CRS Report for Congress

The Endangered Species Act (ESA) in the 110th Congress: Conflicting Values and Difficult Choices

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Prepared for Members and Committees of Congress

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Summary

The 110th Congress is likely to oversee implementation and funding of the Endangered Species Act (ESA; P.L. 93-205, 16 U.S.C. §§1531-1543) and to consider proposals to amend the act. Major issues in recent years have included the role of science in decision-making, critical habitat (CH) designation and procedures, protection by and incentives for property owners, and appropriate protection of listed species, among others. In addition, many have advocated enacting as law some ESA regulations promulgated during the Clinton Administration.

ESA has been one of the more contentious environmental laws. This may stem from its strict substantive provisions, which can affect the use of both federal and nonfederal lands and resources. Under ESA, species of plants and animals (both vertebrate and invertebrate) can be listed as *endangered* or *threatened* according to assessments of their risk of extinction. Once a species is listed, powerful legal tools are available to aid its recovery and protect its habitat. ESA may also be controversial because dwindling species are usually harbingers of broader ecosystem decline: the most common cause of species listing is habitat loss.

The authorization for spending under ESA expired on October 1, 1992. The prohibitions and requirements of ESA remain in force, even in the absence of an authorization, and funds have been appropriated to implement the administrative provisions of ESA in each subsequent fiscal year. In the 109th Congress, several proposals would have reauthorized and extensively amended ESA, but none were enacted. Proponents of modifying ESA argued that their proposed changes would have made ESA more effective by redefining the relationship between private and public property uses and species protection, implementing new incentives for species conservation, and removing what some see as undue land use restrictions. However, critics argued that the proposed changes would have created gaps in the ESA safety net of protections and prohibitions.

This report will identify and discuss oversight issues and legislation introduced in the 110th Congress to address specific concerns related to how ESA is implemented and how endangered species are managed, and will be updated periodically to reflect legislative action.

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Increasing numbers of animal and plant species face possible extinction. Endangered and threatened species — and the law that protects them, the 1973 Endangered Species Act (ESA, 16 U.S.C. §§1531, et seq.) — are controversial, in part, because dwindling species are often harbingers of resource scarcity. The most common cause of species' decline is habitat loss or alteration. Habitat loss occurs due to development, changes in land management practices, competition from invasive species, and other factors, nearly all related to economic, political, or social interests. ESA has been among the most contentious environmental laws, because of its strict substantive provisions, which can affect the use of both federal and nonfederal lands and resources. Congress faces the issue of how to balance these interests (which may fall on various sides of any given species controversy) with the protection of endangered and threatened species and, as stated in ESA, "the ecosystems upon which endangered species and threatened species depend." Because of strong support and strong opposition to the ESA, comprehensive endangered species legislation has not been reauthorized since the last ESA authorization expired in 1992. Instead, congressional efforts have focused on addressing some controversial features of ESA. There were several attempts to enact comprehensive legislation that would have reauthorized the ESA in the 109th Congress. These attempts are less likely in the 110th Congress. Congress may shift to considering issues for oversight such as the science used for making decisions and designation of critical habitat. Further, Congress may also address issues related to the implementation and funding of the ESA.

Background and Analysis

Overview

The 1973 ESA (P.L. 93-205, as amended; 16 U.S.C. §§1531-1543) was a comprehensive attempt to protect species at risk of extinction and to consider habitat protection as an integral part of that effort. A stated purpose of ESA is to protect the ecosystems of which listed species are a part. Under ESA, species of plants and animals (both vertebrate and invertebrate) may be listed as either *endangered* or *threatened* according to assessments of the risk of their extinction. More flexible management can be provided for species listed as threatened. Distinct population segments of vertebrate species may also be listed as threatened or endangered. Consequently, some populations of chinook, coho, chum, and sockeye salmon in Washington, Oregon, Idaho, and California have been listed under ESA, even as other healthy populations of these same species in Alaska are not listed and may be

commercially harvested. More limited protection is available for plant species under ESA. Once a species is listed, powerful legal tools, including penalties and citizen suits, are available to aid species recovery and protect habitat. Use of these tools, or the failure to use them, has led to conflict.¹

ESA is administered by the Department of the Interior's Fish and Wildlife Service (FWS) for terrestrial and freshwater species and some marine mammals, and by the National Marine Fisheries Service (NMFS; also popularly referred to as NOAA Fisheries) in the Department of Commerce's National Oceanic and Atmospheric Administration for the remaining marine and anadromous species.² The U.S. Geological Survey's Biological Resources Division conducts research on species for which FWS has management authority; NMFS conducts research on the species for which it is responsible.

Currently, a total of 1,132 species of animals and 747 species of plants are listed as either endangered or threatened, of which the majority (567 species of animals and 744 species of plants) occur in the United States and its territories and the remainder only in other countries. Of the 1,311 U.S. species, 1,081 are covered in recovery plans.³ Of the U.S. species, 479 (37%) have designated critical habitat (CH) in some portion of their range.⁴

At times, efforts to protect and recover listed species are controversial; declining species often function like the proverbial canary in the coal mine, by flagging larger issues of resource scarcity and altered ecosystems. Past resource debates in which ESA-listed species were part of larger issues include Tennessee's Tellico Dam (water storage and construction jobs versus farmland protection and tribal graves, as well as snail darters); Pacific Northwest timber harvest (protection of logging jobs and communities versus commercial and sport fishing, recreation, and ecosystem protection, including salmon and spotted owls); and Texas's Edwards Aquifer (allocation of water among various users with differing short- and long-term interests, as well as several spring-dependent species).

