the ESA. It discusses several major provisions of the act, generally in the order they appear in the *U.S. Code*. These sections include Section 4, on listing species under the ESA; Section 6, on cooperating with states in recovering listed species; Section 7, on interagency cooperation and consultation; Section 9, on prohibitions under the ESA; Section 10, on exceptions to prohibitions; Section 11, on penalties and enforcement under the ESA; and Section 8, on the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), among others.

The ESA has been amended numerous times since its enactment. The authorization for funding included in Section 15 of the ESA expired on October 1, 1992; nevertheless, Congress has appropriated funds in each succeeding fiscal year, and the ESA's provisions—including those related to listings, consultations, prohibitions, and penalties—remain in effect.

A long-standing question related to the ESA is whether it effectively achieves its purposes, as outlined in the act. Various stakeholders have put forth different interpretations on this issue. Some stakeholders have offered, as evidence of the ESA's success, the very low rate of extinction for those species listed under the act. Other stakeholders have suggested the ESA has been ineffective at conservation, noting that recovery is an integral component of success as presumed by the definition of conservation included within the act—"to bring any endangered or threatened species to the point at which the measures provided in [the ESA] are no longer necessary"; to support this position, they highlight that only a small number of species have been delisted due to recovery.

In addition to addressing whether the ESA has been successful at conserving species, stakeholders have raised other issues related to the act. These issues include, among others, the ESA's effects on private property and landowners; the ability to conserve species before it is necessary to list them; the cost of listing species and the resulting economic impacts; the availability of funding for the ESA; incentives for conservation under the ESA; the states' role in conserving listed species; delays in listing, delisting, and reclassifying species under the ESA; and litigation related to the ESA. Given the perennial nature of these issues and the ESA's controversial nature, these matters are routinely of concern to Members of Congress.

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Introduction

The Endangered Species Act of 1973 (ESA; P.L. 93-205, 87 Stat. 884, 16 U.S.C. §§1531-1544) aims to conserve species listed as endangered or threatened under the act. The stated purpose of the ESA is to

> Provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.[1]

Under the ESA, it is the policy of Congress that all federal agencies shall seek to conserve threatened and endangered species, use their authorities in furtherance of the ESA, and cooperate with state and local agencies to resolve water resource issues in concert with conserving endangered species.[2]

The ESA is administered by the U.S. Fish and Wildlife Service (FWS) for terrestrial and freshwater species,[3] as delegated by the Secretary of the Interior, and by the National Marine Fisheries Service (NMFS) for marine and anadromous species,[4] as delegated by the Secretary of Commerce (hereinafter, FWS and NMFS are jointly referenced as *the Services*).[5] Under the ESA, domestic and foreign species of animals (both vertebrate and invertebrate) and plants can be listed as either *endangered* or *threatened*, according to an assessment of the risk of their extinction (see **Figure 1**.)[6] Once a species is listed, the act provides tools to aid its conservation and recovery and to protect its habitat. Among these tools are the ESA's prohibition of *take* (e.g., killing, capturing, or harming) of endangered species without a permit and its requirement that federal agencies, in consultation with FWS or NMFS, as applicable, ensure their actions are not likely to jeopardize the continued existence of listed species or to result in destruction or adverse modification of designated critical habitat.

The ESA extends to both domestic and foreign species. As of October 2020, a total of 2,363 species of animals and plants were listed as either endangered or threatened; 1,668 of all listed species occur in the United States and its territories,[7] and the remainder (695 species) occur solely in other countries.[8] (See **Figure 1**.) Regulations under the ESA for foreign species largely address

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[1] Endangered Species Act (ESA; P.L. 93-205, 87 Stat. 884, 16 U.S.C. §§1531-1544) §2, 16 U.S.C. §1531(b).

[2] ESA §2(c), 16 U.S.C. §1531(c).

[3] For detailed information on the U.S. Fish and Wildlife Service (FWS) program for endangered and threatened species, see FWS, "Endangered Species," at http://www.fws.gov/endangered/.

[4] The National Marine Fisheries Service (NMFS), a part of the National Oceanic and Atmospheric Administration (NOAA), is also sometimes referred to as *NOAA Fisheries*. Fish are *anadromous* if they spend most of their lives in salt water and then swim up a river to spawn. Young anadromous fish hatch and then swim downstream to grow to adulthood in the ocean. For example, most salmon and some sturgeon species are anadromous.

[5] In addition to the administrative responsibilities assigned to the Secretary of the Interior and the Secretary of Commerce, the Secretary of Agriculture, pursuant to 16 U.S.C. §1532(15), is responsible for administering the ESA with regard to the import and export of listed plant species.

[6] *Domestic species* are those species found in the United States, regardless of whether they are also found elsewhere. *Foreign species* are species that are not native to the United States and therefore only found abroad.

[7] Listings attributed to the United States include species with populations where the United States shares jurisdiction with another nation.

[8] For updated information, see FWS, "Environmental Conservation Online System (ECOS) – Listed Species Summary," at https://ecos.fws.gov/ecp/report/boxscore.

import restrictions and domestic breeding activities within the United States; the ESA generally does not regulate listed species outside the United States and U.S. territories, because these species are beyond U.S. jurisdiction. For example, the ESA does not prohibit individuals from killing listed species in foreign countries.[9]

The ESA was passed in 1973, but it was preceded by laws for the preservation and conservation of endangered species in 1966 and 1969. The Endangered Species Preservation Act (P.L. 89-669), enacted in 1966, implemented a process for listing native species that were considered endangered and a program for conserving, protecting, restoring, and propagating those species. For example, the Endangered Species Preservation Act authorized the Secretary of the Interior to acquire land as needed to further the conservation of listed species. The first list of endangered species was promulgated in 1967 and included 78 species, including the grizzly bear, American alligator, and bald eagle, among others.[10]

In 1969, the Endangered Species Conservation Act (P.L. 91-135) amended the Endangered Species Preservation Act. The Endangered Species Conservation Act provided, among other things, a list of species in danger of worldwide extinction and expanded protections for species already listed. The act also called for an international convention or treaty to conserve endangered species; the United Nations (U.N.) made a similar resolution in 1963.[11] This U.N. resolution laid the groundwork for a multilateral treaty known as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). (See section on "CITES" for more information.)

In 1973, Congress passed the Endangered Species Act to provide for the conservation of threatened and endangered species.[12] The ESA has been amended on numerous occasions since it was enacted.[13] The authorization for funding included in Section 15 of the ESA expired on October 1, 1992;[14] nevertheless, Congress has appropriated funds in each succeeding fiscal year, and the ESA's provisions—including those related to listings, consultations, prohibitions, and penalties—remain in effect.

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[9] Any person seeking to hunt such species would be subject only to the laws and regulations of the country where the species resides. However, the ESA can limit a hunter's ability to bring back to the United States (i.e., import) any trophy from such a hunt. For example, individuals are required to obtain appropriate permits prior to importing a trophy of an ESA-listed species—such as a lion (*Panthera leo leo*) or an African elephant (*Loxodonta africana*)—and certain restrictions apply on how many such trophies can be imported into the United States.

[10] Department of the Interior (DOI), "Native Fish and Wildlife: Endangered Species," 32 *Federal Register* 4001 (March 11, 1967).

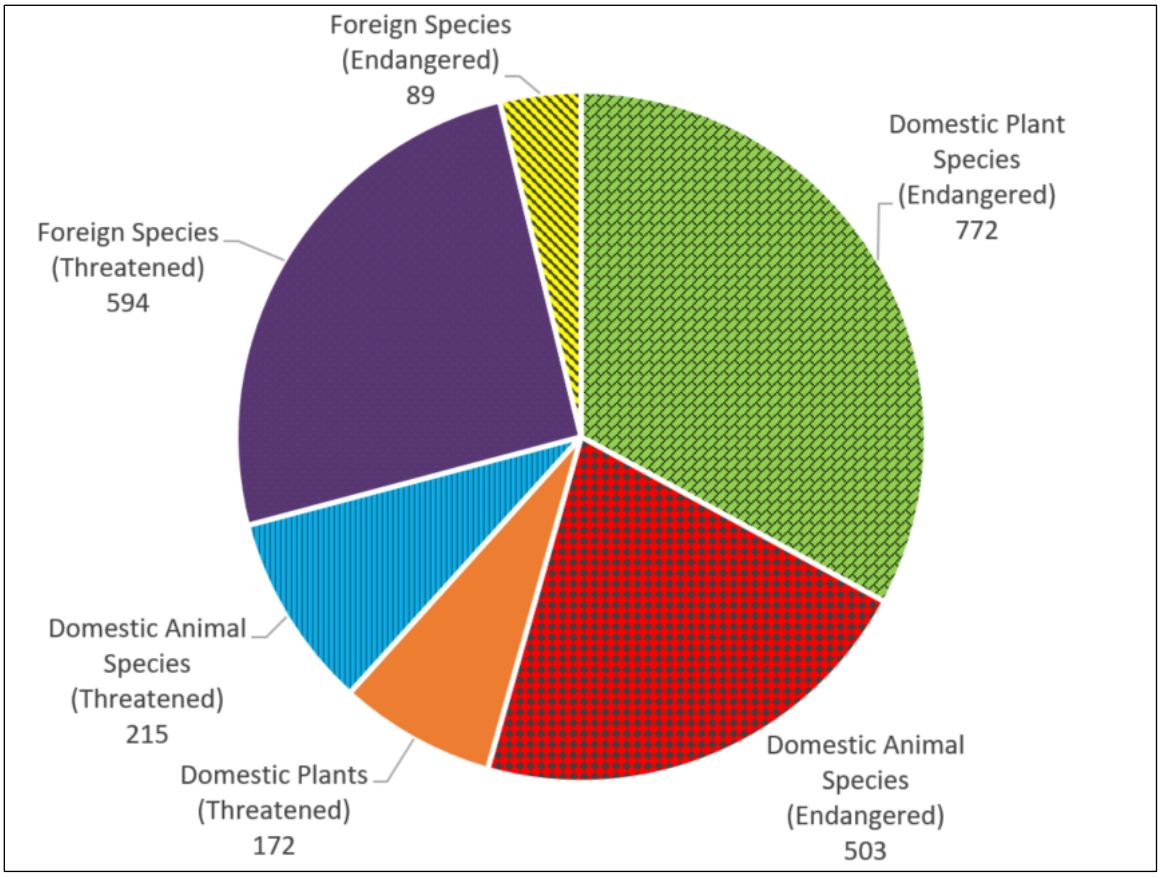
[11] International Union for Conservation of Nature, *Resolution on Illegal Traffic in Wildlife Species*, GA 1963 RES 005, 1963 Nairobi General Assembly, 1963.

[12] Congress passed the Endangered Species Act pursuant to its authority under the Commerce Clause to "regulate Commerce with foreign Nations, and among the several States, and with Indian tribes." U.S. Const. art. I, §8, cl. 3. Every U.S. Court of Appeals to consider the issue has upheld Congress's authority to regulate listed species under that clause, including with respect to species located only in one state. See People for the Ethical Treatment of Property Owners v. U.S. Fish & Wildlife Serv., 852 F.3d 990, 999-1008 (10th Cir. 2017) ("Every one of our sister circuits that has addressed this issue has agreed that regulation of purely intrastate species is an essential part of the ESA's regulatory scheme."); San Luis & Delta-Mendota Water Auth. v. Salazar, 638 F.3d 1163, 1174-77 (9th Cir. 2011); Ala.-Tombigbee Rivers Coal. v. Kempthorne, 477 F.3d 1250, 1274 (11th Cir. 2007); GDF Realty Invs. v. Norton, 326 F.3d 622, 640 (5th Cir. 2003); Rancho Viejo, LLC v. Norton, 323 F.3d 1062, 1080 (D.C. Cir. 2003); Gibbs v. Babbitt, 214 F.3d 483, 487 (4th Cir. 2000).

[13] The ESA has been amended several times, notably by P.L. 94-359 (1976); P.L. 95-212 (1977) P.L. 95-632 (1978); P.L. 96-159 (1979); P.L. 96-246 (1980); P.L. 97-79 (1981); P.L. 97-304 (1982); P.L. 98-327 (1984); P.L. 99-659 (1986); P.L. 100-478 (1988); P.L. 100-707 (1988); and P.L. 108-136 (2003).

[14] 16 U.S.C. §1542.

Figure 1. Distribution of Species Listed Under the Endangered Species Act (ESA), as of October 2020



Source: Congressional Research Service (CRS), from data provided by the U.S. Fish and Wildlife Service (FWS), October 2020.

Notes: Three foreign plant species and 692 foreign animal species are listed under the Endangered Species Act (ESA; P.L. 93-205, 87 Stat. 884, 16 U.S.C. §§1531-1544).

Congressional debate over the ESA has addressed a variety of issues. These issues include the law's purpose and structure as a whole, specific species and their status and regulation under the law (e.g., gray wolves)[15], and specific activities and how those activities affect listed species (e.g., the effect of water conveyance and pumping in the confluence of the Sacramento and San Joaquin Rivers' Delta on the threatened Delta smelt). Many Members of Congress have expressed interest in how the ESA is implemented, because states—as well as American Samoa, Guam, the Northern Mariana Islands,[16] Puerto Rico, the Virgin Islands, outlying Islands in the Pacific and

[15] For more information on the gray wolf, see CRS Report R46184, *The Gray Wolf Under the Endangered Species Act (ESA): A Case Study in Listing and Delisting Challenges*, by Erin H. Ward.

[16] 16 U.S.C. §1532(17) and 50 C.F.R. §81.1(i) both define *state* in the context of the ESA to be "any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands." However, the Trust Territory of the Pacific Islands has since terminated, and of the trustees, only the Commonwealth of the Northern Mariana Islands (CNMI) is still in political union with the United States. For more information, see 48 U.S.C. §1681 and 48 U.S.C. §§1801 et seq. The covenant between the United States and the CNMI, which established the political union (P.L. 94-241, as amended), provided for the applicability of the ESA to the CNMI.

the Caribbean, and Washington, DC—have species that are, or may be in the future, listed under the act.[17] Some Members have supported efforts to amend the ESA to increase the authorization of funding for the act, particularly to address the backlog of species the Services have determined warrant listing and to improve recovery efforts; to focus efforts under the act more on species recovery rather than primarily on protection; to elevate the role of states in implementing the act; and to provide increased regulatory certainty to landowners to incentivize conservation activities, among other things.[18] Some other Members may share the sentiment of reauthorizing the ESA but may have other priorities, such as increasing appropriations for implementing the ESA.[19]

Congress also may be interested in broader issues surrounding the ESA and oversight of the act's implementation, primarily because some stakeholders perceive the ESA and the conservation of listed species, at times, as an obstacle to economic development.[20] For example, some see the ESA as a primary driver of or exacerbating factor in resource controversies. Examples of resource controversies where the ESA may be a factor include the allocation of water supplies through the Central Valley Project in California and the conservation of threatened Delta smelt (*Hypomesus transpacificus*), listed under the ESA, and Northwest timber harvests, which balance logging, recreation, and sport fishing with ecosystem protection and the conservation of listed species, such as the northern spotted owl (*Strix occidentalis caurina*). In contrast, some stakeholders argue the ESA is not a primary factor in resource controversies and may be one of several factors contributing to such issues.[21]

This report discusses selected provisions of the ESA and selected federal regulations that implement the ESA. The discussion is not comprehensive. It includes references to other CRS products that provide in-depth discussion of some provisions.

Key Provisions of the ESA Addressed in This Report

This report discusses several major provisions of the ESA. It addresses the following sections of the act, generally in the order they appear in the *U.S. Code*.[22]

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[17] For an accounting of the number of species listed as threatened or endangered by state, see FWS, Environmental Conservation Online System (ECOS), "Listed Species Believed to or Known to Occur in Each State," at https://ecos.fws.gov/ecp/report/species-listings-by-state-totals?statusCategory=Listed. In addition to the federal ESA, many states have enacted endangered species acts (though the naming of these acts may differ) to list and conserve species under state law. When discussing the ESA or listed species in this report, only the federal ESA is being referenced.

[18] For example, see statement of Sen. John Barrasso, U.S. Congress, Senate Committee on Environment and Public Works, *Modernizing the Endangered Species Act: Legislative Hearing on S.4589, the Endangered Species Act Amendments of 2020*, 116th Cong., 2nd sess., September 23, 2020.

[19] For example, see statement of Sen. Thomas R. Carper, U.S. Congress, Senate Committee on Environment and Public Works, *Modernizing the Endangered Species Act: Legislative Hearing on S.4589, the Endangered Species Act Amendments of 2020*, 116th Cong., 2nd sess., September 23, 2020.

[20] For example, see A. J. Hoffman, M. H. Bazerman, and S. L. Yaffee, "Balancing Business Interests and Endangered Species Protection," *MIT Sloan Management Review*, vol. 39, no. 1 (Fall 1997), pp. 59-73.

[21] The timing and amount of water diverted for agricultural and municipal needs in the Central Valley of California is a complex issue that involves several factors, including listed species under the ESA. Scientists argue the issue is not derived solely from the ESA but also involves water quality factors, toxins, lawsuits, and water supply, among other factors. See Committee on Sustainable Water and Environmental Management in the California Bay-Delta, *Sustainable Water and Environmental Management in the California Bay-Delta*, National Research Council, 2012.

[22] Section 2 of the ESA (16 U.S.C. §1531), which addresses congressional findings and declaration of purposes and policy, is discussed briefly in the "Introduction" to this report. For more information on legal aspects of the ESA, namely the listing process, please see CRS Report R46184, *The Gray Wolf Under the Endangered Species Act (ESA): A*

- Section 3: Definitions
- Section 4: Listing
- Section 5: Land Acquisition
- Section 6: Cooperation with States
- Section 7: Interagency Cooperation and Consultation
- Section 9: Prohibitions
- Section 10: Exceptions
- Section 11: Penalties and Enforcement
- Section 8: Convention Implementation
- Section 15: Authorization of Appropriations

Additional relevant definitions and implementing regulations are discussed in the applicable sections.

ESA Section 3: Definitions

Section 3 of the ESA defines terms for purposes of the act.[23] Selected definitions from the ESA are discussed below. Other definitions under the ESA are discussed later in this report, where they are most relevant.

Conserve, Conserving, and Conservation

The terms *conserve*, *conserving,* and *conservation* mean to use and the use of all methods and actions to bring an endangered or threatened species to the point where the protections of and measures within the ESA are no longer necessary for the species. The definition states that these methods and measures include activities associated with scientific resources management (e.g., research, census, law enforcement, habitat acquisition and maintenance, propagation, transplanting, and, in limited circumstances, regulated taking).[24]

Endangered Species

The term *endangered species* refers to those species—as defined by the ESA—that are "in danger of extinction throughout all or a significant portion of its range." Although the definition of *species* includes animals (both vertebrates and invertebrates) and plants, the definition of *endangered species* precludes listing certain insect species determined by the Secretary of the Interior or the Secretary of Commerce, as appropriate, to be pests.[25]

Case Study in Listing and Delisting Challenges, by Erin H. Ward.

[23] ESA §3, 16 U.S.C. §1532.

[24] ESA §3(3), 16 U.S.C. §1532(3).

[25] ESA §3(6), 16 U.S.C. §1532(6). In this report, references to *the Secretary* are to the Secretary of the Interior or the Secretary of Commerce, as appropriate, unless otherwise stated. See "Secretary" for more information.

Fish or Wildlife

The term *fish or wildlife* refers to any member of the animal kingdom, including mammals, fish, birds, amphibians, reptiles, mollusks, crustacean, arthropod, or other invertebrates (e.g., insects such as the rusty patched bumble bee [*Bombus affinis*] and the American burying beetle [*Nicrophorus americanus*]). It "includes any part, product, egg, or offspring thereof, or the dead body or parts thereof."[26]

Secretary

In the ESA, the term the *Secretary* means the Secretary of the Interior or the Secretary of Commerce, as appropriate, except that it also could refer to the Secretary of Agriculture with respect to enforcement provisions in the act and CITES as they relate to terrestrial plants (all references to *Secretary* in this report are to the Secretary of the Interior or the Secretary of Commerce, as appropriate, unless otherwise stated).[27]

The Secretary of the Interior, through FWS, generally manages and administers the ESA with regard to terrestrial, freshwater, and catadromous species.[28] However, marine and anadromous species generally are the responsibility of the Secretary of Commerce, acting through NMFS. Management of marine mammals under the ESA is split between the Services,[29] and sea turtles are managed jointly by both Services.[30] The law assigns several key roles to the Secretary of the Interior and provides for the relationship of the Secretary of the Interior and the Secretary of Commerce and their respective powers. For example, the Secretary of the Interior is responsible for listing and delisting species. In the case of species administered by NMFS, the Secretary of Commerce conveys listing, reclassification, and delisting determinations to the Secretary of the Interior. Per the ESA, the Secretary of the Interior is instructed to list or uplist (i.e., reclassify a species from being listed as threatened to being listed as endangered) a species under the Secretary of Commerce's purview after being informed of such determination by the Secretary of Commerce. Downlisting (i.e., reclassifying a species from being listed as endangered to being listed as threatened) and delisting determinations for species managed by NMFS are implemented if the Secretary of the Interior concurs with the Secretary of Commerce's recommendation.[31]

Species

The ESA defines *species* to include any subspecies of fish, wildlife, or plant and any distinct population segment (DPS) of vertebrate fish or wildlife species that interbreeds when mature.[32] Accordingly, the Secretary can list a species (as used in taxonomy; i.e., *Genus species*), a subspecies (i.e., *Genus species subspecies*), or a DPS as a "species" under the act. The Secretary

[26] ESA §3(8), 16 U.S.C. §1532(8).

[27] ESA §3(15), 16 U.S.C. §1532(15).

[28] Fish are *catadromous* if they are born in salt water, migrate to fresh water to mature, and then migrate back to salt water to spawn. The American eel (*Anguilla rostrate*) can be catadromous, though the species also can remain in marine or brackish water during maturation.

[29] For more information, see FWS, International Affairs, "Marine Mammals," at https://www.fws.gov/international/animals/marine-mammals.html.

[30] 50 C.F.R. §17.11.

[31] ESA §(2)(a)(2)(C), 16 U.S.C. §1533(a)(2)(C).

[32] A *distinct population segment* (DPS) under the ESA refers to a population of a species that is a discrete and significant segment of the species as a whole.

cannot, however, list a group of organisms that does not qualify as one of these three categories. The term *DPS* is specific to the act rather than borrowed from biology or taxonomy. It has been interpreted by the Services in guidance and in rules promulgated under the ESA, as described in the text box on Distinct Population Segments.

Take

The ESA defines the term *take* to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[33] FWS defined the terms *harass* and *harm* for species under its management through regulation at 50 C.F.R. §17.3, and NMFS similarly defined *harm* through regulation at 50 C.F.R. §222.102. The Services both define harm to include significant habitat modification or degradation that kills or injures wildlife. A group of landholders and parties with interests in forestry challenged FWS's inclusion of modification or degradation of habitat as an overly expansive interpretation of the statute.[34] The parties argued that harm should be limited to using force directly against a species.[35] The Supreme Court held that it was reasonable for the Secretary to interpret harm to include habitat modification or degradation that results in actual injury or death of a listed species.[36]

Threatened Species

The term *threatened species* means any species, as defined by the ESA, that is likely to become an endangered species within the foreseeable future (see text box below on "Foreseeable Future in Regulations") throughout all or a significant portion of its range.[37]

Foreseeable Future in Regulations

The FWS and the NMFS defined the term *foreseeable future* in regulations for the first time in a final rule promulgated in August 2019 (84 *Federal Register* 45020). Before this rule, the Services had interpreted the *foreseeable future* on a case-by-case basis in the course of promulgating listing rules for particular species and for purposes of related litigation.

Under the final rule, the Services define *foreseeable future* as extending "only so far into the future as the Services can reasonably determine that both the future threats and the species' responses to those threats are likely." The Services explain that *likely* means more likely than not. Although the final rule provides a definition for the term *foreseeable future*, the Services stated they still would determine how this definition applies to a particular species on a case-by-case basis based on the best available data. The Services stated they intend to take into account life-history characteristics, threat-projection time frames, and environmental variability to determine how foreseeable future applies for a given species.

The Services and certain stakeholders have characterized the definition as generally codifying the Services' existing practices when determining the foreseeable future in listing decisions. Other stakeholders have expressed concerns that this definition of foreseeable future would limit consideration of long-term projected threats, including from climate change (e.g., habitat changes or sea-level rise) and could limit the use of population modeling to evaluate the fate of a species under future conditions. The Services will have discretion to evaluate these and other factors when considering which threats and responses are *likely* in implementing this definition.

Sources: 50 C.F.R. §424.11(d). Rebecca Barho and Brooke Wahlberg, "Expert Analysis ESA Rule Changes Less Drastic Than Critics Claim," *Law360* (August 29, 2019), at https://www.law360.com/transportation/articles/1192657/esa-rule-changes-less-drastic-than-critics-claim; Jake Li, "Last Week's Endangered Species Regulations:

[33] ESA §3(19), 16 U.S.C. §1532(19).

[34] Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687, 692-93 (1995). Hereinafter referred to as "Sweet Home," 1995.

[35] "Sweet Home," 1995 at 697-98.

[36] "Sweet Home," 1995 at 697-704.

[37] ESA §3(20), 16 U.S.C. §1532(20).

What Really Happened?" Environmental Policy and Innovation Center, August 20, 2019, at http://policyinnovation.org/the-real-story-on-the-new-endangered-species-act-rules/.

Note: For more information on listing species under the Endangered Species Act (ESA; P.L. 93-205, 87 Stat. 884, 16 U.S.C. §§1531-1544) due to climate change, see CRS Report R45926, *The Endangered Species Act and Climate Change: Selected Legal Issues*, by Linda Tsang.

ESA Section 4: Listing, Critical Habitat, and Recovery

The Services may list a species as endangered or threatened under the ESA pursuant to Section 4 of the act and the accompanying regulations.[38] Under the ESA, they may also reclassify species through uplisting or downlisting, or delist them.

Criteria and Factors for Listing

The Services may list a species as endangered or threatened if one or more ESA factors would render the species in danger of extinction (endangered) or likely to become so in the foreseeable future (threatened) in all or a significant portion of its range.[39] The ESA factors are

1. The present or threatened destruction, modification, or curtailment of the species' habitat or range
2. The species' overuse for commercial, recreational, scientific, or educational purposes
3. Disease or predation affecting the species
4. Inadequate existing regulatory mechanisms protecting the species
5. Other natural or man-made factors affecting the species' continued existence[40]

The ESA addresses both anthropogenic and natural factors that could affect a species' viability. For example, a dwindling species subject to natural stressors could be listed under the ESA pursuant to the third factor. However, a species' small population alone may not necessarily warrant its listing. Courts have held that the Services may need to weigh other considerations, such as the reasons for the small population size, if and the rate at which population size is changing, and the potential implications of small population size on the species' risk of extinction.[41] If the Secretary determines a species is threatened or endangered based on any ESA factor, the Secretary is required to list the species.[42]

The ESA provides for listing species, subspecies, or, for vertebrate fish and wildlife, distinct population segments (DPS). Typically, a DPS is described in geographic terms (e.g., the Northern Rocky Mountain DPS for gray wolves, *Canis lupis*). Depending on how a species is listed, ESA protections for fish and wildlife species may extend to (1) the species as a whole, including all subspecies, if the taxonomic species is listed; (2) the subspecies, if the subspecies is listed; or (3)

[38] ESA §4, 16 U.S.C. §1533.

[39] ESA §3(6), (20), 16 U.S.C. §1532(6), (20).

[40] ESA §4(a)(1), 16 U.S.C. §1533(a)(1).

[41] See, for example, Ctr. for Biological Diversity v. Zinke, 900 F.3d 1053, 1073-74 (9th Cir. 2018); Sw. Ctr. for Biological Diversity v. Norton, Civ. Action No. 98-934, 2002 WL 1733618, at *13 (D D.C. July 29, 2002).

[42] ESA §4(a)(1), 16 U.S.C. §1533(a)(1).

an identified population of the taxonomic species or subspecies when a DPS is listed. Protections also may differ depending on whether a species is listed as endangered or threatened (see "Section 4(d) Rule"). More limited protections are available for plants (see "Section 9: Prohibitions").[43] The ESA does not protect organisms considered neither animal nor plant (e.g., Eubacteria, archaea, and viruses).

Distinct Population Segments

Under the ESA, a *distinct population segment* (DPS) refers to a vertebrate fish or wildlife population that is a *discrete* and *significant* segment of a species as a whole. (16 U.S.C. §1532(16)). For purposes of this discussion, *species* refers to a taxonomic species rather than a species as defined by the ESA. Discreteness is based on the population's separation from other populations of the species and may be "the consequence of physical, physiological, ecological, or behavioral factors." The Services evaluate significance based on biological and ecological factors. To be designated significant, the Services consider factors that include, but are not limited to, the following:

- The DPS exists in an ecological setting that is unusual or unique for the species.
- Evidence exists that loss of the DPS would lead to a gap in the species' range.
- Evidence exists that the DPS represents the species' only surviving natural population, regardless of whether the species is abundant outside its historic range as an introduced population.
- The DPS is genetically different from the species' other populations.

By listing, reclassifying, or delisting a DPS, the Services can identify and either heighten or lower protections for a distinct population of a species based on the best available science. For example, when a species is listed as threatened, a portion of the species identified as a DPS may be listed as endangered while the rest of the taxon remains threatened. In this way, the Services can use a DPS to address a species' decline in a distinct region when listing the entire species is unwarranted. In their policy, the Services have noted that identifying a DPS might enable less costly protection and recovery measures than adopting measures across the species' full geographic range. Alternatively, a DPS may be listed as threatened when the remainder of the species is listed as endangered, or the Services may list a DPS as threatened or endangered and not list the remainder of the species.

Congress first included DPS as part of the ESA species definition in 1978. Prior to 1978, the ESA included "any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature" as part of the ESA species definition. In 1996, the Services promulgated a policy describing how they would evaluate whether a population qualified as a DPS.

NMFS developed the concept of *evolutionarily significant units* (ESUs) as a way to interpret the "distinct population segment" language in Section 3(16) of the ESA for Pacific salmon. ESUs generally include multiple (often as many as 20 to 30) populations or stocks and are intended to identify groups of salmon populations that can be listed as threatened or endangered under the ESA. NMFS's policy states that to qualify as an ESU, a stock must be reproductively isolated from other population units and must represent a genetically important or significant component of the species. The ESU policy does not impose specific scientific criteria and applies only to Pacific salmon population segments. Whether hatchery fish may be assigned to an ESU, thereby augmenting an ESU's population count, has been particularly controversial. For example, see CRS Report R40169, *Endangered Species Act Litigation Regarding Columbia Basin Salmon and Steelhead*, by Stephen P. Mulligan and Harold F. Upton.

Sources: FWS and NMFS, "Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act," 61 *Federal Register* 4722-4725, February 7, 1996; NMFS, "Policy on Applying the Definition of Species Under the Endangered Species Act to Pacific Salmon," 56 *Federal Register* 58612, November 20, 1991; D. S. Pennock and W. W. Dimmick, "Critique of the Evolutionarily Significant Unit as a Definition for Distinct Population Segments Under the U.S. Endangered Species Act," *Conservation Biology*, v. 11 (1997), pp. 611-619.

The Services' interpretation of "all or a significant portion of its range" has changed over time, generally in response to adverse court decisions overturning listing rules.[44] In 2014, the Services

[43] ESA §9(a)(2), 16 U.S.C. §1538(a)(2).

[44] *See*, for example, Defs. of Wildlife v. Norton, 258 F.3d 1136, 1141-42 (9th Cir. 2001); Defs. of Wildlife v. Salazar, 729 F. Supp. 2d 1207, 1217-28 (D. Mont. 2010).

issued a joint policy interpreting "all or a significant portion of its range."[45] Under the policy, the Services interpret the phrase as providing two independent bases for listing a species: (1) when the species is endangered or threatened in all of its range or (2) when the species is endangered or threatened across a significant portion of its range.[46] The Services interpret the *range* of a species to mean the area that the species currently occupies, not its historical range;[47] at least one court has upheld this interpretation as reasonable.[48] The Services have, however, accounted for lost historical range when evaluating the factors threatening a species.[49]

The 2014 policy also explained how the Services would determine whether a portion of a species' range was *significant*, but district courts have since overturned that definition.[50] Under the policy, the Services considered a portion of a species' range to be *significant* if "the species is not currently endangered or threatened throughout its range, but the portion's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range."[51] District courts invalidated this interpretation, because they concluded it rendered the phrase "a significant portion of its range" superfluous.[52] The courts reasoned that if a species would be endangered or threatened in the areas outside the "significant portion" of the range and the species is endangered or threatened within the significant portion of the range, then the species is necessarily endangered or threatened throughout its entire range.[53] The Services therefore could never list a species as endangered or threatened in a significant portion of its range under their interpretation—the species would always need to be endangered or threatened in all of its range to be listed. The courts concluded that the Services used this interpretation to give the phrase "a significant portion of its range" "as little substantive effect as possible," which was "arguably at odds with the conservation purposes of the ESA," and that the Services impermissibly limited the phrase "to situations in which it is unnecessary."[54]

In a 2019 proposed rule to delist the gray wolf, FWS acknowledged that the Services' interpretation of the term *significant* in the policy no longer applies.[55] FWS proposed to identify any portion of a species' range "that could be significant under any reasonable definition of 'significant' that relates to the conservation of the [species proposed for listing]."[56] The Services

[45] FWS and NOAA, "Final Policy on Interpretation of the Phrase 'Significant Portion of Its Range' in the Endangered Species Act's Definitions of 'Endangered Species' and 'Threatened Species'"; Final Rule, 79 *Federal Register* 37578-37612, July 1, 2014.

[46] 79 *Federal Register* 37580; *see also* 77 *Federal Register* 55530 and 55601, September 10, 2012.

[47] 79 *Federal Register* 37583-37585.

[48] See, for example, Humane Soc'y of U.S. v. Zinke, 865 F.3d 85, 603-04 (D.C. Cir. 2017).

[49] See, for example, 84 *Federal Register* 9648 and 9658, March 15, 2019.

[50] Desert Survivors v. U.S. Dep't of the Interior, No. 16-cv-01165-JCS, at *7 (N.D. Cal. Aug. 24, 2018) (issuing nationwide injunction vacating and setting aside definition of "significant" under Services policy). See also Desert Survivors v. U.S. Dep't of the Interior, 321 F. Supp. 3d 1011, 1073-74 (N.D. Cal. 2018) (order granting summary judgment to plaintiffs); Ctr. for Biological Diversity v. Jewell, 248 F. Supp. 3d 946, 956 (D. Ariz. 2017).

[51] 79 *Federal Register* at 37579.

[52] *Ctr. for Biological Diversity*, 248 F. Supp. 3d at 956; *Desert Survivors*, 321 F. Supp. 3d at 1073-74.

[53] *Ctr. for Biological Diversity*, 248 F. Supp. 3d at 956; *see also Desert Survivors*, 321 F. Supp. 3d at 1073-74 (order granting summary judgment to plaintiffs).

[54] *Ctr. for Biological Diversity*, 248 F. Supp. 3d at 958.

[55] 84 *Federal Register* 9648 and 9684, March 15, 2019.

[56] 84 *Federal Register* 9684, March 15, 2019.

have not yet revised their policy to interpret the term *significant* to account for the court's decision.

Using the Best Available Science

Pursuant to statutory requirements, the Secretary must decide whether to list species based only on the best available scientific and commercial data, using information to which the agency has access and information obtained from the public through the agency rulemaking process.[57] The statute does not define the phrase "best available scientific and commercial data," and the Services have not interpreted this phrase through regulation. Courts, however, have reviewed the use of science and data in ESA decisions. One court held that the statutory phrase does not require, and hence a court cannot order, the Services to conduct additional studies to obtain missing data and that the agency must rely on inconclusive or uncertain information if that is the best data *available* at the time of a listing decision.[58] However, the agency cannot rely on data that its own scientists agree is inaccurate.[59] The relevant agency cannot ignore available biological information or commercial data, especially if that information is the most current or is scientifically superior to other information.[60]

A court also said that "the 'best scientific and commercial data available' is not a standard of absolute certainty, and [is] a fact that reflects Congress' intent that the FWS take conservation measures before a species is 'conclusively' headed for extinction."[61] The fact that the studies on which the Services rely are imperfect—so long as they are not inaccurate—does not undermine those authorities as the best scientific data available; "the Service must utilize the best scientific ... data *available*, not the best scientific data *possible.*"[62]

The ESA expressly requires the Services to make listing determinations "*solely* on the basis of the best scientific and commercial data available."[63] Congress added the word *solely* in the 1982 amendments to the ESA to clarify that the determination of endangered or threatened status was intended to be made without reference to its potential economic impacts.[64] In discussing the addition of the word *solely*, a committee report stated the word is "intended to remove from the process of the listing or delisting of species any factor not related to the biological status of the species."[65] The committee further stated that it "strongly believes that economic considerations

[57] ESA §4(b)(1)(A), 16 U.S.C. §1534(b)(1)(A). Formally, this determination is made by the Secretary of the Interior, but for species under NMFS's jurisdiction, the determination to list, delist, or change the status of a species cannot be made without "prior favorable determination ... by the Secretary of Commerce." 16 U.S.C. §1533(a)(2)(C).

[58] Sw. Ctr. for Biological Diversity v. Babbitt, 215 F.3d 58 (D.C. Cir. 2000); *see also* Las Vegas v. Lujan, 891 F.2d 927, 933 (D.C. Cir. 1989); Defs. of Wildlife v. Jewell, 176 F. Supp. 3d 975, 999-1000 (D. Mont. 2016).

[59] Ctr. for Biological Diversity v. Lohn, 296 F. Supp. 2d 1223 n.13 (W.D. Wash. 2003), *vacated on other grounds by* Ctr. for Biological Diversity v. Lohn, 511 F.3d 960 (9th Cir. 2007).

[60] Am. Wildlands v. Kempthorne, 530 F.3d 991, 998 (D.C. Cir. 2008); Sw. Ctr. for Biological Diversity v. Babbitt, 926 F. Supp. 920, 927 (D. Ariz. 1996); *Las Vegas*, 891 F.2d at 933.

[61] Defs. of Wildlife v. Babbitt, 958 F. Supp. 670, 679-80 (D.D.C. 1997); *see also Defs. of Wildlife*, 176 F. Supp. 3d at 999-1000.

[62] Bldg. Indus. Ass'n of Superior Cal. v. Norton, 247 F.3d 1241, 1246-67 (D.C. Cir. 2001), *cert. denied* 534 U.S. 1108; *see also* San Luis & Delta-Mendota Water Auth. v. Jewell, 747 F.3d 581, 602 (9th Cir. 2014); *Defs. of Wildlife*, 176 F. Supp. 3d at 999-1000 (emphasis added).

[63] ESA §4(b)(1)(A), 16 U.S.C. §1533(b)(1)(A) (emphasis added).

[64] P.L. 97-304, 96 Stat. 1411.

[65] H.Rept. 97-567, pp. 19-20. The conference report (H.Rept. 97-835, p. 19) also confirms that it was the intent of both chambers that economic factors would not play a role in the listing of species for protection.

have no relevance to determinations regarding the [listing] status of species," and that applying economic criteria to the listing process is prohibited by the inclusion of the word *solely* in the legislation.[66]

As part of a listing decision, the Secretary may not consider the economic effects that listing may have, such as delaying or modifying building projects in the area where the species occurs.[67] In a 2019 final rule, the Services amended the regulations implementing listing decisions under the ESA to no longer prohibit referencing the estimated economic costs of listing a species in the listing decision. While acknowledging that economic costs cannot be a factor in whether to list a species, the rule states that these costs can be reported in the listing decision to provide transparency to stakeholders and be used for planning purposes.[68]

In summary, under the ESA, whether a species is endangered or threatened is a scientific decision that the Services make based on the best available scientific and commercial data. Once a species is listed as threatened or endangered, the Services must consider economics for critical habitat designations and may consider economic factors when suggesting reasonable and prudent alternatives.[69]

Process for Listing a Species

Listing a species, as well as delisting or reclassifying (i.e., uplisting or downlisting), may be initiated by the Services or through a petition process. The listing process is outlined by statute and further specified in implementing regulations.[70] This section discusses the process for listing a species under the ESA (see **Figure 2**).

[66] H.Rept. 97-567, pp. 19-20.