Major Provisions of Domestic Law

Listing. Species may be listed on the initiative of the appropriate Secretary or by petition from an individual, group, or state agency. The Secretary must decide whether to list the species based only on the best available scientific and commercial information, after an extensive series of procedural steps to ensure public

¹ For additional background, see CRS Report RL31654, *The Endangered Species Act: A Primer*, by M. Lynne Corn, Eugene H. Buck, and Pamela Baldwin.

² For background on ESA programs of the two administering agencies, see FWS programs at [http://www.fws.gov/endangered/] and NMFS programs at [http://www.nmfs.noaa.gov/pr/species/].

³ Daily updated statistics are available at [http://ecos.fws.gov/tess_public/Boxscore.do].

⁴ A list of species with designated CH is available at [http://ecos.fws.gov/tess_public/CriticalHabitat.do?listings=0&nmfs=1].

participation and the collection of scientific information.⁵ In deciding whether a species warrants the protections of ESA, the Secretary *may not* take into account the economic effects that listing may have; economic and other considerations are taken into account in structuring alternatives for assisting the species after listing.⁶

In addition, FWS and NMFS may identify selected species by adding them to a list of *candidate species* that are believed to be at sufficient risk to warrant protection, but whose protection is precluded by work to protect listed species. Currently, there are 278 species on the list of candidate species.⁷

Critical Habitat. With certain exceptions, if a species is listed, the Secretary must designate critical habitat (CH) in areas where the species is currently found or which might provide additional habitat for the species' recovery. However, if the publication of this information is not prudent (e.g., might encourage vandals or collectors), the Secretary may decide not to designate CH. The Secretary may postpone designation for up to one year after listing, if the information is not determinable (16 U.S.C. §1533). Currently, FWS has designated CH for 37% of listed domestic species.

As a practical matter, CH has not been designated for most listed species largely because FWS prefers to allocate its limited resources to listing new species, based on its regulation (50 C.F.R. §402.02) that takes away much of the legal value of designating CH to the recovery of the species. Yet FWS consistently loses legal challenges for failure to designate CH, and several courts have found the regulation in question to be an erroneous interpretation of the law, because it does not take into account the duty to avoid adverse modification of CH.⁹ Others have asserted the value of CH; for example, scientists with the Center for Biological Diversity published a study in April 2005 concluding that CH designation enhances species recovery.¹⁰ On April 28, 2006, the Keystone Center's ESA Working Group on Habitat released a report on habitat protection and ESA.¹¹ One of the conclusions of participants in this study was that identifying the habitat that species require to

⁵ For a more detailed discussion of the listing process, see [http://www.fws.gov/endangered/listing.pdf] and [http://www.fws.gov/endangered/esb/99/11-12/6-9.pdf].

⁶ For an analysis of when and how ESA allows consideration of economic factors, see CRS Report RL30792, *The Endangered Species Act: Consideration of Economic Factors*, by Pamela Baldwin.

⁷ The list of candidate species is available at [http://ecos.fws.gov/tess_public/Species Report.do?listingType=C].

⁸ For additional background on CH, see CRS Report RS20263, *Designation of Critical Habitat under the Endangered Species Act (ESA)*, by Pamela Baldwin.

⁹ Sierra Club v. United States Fish and Wildlife Service, 245 F. 3d 434 (5th Cir. 2001), cited with approval in New Mexico Cattle Growers Ass'n v. FWS, 248 F. 3d 1277 (10th Cir. 2001); Gifford Pinchot Task Force v. USFWS, 2004 U.S. App. LEXIS 16215 (9th Cir. August 6, 2004).

¹⁰ See [http://www.biologicaldiversity.org/swcbd/programs/policy/ch/bioscience2005.pdf].

 $^{^{11}}$ Available at [http://www.keystone.org/spp/documents/ESA% 20Report% 20FINAL% 204% 2025% 2006% 20(2).pdf].

recover is better done in the context of recovery planning, after more rigorous analysis and deliberation have been completed, rather than at the time of listing. Although recovery plans are not enforceable, preventing adverse modification of CH is enforceable.

CH is frequently misunderstood by the public as posing a significant direct restriction on private landowners' authority to manage land. While a landowner may experience some additional procedures and possible restrictions on land management because of the presence of an ESA-listed species (through ESA's prohibitions on taking a listed species), and the presence of CH may shed light on whether "harm" has occurred, the duty to avoid adverse modification of CH is an express obligation only for federal agencies and actions, or private (nonfederal) actors in actions with a federal nexus (i.e., actions that involve any federal funding, permit, or license).

Prohibitions and Penalties. ESA contains prohibitions on the "take" of endangered species; *take* means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct" (16 U.S.C. §1532; *harassment* and *harm* are further defined in regulation at 50 C.F.R. §17.3). There has been controversy over the extent to which habitat modification is prohibited. A 1995 Supreme Court decision held that including significant habitat modification was a reasonable interpretation of the term "harm" in ESA. ¹² ESA provides civil and criminal penalties for violations.