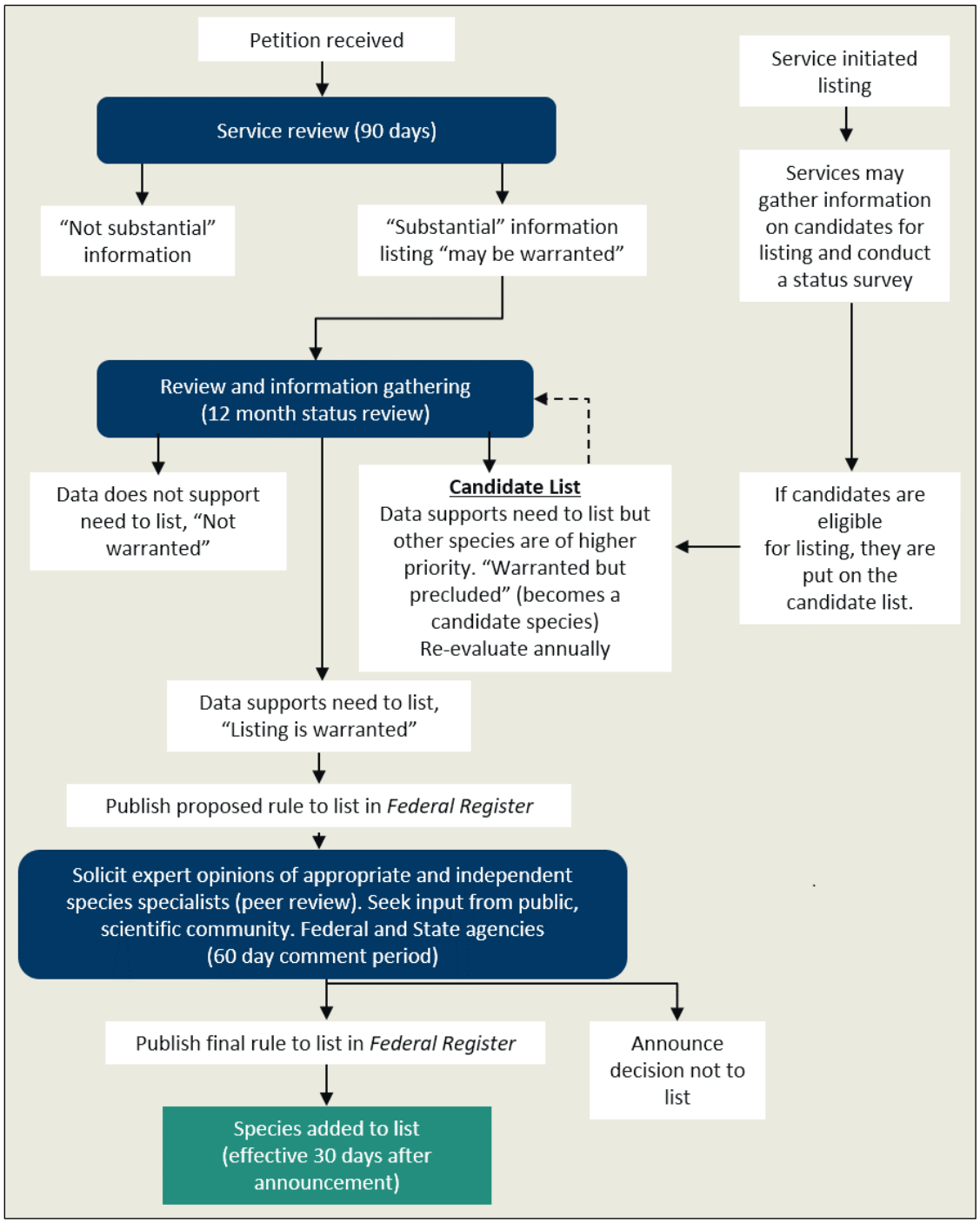
[67] However, economic considerations, among other factors, are to be incorporated into critical habitat determinations. ESA §4(b)(2), 16 U.S.C. §1533(b)(2). In addition to economic considerations, the ESA requires consideration of "the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat."

[68] FWS and NOAA, "Endangered and Threatened Wildlife and Plants: Regulations for Listing Species and Designating Critical Habitat," 84 *Federal Register* 45020-45053, August 27, 2019.

[69] *Reasonable and prudent alternatives* refer to alternative actions that can be implemented consistent with the intended purpose of the action and authority and jurisdiction of the action agency; is economically and technologically feasible; and that the Services believe will avoid the likelihood of jeopardizing the continued existence of listed species or result in the destruction or adverse modification of its critical habitat. 50 C.F.R. §402.02. See section on "ESA Section 7: Interagency Consultation" for more information.

[70] ESA §4, 16 U.S.C. §1533, and 50 C.F.R. §424.

Figure 2. Listing Process Under the ESA



Source: Adapted from FWS, Endangered Species Program, "Listing a Species as a Threatened or Endangered Species, August 2016, at https://www.fws.gov/endangered/esa-library/pdf/listing.pdf.

Service-Initiated Listings

As delegated by the Secretaries, the Services, on their own initiative, may propose to list a species under the ESA. When considering listing a species, the Services conduct status surveys to assess the species' viability. The process for Service-initiated reclassification is discussed in "Delisting, Uplisting, and Downlisting," below.

Petitions to List Species

Any person may petition the Services to list a species under the ESA.[71] *Person* is defined under the ESA as

> an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States.[72]

Any person also may petition for a species to be reclassified or delisted.

The ESA requires that, within 90 days of receiving a petition to list a species, "to the maximum extent practicable," the Secretary make an initial determination as to "whether the petition presents substantial scientific or commercial information" to indicate the requested action "may be warranted."[73] If the relevant Service determines the petition may be warranted, the agency conducts a status review of the species pursuant to the criteria for listing a species. The Service has 12 months after receiving the petition to conduct the status review and make a final determination on whether the petitioned action is warranted.

Lawsuits for Failing to Meet Listing Deadlines

Petitioners have sued the Services for failing to meet the 90-day and 12-month deadlines, particularly as the number of petitions has increased. (See section on "Citizen Suits," below.) Courts have rejected the argument that the 90-day deadline establishes a "mandatory, nondiscretionary duty" for the Services, determining instead that the phrase "to the maximum extent practicable" allows for "at least a 'limited exception'" to that time limit. How much discretion this language affords has been a point of dispute between plaintiffs and the Services, with courts generally deferring to the agency's explanation for its allocation of resources—provided it is reasonable. Courts have held, however, that the 12-month statutory deadline is mandatory.

Although the 12-month deadline is statutorily required, the Services frequently have missed this deadline. In February 2020, a stakeholder filed a lawsuit alleging the Services had missed the 12-month deadline for petitions to list 231 species.

Before the court reaches a final determination on addressing deadlines for listing, the Services and parties may use voluntary settlements to agree to alternative time frames for addressing petitions or listing species. For example, several of these lawsuits were settled in 2011, setting deadlines for listing determinations on hundreds of species.

Sources: Biodiversity Legal Found. v. Babbitt, 146 F.3d 1249, 1253-57 (10th Cir. 1998); *see also* Inst. for Wildlife Prot. v. Norton, 303 F. Supp. 2d 1175, 1177-78 (W.D. Wash. 2003); Ctr. for Biological Diversity v. Norton, 208 F. Supp. 2d 1044, 1049 (N.D. Cal. 2002); Ctr. for Biological Diversity v. Norton, 254 F.3d 833, 837 (9th Cir. 2001); Friends of Animals v. Salazar, 670 F. Supp. 2d 7, 12-13 (D.D.C. 2009); Biodiversity Legal Found. v. Norton, 180 F. Supp. 2d 7, 9 (D.D.C. 2001); FWS, "Improving ESA Implementation: Listing Workplan Overview," at https://www.fws.gov/endangered/improving_ESA/listing_workplan.html.

[71] ESA §4(b)(3), 16 U.S.C. §1533(b)(3).

[72] ESA §3(13), 16 U.S.C. §1532(13).

[73] ESA §4(b)(3)(A), 416 U.S.C. §1533(b)(3)(A).

In May 2019, FWS issued a *National Listing Workplan* to prioritize its listing and critical habitat designations over a five-year period.[74] Through the workplan, which FWS intended to update regularly, FWS aims to provide stakeholders with greater clarity and predictability about the timing of listing determinations in order to encourage proactive conservation actions that may avoid the need for federal protection. The workplan includes nearly 250 species.[75]

The status review for listing a species results in one of three findings: (1) the petitioned action is *not warranted*; (2) the petitioned action is *warranted* and a listing proposal will be promptly published; or (3) the petitioned action is *warranted but precluded* by higher-priority species for listing.[76] If the Secretary concludes the action is warranted, the Service prepares a proposed rule to list the species. The Services also may consider petitions for multiple species that share a common ecosystem.

If a species is proposed for listing under the ESA, the Secretary must do the following:

- Publish the proposed regulation in the *Federal Register* and solicit public comments over a 60-day comment period
- Seek independent peer review and scientific analysis from species specialists
- Give notice to state agencies and counties where the species is thought to occur and invite those governments to submit comments on the proposal
- Give notice, if practical, to foreign countries where the species occurs or whose citizens harvest the species on the high seas
- Notify relevant professional societies
- Publish a summary of the regulation locally where the species is found
- Upon request, hold a public hearing[77]

Alternatively, a warranted but precluded finding means the Services will not propose to list the species at that time and the species instead becomes a *candidate species* (see "Candidate Species and Their Conservation" for more information).[78] The ESA requires the Services to reevaluate candidate species annually until a listing rule is proposed or a not warranted finding is made. (See **Figure 2**.)

Rulemaking

The Services initiate an Administrative Procedure Act (APA) rulemaking to list a species.[79] To issue a new rule (e.g., a listing rule) under the APA, the Services must publish notice of the proposed rule in the *Federal Register*, provide a period for the public to comment on the

[74] FWS, *National Listing Workplan*, May 2019, at https://www.fws.gov/endangered/esa-library/pdf/5-Year%20Listing%20Workplan%20May%20Version.pdf.

[75] FWS, *National Listing Workplan*, May 2019, at https://www.fws.gov/endangered/esa-library/pdf/5-Year%20Listing%20Workplan%20May%20Version.pdf.

[76] ESA §4(b)(3), 16 U.S.C. §1533(b)(3).

[77] ESA §4(b)(5), 16 U.S.C. §1533(b)(5).

[78] See "Candidate Species and Their Conservation" section in this report.

[79] 5 U.S.C. §§551 et seq.

proposed rule and submit data, and publish the final rule with an explanation of its basis and purpose.[80] The Services also may allow for public hearings on the proposed rule.[81]

A species is listed, reclassified, or delisted through a final rule published in the *Federal Register*. In accordance with the Services' regulations, the rule must contain a summary of comments and recommendations received in response to the proposed rule, summaries of the data on which the rule is based, the relationship of the data to the final rule, and a summary of the factors affecting the species, among other things.[82] If a state agency submits comments disagreeing with a proposed rule and the Secretary finalizes the rule in conflict with state comments, then the Secretary is to provide the state agency with a justification for adopting a rule not consistent with state comments.[83]

Candidate Species and Their Conservation

A *candidate species* is "any species being considered by the Secretary for listing as an endangered or threatened species, but not yet the subject of a proposed rule."[84] FWS elaborates on this definition by stating that candidate species are those for which the relevant Service has sufficient information to propose the species as threatened or endangered, but developing a proposal for listing is precluded by other, higher-priority listing activities, often referred to as *warranted but precluded*.[85] As noted, candidate species may result from either a Service-initiated review of a species or the petition process. Candidate species have no statutory protection. The status of candidate species must be reviewed annually until one of the Services issues a proposed rule for listing the species or the Services determine that listing is no longer warranted.

While a species is a candidate for listing, federal agencies and other entities may undertake strategic activities to improve its status to avoid a listing proposal at some future date. For example, federal agencies may develop a *candidate conservation agreement* with FWS or NMFS to take specified actions to conserve a species.[86] Nonfederal landowners may pursue a *candidate conservation agreement with assurances* (CCAA).[87] Under a CCAA, a landowner may agree to carry out certain actions intended to conserve the species, with the assurance that, as long as the agreed actions are carried out, the landowner will not be required to change those activities if any candidate species covered by the CCAA is subsequently listed as threatened or endangered. According to FWS, early conservation of candidate species generally increases management options and flexibility for landowners, lowers the cost of recovery for the species, and reduces the likelihood that more restrictive land use measures will be necessary in the future (i.e., if the species continues to decline and is listed).[88]

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[80] 5 U.S.C. §553.

[81] 5 U.S.C. §553.

[82] 50 C.F.R. §424.18.

[83] 50 C.F.R. §424.18(c).

[84] 50 C.F.R. §424.02(b).

[85] FWS, "Candidate Species: Section 4 of the Endangered Species Act," October 2017. Hereinafter cited as FWS, "Candidate Species."

[86] For a library of policies concerning candidate conservation, see FWS, "Endangered Species Act Document Library," at https://www.fws.gov/endangered/esa-library/index.html#cc_policy.

[87] See CRS Report R44592, *Sage-Grouse Conservation: Background and Issues*, by M. Lynne Corn, Katie Hoover, and Carol Hardy Vincent, for an example of the use of candidate conservation agreements and candidate conservation agreements with assurances in the conservation of a species.

[88] FWS, "Candidate Species."

The Secretary must monitor the status of a candidate species and, if any emergency poses a significant risk to the well-being of the species, promptly list it.[89] Some steps in the normal listing process may be skipped for these emergency listings.

Section 4(d) Rules

Section 4(d) allows the Secretary to extend certain protections that apply to endangered species to threatened species. The act protects endangered species by prohibiting certain acts that may affect them (see "ESA Section 9: Prohibitions"). For example, no person may import, export, sell, or take (e.g., harm, hunt, harass, kill) an endangered species. However, those protections are not automatically extended to threatened species in statute. Instead, Section 4(d) of the ESA authorizes the Secretary to promulgate special regulations "as he deems necessary and advisable" to conserve threatened species.[90] Rules issued pursuant to this authority are known as *4(d) rules* or, alternatively, as *special rules* or *species-specific rules*. In a 4(d) rule, the Secretary may prohibit nearly any act on a threatened species prohibited by ESA Section 9(a)(1) or (a)(2) for an endangered species. Accordingly, protections for a particular threatened species can be tailored to promote the conservation of the species and target specific threats to the species. Under the ESA, the Services are not statutorily required to promulgate a 4(d) rule for every threatened species.

Historically, the two Services have taken different approaches to extending prohibitions to threatened species. In 1975, FWS promulgated a regulation known as the blanket 4(d) rule, which extended nearly all of the prohibitions provided for wildlife species listed as endangered to wildlife species listed as threatened, unless the Service promulgated a species-specific 4(d) rule; a similar rule for plants was issued in 1977.[91] These blanket 4(d) rules historically provided de facto protections to FWS-listed threatened species, unless a species-specific 4(d) rule superseded the blanket rule for that species. NMFS never established a blanket 4(d) rule and has extended prohibitions to threatened species on a case-by-case basis through species-specific 4(d) rules. Without the blanket 4(d) rule, there are no de facto protections for NMFS-listed threatened species without species-specific 4(d) rules.

In August 2019, FWS modified its regulations to no longer employ the blanket 4(d) rule for species listed as threatened after the revised regulation became effective on September 26, 2019.[92] Beginning September 27, 2019, species newly listed or reclassified as threatened were no longer protected under the blanket 4(d) rule and did not have any de facto protections in the absence of a species-specific 4(d) rule. Instead, these species had protective regulations only if FWS promulgated a species-specific 4(d) rule, similar to how NMFS regulates threatened species. This provision is not retroactive, so the blanket 4(d) rule continues to apply to species listed or

[89] ESA §4(b)(3)(C)(iii), 16 U.S.C. §1533(b)(3)(C)(iii). The Services determine what constitutes an emergency on a case-by-case basis. For example, FWS issued an emergency rule to list the Columbia Basin distinct population segment of the pygmy rabbit (*Brachylagus idahoensis*) as endangered in 2001, stating as reasons for the emergency listing that "the immediate concerns for the Columbia Basin pygmy rabbit are associated with the population's extremely small size, history of fragmentation and extirpation, and the recent, dramatic decline in its distribution and abundance." 66 *Federal Register* 59734, 59745, November 30, 2001.

[90] ESA §4(d), 16 U.S.C. §1533(d).

[91] The blanket 4(d) protections for wildlife were implemented pursuant to FWS, 40 *Federal Register* 44425, September 26, 1975, as amended at FWS, 43 *Federal Register*, 18181, April 28, 1978; FWS, 44 *Federal Register* 31580, May 31, 1979; FWS, 70 *Federal Register* 10503, March 4, 2005. The blanket 4(d) protections for plants were implemented pursuant to FWS, 42 *Federal Register* 32380, June 24, 1977, as amended at FWS, 50 *Federal Register* 39691, September 30, 1985.

[92] 84 *Federal Register* 44753.

reclassified as threatened on or before September 26, 2019, that were not the subject of a species-specific rule. However, FWS may supersede existing blanket 4(d) rule protections by promulgating a species-specific 4(d) rule for a species listed before the regulation became effective. FWS's rationale for changing its approach is that eliminating the blanket 4(d) rule more closely aligns FWS policy with that of NMFS and that species-specific 4(d) rules incentivize conservation, reduce the need for permitting for certain actions, and streamline Section 7 consultation under ESA.[93]

FWS states that while it expects to promulgate a 4(d) rule concurrently with listing or reclassifying a species as threatened, it did not find it necessary to require the simultaneous promulgation of such a rule.[94] Some have raised concerns about the 2019 regulations by arguing that if 4(d) rules are not issued for threatened species in a timely manner or at all, the species could be negatively affected. Others contend the effect of this rule change on species depends on how often FWS issues 4(d) rules and how soon after listing these rules are issued.[95] Under the ESA, there is no timeline or deadline for issuing a 4(d) rule.

Experimental Populations

In 1982, Congress added *experimental populations* to the ESA to allow the Services to release or introduce individuals of a species listed as threatened or endangered outside of the species' current range.[96] An experimental population consists of the population introduced to an area, as well as any offspring arising solely from that population. As of October 2020, 147 experimental populations had been designated and released by the Services under the ESA since 1982.

To qualify as an experimental population, a population must meet two criteria:

1. The Services must have authorized the release of the population.
2. The population must be wholly separate geographically from other populations of that species.[97]

Congress required the geographic separation so the introduced experimental population could be distinguished from the natural population of the species and the natural population could be protected from the introduced population.[98] FWS has interpreted the requirement that the populations be "wholly geographically separate" to apply to populations of the species rather than to individuals. For example, FWS used this interpretation when it authorized introducing experimental populations of the gray wolf into Montana, Wyoming, and Idaho; this interpretation allowed the agency to reintroduce the gray wolf into parts of these three states even as FWS

[93] 84 *Federal Register* 44754-44755.

[94] 84 *Federal Register* 44754-44755.

[95] Environmental Policy Innovation Center, *Guide to the Revised Endangered Species Regulations*, at 2019, at http://policyinnovation.org/wp-content/uploads/2020/01/ESA-final-rules-analysis.pdf.

[96] P.L. 97-304 §6(6), 96 Stat. 1424; ESA §10(j), 16 U.S.C. §1539(j). Experimental population designations are sometimes referred to as *Section 10(j) rules*.

[97] Plants are eligible for reintroduction as experimental populations, but to date no plants have been designated as such.

[98] "Joint Explanatory Statement of the Committee of Conference," Conference Report on H.R. 6133, *Congressional Record*, daily edition, September 17, 1982, pp. 24157-24158.

acknowledged that lone wolves might disperse to the area from a population in northern Montana.[99] When this rule was challenged, a court upheld FWS's interpretation.[100]

The Secretary determines whether each experimental population is essential or nonessential to the survival of the species; this determination in turn affects the way the experimental population is treated. An essential experimental population is one whose loss likely would result in appreciably reducing the likelihood of the survival of the species in the wild. All other populations are nonessential experimental populations. As of this report's publication, no experimental populations have been designated as essential.

Because the ESA's provisions apply somewhat differently to experimental populations than to listed populations, the authority to release experimental populations gave the Services an opportunity to release a population of a listed species with potentially fewer restrictions on federal and private actions in the area.[101] For example, regardless of whether the species is listed as threatened or endangered, all essential experimental populations are regulated as threatened species. As with threatened species, acts with respect to an essential experimental population are prohibited only to the extent the Secretary orders in a species-specific 4(d) rule.[102]

For the purpose of requirements under Section 7 of the ESA (see "Section 7 Consultation Process and Biological Opinions," below), *nonessential* experimental populations are treated in the same manner as *candidate species*, except when the experimental population occurs on lands of the National Wildlife Refuge System or the National Park System.[103] As such, federal agencies must confer with the Secretary regarding any actions that might jeopardize the continued existence of the species, but the Services need not engage in full Section 7 consultation or refrain from irreversibly or irretrievably committing agency resources to the action unless the action takes place on national wildlife refuges or in national parks. In addition, the Services cannot designate critical habitat for nonessential experimental populations.

Critical Habitat

One of the ESA's purposes is to conserve the "ecosystems upon which endangered species and threatened species depend," which includes their habitat.[104] The loss or alteration of habitat is a factor for listing species.[105] The ESA directs the Services to designate critical habitat for listed species and requires that federal agencies not destroy or adversely modify that habitat through their actions.[106]

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[99] 59 *Federal Register* 60253-60254; 59 *Federal Register* 60267-60269.

[100] Wyo. Farm Bureau Fed'n v. Babbitt, 199 F.3d 1224, 1234, 1237 (10th Cir. 2000).

[101] Though the Services had preexisting authority to release listed species prior to the inclusion of the authority related to experimental populations, a court, reviewing the statute's legislative history, concluded that Congress added this section to address the Services' frustration with political opposition to such reintroduction efforts borne from "fears experimental populations would halt development projects." *Wyo. Farm Bureau Fed'n*, 199 F.3d at 1231-32 (citing H.R. Rep. No. 97-567, at 8 (1982)).

[102] The blanket 4(d) rule did not apply to experimental populations. See 83 *Federal Register* 35176.

[103] ESA §10(j)(C)(i), 16 U.S.C. §1539(j)(C)(i).

[104] ESA §2(c), 16 U.S.C. §1531(c).

[105] D. M. Evans et al., "Species Recovery in the United States: Increasing the Effectiveness of the Endangered Species Act," *Issues in Ecology*, vol. 20 (Winter 2016). Hereinafter cited as Evans, "Species Recovery."

[106] ESA §4(a)(3)(A), 16 U.S.C. §1533(a)(3)(A) and ESA §7(a)(2), 16 U.S.C. §1536(a)(2).

The ESA defines *critical habitat* to include geographic areas occupied or not occupied by the species at the time of listing.[107] Areas *occupied* by the species at the time of listing must have physical and biological features that (1) are essential to the conservation of a species and (2) may require certain management considerations or protection.[108] Areas *not occupied* by the species at the time of listing may be designated as critical habitat if the Secretary determines that such additional areas are "essential for the conservation of the species."[109] Of particular relevance to unoccupied areas, the Supreme Court concluded in *Weyerhaeuser Co. v. U.S. Fish and Wildlife Service* that an area must be *habitat* for a species in order to be designated as *critical habitat*.[110] In response to the Court's decision, the Services issued a final rule in December 2020 defining *habitat* in the ESA implementing regulations.[111] Furthermore, pursuant to regulations promulgated in an August 2019 final rule, the Services may designate unoccupied areas as critical habitat only if they determine that occupied areas alone are inadequate to conserve the species and that the unoccupied areas contain one or more physical or biological features essential to the species' conservation.[112] In general, critical habitat cannot include the entire geographical area that a listed species could occupy, except in circumstances determined by the Secretary.[113]

The Secretary must designate critical habitat concurrently with listing a species "to the maximum extent prudent and determinable."[114] If the species' critical habitat is not determinable at the time of listing, the Secretary may postpone designation for up to one year; after that year, the Secretary must designate critical habitat to the maximum extent prudent based on the available information.[115] The Services' regulations identify certain circumstances in which the Secretary may determine that designating critical habitat is not "prudent," including the following:

- The designation of critical habitat for a listed species would result in a greater risk of the species being threatened by takings (e.g., if critical habitat is known, then poachers would have a better idea of where the species resides).
- The present or threatened destruction or alteration of habitat is not a threat to the species, or threats to the species stem solely from causes that cannot be addressed through habitat management under Section 7 consultation.
- Areas within U.S. jurisdiction provide negligible conservation value for the species because it resides primarily outside of U.S. jurisdiction.
- No areas meet the definition of critical habitat.
- The Secretary otherwise determines the designation of critical habitat would not be prudent based on the best scientific data available.[116]

[107] ESA §3(5), 16 U.S.C. §1532(5).

[108] ESA §3(5), 16 U.S.C. §1532(5).

[109] ESA §3(5), 16 U.S.C. §1532(5).

[110] 139 S. Ct. 361, 368 (2018).

[111] FWS and NOAA, "Regulations for Listing Endangered and Threatened Species and Designating Critical Habitat," 85 *Federal Register* 81411, December 16, 2020. FWS issued a final rule in December 2020 that also responded, in part, to the *Weyerhauser* opinion by clarifying the process by which FWS would exclude areas from being designated as critical habitat. FWS, "Regulations for Designating Critical Habitat," 85 *Federal Register* 82376, December 18, 2020.

[112] 50 C.F.R. §424.12. FWS and NOAA, "Endangered and Threatened Wildlife and Plants; Regulations for Listing Species and Designating Critical Habitat," 84 *Federal Register* 45020, August 27, 2019.

[113] ESA §3(5)(C), 16 U.S.C. §1532(5)(C).

[114] ESA §4(a)(3)(A), 16 U.S.C. §1533(a)(3)(A).

[115] ESA §4(b)(6)(C), 16 U.S.C. §1533(b)(6)(C).

[116] 50 C.F.R. §424.12.

As of October 2020, the Services have designated critical habitat for approximately 1,000 listed species, or roughly 60% of the 1,666 listed domestic animal and plant species.[117] Critical habitat size varies considerably by species. For example, FWS designated more than 9 million acres of critical habitat for the Indiana bat and the Mexican spotted owl, whereas FWS designated 21 acres of critical habitat for the Leon Springs pupfish.[118]

Designation of Critical Habitat

The Secretary designates critical habitat based on the best scientific data available after considering potential economic, national security, and other relevant impacts that may arise from designating areas as critical habitat.[119] Unlike listing decisions where the Secretary cannot consider economic factors, the Secretary *must* consider economic factors when designating critical habitat. The Secretary may exclude any area from designation as critical habitat if the benefits of excluding the area outweigh the benefits of designating it as critical habitat, unless the best available scientific and commercial data indicate that failing to designate such area as critical habitat could result in the species' extinction.[120]

Revisions to Critical Habitat Regulations in 2019 Rules

In August 2019, the Services promulgated a final rule—effective September 26, 2019—addressing the designation of critical habitat. The Services amended the list of circumstances under which the Services might find it prudent *not* to designate critical habitat. The revised regulations replaced the circumstance that designating critical habitat would not benefit the species with four other circumstances. For example, the Secretary could determine that designating critical habitat is not prudent because no areas meet the definition of critical habitat or there are no habitat-based threats to the species (e.g., the conservation of a species threatened solely by illegal trade may not effectively be addressed through habitat management).

The final rule also clarified when the Secretary may designate unoccupied areas as critical habitat. Under the ESA, unoccupied areas must be *essential* to the species' conservation to be critical habitat. The final rule specified that for unoccupied areas to be deemed *essential*, the Secretary must find that the species' *occupied habitat* at the time of listing is inadequate to ensure the species' conservation. The Secretary also must determine that it is reasonably certain the unoccupied area will contribute to the species' conservation and that the unoccupied area contains at least one physical or biological feature essential to the species' conservation, as defined in the regulation.

Source: FWS and National Oceanic and Atmospheric Association (NOAA), "Endangered and Threatened Wildlife and Plants: Regulations for Listing Species and Designating Critical Habitat," 84 *Federal Register* 45020-45053, August 27, 2019; FWS, "Endangered and Threatened Wildlife and Plants: Regulations for Designating Critical Habitat," 85 *Federal Register* 55398-55407, September 8, 2020.

The Secretary can revise critical habitat designations independently at any time or pursuant to a petition. For petition-initiated requests, the ESA contains timelines for addressing revisions to critical habitat. As with petitions for listing or delisting, the Secretary, to the maximum extent practicable, has 90 days from receiving a petition to revise critical habitat to determine whether the petition contains sufficient scientific information to show that a revision may be warranted.

[117] The information at FWS, "ECOS – Threatened & Endangered Species Active Critical Habitat Report," at https://ecos.fws.gov/ecp/report/table/critical-habitat.html, is updated daily. For marine species, see ESA Threatened and Endangered Species at https://www.fisheries.noaa.gov/species-directory/threatened-endangered.

[118] FWS, "ECOS – Threatened & Endangered Species Active Critical Habitat Report," at https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

[119] ESA §4(b)(2), 16 U.S.C. §1533(b)(2).

[120] ESA §4(b)(2), 16 U.S.C. §1533(b)(2).

The Secretary has 12 months from receiving the petition to make a final determination on how to proceed with the requested revision and publish the finding in the *Federal Register*.[121]

The ESA exempts Department of Defense land from being designated as critical habitat in certain situations. The National Defense Authorization Act for Fiscal Year 2004 (P.L. 108-136) amended the ESA to specify that the Secretary shall not designate critical habitat on lands controlled by the Department of Defense if those lands are subject to an Integrated Natural Resource Management Plan (INRMP) under the Sikes Act (16 U.S.C. §670a).[122] For the provision to apply, the Secretary must determine the INRMP provides "a benefit" to the lands that otherwise might have been designated as critical habitat.[123] The ESA also directs the Secretary to consider national security when designating critical habitat. According to legislative history, Congress added these provisions in response to assertions that designating critical habitat on some military lands was interfering with military training and readiness activities.[124]

[121] ESA §4(b)(3)(D), 16 U.S.C. §1533(b)(3)(D).

[122] ESA §4(a)(3)(B), 16 U.S.C. §1533(a)(3)(B). An Integrated Natural Resource Management Plan is a planning document that provides Department of Defense installations guidance to implement landscape-level management actions to conserve natural resources in collaboration with various stakeholders. The authority for conducting these plans is under the Sikes Act (16 U.S.C. §670(a)-670(f)).

[123] ESA §4(a)(3)(B)(1), 16 U.S.C. §1533(a)(3)(B)(1). The military remains subject to the ESA's other provisions, including those on consultation and taking.

[124] For example, see U.S. Congress, House Committee of the Whole House on the State of the Union, *National Defense Authorization Act for Fiscal Year 2003*, Conference Report to Accompany H.R. 4546, 107th Cong., 2nd sess., November 12, 2002, H.Rept. 107-772 (Washington: GPO, 2002), p. H8452.

Conservation Value of Designating Critical Habitat

There is an ongoing debate as to the conservation value of designating critical habitat under the ESA. Some stakeholders contend that critical habitat offers little protection for a species beyond the other ESA protections available to listed species (e.g., prohibited acts under Section 9 and the consultation requirements under Section 7). Thus, in their view, the expense of designation, which may arise from complying with consultation under ESA Section 7 (see "Section 7 Consultation Process and Biological Opinions" in this report) and the perception of a small margin of additional conservation benefit make critical habitat requirements a poor use of budgetary resources. In summary, some stakeholders view critical habitat as a regulatory burden of the ESA rather than a conservation benefit that supplements the ESA's prohibition on taking certain listed species.

In contrast, some observers argue that critical habitat designation provides an added conservation benefit, particularly when it includes areas not currently occupied by the species. They assert the following potential benefits of designating critical habitat:

- Designation of critical habitat may provide additional protection for listed species in the context of federal actions. Federal agencies must consider whether their actions are likely to destroy or adversely modify critical habitat under the Section 7 consultation provisions. If critical habitat were not designated, Section 7 consultations would be limited to whether actions jeopardize a species' continued existence.
- Designation of critical habitat requires the Secretary to consider what habitat is essential for conservation of the species and the economic and other effects of designating critical habitat. Analyzing the economic effects of designation might inform landowners on how to manage their lands to support the species and reduce economic costs.
- Critical habitat might inform landowners where listed species may be located, allowing landowners to avoid taking such species and incurring the associated penalties.
- Critical habitat designation might encourage landowners to modify land uses that go beyond statutory requirements.
- The process of designating critical habitat might yield scientific information about the species that benefits habitat conservation and recovery planning and provides information for permitting incidental take.
- Critical habitats may serve as connecting corridors between populations, areas for existing populations to expand into, or areas in which new populations may be reintroduced. In addition, unoccupied habitat might be important for species that migrate or are forced from their current habitat due to environmental changes, such as changes to climate (e.g., increased drought) or the ecosystems in which the species resides (e.g., sea level rise and saltwater intrusion).

Sources: R. J. Scarpello, "Statutory Redundancy: Why Congress Should Overhaul the Endangered Species Act to Exclude Critical Habitat Designation," *Boston College Environmental Affairs Law Review*, vol. 30, no. 399 (2003), pp. 399-431; A. N. Hagen and K. E. Hodges, "Resolving Critical Habitat Designation Failures: Reconciling Law, Policy, and Biology," *Conservation Biology*, March 27, 2006, pp. 356-366; K. Suckling and M. Taylor, "Critical Habitat and Recovery: A Legal, Case Study, and Quantitative Review," in D. D. Goble, J. M. Scott, and F. W. Davis, eds., *The Endangered Species Act at 30: Renewing the Conservation Commitment* (Washington, DC: Island Press), 2005.

Recovery of Listed Species

To guide recovery efforts, the ESA requires the Secretary to develop recovery plans for the conservation and survival of listed species, unless the Secretary finds that developing a recovery plan would not benefit the species.[125] Recovery plans aim to identify the listed species' condition and threats the species faces (i.e., conduct a species status assessment) and to provide a vision for and pathway toward the species' recovery (i.e., recovery implementation strategy). The Services' recovery planning guidance notes that "recovery recommendations are based on resolving the threats to the species and ensuring self-sustaining populations in the wild."[126]

[125] ESA §4(f), 16 U.S.C. §1533(f).

[126] NMFS, *Interim Endangered and Threatened Species Recovery Planning Guidance Version 1.4*, July 2018. Hereinafter cited as NMFS, *Recovery Planning Guidance*.

A 1988 ESA amendment added requirements for recovery plan contents.[127] The law specified that each plan is to include three elements, to the maximum extent practicable:

1. A description of management actions needed to accomplish a plan's goal for the conservation and survival of the species
2. Objective, measurable criteria that, when met, would lead to downlisting or delisting the species
3. The estimated time and cost of carrying out measures to achieve the plan's goal[128]

Overall, the Services have stated that recovery plans are guiding documents that are not binding on federal agencies or other entities to implement.[129] The Services use a species status assessment (SSA), often created during the listing process, to inform the species recovery plan.[130] The Services use the best available science about a species to evaluate the species' present and potential future threats. An SSA assesses a species' ability to maintain self-sustaining populations over time.[131] The Services use the three principles of conservation biology to conduct this assessment: resilience, redundancy, and representation.[132] FWS explains the principles as follows:

> Representation describes the ability of a species to adapt to changing environmental conditions, which is related to distribution within the species' ecological settings. Resiliency describes the ability of the species to withstand stochastic disturbance events, which is associated with population size, growth rate, and habitat quality. Redundancy describes the ability of a species to withstand catastrophic events, which is related to the number, distribution, and resilience of populations. Together, the 3Rs, and their core autecological parameters of abundance, distribution and diversity, comprise the key characteristics that contribute to a species' ability to sustain populations in the wild over time. When combined across populations, they measure the health of the species as a whole.[133]

The ESA requires the Services to provide the public with an opportunity to review and comment on each new or revised recovery plan before final approval. Further, FWS has stated that its policy is to solicit scientific peer review of recovery plans from three independent reviewers.[134] The Services' guidance provides a time frame for completing recovery plans. (See **Table 1**.)

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[127] P.L. 100-478.

[128] ESA §4(f)(1)(B), 16 U.S.C. §1533(f)(1)(B).

[129] NOAA, *Recovery of Species Under the Endangered Species Act*, July 10, 2020, at https://www.fisheries.noaa.gov/national/endangered-species-conservation/recovery-species-under-endangered-species-act#:~:text=Are%20Recovery%20Plans%3F-,A%20recovery%20plan%20serves%20as%20a%20road%20map%20for%20species,support%20recovery%20of%20a%20species.

[130] Most listing, reclassification, and delisting decisions are accompanied by an SSA. The SSA ideally is created during the initial listing stage but can be initiated at any time, according to FWS. FWS, *Species Status Assessment Framework: An Integrated Analytical Framework for Conservation, Version 3.4*, August 2016, at https://www.fws.gov/endangered/improving_esa/pdf/SSA%20Framework%20v3.4-8_10_2016.pdf. Hereinafter cited as FWS, *Species Assessment Framework*. NOAA conducts population viability analyses to assess the population status of the species that it covers.

[131] FWS, "Species Status Assessment Framework: An Integrated Framework for Conservation," August 2016, at https://www.fws.gov/endangered/improving_esa/pdf/SSA_Fact_Sheet-August_2016.pdf.

[132] FWS, *Species Assessment Framework*.

[133] FWS, *Species Assessment Framework*.

[134] FWS, *Delisting a Species: Section 4 of the Endangered Species Act*, April 2011, at https://www.fws.gov/endangered/esa-library/pdf/delisting.pdf. Hereinafter cited as FWS, *Delisting a Species*. The ESA does not require this

Table 1. Time Frame for Recovery Plan Development for FWS and NMFS

(policy guidance; not mandated in law)

Time Frame	Action
60 days from date of listing	Recovery outline completed and submitted
90 days from date of listing	Recovery outline approved
18 months from date of listing	Draft recovery plan completed, published in the *Federal Register* for public comment, and distributed for peer review
30 months from date of listing	Final recovery plan completed and approved

Sources: NMFS, *Interim Endangered and Threatened Species Recovery Planning Guidance, Version 1.4*, last updated July 2018. (FWS has adopted these guidelines.)

The Services must provide a report to Congress on the status of recovery plan development and implementation for all listed species every two years.[135] As of October 2020, there were more than 600 draft and final recovery plans for 1,666 species listed in the United States.[136] According to one study, as of January 2018, almost one-third of species that had been listed for more than 2½ years did not have a recovery plan.[137] The study states that the main reason for not completing recovery plans is inadequate funding for recovery planning.[138]

Under some circumstances, the Services may decide not to prepare a recovery plan for a listed species. For example, the Services may decide not to prepare recovery plans for species that the Services determine will not receive a conservation benefit from the recovery plan; that is expected to be delisted due to extinction or an error in listing; or whose range is entirely in a foreign country (i.e., foreign species).[139]

The creation and implementation of recovery plans for listed species have generated discussion over the plans' usefulness for identifying when a species is recovered and can be delisted.[140] Although the ESA requires recovery plans to include objective and measurable criteria for delisting to the maximum extent practicable, the act does not require the Services to base delisting decisions on meeting those recovery plan criteria—delisting decisions are based on a status review pursuant to the ESA definitions and factors.[141] Some stakeholders suggest that recovery plans create false expectations and inconsistencies in delisting decisions.[142] In 2019, the Department of the Interior (DOI) responded to this concern by setting an agency goal to provide clarity as to when a listed species can be downlisted or delisted.[143] To facilitate attaining this goal,

form of review.

[135] ESA §4(f)(3), 16 U.S.C. §1533(f)(3). See, for example, *Conservation Cong. v. Finley*, 774 F.3d 611, 620 (9th Cir. 2014); Friends of Blackwater v. Salazar, 691 F.3d 428, 429 (D.C. Cir. 2012); Fund for Animals v. Rice, 85 F.3d 535, 547 (11th Cir. 1996).

[136] The information at FWS, "Environmental Conservation Online System (ECOS) – Listed Species Summary," at https://ecos.fws.gov/ecp/report/boxscore, is updated daily. Some recovery plans cover more than one listed species.

[137] Jacob W. Malcom and Li Ya-Wei, "Missing, Delayed, and Old: The Status of ESA Recovery Plans," *Conservation Letters*, vol. 11, no. 12601 (2018), pp. 1-9. Hereinafter cited as Malcom and Li, "Missing, Delayed, and Old."

[138] Malcom and Li, "Missing, Delayed, and Old."

[139] NMFS, *Recovery Planning Guidance*, p. 2.2.1.

[140] Evans, "Species Recovery."

[141] 50 C.F.R. §424.11(e). For example, see Defenders of Wildlife v. Hall, 565 F. Supp. 2d 1160, 1170 (D. Mont. 2008).

[142] 50 C.F.R. §424.11(e).