Permits and Consultation. Proposed actions that may have adverse impacts on listed species may be permitted in two ways. First, under §7 of ESA, if federal agency actions (or actions of a nonfederal party that require an agency's approval, permit, or funding) may affect a listed species, the federal agency must ensure that those actions are "not likely to jeopardize the continued existence" of any endangered or threatened species, nor to destroy or adversely modify CH. To review the possible effects of their actions on listed species and CH, federal agencies must consult with the appropriate Secretary. If the Secretary finds that an action would jeopardize a listed species or destroy or adversely modify CH, the Secretary must suggest reasonable and prudent alternatives that would avoid these harms. Pending completion of the consultation process, agencies may not make irretrievable commitments of resources that would foreclose any alternatives. The Secretary issues a written statement, called a biological opinion, that may allow the agency or the applicant to take individuals of a species incidental to otherwise lawful activities without triggering ESA's penalties, subject to terms and conditions specified in the opinion (16 U.S.C. §1536), or may conclude that jeopardy cannot be avoided, in which case the agency may seek an exemption for the action from the Endangered Species Committee.

For actions without a federal nexus (i.e., no federal funding, permit, or license), the appropriate Secretary may issue permits under §10 of ESA to allow the *incidental*

¹² See CRS Report 95-778, *Habitat Modification and the Endangered Species Act: The Sweet Home Decision*, by Pamela Baldwin.

take of species during otherwise lawful actions.¹³ An applicant for a permit must submit a habitat conservation plan (HCP) that shows the likely impact of the planned action; steps taken to minimize and mitigate the impact; funding for the mitigation; alternatives considered and rejected; and any other measures that the Secretary may require. The use of this section has been vastly expanded, and streamlined procedures are provided for activities with minimal impacts (50 C.F.R. §17.22).

Exemptions. Proponents of a federal action may apply for an exemption from the prohibition against jeopardy for that action (not for a species). Under ESA, an Endangered Species Committee (commonly called the "God Squad") decides whether to allow a project to proceed despite likely harm to a species. To date, this process has been little used and only one exemption (Grayrocks Dam, WY) has been granted and carried out. The committee is required to accept the President's determination (under specified circumstances) on an exemption in declared disaster The committee must grant an exemption if the Secretary of Defense determines that an exemption is necessary for national security (16 U.S.C. §1536). The Department of Defense (DOD) has claimed that requirements under ESA conflict with its readiness activities, but DOD has not requested any exemptions to date. Other statutes may provide for waivers of ESA provisions; for example, §102(c) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (Division C of P.L. 104-208) provides for a waiver of ESA (and NEPA) to the extent the Attorney General determines is necessary to ensure expeditious construction of barriers and roads at borders.

Emergencies. 50 C.F.R. §402.05 provides for ESA procedures in case of emergencies, basically requiring only very informal consultations during an emergency with more complete consultation after the emergency has passed. According to FWS, any hurricane-related federal activities in presidentially declared disaster areas would trigger the emergency consultation provisions of ESA. Specifically, for the 2005 Gulf of Mexico hurricanes, FWS stated that restoring "any infrastructure damaged or lost due to the hurricane back into the original footprint does not require ESA consultation with the Service."

Recovery Plans. The appropriate Secretary generally must develop a recovery plan for the survival and conservation (defined in §3(3) of ESA as "to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary" — i.e., recovery) of a listed species. These plans are not binding on federal agencies or others, but rather serve as guidelines. At first, recovery plans tended to cover popular species, like birds or mammals, but a 1988 amendment forbade the Secretary from favoring particular taxonomic groups (16 U.S.C. §1533).

Land Acquisition and Cooperation. The federal government may acquire land to conserve or recover listed species, and ESA authorizes money from the Land and Water Conservation Fund for land acquisition (16 U.S.C. §1534). The appropriate Secretary must cooperate with the states in conserving protected species

¹³ For additional background on FWS's permitting program, see [http://www.fws.gov/endangered/permits/permits.pdf].

and must enter into cooperative agreements to assist states in their endangered species programs, if the programs meet certain specified standards. If there is a cooperative agreement, the states may receive federal funds to implement the program, but must normally provide a minimum 25% match. Under the 1988 amendments, the Cooperative Endangered Species Conservation Fund was authorized to provide state grants. While regular annual deposits to this fund are set by a formula (16 U.S.C. §1535(i)(1)), spending from the fund requires annual appropriation.

Miscellaneous. Other provisions specify exemptions for certain captive raptors and their progeny, regulate subsistence activities by Alaskan Natives, prohibit interstate transport and sale of listed species and parts, control trade in parts or products of endangered species owned before ESA went into effect, and specify rules for establishing experimental populations (16 U.S.C. §1539).

Major Provisions of International Law

ESA is the domestic implementing legislation for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES; TIAS 8249), signed by the United States on March 3, 1973; and the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (the Western Hemisphere Convention; 50 Stat. 1354; TS 981), signed by the United States on October 12, 1940. CITES parallels ESA by dividing its listed species into groups, according to the estimated risk of extinction, but uses three major categories (called Appendices), rather than two. ¹⁴ In contrast to ESA, CITES classifies species based solely on the risk that *trade* poses to their survival. ESA makes violations of CITES violations of U.S. law if committed within U.S. jurisdiction (16 U.S.C. §1538). ESA also regulates import and export of controlled products and provides some exceptions. ¹⁵

On August 18, 2003, FWS published a draft policy for enhancement-of-survival permits for foreign species listed under ESA.¹⁶ These permits would allow imports of endangered species into the United States for scientific research and for enhancing survival of the species in their range country (i.e., the country where the population of the species in question naturally exists). The comment period on this draft policy has closed, but FWS has not yet published its final policy.¹⁷

In addition, FWS's Multinational Species Conservation Fund (MSCF) benefits tigers, the six species of rhinoceroses, Asian and African elephants, marine turtles, and great apes (gorillas, chimpanzees, bonobos, orangutans, and the various species

¹⁴ For additional information on CITES, see [http://www.cites.org/].