[143] DOI, *Ensure Clear, Quantitative Criteria for Threatened and Endangered Species Recovery Plans*; DOI, *Agency*

DOI stated it would require 100% of FWS-promulgated recovery plans to include quantitative criteria that specify when a species has recovered.[144]

Delisting, Uplisting, and Downlisting

The processes for delisting, uplisting, or downlisting a listed species are generally the same as the processes for listing species and use the same criteria (i.e., the definitions of endangered and threatened species and the five listing factors under Section 4).[145] As with listing decisions, the Services must make the determination to delist, uplist, or downlist a species "solely on the basis of the best scientific and commercial data available," without considering possible economic or other effects.[146] The Services' regulations state they will delist a species if they find the species is extinct, does not meet the definition of an endangered or threatened species, or does not meet the definition of a species (e.g., taxonomic revision).[147] The Secretary may initiate delisting or reclassifying a species independently or may act on a petition for any change in a species' listing status.

The ESA mandates the Secretary review the status of each listed species at least once every five years to determine whether the species should be delisted, uplisted, or downlisted.[148] For species with recovery plans, this five-year review may include assessing whether the species has met the plan's recovery goals. However, the Services are not bound to delist or downlist a species that attains its recovery goals, nor are they prevented from downlisting or delisting a species that has not met its recovery goals.[149]

After a species is delisted, the ESA requires the Services, in cooperation with the states in which the species is found, to monitor the species' status for at least five years.[150] To implement this requirement, the Services prepare a delisting monitoring plan, which is peer reviewed and subject to public comment.[151] Monitoring allows the Services to assess whether the species remains recovered (i.e., not endangered or threatened) without the ESA's protection. The ESA also requires the Secretary to exercise emergency authority to relist a delisted species when necessary "to prevent a significant risk to the wellbeing" of the species.[152] As of October 2020, no species had been relisted on an emergency basis under this authority.

Priority Goal Action Plan, 2019, at https://assets.performance.gov/APG/Interior/FY2019_June_Interior_Ensure_Clear_Quantitative_Criteria_for_Threatened_and_Endangered_Species_Recovery_Plans.pdf.

[144] DOI, *Ensure Clear, Quantitative Criteria for Threatened and Endangered Species Recovery Plans.*

[145] ESA §4(c), 16 U.S.C. §1533(c).

[146] ESA §4(b)(1)(A), 16 U.S.C. §1533(b)(1)(A); 50 C.F.R. §424.11(b).

[147] 50 C.F.R. §424.11(e).

[148] ESA §4(c), 16 U.S.C. §1533(c) and 50 C.F.R. §424.21.

[149] See, for example, Friends of Blackwater v. Salazar, 691 F.3d 428, 436 (D.C. Cir. 2012).

[150] ESA §4(g), 16 U.S.C. §1533(g).

[151] FWS, *Delisting a Species*, and NOAA, *Delisting Species Under the Endangered Species Act*, December 27, 2019, at https://www.fisheries.noaa.gov/national/endangered-species-conservation/delisting-species-under-endangered-species-act.

[152] ESA §4(b)(7), 16 U.S.C. §1533(b)(7).

ESA Section 5: Land Acquisition

Section 5 of the ESA authorizes the acquisition of land to conserve (i.e., recover) endangered and threatened species. Approximately half of the species listed under the ESA have at least 80% of their habitat on private lands, according to FWS.[153] The act directs the Secretary of the Interior and the Secretary of Agriculture (through the National Forest System) to establish a program to conserve fish, wildlife, and plants, including species listed under the ESA.[154] The Secretaries may use several existing authorities, listed in the act, to achieve these purposes. The ESA also authorizes the Secretaries to acquire lands and waters through purchase, donations, or other means. Money from the Land and Water Conservation Fund (LWCF) may be appropriated for these acquisitions.[155] The LWCF is a federal fund derived primarily from receipts from offshore oil and gas leases; it is used for land acquisitions by the four agencies charged with managing most federal lands, among other things.[156]

FWS reports expenditures for listed species annually and includes expenditures for land acquisition. The last annual expenditure report was published for FY2017;[157] this report lists federal agencies' land acquisition expenditures that are "reasonably identifiable to specific individual species." In FY2017, federal agencies spent approximately $51.7 million and states spent approximately $5.0 million to acquire land for listed species and potentially other purposes. Three federal agencies spent the majority of funds to acquire land to conserve listed species: FWS spent approximately $21.1 million; the U.S. Department of Agriculture spent $19.9 million; and the Bureau of Reclamation spent $9.1 million.[158] The greatest amount of funds spent to acquire lands for a single species in FY2017 was approximately $11.0 million for the wood stork (*Mycteria americana*).

ESA Section 6: Cooperation with States

Section 6 of the ESA requires the Secretary to cooperate with the states to the maximum extent practicable in conserving federally protected species.[159] FWS and courts have recognized the states' "key role" in regulating wildlife and catalyzing conservation efforts by landowners and communities on private land.[160] Section 6 enables the Secretary to facilitate state conservation programs and to direct federal funding toward such efforts.[161]

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[153] FWS, *Our Endangered Species Program and How It Works with Landowners*, July 2009, at https://www.fws.gov/endangered/esa-library/pdf/landowners.pdf.

[154] ESA §5(a), 16 U.S.C. §1534(a).

[155] ESA §5(b), 16 U.S.C. §1534(b).

[156] The four agencies are FWS, Bureau of Land Management, and National Park Service, all in DOI, and the Forest Service in the Department of Agriculture. For more on the fund, see CRS Report RL33531, *Land and Water Conservation Fund: Overview, Funding History, and Issues*, by Carol Hardy Vincent.

[157] FWS, *Federal and State Threatened and Endangered Species Expenditures FY2017*, 2018, at https://www.fws.gov/endangered/esa-library/pdf/2017-Expenditures-Report.pdf. Hereinafter cited as FWS, *Federal and State Expenditures.*

[158] FWS, *Federal and State Expenditures.*

[159] ESA §6(a), 16 U.S.C. §1535(a).

[160] FWS, "Grants: Overview," updated January 30, 2020, at https://www.fws.gov/endangered/grants/; Gibbs v. Babbitt, 214 F.3d 483, 499 (4th Cir. 2000).

[161] ESA §6, 16 U.S.C. §1535.

The ESA authorizes the Secretary to enter into agreements with states to assist with state conservation efforts.[162] The Secretary may enter into agreements with states, referred to as *management agreements*, to administer and manage any area created to conserve listed species. In addition, the Secretary is required to enter into a *cooperative agreement* with any state that establishes and maintains an "adequate and active" state program to conserve listed species that the Secretary determines meets certain statutory criteria.[163]

Management Agreements

The Secretary may enter into management agreements with states for the administration and management of areas established for the conservation of species listed under the ESA.[164]

Cooperative Agreements

A cooperative agreement between the Secretary and a state facilitates the state establishing and maintaining its own program to conserve species listed under the ESA. To initiate the process, the state submits a plan for the program to the Secretary. To qualify for a cooperative agreement, the state program must include the following elements:[165]

- The state agency that is carrying out the program (e.g., a state's fish and wildlife agency) has the authority to conserve resident fish and wildlife species that are listed under the federal or state endangered species act.
- The state has established acceptable conservation programs, consistent with the ESA, for conserving *all* resident listed species that the Secretary has deemed endangered or threatened under the ESA.
- The state agency is authorized to investigate the status and requirements for resident species' survival.
- The state agency is authorized to establish programs to conserve resident listed species, including through land acquisition.
- The state provides for public participation in designating resident species as endangered or threatened.

Similar requirements apply to cooperative agreements with states that address the conservation of plant species.[166]

The ESA requires states to enter into such cooperative agreements to be eligible for federal funding. The Secretary is authorized to provide funds to any state that has entered into a cooperative agreement to assist with implementing the state's program to conserve species listed under the ESA or with monitoring candidate and delisted species, including land acquisition and planning assistance.[167] The states generally must provide at least 25% of the program costs

[162] ESA §6, 16 U.S.C. §1535.

[163] ESA §6(c)(1), 16 U.S.C. §1535(c)(1).

[164] ESA §6(b), 16 U.S.C. §1535(b).

[165] ESA §6(c)(1), 16 U.S.C. §1535(c)(1). The Secretary has 120 days to after receiving a proposed state program to determine whether the program is in accordance with the ESA.

[166] ESA §6(c)(2), 16 U.S.C. §1535(c)(2).

[167] ESA §6(d), 16 U.S.C. §1535(d).

through matching funds (i.e., the federal component cannot exceed 75% of the cost), though the federal component may be greater for certain multistate conservation agreements.[168]

The 1988 ESA amendments created a fund—known as the Cooperative Endangered Species Conservation Fund (CESCF)—to provide funding for state grants, including land acquisition and planning assistance.[169] Although the amount of money deposited into the fund is authorized according to requirements set in statute, money from the fund can be disbursed only through discretionary appropriations.[170] Congress can appropriate funds from the CESCF to address state programs under cooperative agreements. The ESA requires that certain mandatory funding be deposited into the CESCF; the amounts deposited into the CESCF are equal to (1) 5% of the total amounts deposited in the Wildlife and Sport Fish Restoration accounts each fiscal year and (2) the amount by which the balance of fines, penalties, and forfeited property for violations of the ESA and the Lacey Act (P.L. 100-478) exceeds $500,000.[171]

Outside of cooperative and management agreements, cooperation and consultation between the federal and state governments occurs in several other instances. For example, the federal government is required to consult with state governments before acquiring any land or water for the conservation of listed species.[172] **Table 2** shows other instances of federal-state cooperation and consultation under the ESA.

Table 2. Selected Examples of Federal-State Cooperation Under the ESA

ESA Process	Description of Federal Cooperation with States
Listing and Critical Habitat	Works with state experts to develop a scientific foundation for listing, delisting, and reclassifying decisions and critical habitat designations Provides notice to state agencies of any proposed listing or critical habitat rule in accordance with the ESA and works with states on future listing and critical habitat plans
Candidate Species	Uses states' expertise and solicits their information to determine which species should be included on the list of candidate species Works with states on conservation planning to reduce threats to candidate and listed species Works with states to implement candidate conservation agreements with assurances to provide nonfederal landowners incentives to conserve candidate species
Consultation	Informs state agencies of federal agency actions that are likely to adversely affect listed species and critical habitat, and collects information from states to help in the consultation process required under Section 7 of the ESA Requests updated information, including scientific and commercial data, from the state on the species or habitat that could help in preparing a final biological opinion
Habitat Conservation Planning	Uses the states' expertise in all aspects of the habitat conservation planning process for species under states' jurisdiction Collaborates with states to work efficiently on permitting activities related to listed species

[168] ESA §6(d), 16 U.S.C. §1535(d)(2)(i).

[169] P.L. 100-478.

[170] ESA §6(i), 16 U.S.C. §1535(i).

[171] Per ESA §6(i), 16 U.S.C. §1535(i), an amount equal to 5% of the funds deposited into the Federal Aid to Wildlife Restoration Fund (the program that administers this fund is also known as Pittman-Robertson; 16 U.S.C. §§669 et seq.) and the Federal Aid to Sport Fish Restoration Fund (the program that administers this fund is also known as Dingell-Johnson; 16 U.S.C. §§777 et seq.) is deposited into the Cooperative Endangered Species Conservation Fund.

[172] ESA §6(a), 16 U.S.C. §1535(a).

ESA Process	Description of Federal Cooperation with States
Recovery	Uses the states' expertise in all aspects of the recovery planning process for species under states' jurisdiction, including implementing recovery plans
	Uses states' expertise and authority in designing monitoring programs for species that have been delisted
	Works with states to design and encourage the use of safe harbor agreements to assist in the recovery of listed species
	(Safe harbor agreements are voluntary agreements between the Services and nonfederal landowners that provide nonfederal landowners assurances the Services will not impose restrictions on their land if a landowner conducts conservation actions that benefit listed species or species that might be listed in the future)

Source: FWS and National Oceanic and Atmospheric Association (NOAA), "Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities," 81 *Federal Register* 8663-8665, February 22, 2016.

To allow for a continuing state role in endangered species conservation, the ESA's preemption of state law is limited. The ESA voids any state regulation that addresses the import or export of, or interstate or foreign commerce in, listed species and either (1) permits actions the ESA prohibits or (2) prohibits actions the ESA allows (e.g., in an exemption or permit).[173] The act otherwise allows states to retain and enforce laws or regulations that aim to conserve listed species. Further, any state law or regulation that addresses taking listed species may be *more* restrictive than ESA and the accompanying regulations—but not less.[174]

Most states have enacted laws aiming to protect endangered or threatened species.[175] Forty-four states have statutes that allow the state government to identify species in danger of extinction and provide some form of protection for these species.[176] Of the other six states, Alabama, West Virginia, and Wyoming do not have any statutes providing for identifying or conserving

[173] ESA §6(f), 16 U.S.C. §1535(f).

[174] ESA §6(f), 16 U.S.C. §1535(f).

[175] State endangered species acts may include federally listed species and additional species not listed under the federal ESA. Three states have no provisions (Alabama, West Virginia, and Wyoming), and several states have varied protections.

[176] ALASKA STAT. §§16.20.180 – 16.20.270; ARIZ. REV. STAT. ANN. §§17-268, 17-296 – 17-298.01, 17-314; CAL. FISH & GAME CODE §§1900 – 1913, 2050 – 2089.26; COLO. REV. STAT. §33-2-101 – 33-2-107; CONN. GEN. STAT. ANN. §§26-303 – 26-316; DEL. CODE. ANN. tit. 7 §§601 – 605; FLA. STAT. §§379.2291, 379.411, 581.185; GA. CODE ANN. §§27-3-130 – 27-3-133; HAW. REV. STAT. ANN. §§195d-1 – 195d-32; 520 ILL. COMP. STAT. ANN. 10/1 – 10/11; IND. CODE ANN. §§14-22-34-1 – 14-22-34-21; IOWA CODE ANN. §§481b.1 – 481b.10; KAN. STAT. ANN. §§32-957 – 32-962; KY. REV. STAT. ANN. §§146.601 – 619, 150.183; LA. STAT. ANN. §§56:1901 – 56:1907; ME. STAT. tit. 12 §§6971–6978, 12801–12810; MD. CODE ANN., NAT. RES. §§10-2A-01 – 10-2A-09, 4-2A-01 – 4-2A-09; MASS. GEN. LAWS ANN. ch. 131A §§1-7; MICH. COMP. LAWS ANN. §§324.36501 – 324.36507; MINN. STAT. §§84.0894 – 84.0895, 97A.501; MISS. CODE ANN. §§49-5-101 – 49-5-119; MO. ANN. STAT. §252.240; MONT. CODE ANN. §§87-5-101 – 87-5-132; NEB. REV. STAT. ANN. §§37-801 – 37-811; NEV. REV. STAT. ANN. §503.584 – 503.589; N.H. REV. STAT. ANN. §§212-A:1 – 212-A:15, 217-A:1 – 217-A:12; N.J. STAT. ANN. §§23:2A-1 – 23:2A-13, 13:1B-15.151 – 13:1B-15.158; N.M. STAT. ANN. §§17-2-37 – 17-2-46, 75-6-1; N.Y. ENV'T CONSERV. LAW §§9-1503, 11-0535; N.C. GEN. STAT. ANN. §§106-202.12 – 106-202.22, 113-331 – 113-350; N.D. CENT. CODE ANN. §§20.1-01-02, 20.1-02-05; OHIO REV. CODE ANN. §§1518.01 – 1518.05, 1518.99, 1531.25 – 1531.26, 1531.99; OKLA. STAT. tit. 29 §§2-109, 2-135, 5-402, 5-412, 5-412.1, 7-502, 7-601 – 7-602; OR. REV. STAT. ANN. §§496.171 – 496.192, 498.026, 564.010 – 564.994; 30 PENN. STAT. & CONS. STAT. ANN. §2305; 32 PENN. STAT. & CONS. STAT. ANN. §5307; 34 PENN. STAT. & CONS. STAT. ANN. §§102, 925, 2167, 2924; 20 R.I. GEN. LAWS ANN. §§20-37-1 – 20-37-5; S.C. CODE ANN. §§50-1-270, 50-15-10 – 50-15-90; S.D. CODIFIED LAWS §§34A-8-1 34A-8-13; TENN. CODE ANN. §§70-8-101 – 70-8-112, 70-8-301 – 70-8-314; TEX. PARKS & WILD. CODE ANN. §§68.001 – 68.021, 88.001 – 88.012; VT. STAT. ANN. tit. 10 §§4518, 5401 – 5410; VA. CODE ANN. §§3.2-1000 – 3.2-1011, 29.1-563 – 29.1-570; WASH. REV. CODE ANN. §§77-08-010, 77-12-020, 77-15-120, 77-15-130, 77-15-135, 77-15-420; WIS. STAT. ANN. §§29.604, 29.983, 169.01, 169.30.

endangered or threatened species. Arkansas declares a public policy of "promot[ing] sound management, conservation, and public awareness of Arkansas' rich diversity of native plant and nongame animals," including species, subspecies, and populations that are "rare, threatened, endangered or are of special significance to the state."[177] Idaho and Utah define endangered and threatened species under state law as including only those species identified as such under the federal ESA.[178] Idaho does not provide any further protections for listed species beyond the federal ESA. Utah allows certain state entities to "make determinations concerning the management, protection, and conservation of plant species" listed or proposed for listing under the federal ESA on state and school or institutional trust lands.[179] Utah does not provide any additional protections for listed fish, wildlife, or plants beyond the federal ESA.

ESA Section 7: Interagency Consultation

Section 7 consultation under the ESA is the process federal agencies use to interact with the Services to address the conservation of listed species. Under Section 7(a)(1), federal agencies are required to use their authorities to carry out programs for the conservation of listed species under the ESA. The Services note that this provision supports a proactive conservation planning process by federal agencies that will enable the agencies to plan their actions and programs to allow for the conservation and recovery of listed species.[180]

Section 7(a)(2) requires federal agencies to ensure their discretionary actions, or the actions of nonfederal parties granted approvals, permits, or funding by federal agencies, are "not likely to jeopardize the continued existence" of any endangered or threatened species or "adversely modify critical habitat."[181] Federal agencies undertaking actions, whether directly or through federal approvals, permits, or funding for nonfederal parties, must consult with FWS or NMFS, as appropriate, if those actions might affect a listed species or designated critical habitat.[182] This process is referred to as *Section 7 consultation*. Federal actions mandated by statute (i.e., that are not discretionary) do not require Section 7 consultation.

Section 7 Consultation Process and Biological Opinions

The Section 7 consultation requirements apply to federal agency actions, including actions on federal land and actions on private land with a federal nexus. The Services' joint regulations on Section 7 consultations define an agency *action* as

> All activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. Examples include, but are not limited to:
>
> (a) actions intended to conserve listed species or their habitat;

[177] ARK. CODE ANN. §15-45-301. The statute establishes a Nongame Conservation Committee that may expend funds collected from voluntary checkoff designations from state income tax refunds "for the purpose of protecting, preserving, and restoring the nongame resources of the state." ARK. CODE ANN. §15-45-303.

[178] IDAHO CODE ANN. §36-2401; UTAH CODE ANN. §23-13-2.

[179] UTAH CODE ANN. §§53C-2-202 & 65A-2-3.

[180] 50 C.F.R. §402.01 and 84 *Federal Register* 44976-45018.

[181] ESA §7(a)(2), 16 U.S.C. §1536(a)(2).

[182] 50 C.F.R. §402.02. *Action* includes any activity authorized, funded, or carried out by a federal agency, including permits and licenses.

(b) the promulgation of regulations;

(c) the granting of licenses, contracts, leases, easements, rights-of-way, permits, or grants-in-aid; or

(d) actions directly or indirectly causing modifications to the land, water, or air.[183]

Federal agencies must determine whether their proposed actions might affect listed species or designated critical habitat (i.e., whether the listed species or critical habitat may be present in the action area).[184] If the agency determines the action is likely to affect a species or critical habitat, then the agency must consult with the Services on the action's effects. Consultation usually is initiated by the action agency but may be initiated at the request of an FWS Regional Director or NMFS's Assistant Administrator for Fisheries.[185]

The federal action agency must complete a biological assessment (BA) if listed species may be present in the area that the action would affect.[186] The BA describes the proposed action and its likely effect on listed species. It also lists activities the agency plans to undertake to mitigate any adverse effects of the action. The BA must be based on "the best scientific and commercial data available."[187] Action agencies use the BA to determine whether formal consultation (i.e., a request for consultation from the agency to the Services that culminates in a biological opinion) is necessary.[188]

To determine whether formal consultation might be needed, a federal action agency can engage in informal consultation with the Services. (See **Figure 3**.) *Informal consultation* is an umbrella term used to describe all of the correspondence and discussions between an agency and the Services regarding the proposed action.[189] These interactions may be used to avoid the need for formal consultation. For example, the action agency, in coordination with any nonfederal applicant (e.g., permit applicant), might work with the Services on the design of the proposed action during informal consultations to eliminate the potential for adverse effect on the species or critical habitat to avoid the need for formal consultation.[190] If the federal action agency determines during the informal consultation process that the action is not likely to adversely affect the listed species or designated critical habitat, the agency can request a written concurrence from the applicable Service; if the Service concurs, the consultation is finished. The Services are required to respond to this request with either concurrence or nonconcurrence within 60 days, unless the time limit is mutually extended for a period not exceeding 120 days from the date of the request.[191] Informal consultations under the ESA outnumber formal consultations. In a 2015 study that analyzed consultations from 2008 to 2015, 81,461 informal consultations were

[183] 50 C.F.R. §402.02.