¹⁵ For more information on CITES, see CRS Report RL32751, *The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Background and Issues*, by Pervaze A. Sheikh and M. Lynne Corn.

¹⁶ 68 Fed. Reg. 49512.

¹⁷ For additional information, see CRS Report RS22420, *Enhancement-of-Survival Permits: Background and Status of Proposed Policy*, by Pervaze A. Sheikh.

of gibbons). This fund supports conservation efforts benefitting these species, often in conjunction with efforts under CITES.¹⁸

Is Species Protection and Restoration Working?

The answer to this question depends on what is measured. Since a major goal of ESA is the recovery of species to the point at which ESA protection is no longer necessary, this seems a good starting point. Since ESA was enacted in 1973, 40 U.S. and foreign species have been delisted. The reasons cited by FWS are (a) recovery (17 species); (b) extinction (9 species, but some may have been extinct when listed); (c) new understanding of the taxonomy of the species, making some ineligible for listing under current law (7 species); and (d) new information, including a determination that erroneous data were provided to FWS at the time of listing (7 species). Recovered species include alligators, peregrine falcons (two subspecies), and three species of kangaroos. Extinct species include the dusky seaside sparrow, Guam broadbill (a bird), and two small fish living in desert springs. However, it can be quite difficult to prove whether extraordinarily rare species are simply that or, in fact, are already extinct. For example, the ivory-billed woodpecker, thought by many to be extinct, was believed to have been rediscovered in a remote area of Arkansas a few years ago; it might just as easily have quietly gone extinct without being rediscovered. Rare species are, by definition, hard to find.

Some have asserted that ESA is a failure since only 17 species have been delisted as recovered. Others note that full recoveries are relatively few because the two principal causes of extinction — habitat loss and invasive non-native species — continue to increase. In addition, some scientific studies have demonstrated that most species are listed only after they become very depleted (e.g., median population of 407 animals for endangered vertebrates, according to one study), thereby making recovery difficult. Another measure of "success" might be the number of species that have stabilized or increased their populations, even if the species are not actually delisted. If this standard is used, ESA could be considered a success, since a large number (41%, according to one study) of listed species have improved or stabilized their population levels after listing. Other species (e.g., red wolves and California condors) might not exist at all without ESA protection, and this too might be considered a measure of success, although these species are still rare.

On May 17, 2005, the House Committee on Resources released an oversight report entitled *Implementation of the Endangered Species Act of 1973*.²¹ It reviewed and critiqued various ways that recovery might be measured. One approach is to look at what proportion of the recovery objectives identified in species recovery plans

¹⁸ For more information on the MSCF, see CRS Report RS21157, *Multinational Species Conservation Fund*, by Pervaze A. Sheikh and M. Lynne Corn.

¹⁹ Delisted species are identified at [http://ecos.fws.gov/tess_public/DelistingReport.do].

²⁰ See archived CRS Report 98-32, *Endangered Species Act List Revisions: A Summary of Delisting and Downlisting*, by Robert J. Noecker, available from [lcorn@crs.loc.gov].

²¹ Available at [http://resourcescommittee.house.gov/issues/more/esa/ESA_Implementation_ Report5.17.05.pdf].

have been achieved. **Table 1** indicates how recovery has progressed related to the length of time since species were listed.

Table 1. Percent Recovery Achieved Versus Time Listed (data as of September 30, 2002)

Recovery Plan objectives	% species listed 5 years or less	% species listed 6-10 years	% species listed 11+ years
0%-25% recovery achieved	96	94	64
26%-50% recovery achieved	4	5.5	24
51%-75% recovery 0 achieved		0.25	9
76%-100% recovery achieved	0	0.25	3

Source: FWS, Recovery Report to Congress: Fiscal Years 2001-2002, p. 13.

In a recent report, the Government Accountability Office (GAO) examined federal efforts to recover a selected sample of 31 species.²² GAO determined that, while many factors affected the recovery of species, recovery plans played an important role in the recovery of all but one of the species examined. Critics claimed the GAO study was biased by the selection of species examined.

Issues in the 110th Congress

ESA reauthorization has been on the legislative agenda since the funding authorization expired in 1992, and bills have been introduced in each subsequent Congress to address various aspects of endangered species protection. Issues for the 110th Congress may include effects of ESA on private and federal land use, how to better promote species recovery, agency use of scientific information, specific regional resource conflicts, and other matters. Below are descriptions of some of the issues that may be considered, either in oversight or legislation.

Critical Habitat Designation

With limited exceptions, FWS or NMFS must designate CH at the time a species is listed. However, some critics argue that CH designation places undue burdens on landowners or that it has little conservation benefit. Others argue (and

²² U.S. Government Accountability Office, *Endangered Species: Many Factors Affect the Length of Time to Recover Select Species*, GAO-06-730 (Washington, DC: GPO, Sept. 8, 2006). In this report, GAO acknowledged that results from nonprobability (i.e., nonrandom) samples cannot be used to make inferences about a population (i.e., all ESA-listed species). However, review of the selected species provides valuable, case-level insights into their progress toward recovery and the role that recovery plans have played in that progress.

the courts have largely agreed) that FWS and NMFS have misinterpreted and failed to enforce the current statute. There are also disagreements over the value and timing of CH designation. (See "Critical Habitat," above, and "ESA Listing Caps, New and Old," below.) For details on how legislation in the 109th Congress sought to address this issue, see CRS Report RL33468, *The Endangered Species Act (ESA) in the 109th Congress: Conflicting Values and Difficult Choices*, by Eugene H. Buck, M. Lynne Corn, Pervaze A. Sheikh, and Robert Meltz.

"Sound Science" and ESA

ESA requires that determinations of species status be made "solely on the basis of the best scientific and commercial data available ..." In several recent situations, legal, economic, and social disputes have resulted from actions under ESA. Examples of these controversies include the Canada lynx, Florida panthers, and Klamath River Basin suckers and coho salmon. Critics in some of these disputes suggest that the science supporting ESA action has been insufficiently rigorous or mishandled by the agencies.

Many rare and endangered species are little studied because they are hard to find or because it is difficult to locate enough of them to support scientific research. There may be little information on many species facing extinction, and only limited personnel or funds available to conduct studies on many of the less charismatic species, or those of little known economic import. What should be done in such instances? Some suggest that considerations other than species conservation should prevail; others seek to change the current posture of the law by changing the role of science. These considerations are complicated by the costs and time required to acquire more complete data, particularly in connection with many lesser-known species.

ESA does not elaborate on this question, but some assert that, given the protective purpose of ESA — to save and recover species — and the wording of "best ... data available," arguably dwindling species are to be given the benefit of the doubt and a margin of safety. This is the position taken on page 1-7 of the joint FWS/NMFS Endangered Species Consultation Handbook, which states that efforts should be made to develop information, but if a biological opinion must be rendered promptly, it should be based on the available information, "giving the benefit of the doubt to the species," with consultation possibly being reinitiated if additional information becomes available. This phrase is drawn from H.Rept. 96-697, p. 12 (1979), which states that the "best information available" language was intended to allow FWS to issue biological opinions even when information was incomplete, rather than being forced to issue negative opinions. The report also states that if a biological opinion is rendered on the basis of inadequate information, the federal agency proposing an action has the duty to show its actions will not jeopardize a

²³ 16 U.S.C. 1533(b)(1)(A).

²⁴ See CRS Report RL32992, *The Endangered Species Act and "Sound Science*," by Eugene H. Buck, et al.

²⁵ Available at [http://www.nmfs.noaa.gov/pr/pdfs/laws/esa_section7_handbook.pdf].

species and a continuing obligation to make a reasonable effort to develop information, and that the statutory language "continues to give the benefit of the doubt to the species."

Information Quality. Section 515 of P.L. 106-554, known as the Information Quality Act or the Data Quality Act, directs the Office of Management and Budget (OMB) to issue government-wide guidelines to federal agencies to ensure and maximize the quality, objectivity, utility, and integrity of information disseminated by federal agencies. OMB published final guidelines on February 22, 2002. The Department of the Interior and FWS have both issued additional guidelines that are available through their websites, and a process is established for interested persons to seek correction of information. Even before these latest guidelines, FWS had promulgated guidance on information quality and peer review procedures — issues that also have been addressed in recent legislation.

FWS and NMFS developed an Interagency Cooperative Policy on Information Standards Under the Endangered Species Act.²⁸ Under this policy, FWS and NMFS are to receive and use information from a wide variety of sources, including from individuals. Submitted information may range from the informal — oral, traditional, or anecdotal — to peer-reviewed scientific studies, and hence the reliability of the information can vary widely. Agency biologists are to review and evaluate all information impartially for purposes of listing, CH designation, consultation, recovery, and permitting actions, and to ensure that any information used by the agencies to implement ESA is "reliable, credible, and represents the best scientific and commercial data available." Agency biologists are to document their evaluations of all information and, to the extent consistent with the use of the best scientific and commercial data available, use primary and original sources of information as the basis for recommendations. In addition, agency managers are to review the work of FWS and NMFS biologists to "verify and assure the quality of the science used to establish official positions, decisions, and actions..."

Additionally, a companion document, the Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities, ²⁹ notes that, in addition to the public comments received on proposed listing rules and draft recovery plans, the Services are also to formally solicit expert opinions and peer review to ensure the best biological and commercial information. For listing decisions, the agencies are to solicit the expert opinions of three specialists and summarize these in the record of final decision. Special independent peer review can also be used when it is likely to reduce or resolve an unacceptable level of scientific uncertainty.

²⁶ 67 Fed. Reg. 8452.

²⁷ For example, see [http://www.fws.gov/stand/standards/process_WWW.html].

²⁸ 59 Fed. Reg. 34271, July 1, 1994.

²⁹ 59 Fed. Reg. 34270, July 1, 1994.

Court Cases on ESA and Science.³⁰ Courts that have considered the "best data available" language have held that an agency is not obliged to conduct studies to obtain missing data,³¹ but cannot ignore available biological information,³² especially if the ignored information is the most current.³³ Nor may an agency treat one species differently from other similarly situated species,³⁴ nor decline to list a dwindling species and wait until it is on the brink of extinction in relying on possible but uncertain future actions of an agency.³⁵ "Best scientific and commercial data available" is not a standard of absolute certainty, reflecting Congress's intent that FWS take conservation measures before a species is conclusively headed for extinction.³⁶ If FWS does not base its listings on speculation or surmise or disregard superior data, the imperfections of the studies upon which it relies do not undermine those studies as the best scientific data available—"the Service must utilize the best scientific ... data available, not the best scientific data possible."³⁷

Judicial review can also help ensure that agency decisions and their use of scientific data are not arbitrary or capricious and that regulations are rationally related to the problems causing the decline of a species, especially when other interests are adversely affected.³⁸ In *Arizona Cattle Growers Association v. United States Fish and Wildlife Service*,³⁹ the court stated that the evidentiary bar FWS must clear is very low, but it must at least clear it. In the context of issuing Incidental Take Permits under §10(a), this ruling means the agency must demonstrate that a species is or could be in an area before regulating it, and must establish the causal connection between the land use being regulated and harm to the species in question. Mere speculation as to the potential for harm is not sufficient. An agency must consider the relevant facts and articulate a rational connection between these facts and the choices made.⁴⁰

³⁰ For more information, see CRS Report RL32992, *The Endangered Species Act and "Sound Science,"* by Eugene H. Buck et al.