[184] If the agency determines its proposed action will not affect a listed species or critical habitat, then the agency is not required to undergo consultation. The agency could be subject to penalties for violating prohibitions under the ESA if its determination is found to be incorrect.

[185] 50 C.F.R. §402.14, and see the definition of *Director* in §402.02.

[186] ESA §7(c), 16 U.S.C. §1536(c).

[187] ESA §7(a)(2), 16 U.S.C. §1536(a)(2).

[188] 50 C.F.R. §402.2 (definition of *formal consultation*); 50 C.F.R. §402.12(a).

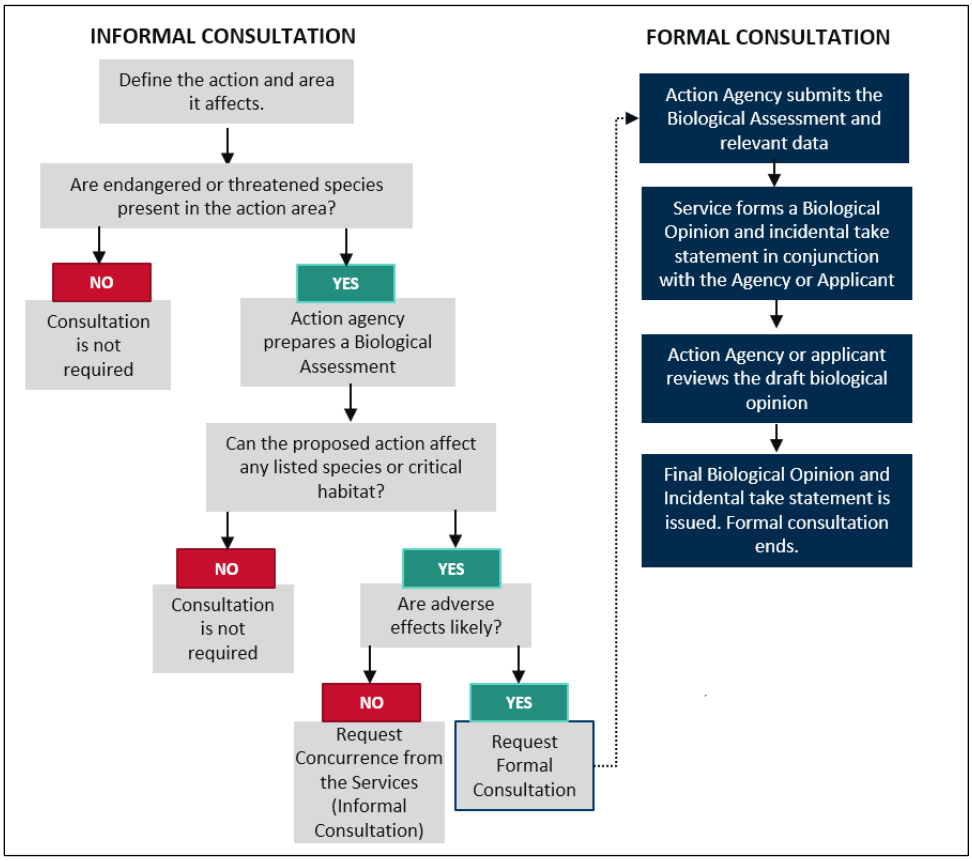
[189] FWS, "Consultations: Frequently Asked Questions," June 10, 2020, at https://www.fws.gov/endangered/what-we-do/faq.html#:~:text= Informal%20consultation%20is%20an%20optional,no%20specified%20timeframe%20for%20completion.

[190] See 50 C.F.R. §402.13 for more information.

[191] 50 C.F.R. §402.13.

completed, compared with 6,829 formal consultations.[192] This study also reported that informal consultations under Section 7 took an average of 13 days and formal consultations took an average of 62 days.[193]

Figure 3. Informal and Formal Consultation Under the ESA



Source: Congressional Research Service.

Note: Services = U.S. Fish and Wildlife Service and National Marine Fisheries Service.

If the agency requests formal consultation, the ESA has a defined process to be completed under a specified timeline. (See **Table 3**.) The agency sends the BA to the appropriate Secretary, where the appropriate Service analyzes the assessment. If the Secretary finds the action would neither jeopardize any listed species nor adversely modify critical habitat, the Secretary issues a biological opinion (BiOp) to that effect. The BiOp includes a written incidental take statement (ITS).[194] *Incidental take* is the take of a listed species as a result of an otherwise lawful action. An ITS states the amount of take of a listed species that is anticipated from the proposed action and provides the agency with an exemption from the prohibitions on take under Section 9 of the ESA

[192] J. W. Malcom and Ya-Wei Li, "Data Contradict Common Perceptions About a Controversial Provision of the U.S. Endangered Species Act," *Proceedings of the National Academy of Sciences*, vol. 112, no. 52 (December 29, 2015). Hereinafter cited as Malcom and Li, "Data Contradict Common Perceptions."

[193] Malcom and Li, "Data Contradict Common Perceptions."

[194] ESA §7(b)(4), 16 U.S.C. §1536(b)(4).

for the expected level of take. This exemption is contingent on the agency complying with any reasonable and prudent measures and the terms and conditions included in the ITS.[195]

Alternatively, if the proposed action is judged to jeopardize listed species or adversely modify critical habitat, the Secretary must suggest any *reasonable and prudent alternatives* (RPAs) in the issued BiOp that minimize harm to the species. A BiOp with RPAs also contains an ITS that sets limits on take for listed species. If no RPAs are feasible, then the agency proposing the action must (1) forgo the action, (2) modify the action and reinitiate consultation for the revised action, (3) risk violating the ESA, or (4) obtain a formal exemption from an Endangered Species Committee (ESC).[196] The great majority of Section 7 consultations result in *no jeopardy* opinions, and nearly all of the rest identify RPAs that permit the action agencies to go forward with the proposed projects.[197]

The Secretary generally must conclude consultation and issue a BiOp within 90 days of receiving an action agency's BA for a wholly federal action, unless the Secretary and the federal agency mutually agree to a longer period.[198] For consultations involving a nonfederal party (e.g., permit applicant), the 90-day period may be extended up to an additional 60 days without the nonfederal party's permission; the Services and action agency need only provide the nonfederal party with an explanation for the delay and the estimated time frame for completion.[199] The Services and action agency must obtain the nonfederal party's permission to extend the consultation beyond 150 days from its initiation.[200] Pursuant to federal regulations, the action agency and the Services may enter into an agreement to conduct an expedited consultation under Section 7 with an alternative accelerated timeline established by the action agency and the Services.[201] In general, the Services complete formal consultations pursuant to the given timelines; however, some consultations may take a year or more.[202]

BiOps may be revised through a reinitiation of formal consultation. After a consultation is complete, federal agencies may be required to reinitiate consultation with the Services when certain circumstances arise. Specifically, reinitiation of consultation is required when

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[195] 16 U.S.C. §1536(b)(4). *Reasonable and prudent measures* are distinct from *reasonable and prudent alternatives* that may be provided by the Secretary if the action is likely to jeopardize listed species or adversely modify critical habitat. *Reasonable and prudent measures* "refer to those actions the Director believes necessary or appropriate to minimize the impacts, i.e., amount or extent, of incidental take." "*Reasonable and prudent alternatives* refer to alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that is economically and technologically feasible, and that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat." 50 C.F.R. §402.02.

[196] 16 U.S.C. §1536(g); 50 C.F.R. §402.15; 50 C.F.R. Subchapter C; FWS and NMFS, *Endangered Species Conservation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*, March 1998, at https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf, p. 2-11. For more information, see CRS Report R40787, *Endangered Species Act (ESA): The Exemption Process*, by Pervaze A. Sheikh. See section on Exemptions for Section 7 Consultation in this report for more information.

[197] Malcom and Li, "Data Contradict Common Perceptions," pp. 15844-15849.

[198] ESA §7(b)(1), 16 U.S.C. §1536(b)(1); 50 C.F.R. §402.14(e). FWS and NMFS begin the 90-day clock when they receive a complete biological assessment (BA) with all the information needed for consultation; action agencies are often asked for more information than the data submitted in the original BA. Action agencies often object to the delays; the Services respond that consultation requires adequate data about the project.

[199] ESA §7(b)(2), 16 U.S.C. §1536(b)(2).

[200] ESA §7(b)(2), 16 U.S.C. §1536(b)(2).

[201] 50 C.F.R. §402.14(l).

[202] Malcom and Li, "Data Contradict Common Perceptions."

"discretionary Federal involvement or control over the action has been retained or is authorized by law" and one or more of the following triggering events occurs:

- The amount or extent of taking specified in an incidental take statement is exceeded.
- New information on the species or action reveals there is an effect on the species or critical habitat that was not considered in the BiOp.
- The action is sufficiently modified so there is an effect on species and critical habitat that was not considered in the BiOp.
- A new species is listed or critical habitat is designated that may be affected by the action.[203]

Reinitiated consultation follows the same procedures and timelines as formal consultation.

Section 7 consultation also can be conducted at the programmatic level, often referred to as a *programmatic consultation*. Programmatic consultations allow federal agencies to consult with the Services on multiple, frequently occurring, or routine actions in a particular geographic area or on proposed programs, policies, or regulations that would provide a framework for future actions.[204] Individual projects conducted under a program covered by a programmatic BiOp generally still require a separate consultation under Section 7; however, with a programmatic BiOp in place, this process may be streamlined.

One study found that between 2000 and 2017, the species that were most frequently the subject of Section 7 consultations included Chinook salmon (*Oncorhynchus tshawytscha*); steelhead trout (*Oncorhynchus mykiss)*; Coho salmon (*Oncorhynchus kisutch*); and several species of sea turtles, such as the green sea turtle (*Chelonia mydas*) and the loggerhead sea turtle (*Caretta caretta*).[205] The study also determined that the U.S. Army Corps of Engineers conducted more Section 7 consultations than any other federal agency, more than triple the number completed by the U.S. Forest Service, which had the second-most consultations. The three project types associated with the most Section 7 consultations during the study period were waterways, transportation, and restoration.[206]

Section 7 Consultation and Proposed Species

Section 7 requires federal agencies to confer with the appropriate Secretary on any federal agency action that is likely to jeopardize the continued existence of any species proposed to be listed or to destroy or adversely modify critical habitat proposed to be designated for such species (ESA §7(a)(4), 16 U.S.C. §1536(a)(4)). *Proposed species* are "any species of fish, wildlife or plant that is proposed in the *Federal Register* to be listed under section 4 of the [Endangered Species] Act." However, agencies need not limit commitments of resources for the agency action. As a result of the rulemaking process and limited agency resources, a species may be proposed for listing for months or years before the species is listed or determined to no longer warrant listing. During that time, federal agencies and private parties may undertake actions that affect the proposed species. The ESA does not extend any of the prohibited acts for endangered species to proposed species, so nonfederal parties (e.g., private landowners, state governments, or nonprofits) generally may engage in any activities or projects that have no federal nexus.

Implementing regulations under 50 C.F.R. §402.10 state that an action agency may hold a conference with the Services on any action that is likely to jeopardize a proposed species or to destroy or modify its proposed critical

[203] 50 C.F.R. §402.16.

[204] 50 C.F.R. §402.13(l).

[205] M. J. Evans, J. W. Malcom, and Y. W. Li, "Novel Data Show Expert Wildlife Agencies Are Important to Endangered Species Recovery," *Nature Communications*, vol. 10 (August 1, 2019). Hereinafter cited as Evans, Malcom, and Li, "Novel Data."

[206] Evans, Malcom, and Li, "Novel Data."

habitat. The conference is designed to assist the federal agency and the applicant (if any) in identifying and resolving potential conflicts at an early stage in the planning process. The conference process that applies to species proposed for listing is distinct from the consultation process that applies to listed species. The conference is intended to be less formal and to permit the Services to advise a federal agency on ways to minimize or avoid adverse effects on a proposed species. A federal agency may, however, choose to undertake the more extensive and formal consultation process even at the proposed listing stage to avoid duplication of effort later.

For more information on conference requirements for proposed species, see FWS and NMFS, *Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*, March 1998.

Exemptions for Section 7 Consultation

If the Services cannot identify any RPAs for a project to avoid jeopardizing listed species or adversely modifying designated critical habitat and if other required conditions are met, an action may be eligible to receive a formal exemption from the requirement that the action not jeopardize listed species or adversely modify critical habitat.[207] In addition, any action covered by a formal exemption is deemed to not result in take of a listed species.[208] If an agency wants to obtain a formal exemption, the agency (or the affected governor[s] or license applicant[s]) may apply to the Secretary, who passes on the application to an ESC for an exemption.[209] Exemptions are available for specific actions (e.g., water withdrawals) rather than for all actions related to a particular species (e.g., Delta smelt). An ESC, which decides whether to provide an exemption for the action, is composed of six specified federal officials and one individual from each affected state.[210] Five members or their representatives need to be present for a quorum; only members—not their representatives—count toward a quorum if the committee is voting, because only members can vote. At least five votes are required to allow an exemption.[211]

Under Section 7(g), to be eligible for consideration of an exemption, the Secretary must determine within 20 days, or a time period otherwise agreeable to the Secretary and the applicant, that the applicant

- completed consultation requirements "in good faith and made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives";
- conducted any required BAs; and
- "to the extent determinable ... refrained from making any irreversible or irretrievable commitment of resources."[212]

[207] ESA §7(h), 16 U.S.C. §1536(h).

[208] ESA §7(o)(1), 16 U.S.C. §1536(o)(1).

[209] ESA §7(g), 16 U.S.C. §1536(g).

[210] The six federal officials are the Secretaries of the Interior (chair), Agriculture, and the Army; the Chair of the Council of Economic Advisors; and the Administrators of NOAA and the Environmental Protection Agency. 16 U.S.C. §1536(e)(3).

[211] In the event that more than one state is affected by the action, the regulations provide that the states collectively cast one vote. 50 C.F.R. §453.05.

[212] ESA §7(g)(3), 16 U.S.C. §1536(g)(3). Such "irreversible or irretrievable commitment[s] of resources" are those that would foreclose the formulation or implementation of RPAs that would avoid jeopardizing the species and/or adversely modifying critical habitat. ESA §7(d), 16 U.S.C. §1536(d).

These qualifying requirements ensure the exemption process is meaningful and consideration of the issues will not be preempted by actions already taken. Additional requirements for an application are contained in the relevant regulations.[213]

The ESC shall grant an exemption for the project or activity if, based on the evidence, the ESC determines that

> (i) there are no reasonable and prudent alternatives to the agency action;
>
> (ii) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or critical habitat, and such action is in the public interest;
>
> (iii) the action is of regional or national significance; and
>
> (iv) neither the federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources prohibited by subsection (d) of this section.[214]

There have been three completed applications for an exemption under this process (two granted) and three other instances in which applications were filed but the applications were withdrawn or abandoned.[215]

The ESA also provides alternative avenues for granting exemptions under certain circumstances. Specifically, exemptions may be approved under alternative procedures when the action concerns international treaty obligations,[216] national security,[217] and presidentially declared disasters.[218] The ESA does not have a general provision that allows exemptions in other emergency conditions.

ESA Section 9: Prohibitions

Section 9 of the ESA enumerates various acts that are prohibited with respect to endangered species. For threatened species not covered by FWS's blanket 4(d) rule, the Services may apply Section 9 prohibitions to such threatened species through a species-specific 4(d) rule. Absent a species-specific 4(d) rule, the Section 9 prohibited acts do not extend to threatened species.[219]

The Section 9 prohibitions include the following:

- Importing or exporting endangered species into or out of the United States
- Taking endangered species within the United States or U.S. territorial seas and taking such species on the high seas

[213] 50 C.F.R. parts 450-453.

[214] ESA §7(h)(1)(A), 16 U.S.C. §1536(h)(1)(A).

[215] For more information, see CRS Report R40787, *Endangered Species Act (ESA): The Exemption Process*, by Pervaze A. Sheikh.

[216] ESA §7(i), 16 U.S.C. §1536(i).

[217] ESA §7(j), 16 U.S.C. §1536(j).

[218] ESA §7(p), 16 U.S.C. §1536(p). However, 50 C.F.R. §13.4 states that in emergency conditions, the FWS Director "may approve variations from the requirements of this part [the general permit procedures] when he finds that any emergency exists and that the proposed variations will not hinder effective administration of [the subchapter on permits], and will not be unlawful."

[219] In the absence of a species-specific 4(d) rule for threatened species listed by FWS before September 26, 2019, the blanket 4(d) rule extended essentially the same protections and prohibitions to those species as apply to endangered species.

- Possessing, selling, or transporting any unlawfully taken endangered species
- Delivering, receiving, transporting, or selling in interstate or foreign commerce any endangered species
- Violating any regulation promulgated by FWS or NMFS pertaining to any endangered or threatened species[220]

Similar prohibitions apply to endangered plants, except the prohibitions most similar to the take prohibitions generally apply only to endangered plant species located in areas under federal jurisdiction.[221]

The ESA also prohibits attempting to commit, soliciting another to commit, or causing to be committed any prohibited act.[222] The ESA's prohibitions apply broadly to any person (as defined by the act) subject to the jurisdiction of the United States.[223] Sections 9 and 10 of the ESA allow for certain exceptions from the prohibitions.[224]

Import and Export Provisions Under Section 9 of the ESA

The ESA generally requires any person who engages in the business of importing or exporting fish, wildlife, or plants to obtain permission from the appropriate Secretary. The ESA does not specify that the species must be listed, thus making the law broadly applicable to all species, with some exceptions. Those persons who are required to receive permission must keep records on their imports and exports; provide access to their place of business for inspections; file required reports with the Secretary; and use certain ports designated by the Secretary, unless the Secretary deems it appropriate and consistent with the ESA to permit importation or exportation elsewhere.

Source: ESA §9(d)-(f), 16 U.S.C. §1538(d)-(f).

ESA Section 10: Exceptions

Section 10 of the ESA authorizes the Secretary to issue a permit to exempt certain actions from ESA prohibitions. Eligible actions include taking species for scientific purposes, enhancing the survival of listed species, and incidental taking of listed species during otherwise lawful actions.[225] The following sections discuss these exemptions.

Permits for Scientific Purposes and Enhancing the Survival of Species

Section 10(a)(1)(A) authorizes the Secretary to issue permits to carry out acts otherwise prohibited by Section 9 of the ESA for scientific purposes and to "enhance the propagation and survival" of listed species; these permits may be used to establish experimental populations.[226] Scientific permits issued by the Services may authorize take of listed species to study the biology and long-term survival needs of a listed species, among other things. The Services also issue

[220] ESA §9(a), 16 U.S.C. §1538(a).

[221] ESA §9(a)(2), 16 U.S.C. §1538(a)(2).

[222] ESA §9(g), 16 U.S.C. §1538(g).

[223] ESA §9(a), 16 U.S.C. §1538(a).

[224] ESA §§9(b) and 10, 16 U.S.C. §§1538(b) and 1539.

[225] ESA §10, 16 U.S.C. §1539(a).

[226] ESA §10(a)(1), 16 U.S.C. §1539(a)(1).

recovery permits under this same authority. Recovery permits are issued to assist in the recovery of listed species and may include exemptions from prohibitions of take.[227] Some activities that might be authorized under a recovery permit include genetic studies, abundance surveys, and telemetric monitoring (i.e., tracking species using sensors) of listed species.

The Services issue enhancement of survival permits (*enhancement permits*) for activities that provide a conservation benefit for listed species or unlisted species in the event they become listed in the future. For example, enhancement permits are used to approve activities in conjunction with a candidate conservation agreement or a safe harbor agreement (see textbox below).

Safe Harbor Agreements

Because many listed species inhabit private lands, the Services created policies that encourage private landowners' involvement in the conservation of these species. To incentivize landowners to aid in species conservation, the Services may use *safe harbor agreements* (SHAs). SHAs are voluntary agreements between the Services and nonfederal landowners that provide nonfederal landowners assurances that the Services will not require changes in management activities on their land if additional listed species enter into their property or if the distribution of listed species increases on their property if a landowner conducts conservation actions that benefit listed species or species that might be listed in the future. The assurance is provided by an Enhancement of Survival Permit issued to the property owner. The permit authorizes incidental take of listed species from actions taken by the landowner in the SHA.

Some conservation activities that might be covered under SHAs include restoring habitat for species; reducing habitat fragmentation; and creating buffers for habitat, such as vegetative buffers for streams, among others. An SHA benefits landowners by ensuring potential restrictions on land use or activities will not be applied if newly listed species inhabit their lands or if existing listed species move onto their land. This assurance is provided by an enhancement permit issued to the landowner. The permit can authorize incidental take of species that may result from conservation activities included in the SHA.

Source: FWS, "Safe Harbor Agreements: Frequently Asked Questions," January 2020, at https://www.fws.gov/endangered/landowners/landowners-faq.html.

Enhancement permits can be issued for several other activities, including captive breeding programs that aim to improve the survivorship, reproduction, genetic vitality, and management of populations. Enhancement permits also can be used to exhibit living listed species to educate the public on the species' conservation needs and ecological roles.[228] Zoos, for example, may obtain such permits to conserve listed species.[229]

Enhancement permits sometimes are issued to import and export listed species. An enhancement permit may be used to import sport-hunted trophies of foreign species listed under the ESA into the United States. These enhancement permits may be justified based on the incentives allowing such imports to provide for increasing the survival of the species in its native habitat. For example, if trophy hunters are allowed to harvest a limited number of animals, and if funds generated by the hunters' activities (e.g., through permits or taxes) are transferred to a conservation program that supports a population of the same species, then the limited take of individuals through hunting could enhance the species' survival by providing an incentive for conservation.

[227] FWS, *Recovery 10(a)(A)(1) Permits Program*, April 23, 2020.

[228] A. Haas, "Interpreting 'Enhancement of Survival' in Granting Section 10 Endangered Species Act Exemptions to Animal Exhibitors," *Pace Environmental Law Review*, July 2015, pp. 956-982. Hereinafter cited as A. Haas, "Enhancement of Survival."

[229] A. Haas, "Enhancement of Survival."

The ESA states that the Secretary may grant permits under Section 10(a)(1)(A) if the Secretary finds that permits were applied for in good faith, will not disadvantage endangered species, and will be consistent with the purposes and policy of the ESA.[230]

Permits for Incidental Taking of Species and Habitat Conservation Plans

For actions by nonfederal parties that might result in take of a listed species but have no federal nexus (e.g., a loan or permit), the Secretary may issue permits to allow incidental take of listed species for otherwise lawful actions.[231] To obtain an incidental take permit (ITP), a nonfederal entity must submit a permit application and a habitat conservation plan (HCP), under Section 10(a)(1)(B) of the ESA.[232] The HCP describes the anticipated effects of the nonfederal applicant's action on listed species,[233] as well as the steps to be taken to minimize and mitigate that impact, funding for the mitigation, alternatives that were considered and rejected, and any other measures the Secretary may require. HCPs also must comply with other policies by including biological goals and outcomes for the species covered by the HCP, adaptive management provisions,[234] monitoring protocols, permit duration, and public participation in the process. The permit applicant must use the best available science when creating HCPs and ITPs, and in some cases HCPs are reviewed by independent scientists.[235]

Once the permit application and draft HCP are completed, they generally are submitted to the Services along with an implementation agreement. The Secretary evaluates the permit application (including the HCP) and determines if it meets and abides by the following criteria specified under the ESA:

- The taking of species will be incidental.
- The applicant will minimize and mitigate the action's effects on species to the maximum extent practicable.
- The applicant will ensure that adequate funding of the mitigation measures is required.
- The taking of the species will not appreciably reduce the survival and recovery of the species in the wild.
- Any other measures prescribed by the Secretary.[236]

[230] ESA §10(d), 16 U.S.C. §1539(d).

[231] ESA §10(a), 16 U.S.C. §1539(a).

[232] ESA §10(a)(2)(A), 16 U.S.C. §1539(a)(2)(A). Also, see 50 C.F.R. §17.3, which defined *conservation plan* as "the plan required by section 10(a)(2)(A) of the ESA that an applicant must submit when applying for an incidental take permit. Conservation plans also are known as 'habitat conservation plans' or 'HCPs.'"

[233] ESA §10(a)(2)(A), 16 U.S.C. §1539(a)(2)(A).

[234] *Adaptive management* is the process of incorporating new scientific and programmatic information into the implementation of a project or plan to ensure the activity's goals are being reached efficiently. It promotes flexible decision-making to modify existing activities or create new activities if new circumstances arise (e.g., new scientific information) or if projects are not meeting their goals.

[235] FWS, *Habitat Conservation Plans Under the Endangered Species Act*, April 2011, at https://www.fws.gov/endangered/esa-library/pdf/hcp.pdf.

[236] ESA §10(a)(2)(B), 16 U.S.C. §1539(a)(2)(B).

Because the issuance of an ITP is considered a federal action by the Services, FWS or NMFS must complete an intra-Service consultation subject to Section 7 and issue a BiOp assessing the effects of the ITP on the listed species and critical habitat. [237] Upon completion of the Section 7 consultation, an ITP allows nonfederal entities or persons to legally proceed with a project that incidentally takes listed species as specified under the ITP. The permit holder also benefits from the *No Surprises* regulation;[238] under this regulation, private landowners are assured that if unforeseen circumstances arise, FWS will not require an additional commitment of resources to address species in an HCP without the landowner's consent.[239] This policy was created to incentivize private landowners to conserve species and their habitat using Section 10 permits. The actions agreed to in an HCP are made binding through the ITP. Typically, ITPs have an expiration date; however, mitigation under the HCP can be in perpetuity. If the terms of the ITP are violated, the action could result in illegal take under Section 9 of the ESA.

All applications for exceptions or permits under Section 10 must be published in the *Federal Register* and open for comments for 30 days (this period may be waived if the listed species is threatened and no alternatives are available to the applicant). In addition, any information received as part of the application must be made public.[240]

Comparison of Section 10 and Section 7 Consultation

Permitting under Section 10 and consulting under Section 7 lead to an ITP and an ITS, respectively, which allow applicants to proceed with projects or actions that affect listed species without violating the take prohibitions. **Table 3** summarizes some similarities and several differences between the processes under Section 10 and Section 7. The comparison below is not comprehensive but focuses on key aspects of the two processes under the ESA.

Table 3. Comparison of Section 7 Consultation and Section 10 Permitting Under the ESA

Characteristic	Section 7 Consultation	Section 10 Permitting
Applicants	Federal agencies or in some cases nonfederal agencies that have been assigned as an applicant under various authorities.	Nonfederal entities that are proposing actions with no federal nexus.
Applicable Actions	Federal actions or nonfederal actions that have a federal nexus.	Nonfederal entities that believe their otherwise lawful activities will result in the incidental take of a listed species under the ESA.
Applicable Biological Conditions	Section 7 consultation is initiated when a federal agency determines a project or action might jeopardize species listed under the ESA or adversely modify designated critical habitat. Consultation applies to plants, fish, and wildlife.	Section 10 permit is sought when actions *are likely to result in take* of a listed species and any taking is incidental to carrying out the otherwise lawful activity. This applies only to wildlife, since there is no prohibition on take for plants.

[237] FWS and NOAA, *Habitat Conservation Planning and Incidental Take Permit Processing*, FWS and NOAA Handbook, December 21, 2016, p. 3-27, at https://www.fws.gov/endangered/esa-library/pdf/HCP_Handbook.pdf.

[238] 50 C.F.R. §17.3, §17.22(b)(5) and §17.32(b)(5).

[239] 50 C.F.R. §17.3, §17.22(b)(5) and §17.32(b)(5).

[240] ESA §10(d), 16 U.S.C. §1539(d).

Characteristic	Section 7 Consultation	Section 10 Permitting
Scope	Section 7 covers a proposed project or action and considers the effect on one or more species.	Section 10 permit covers a species or multiple species and the effects of actions on those species.
Application Process	Agencies may consult informally with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) before requesting a formal consultation. Informal consultations entail communication with the Services about whether formal consultation is required and whether the action may be modified to avoid the need for formal consultation. A federal agency may prepare a biological assessment (BA) before informal consultation and for formal consultation. Formal consultation occurs when the action may affect a listed species. The Services review the BA and issue a biological opinion (BiOp).	The nonfederal entity applies for an incidental take permit (ITP) to lawfully carry out its action with take of listed species. The applicant for an ITP must submit a habitat conservation plan (HCP) that shows the action's likely impact, steps to minimize and mitigate that impact, funding sources for the mitigation, alternatives that were considered and rejected, and any other measures the Secretary may require.
Time Limits	The appropriate Secretary is to complete consultation within 90 days, unless the Secretary and the applying federal agency agree to extend the time period—with notice to or permission of any nonfederal applicant, depending how long the extension is. The Secretary has 45 days after a formal consultation to issue a BiOp.	There are no time limits in the ESA for completing an HCP and issuing an ITP.
Public Review	There is no requirement that the Services publish a draft BiOp for public review. Draft BiOps can be provided to the federal agency or applicant for review.	The ESA requires a 30-day comment period on ITPs; however, if National Environmental Policy Act requirements are concurrently being met, the comment period could be longer.
Critical Habitat	The adverse modification of critical habitat by an action could trigger a Section 7 consultation. (16 U.S.C. §1536(a)(2).)	Critical habitat does not directly relate to Section 10 permits; however, if the ITP issued is likely to result in the destruction or adverse modification of critical habitat, then the Services may require a Section 7 consultation to issue the Section 10 permit.
Final Plan or Opinion Describing Efforts or Changes to Address the Species	A BiOp is issued through formal consultation. (16 U.S.C. §1536(b).) A BiOp is the Secretary's opinion on how the action will affect listed species and critical habitat. A BiOp could find that an action would neither jeopardize a species nor adversely modify critical habitat. Alternatively, if the proposed action is judged likely to jeopardize listed species or adversely modify critical habitat, the Secretary must suggest any reasonable and prudent alternatives in the BiOp that would avoid harm to the species.	An HCP, submitted by the nonfederal applicant, describes the anticipated effects of the action on species and how the effects can be minimized and mitigated. (16 U.S.C. §1539(a)(1)(A).)

Characteristic	Section 7 Consultation	Section 10 Permitting
Incidental Take	An incidental take statement (ITS) is issued with a BiOp if the project or activity is expected to take listed species. The ITS specifies the terms and conditions under which the federal action must proceed in order to minimize take of the listed species. (16 U.S.C. §1536(b)(4).)	An ITP is required when otherwise lawful nonfederal activities result in the take of species. (16 U.S.C. §1539(a)(1)(B).) An HCP must accompany an ITP. The ITP authorizes the take of the listed species and not the action that is being proposed. This permit allows the applicant to legally proceed with their proposed activity with respect to the ESA.
Duration	The BiOp and the ITS can be indefinite or have a predetermined lifetime.	Permit time is set at the time of issuance. Permits can have long time spans, some as long as 100 years.
Conditions for Changes to Permissible Activities	ESA regulations require reinitiation of consultation if certain conditions arise, including changes to the project or actions associated with the project that affect listed species or critical habitat in ways not anticipated in the BiOp.	Changes in the implementation of an HCP might require amendments to HCPs and the ITP, among other things. ITPs also may be renewed.
No Surprises Policy	Not applicable.	*No Surprises* assurances are provided to nonfederal landowners whose land is included in an HCP. Private landowners are assured that if unforeseen circumstances arise, FWS will not require an additional commitment of resources to address species in an HCP without the landowner's consent.
Decision Not to Issue an Incidental Take Statement or Permit for an Action	If no reasonable and prudent alternatives are feasible, then the agency proposing the action must (1) forgo the action, (2) risk incurring penalties under the ESA, or (3) obtain a formal exemption from the penalties of the ESA.	If jeopardy to a species is anticipated due to the action's effect on a species, an ITP may not be awarded. Further, an ITP may be revoked if jeopardy to a species cannot be avoided.
Frequency of Use	Thousands of Section 7 informal and formal consultations have been performed.	As of October 2020, approximately 700 HCPs and 865 ITPs had been approved.

Sources: CRS, with information from the ESA (P.L. 93-205, 87 Stat. 884, 16 U.S.C. §§1531-1544); FWS, *Habitat Conservation Plans Under the Endangered Species Act*, April 2011, at https://www.fws.gov/endangered/esa-library/pdf/hcp.pdf.; FWS and NOAA, *Habitat Conservation Planning and Incidental Take Permit Processing*, FWS and NOAA Handbook, December 21, 2016, at https://www.fws.gov/endangered/esa-library/pdf/HCP_Handbook.pdf.; FWS and NMFS, *Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*, March 1998; FWS, "Consultation: Frequently Asked Questions," at https://www.fws.gov/endangered/what-we-do/faq.html.

Notes: This table is not comprehensive and represents only key comparisons between the Section 7 consulting and Section 10 permitting processes.

ESA Section 11: Penalties and Enforcement

Section 11 of the ESA imposes civil and criminal penalties for violating the ESA or ESA permits, certificates, or regulations.[241] Any person who violates any ESA provision or any regulation, permit, or certificate issued pursuant to the ESA may be subject to civil penalties for each violation. Knowing violators and persons engaged in business as importers or exporters of fish,

[241] ESA §11, 16 U.S.C. §1540.

wildlife, or plants may be subject to higher civil penalties. Any person who knowingly violates ESA statutory provisions, permits, certificates, or regulations also may be subject to criminal fines or imprisonment upon conviction.[242] Fish, wildlife, and plants connected with any such violations and any items used to facilitate the violation (e.g., guns, traps, vehicles, or aircraft) are subject to forfeiture.[243] Violators can defend themselves against both civil allegations and criminal charges if they can demonstrate that they violated the act believing, in good faith, that they were protecting themselves or another person from bodily harm from any listed species.[244]

The ESA is enforced by the Secretary of the Interior, Commerce, Treasury, or department within which the Coast Guard is operating. The act also contains a number of specific enforcement authorities, such as inspection, arrest without warrant in certain instances, search, and seizure.[245]

The ESA provides for a reward fund that is funded by penalties, fines, or forfeited property collected from violators.[246] The ESA directs the Secretary of the Interior, Commerce, or the Treasury, as appropriate, to pay a reward to any person who provides information that leads to an arrest, criminal conviction, civil penalty assessment, or forfeiture of property for ESA violations. The appropriate Secretary is to designate the amount of the award. The Secretary also may use the reward fund to pay for temporary care of species while associated civil or criminal proceedings are pending.

Citizen Suits

Any person may bring a lawsuit in federal district court (1) to enjoin anyone, including governmental entities, who the person alleges to be violating any provision of the ESA or its regulations; (2) to compel the Secretary to enforce prohibitions on taking listed species; or (3) to compel the Secretary to perform a nondiscretionary duty under the ESA's listing-related provisions in Section 4.[247] The person generally must provide written notice of intent to sue at least 60 days prior to bringing the action.[248] The person cannot file a suit to enjoin violations or compel the Secretary to enforce take prohibitions if the Secretary is "diligently" pursuing an enforcement action for those violations.[249] The ESA expressly allows the court to award litigation costs and attorneys' fees to any party for whom the court determines such an award is appropriate.[250]

Citizen suits frequently have been used to compel agency action and direct agency resources under the ESA. ESA citizen suits have been used to compel the Services to list, reclassify, or delist species; challenge delays in listing decisions; oppose listing, reclassification, or delisting rules; address critical habitat designations and revisions; and challenge BiOps and use of the Section 7 consultation process.[251] A subset of citizen suits has addressed deadlines under the ESA

[242] ESA §11(b), 16 U.S.C. §1540(b).

[243] ESA §11(e)(4), 16 U.S.C. §1540(e)(4).

[244] ESA §11(a)(3), 16 U.S.C. §1540(a)(3).

[245] ESA §11(d)-(f), 16 U.S.C. §1540(d)-(f).

[246] ESA §11(d), 16 U.S.C. §1540(d).

[247] ESA §11(g), 16 U.S.C. §1540(g).

[248] ESA §11(g)(2), 16 U.S.C. §1540(g)(2).

[249] ESA §11(g)(2), 16 U.S.C. §1540(g)(2).

[250] ESA §11(g)(4), 16 U.S.C. §1540(g)(4).

[251] U.S. Government Accountability Office (GAO), *Environmental Litigation: Information on Endangered Species Act Deadline Suits*, GAO-17-304, February 2017, at https://www.gao.gov/assets/690/683058.pdf. Hereinafter cited as

(i.e., *deadline suits*). The Government Accountability Office reported that most deadline suits from 2005 to 2015 were related to the Services missing deadlines on petitions to list species under the ESA.[252] The study found that most of the suits were resolved through settlements that established timelines for completing the listing process.

Some stakeholders assert that deadline suits can burden the Services with heavy workloads and influence their priorities.[253] Further, some contend that deadline suit settlements may result in the Services not fully assessing the science behind listing, potentially leading to more lawsuits in the future.[254] Other stakeholders contend, in support of citizen suit provisions, that species languishing in the listing process for years have gained ESA protection only because successful citizen suits forced the Services to act.[255] One study reported that citizen suits drive listings of species that may be at greater risk of extinction than those proposed by FWS.[256] The same study presented data to support the thesis that citizen proposals for listings are more likely to concern species that generate conflict with development.[257]

ESA Section 8: Treaties and Conventions Implemented by the ESA

In addition to providing for listing and protecting species, the ESA is the implementing legislation for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for the United States.[258] It is also the implementing legislation for the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (the Western Hemisphere Convention) for the United States.[259]

CITES

CITES is an international agreement among national governments that aims to ensure the international trade in plants and animals does not threaten their survival. CITES provides a framework that is voluntarily adhered to by each of the 183 signatories, or parties.[260] Parties to CITES are responsible for implementing the convention in their national legislation.[261] In the

GAO, *Environmental Litigation*.

[252] GAO, *Environmental Litigation*, p. 2.

[253] GAO, *Environmental Litigation*, p. 2.

[254] GAO, *Environmental Litigation*, p. 2.

[255] GAO, *Environmental Litigation*, p. 2, and E. E. Puckett, D. C. Kesler, and D. N. Greenwald, "Taxa, Petitioning Agency, and Lawsuits Affect Time Spent Awaiting Listing Under the U.S. Endangered Species Act," *Biological Conservation*, vol. 201 (2016).

[256] Berry J. Brosi and Eric G. N. Biber, "Citizen Involvement in the U.S. Endangered Species Act," *Science*, vol. 337 (August 17, 2012), pp. 802-803.

[257] Berry J. Brosi and Eric G. N. Biber, "Citizen Involvement in the U.S. Endangered Species Act," *Science*, vol. 337 (August 17, 2012), pp. 802-803.

[258] T.I.A.S. 8249, as signed by the United States, March 3, 1979. See CRS Report RL32751, *The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*, by Pervaze A. Sheikh.

[259] 50 Stat. 1354; TS 981, as signed by the United States, October 12, 1940; ESA §8(a), 16 U.S.C. §1537(a).

[260] For more information, see the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) at https://www.cites.org/eng.

[261] Resolution Conf. 8.4 (Rev. CoP15) on National Laws for Implementation of the Convention, at https://www.cites.org/sites/default/files/document/E-Res-08-04-R15_0.pdf.

United States, the implementing legislation for CITES is the ESA. CITES parallels the ESA's structure by dividing its listed species into groups according to the estimated risk of extinction. However, rather than differentiating species as threatened or endangered, as done under the ESA, CITES uses three major categories of protected species organized into three appendixes. Species listed under CITES are first identified as needing protection and then assessed for the risk trade poses for the species' survival. Approximately 5,900 species of animals and approximately 32,000 species of plants were listed under CITES as of October 2020.