³¹ Southwest Center for Biological Diversity v. Babbitt, 215 F. 3d 58 (D.C. Cir. 2000).

³² Connor v. Burford, 848 F. 2d 1441 (9th Cir. 1988).

³³ Southwest Center for Biological Diversity v. Babbitt, 926 F. Supp. 920 (D.C. Ariz. 1996).

³⁴ Id.

³⁵ Biodiversity Legal Foundation v. Babbitt, 943 F. Supp. 23 (D. D.C. 1996).

³⁶ Defenders of Wildlife v. Babbitt, 958 F. Supp. 670, 679-680 (D. D.C. 1997).

³⁷ Building Industry Ass'n of Sup. Cal. v. Norton, 247 F. 3d 1241, 1246-1267 (D.C. Cir. 2001), cert. denied 2002 U.S. LEXIS 479.

³⁸ See *Connor v. Andrus* (453 F. Supp. 1037 (W.D. TX. 1978)) striking down regulations totally banning duck hunting in an area to protect one listed species of duck.

³⁹ 273 F. 3d 1229, 9th Cir. 2001.

 $^{^{40}}$ Pacific Coast Federation of Fishermen's Associations, Inc. v. NMFS, 265 F.3d 1028, 1034 (9th Cir. 2001).

Regional Resource Conflicts

One express purpose of ESA is to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" (16 U.S.C. §1531(b)). As open space dwindles and increasing human populations put pressures on wildlands and natural resources, conserving species and their habitats may highlight underlying resource crises and economic conflicts. Public values and affected economic interests may be complex and sometimes at odds. The situations described below are some of the situations that have been the subject of recent congressional oversight and legislative interest.

Klamath River Basin. Controversy erupted in 2001 when the Bureau of Reclamation announced it would not release water from part of its Klamath irrigation project to approximately 200,000 acres of farm and pasture lands within the roughly 235,000-acre project service area. The operational change sought to make more water available for three fish species under ESA protection — two endangered sucker species, and a threatened coho salmon population. The Klamath Project straddles the Oregon/California border and has been the site of increasingly complex water management issues involving several tribes, fishermen, farmers, environmentalists, and recreationists. Upstream farmers point to their contractual rights to water from the Klamath Project and to hardships for their families if water is cut off. Others assert that the downstream salmon fishery is more valuable and that farmers could be provided temporary economic assistance, while salmon extinction would be permanent. Still others assert that there are ways to serve all interests, or that the science underlying agency determinations is simply wrong. Specifically at issue is how to operate the Bureau's project facilities to meet irrigation contract obligations without jeopardizing the three listed fish. The Trinity River diversion from the Klamath basin to central California also has ramifications for the Bureau's role in the Central Valley Project. Ten-year and annual operation plans, and associated biological assessments (by the Bureau) and biological opinions (by FWS and NMFS) have been variously criticized and defended.⁴¹

Pacific Salmon Restoration. Salmon protection in the Pacific Northwest presents many difficult choices, especially because of recent droughts and the connection between regional hydropower facilities and fishery management decisions. NMFS officials have listed a total of 26 distinct population segments (called *evolutionarily significant units* or ESUs) of Pacific salmon and steelhead trout as either threatened or endangered, and are working with state, local, and tribal officials, as well as the public, to implement recovery measures addressing habitat restoration and other concerns. Recent controversies and litigation have focused on three issues: (1) biological opinions on operation of the Federal Columbia River Power System (FCRPS) as it relates to retaining (or removing) four dams on the lower Snake River, and how properly to factor the presence of the dams into evaluations of jeopardy; (2) whether or not salmon produced in hatcheries should be included in listed ESUs of Pacific salmon; and (3) the role and extent of CH designation in the recovery of Pacific salmon. Interim decisions of the federal district

⁴¹ For more information, see CRS Report RL31098, *Klamath River Basin Issues: An Overview of Water Use Conflicts*, by Betsy A. Cody, et al.

court for Oregon have invalidated NMFS's approach to evaluating jeopardy to salmon from dam operations on the Columbia and Snake Rivers, and ordered increased spills of water to assist transit of juvenile salmon to the sea.⁴²

In the 110th Congress, H.R. 24 and S. 27 would authorize the implementation of the San Joaquin River Restoration Settlement providing for the reintroduction of chinook salmon.

Rio Grande Silvery Minnow. Efforts to hold back water necessary for the Rio Grande silvery minnow from competing New Mexico water users (primarily the city of Albuquerque and irrigators) ignited considerable controversy. At issue is the operation of two Bureau of Reclamation water projects on the Middle Rio Grande: the San Juan-Chama Project and the Middle Rio Grande Project. The New Mexico District Court held that withholding water from irrigators for ESA-related purposes was permissible under the water contracts at issue. ⁴³ Congress halted implementation and an agreement regarding the minnow has been negotiated. ⁴⁴

Counterpart Regulations: Pesticides and Fire Management Projects

In 50 C.F.R. §402.04, *counterpart* regulations are authorized that allow an action agency to determine unilaterally whether its actions are likely to adversely affect listed species, thereby avoiding §7 consultation with FWS or NMFS.⁴⁵ Although the regulation has been on the books for years, it has not been used until recently, and hence its validity has not yet been tested in the courts. Several new counterpart regulations have recently been finalized and suits challenging the regulations have been filed.