Appendix I

The most stringent restrictions on trade are for species listed in Appendix I. Appendix I contains species that are threatened with extinction, which are or may be affected by trade. CITES generally prohibits commercial international trade in specimens of these species. Circumstances under which these species can be traded include scientific exchange, breeding, or educational programs. Both an import and an export permit (or reexport certificate) are required for the limited trade allowed for species in Appendix I.[262] For example, all eight species of Pangolin, a small, scaly anteater living in parts of Africa and Asia, are listed in Appendix I. They were listed in 2017 due to declines in their populations. Pangolins are considered one of the most trafficked mammals in the world because of high demand for their scales for use in traditional Chinese medicine and their meat, which is considered a delicacy in several countries.[263]

Appendix II

Appendix II contains species that are not necessarily threatened with extinction but require controlled trade to prevent population declines. Trade in Appendix II species is less restrictive than trade in Appendix I species, and exchange is permitted for commercial purposes if trade will not be detrimental to the species in the wild. Trade of Appendix II species requires only an export permit from the country of origin, unless the importing country has imposed additional requirements, which is allowed under CITES.[264]

Appendix III

Appendix III species are listed because at least one country has requested that other countries assist it in regulating trade of that species. International trade of Appendix III species may require one of the following three documents: (1) export permit, granted for a species coming from the country that listed it; (2) reexport permit, granted for an Appendix III species being exported from a country that previously imported it; or (3) certificate of origin, for Appendix III specimens that are being exported from a country other than the listing country.[265]

[262] A reexport certificate is granted for an Appendix I species being exported from a country that previously imported it. For example, if the United States imported a species from Kenya, where it was listed originally, then exported the species, a reexport permit would be necessary. This also would include items subsequently converted to manufactured goods.

[263] United Nations Office on Drugs and Crime et al., *World Wildlife Crime Report 2020: Trafficking in Protected Species*, May 2020.

[264] Article IV of CITES.

[265] Article V of CITES.

CITES Implementation

In CITES, the signatory parties agreed to regulate trade through a series of import and export permits corresponding to the degree of protection afforded the species.[266] The ESA makes violating CITES a violation of U.S. law if committed within the jurisdiction of the United States.[267] The enforcement of CITES is the responsibility of the party countries.[268] CITES does not provide any enforcement authority. Parties are required to "take appropriate measures" to prohibit trade that violates the treaty, as well as to provide for penalties for violations and the confiscation and, where feasible, return of illegally traded specimens.[269]

Article VIII lists other enforcement activities, including (1) designation of ports of entry and exit for species; (2) care for living specimens; (3) maintenance of detailed records on the import and export of listed species; and (4) preparation of a biennial report on the regulatory measures taken to enforce the treaty's provisions. Party countries also are allowed to adopt stricter domestic measures than provided in the convention.[270] Several countries have done so, including countries within the European Union and the United States through the enactment and implementation of the ESA.

The administration of CITES is handled by the Secretariat, and every two to three years the Parties convene at the Conference of the Parties (COP) to consider proposals for listing and other actions. The Secretariat is housed within the United Nations Environment Programme in Geneva, Switzerland, and is funded by parties through a trust fund. The Secretariat has a broad range of duties, including organizing meetings of the parties, preparing reports on the meetings, and publishing annual status reports. The Secretariat also is responsible for undertaking scientific and technical studies that will contribute toward implementing CITES. At the COP, the parties vote on adopting amendments to Appendixes I and II, review the convention's progress in meeting its goals, and make recommendations for improving CITES. Taking actions on substantive proposals or making major procedural changes usually requires a two-thirds vote by the parties; however, many other decisions are made by consensus.[271]

CITES Scientific and Management Authorities

Under CITES, each signatory agrees to designate one or more scientific authorities and management authorities to assist with implementing and enforcing the treaty's provisions. Pursuant to the ESA, the Secretary of the Interior is designated as the management authority and the scientific authority for CITES in the United States. Under the ESA, these authorities are

[266] Articles III-V of CITES.

[267] ESA §9(c), 16 U.S.C. §1538(c).

[268] Article VIII of CITES.

[269] Article VIII of CITES. The parties to the convention adopted a resolution directing the Secretariat to review national laws to assess implementation of the convention. Resolution Conf. 8.4 (Rev. CoP15) on National Laws for Implementation of the Convention, https://cites.org/eng/res/08/08-04R15.php. This resolution directs the Secretariat to identify parties whose domestic measures do not (1) designate a Management and Scientific Authority (see section on CITES Scientific and Management Authorities below for more information); (2) prohibit trade of species in violation of the Convention; (3) penalize violations; and (4) authorize for the confiscation of species illegally traded or possessed. Parties that do not have sufficient measures to implement CITES can be subject to a temporary suspension of trade of CITES-listed species until adequate measures are enacted, according to the resolution.

[270] Article VII of CITES.

[271] GAO, *Protected Species: International Convention and U.S. Laws Protect Wildlife Differently*, GAO-04-964, September 2004.

delegated to FWS.[272] The functions of scientific authorities are defined in part by CITES and the party. Among other things, scientific authorities are required to do the following:

- Provide scientific advice and recommendations on the application of CITES programs and documents.
- Evaluate the status of CITES-listed species within their countries and assess the status of species listed under CITES.
- Determine whether imports or exports of species listed under CITES will have a harmful effect on their conservation status.
- Recommend whether import restrictions for a species should be proposed because trade may have a negative effect on the species' status in the wild or because the introduction of the species into the country would present an ecological threat to native species.[273]

The Secretary of the Interior is required to base import and export determinations upon "the best available biological information," although population estimates are not required.[274]

The ESA also designated the Secretary of the Interior, again exercised through FWS, as the management authority for the United States under CITES.[275] The management authority must (1) review applications for CITES permits; (2) communicate with the Secretariat on scientific, administrative, and enforcement issues; (3) monitor trade of species listed under CITES and report trade and other issues to the Secretariat; and (4) represent the United States at the Conference of the Parties.[276]

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the ESA

The ESA implements CITES in the United States. The ESA and CITES lists are overlapping but not identical, with many species included in both lists.

Although there are similarities between CITES and the ESA in listing and protecting species, several fundamental differences exist. The ESA and CITES have similar rationales for listing species; namely, that there is a threat to the survival of the species. However, under CITES, this threat is specifically associated with the harvesting of the species or their parts for international trade, although other parameters may be considered. Under the ESA, consideration of the threat to survival is broader and includes factors such as habitat loss, disease, and predation in addition to trade and consumption.

Species listed under both lists do not have equal levels of protection. For example, the Saiga antelope (*Saiga tatarica mongolica*) is listed under Appendix II in CITES and is listed as endangered under the ESA. These listings carry different requirements for importing a trophy. Species that are not prohibited for trade under CITES but are listed as threatened or endangered under the ESA can be imported to the United States if the importer meets the requirements under Section 10 or a Section 4(d) rule (if threatened) of the ESA. For example, Section 10 permits have been issued for the import of endangered giant pandas, cheetahs, and Asian elephants for scientific research but generally not for incidental take.

Species do not receive equivalent protection if they are listed as endangered under the ESA versus being listed in Appendix I of CITES. CITES allows for the trade in endangered species, *if* trade is not detrimental to the species' survival. To receive an import permit, the ESA requires that the import of the endangered species have a net result of enhancing the survival of the species. For example, cheetahs are an Appendix I species under CITES and are listed as endangered under the ESA. Under CITES, some countries have allowed the limited trade of sport-

[272] ESA §8(a), 16 U.S.C. §1537(a).

[273] 50 U.S.C. §23.6.

[274] 16 U.S.C. §1537a(c)(2).

[275] ESA §8A(a), 16 U.S.C. §1537a(a).

[276] 50 U.S.C. §23.6.

hunted cheetahs, because it was shown that this trade would not be a detriment to the population. Under the ESA, however, FWS has not issued permits for importing sport-hunted cheetah trophies, because their take has not been shown to enhance the species' survival in its range country.

However, both the ESA and CITES allow limited take of endangered species in some cases where the objective is scientific research, conservation, or education. The ESA further allows the issuance of permits for *incidental take* during otherwise lawful actions. Many have suggested these fundamental differences between regulation under CITES and under the ESA demonstrate that the ESA is stricter than CITES with regard to species protection.

Sources: Government Accountability Office (GAO), *Protected Species: International Convention and U.S. Laws Protect Wildlife Differently*, GAO-04-964, September 2004; CRS Report RL32751, *The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*, by Pervaze A. Sheikh.

Western Hemisphere Convention

In 1942, the Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (the *Western Hemisphere Convention*) entered into force.[277] The convention is a multilateral treaty that addresses trade and migratory bird protection, as well as protection of at-risk species and preservation of natural landscapes.[278] Twenty-two countries in the Western Hemisphere, including the United States, are signatories to the convention. The ESA implements the convention and directs the Secretary to cooperate with the Secretary of State and other Secretaries, as appropriate, in its implementation.[279]

Through the Western Hemisphere Convention, the United States aims to establish various categories of nature reserves, regulate international wildlife trade with other signatories, and protect wildlife. The treaty does not have monitoring requirements and requires no actions by parties, and the parties do not meet. To some extent, the Western Hemisphere Convention's goals have been subsumed under those of the ESA and other international treaties, particularly with respect to wildlife conservation.

Appropriations for the ESA

Although the ESA states that "all Federal departments and agencies shall seek to conserve endangered species and threatened species,"[280] the ESA, as noted, is primarily administered by two agencies: FWS and NMFS. As such, these agencies receive the majority of funding appropriated to administer the ESA, though other agencies also may receive funding for ESA-related activities.

Not all funding for the ESA is specified as individual line items within the appropriations for FWS or NMFS, which can make it difficult to ascertain the exact amount of funding directed to implementing the ESA. Although the authorization for funding under the ESA expired on October

[277] 56 Stat. 1354; Treaty Series 981. The treaty is located at https://www.fws.gov/migratorybirds/pdf/Treaties-Legislation/Treay-WesternHemisphere.pdf.

[278] 56 Stat. 1354; Treaty Series 981.

[279] ESA §8A(c); 16 U.S.C. §1537a(e).

[280] 16 U.S.C. §1531(c).

1, 1992,[281] Congress has appropriated funds in each succeeding fiscal year. ESA prohibitions and penalties remain in effect regardless of the status of authorization of appropriations.[282]

U.S. Fish and Wildlife Service

FWS is the primary agency administering the ESA for terrestrial, freshwater, and catadromous species. According to FWS, the agency undertakes ESA activities related to the following:

- Candidate conservation
- Consultations
- Grant making
- Habitat conservation plans
- International activities
- Listing and critical habitat
- Recovery
- Work with tribes[283]

FWS generally receives annual discretionary appropriations through the Interior, Environment, and Related Agencies appropriations law for each fiscal year. The funding for FWS's ESA-related activities generally is provided in two accounts: the Resource Management appropriations account and the Cooperative Endangered Species Conservation Fund (CESCF) appropriations account (see **Table 4**). Within the Resource Management account, ESA-related funding is provided under the Ecological Services activity, which addresses four sub-activities: listing, planning and consultation, conservation and restoration, and recovery.[284]

Table 4. Enacted FWS Discretionary Appropriations for ESA-Related Activities, FY2016-FY2021

(in thousands of nominal dollars)

Fiscal Year	Ecological Services Activity Within Resource Management Appropriations Account	CESCF Appropriations Account
FY2016	$234,006	$53,495
FY2017	$240,022	$53,495
FY2018	$247,825	$53,495
FY2019	$251,825	$45,995
FY2020	$266,012	$35,731
FY2021	$269,666	$30,840

Sources: CRS. Compiled from FY2016-FY2021 appropriations legislation and related reports.

[281] ESA §15, 16 U.S.C. §1542. Under this section, authorizations for appropriations for the ESA are provided to DOI, the Department of Commerce, and the Department of Agriculture.

[282] Because the authorization for appropriations expired in FY1992, it is sometimes said that the ESA is not authorized. However, that does not mean that the agencies lack authority to conduct actions or that prohibitions within the act are no longer enforceable; those statutory provisions would continue to be law even if no money were appropriated.

[283] For more information, see FWS, "Endangered Species: Overview," at https://www.fws.gov/endangered/about/index.html.

[284] This organization of sub-activities began in FY2016 and continues today.

Notes: For the Ecological Services Activity, funding levels for appropriations for the entire activity are provided. The amounts listed under the Cooperative Endangered Species Conservation Fund (CESCF) account include funding provided through the discretionary appropriations process and any rescissions stipulated in those appropriations laws.

National Marine Fisheries Service

NMFS is the primary agency implementing the ESA for most marine and anadromous species. According to NMFS, the agency's ESA-related activities include but are not limited to the following:

- Listing species under the ESA and designating critical habitat
- Developing protective regulations
- Developing and implementing recovery plans
- Monitoring and evaluating the status of listed species
- Providing grants to states and tribes for species conservation
- Consulting on federal actions that may affect a listed species or its designated critical habitat
- Entering bilateral and multilateral agreements with other nations to encourage conservation
- Issuing permits that authorize scientific research to learn more about listed species or activities that enhance the propagation or survival of listed species[285]

NMFS generally receives discretionary appropriations in annual Commerce, Justice, Science, and Related Agencies appropriations laws. NMFS's funding for ESA activities generally is included in two discretionary accounts within the appropriations for the National Oceanic and Atmospheric Administration: Operations, Research, and Facilities (ORF) and the Pacific Coastal Salmon Recovery Fund (PCSRF) (see **Table 5**). Within ORF, appropriations for ESA activities may be included within multiple appropriations line items in the Protected Resources Science and Management activity and the Enforcement activity, both of which may include non-ESA-related funding, as well. The PCSRF supports West Coast Pacific salmon recovery efforts by providing grants to the states of Washington, Oregon, Idaho, Nevada, California, and Alaska and to federally recognized tribes of the Columbia River and Pacific Coast.[286] Grants are used for the conservation of salmon and steelhead trout populations that are listed or at risk of being listed as threatened or endangered.

Table 5. NMFS ESA Funding for FY2016-FY2021

(in thousands of nominal dollars)

Fiscal Year	Estimated ESA Appropriations	PCSRF
FY2016	$142,459	$65,000
FY2017	$146,160	$65,000
FY2018	$148,727	$65,000
FY2019	$153,495	$65,000

[285] For more information, see NMFS, "Endangered Species Conservation," at https://www.fisheries.noaa.gov/topic/endangered-species-conservation.

[286] 16 U.S.C. §3645(d)(2).

Fiscal Year	Estimated ESA Appropriations	PCSRF
FY2020	$156,811	$65,000
FY2021	Not available[a]	$65,000

Sources: CRS. Data compiled from NOAA Budget Office, email to CRS, May 14, 2020, and relevant Commerce and Justice, Science, and Related Agencies Appropriations bills and reports.

Note: The Pacific Coastal Salmon Recovery Fund (PCSRF) is an appropriations account and is specified in the annual appropriations legislation.

a. CRS did not have access to this data at the time of publication.

Concluding Remarks

The ESA and its predecessors have been in place since 1966. Since enactment, these acts have led to the listing of more than 2,400 species as threatened or endangered, including species in the United States and U.S. territories and in foreign countries.[287] As of October 2020, 2,361 species were listed, the majority of which (71%) were listed in the United States (the remaining 29% were foreign species).[288] Of the total, 79% were listed as endangered and 21% were listed as threatened. (See **Figure 1**.)

As of October 2020, 91 species have been delisted under the ESA since it was enacted in 1973, which is approximately 3.7% of the total number of species ever listed under the act. FWS provided several justifications for delisting, as follows:

- Approximately 65% delisted due to recovery
- Approximately 15% delisted due to new information, changes in the law, or improved scientific understanding of the species
- Approximately 12% deemed extinct and delisted
- Approximately 8% delisted due to scientific reclassification of the species[289]

Delisting a species took 25.4 years on average, though the time required ranged from 3.6 years to 52.9 years. When considering only those 59 species delisted solely due to recovery, delisting a species took an average of 30.6 years and ranged from 8.2 years to 52.9 years. In addition, of the currently listed species, 53 listed species have been reclassified from either endangered to threatened (downlisted; 43 species) or from threatened to endangered (uplisted; 10 species).[290]

A long-standing question is whether the ESA effectively achieves its purposes as outlined in the act. Various stakeholders have offered different interpretations on this issue. Some have offered as evidence of the act's success the very low rate of extinction for those species listed under the

[287] This number is based on the sum of currently listed species and those species that have been delisted. See FWS, Environmental Conservation Online System, "Listed Species Summary (Boxscore)," as of October 23, 2020, at https://ecos.fws.gov/ecp/report/boxscore. This number does not account for those species listed due to "similarity of appearance" and includes some species that are counted more than once due to multiple listings for the same species (e.g., those species with multiple listed distinct population segments). Also see FWS, Environmental Conservation Online System, "Delisted Species," at https://ecos.fws.gov/ecp/report/species-delisted. This list may not include species that have been delisted since the list was last updated.

[288] FWS, Environmental Conservation Online System, "Listed Species Summary (Boxscore)," as of October 2020, at https://ecos.fws.gov/ecp/report/boxscore.

[289] FWS, Environmental Conservation Online System, "Reclassified Species," as of October 2020, at https://ecos.fws.gov/ecp/report/boxscore. Hereinafter cited as FWS, "Reclassified Species."

[290] FWS, "Reclassified Species."

ESA.[291] Stakeholders routinely have supported this position by stating that since the ESA's enactment, less than 1% of listed species have become extinct (11 species have been delisted due to extinction, according to FWS) or, conversely, that over 99% of listed species have successfully been conserved. Other stakeholders have suggested the ESA has been ineffective at conservation,[292] positing that recovery is an integral component of success as presumed by the definition of conservation included in the act—"to bring any endangered or threatened species to the point at which the measures provided in [the ESA] are no longer necessary."[293] To support this position, they highlight that only a small number of species have been delisted due to recovery (59 species, according to FWS). FWS has recognized both of the above stakeholder positions in defining success under the ESA, while acknowledging that the ESA is "also seen as one of the most controversial" laws.[294]

In addition to addressing whether the ESA has been successful at conserving species, various stakeholders have raised numerous other issues related to the act, including the following:

- The ESA's effects on private property and landowners[295]
- The ability to conserve species before it is necessary to list them[296]
- The cost of listing species and the resulting economic impacts[297]
- The availability of funding for the ESA[298]
- Incentives for conservation under the ESA[299]
- States' role in conserving listed species
- Delays in listing, delisting, and reclassification of species under the ESA[300]
- Litigation related to the ESA

[291] For example, see Center for Biological Diversity, "The Endangered Species Act: A Wild Success," at https://www.biologicaldiversity.org/campaigns/esa_wild_success/.

[292] For example, see Competitive Enterprise Institute, "Four Reasons the Endangered Species Act Desperately Needs Reform," August 8, 2018, at https://cei.org/blog/four-reasons-endangered-species-act-desperately-needs-reform.

[293] 16 U.S.C. §1532(3).

[294] FWS, Endangered Species, "Defining Success Under the Endangered Species Act," at https://www.fws.gov/endangered/news/episodes/bu-04-2013/coverstory/index.html.

[295] For example, see Jonathan Wood, Property and Environment Research Center, "Endangered Species Depend on Private Land, So Why Treat Landowners as the Enemy?," August 6, 2017, at https://www.perc.org/2017/08/06/endangered-species-depend-on-private-land-so-why-treat-landowners-as-the-enemy/.

[296] For example, see David Festa, Environmental Defense Fund, "Trump's ESA Overhaul Won't Give Americans What They Want. Here's What Will," July 26, 2018, at http://blogs.edf.org/growingreturns/2018/07/26/trump-endangered-species-act-overhaul-reform/.

[297] For example, Robert Gordon, Competitive Enterprise Institute, "'Whatever the Cost' of the Endangered Species Act, It's Huge," August 21, 2018, at https://cei.org/content/whatever-cost-endangered-species-act-its-huge.

[298] For example, Stephanie Kurose, "Fund Endangered Species Act, It's Saved 99 Percent of Wildlife on the Brink," *Hill*, May 23, 2019, at https://thehill.com/opinion/energy-environment/445309-fund-endangered-species-act-its-saved-99-percent-of-wildlife-on.

[299] For example, American Farm Bureau Federation, "The Endangered Species Act," at https://www.fb.org/issues/regulatory-reform/the-endangered-species-act/https://www.fb.org/issues/regulatory-reform/the-endangered-species-act/.

[300] For example, Emily E. Puckett, Dylan C. Kesler, and D. Noah Greenwald, "Taxa, Petitioning Agency, and Lawsuits Affect Time Spent Awaiting Listing Under the US Endangered Species Act," *Biological Conservation*, vol. 201 (2016), pp. 220-229. Also, Holly Doremus and Joel E. Pagel. "Why Listing May Be Forever: Perspectives on Delisting Under the U.S. Endangered Species Act," *Conservation Biology*, vol. 15, no. 5 (2001), pp. 1258-1268.

Given the perennial nature of these issues and the controversial nature of the ESA, these issues are routinely of concern to Members of Congress.

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