New counterpart pesticide regulations were finalized on August 5, 2004,⁴⁶ for U.S. Environmental Protection Agency (EPA) regulatory actions on pesticides, such that when EPA is taking action under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA; P.L. 80-104; 7 U.S.C. §§136, et seq.), EPA and FWS may execute an alternative consultation agreement under which EPA will decide whether

⁴² For details on how legislation in the 109th Congress proposed to address this issue, see CRS Report RL33468, *The Endangered Species Act (ESA) in the 109th Congress: Conflicting Values and Difficult Choices*, by Eugene H. Buck, M. Lynne Corn, Pervaze A. Sheikh, and Robert Meltz.

⁴³ Affirmed by the 10th Cir., 333 F.3d 1109 (10th Cir. 2004).

⁴⁴ For details on how legislation in the 109th Congress proposed to address this issue, see CRS Report RL33468, *The Endangered Species Act (ESA) in the 109th Congress: Conflicting Values and Difficult Choices*, by Eugene H. Buck, M. Lynne Corn, Pervaze A. Sheikh, and Robert Meltz.

⁴⁵ Counterpart regulations are not authorized by ESA, and there is some question whether they comport with the law or go too far. One could argue that consultation is supposed to be with FWS; the argument on the other side is that counterpart regulations might constitute a *de minimis* procedure for minor actions.

⁴⁶ 69 Fed. Reg. 47732; 50 C.F.R. Part 402, Subpart D.

a proposed FIFRA action is likely to adversely affect a listed species or critical habitat. EPA may make this determination without informal consultation with, and written concurrence from, the FWS Director. If EPA makes such a determination, no further consultation is required. There is to be FWS oversight of the consistency of EPA's determinations with ESA. Under 50 C.F.R. §402.43, EPA may ask FWS for information on listed species that may be present in an area that might be affected by the FIFRA action, including the applicable environmental baseline for each species or habitat, and under new §402.44, EPA may request FWS personnel to assist in determining effects and must use its "best efforts" to include the FWS representative in relevant discussions. These two regulations appear to apply with or without an alternative consultation agreement. Critics note that EPA has a poor record on consultations,⁴⁷ and fear that the new self-consultation process will allow more harm to listed species. Supporters counter that the new process will increase EPA flexibility and efficiency.

On August 24, 2006, U.S. District Court Judge John Coughenour overturned EPA counterpart regulations relating to pesticides, ruling that these regulations did not conform to the plain language or intent of ESA §7 by excusing federal action agencies from engaging in consultation with FWS or NMFS. In addition, he held that it was illegal for FWS or NMFS to allow EPA to use emergency consultation procedures for FIFRA §18 actions. Judge Coughenour let stand the process of "optional formal consultation" in which NMFS or FWS can adopt EPA effects determinations as their own.

Counterpart regulations also were finalized December 8, 2003,⁴⁹ among Forest Service, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, FWS, and NMFS, to streamline consultation on projects supporting the National Fire Plan (NFP). The alternative consultation process contained in these counterpart regulations eliminates the need to conduct informal consultation with FWS or NMFS, and eliminates the requirement to obtain written concurrence from FWS or NMFS for those NFP actions that the action agency determines are "not likely to adversely affect" any listed species or designated CH.

Private Property and Fifth Amendment Takings

The presence of endangered species on private property is sometimes welcomed by owners. Builders, for example, have been known to market a new residential development in part on the basis of the wildlife present on undeveloped parts of the tract. Still, the prohibitions in §9 (private actions) and §7 (federal nexus) at times frustrate the economic desires of owners of land or other property. This has long been a rallying cry for ESA's detractors, who assert that restrictions under ESA routinely "take" property in the constitutional sense of the term. Conflicts between

⁴⁷ See Washington Toxics Coalition v. EPA, Civ. No CO1-132C (W.D. Wa. 2002).

⁴⁸ Washington Toxics Coalition v. U.S. Department of the Interior, 04-1998 (W.D. Wa. 2006); see [http://www.eswr.com/latest/selfconsultationorder.pdf].

⁴⁹ 68 Fed. Reg. 68254; 50 C.F.R. Part 402, Subpart C.

ESA and property owners come about despite the existence of ESA mechanisms intended to soften its impact on property owners.

Under the Fifth Amendment, property cannot be "taken" by the United States without just compensation. The Supreme Court has long tried, with limited success, to define which government actions affect private property so severely as to effect such a "taking." In briefest outline, government actions usually are deemed a taking when they cause either a permanent physical occupation of private property or a *total* elimination of its economic use. When the government restriction removes only part, but not all, of the property's use or value, a three-factor balancing test is used to determine whether a taking has occurred.⁵⁰ Although these factors have been little explicated by the courts, it is clear that for a taking to occur, the property impact must be severe. Moreover, except for physical takings, the property impact is assessed with regard to the property as a whole, not just the regulated portion.

More than a dozen court decisions have addressed takings challenges to ESA restrictions on land or other property, with all but one finding no taking. These cases have involved restrictions on timber cutting, reductions in water delivery to preserve instream flows needed by listed species, restrictions on shooting marauding animals resulting in loss of livestock, and prohibitions on the transport or sale of endangered species. In several of these cases, the taking claim failed because it was filed in the wrong court or was not "ripe." Where taking claims were reached by the court, they were rejected principally because the economic impact was insufficient as to the property as a whole, or because of the longstanding principle that the government is not responsible for the actions of wild animals. In the one decision favoring the property owner, ESA-related cutbacks in water delivered by a state reclamation project to water districts were held a taking by the United States of state-contract-created water rights.⁵¹ This decision has been controversial for several reasons, including the Department of Justice's settlement of the case (for \$16.7 million) despite arguments pressed on it from several quarters that the case was incorrectly decided.

ESA critics want ESA amended to afford compensation for a broader range of property impacts than the Constitution provides — perhaps by specifying a fixed percentage of ESA-related property value loss, above which compensation must always be paid. Similar provisions have been included in bills of previous Congresses. Opponents of an explicit compensation standard counter that ESA

⁵⁰ The three factors, announced by the Supreme Court in *Penn Central Transp. Co. v. New York City* in 1978 and reaffirmed by the Court many times since, are (1) the economic impact of the government action on the property owner; (2) the extent to which the government action interferes with the owner's reasonable investment-backed expectations; and (3) the "character" of the government action. These are vague guideposts only; the Court stresses that every case is to be decided *ad hoc*. Indeed, many question whether it is even appropriate to call the three factors a test.

⁵¹ Tulare Lake Basin Water Storage Dist. v. United States, 49 Fed. Cl. 313 (2001). See CRS Report RL31796, The Endangered Species Act and Claims of Property Rights "Takings," by Robert Meltz; and CRS Congressional Distribution Memorandum, The 'Tulare Lake' Decision's Implications for Use of Bureau of Reclamation Project Water, by Pamela Baldwin and Robert Meltz, available from [rmeltz@crs.loc.gov].

should not be singled out for a more property owner-friendly standard than other statutes or the Constitution. More fundamentally, they note that property rights have never been absolute, and that regulation has long been noncompensable as long as the impact on the property owner is not severe. The likely consequences of a generous compensation threshold — added federal costs and/or a chill on ESA implementation — are among the issues slowing action on ESA reauthorization.⁵²

Making ESA More User-Friendly

Former Interior Secretary Babbitt initiated actions to decrease ESA conflicts in several ways. Joint FWS and NMFS policies streamlined permit procedures for small landowners, and other initiatives encouraged landowners to increase protection for populations of listed species on their land. Under safe harbor agreements, landowners who increased suitable habitat could return to "baseline conditions" without penalty. No surprises agreements provided landowners with greater certainty regarding activities that might otherwise trigger penalties — an incentive for landowners to develop Habitat Conservation Plans (HCP), since a landowner properly implementing such an agreement is assured that there will be no further costs or restrictions on the use of the property to benefit the species covered by the HCP, except by mutual consent or in unforeseen circumstances in which changes may be implemented by the government without costs borne by the landowner. Modifications to the *no surprises* rule require revoking an incidental take permit if the taking would be inconsistent with the survival and recovery of the listed species, and the inconsistency was not remedied in a timely fashion. These rules were finalized⁵³ in response to litigation, but may still present issues raised previously. Federal managers also focused on listing species as threatened rather than endangered, to allow FWS to take advantage of ESA's more flexible provisions for protecting threatened species. While administrative changes have been made within the framework of existing law, there is great interest among some groups in codifying many of these changes in an amended ESA. Others are critical of HCP agreements as difficult to enforce, virtually lacking monitoring, and locking the government into inflexible long-term positions that sometimes are based on inadequate knowledge.⁵⁴

Additional Legislative Initiatives

In the 109th Congress, several proposals sought to reauthorize and amend ESA. Proponents of these proposals said that they were designed to make ESA more effective by redefining the relationship between private and public property uses and

⁵² For details on how legislation in the 109th Congress proposed to address this issue, see CRS Report RL33468, *The Endangered Species Act (ESA) in the 109th Congress: Conflicting Values and Difficult Choices*, by Eugene H. Buck, M. Lynne Corn, Pervaze A. Sheikh, and Robert Meltz.

⁵³ 69 Fed. Reg. 71723 (Dec. 10, 2004), 50 C.F.R. Part 17.

⁵⁴ For details on how legislation in the 109th Congress proposed to address this issue, see CRS Report RL33468, *The Endangered Species Act (ESA) in the 109th Congress: Conflicting Values and Difficult Choices*, by Eugene H. Buck, M. Lynne Corn, Pervaze A. Sheikh, and Robert Meltz.

species protection, implementing new incentives for species conservation, and removing what some see as undue land use restrictions. Thus, these proposals contained provisions meant to encourage greater voluntary conservation of species by states and private landowners, a concept that has been supported by many observers. Further, the proposals would have modified or eliminated certain procedural or other elements of current ESA that some have viewed as significant protections and prohibitions, including:

- eliminating or changing the role of CH (which would eliminate one aspect of the current consultation process);
- making the listing of threatened and endangered species more difficult or less likely;
- expanding §10 permits allowing incidental take (which could incur a greater need for agency oversight and enforcement); and
- expanding state rather than federal implementation of ESA programs (which might make oversight more difficult).

Proponents of these changes argued that tighter listing standards would enable a better focus on species with the most dire needs, and that other measures would achieve recovery of more species. Critics argued that proposed changes would create gaps in the ESA safety net of protections and prohibitions.⁵⁵

Appropriations

Appropriations play an important role in the ESA debate, providing funds for listing and recovery activities as well as financing FWS and NMFS consultations that are necessary for federal projects. In addition, appropriations bills have served as vehicles for some changes in ESA.

Table 2 shows recent ESA funding. The FY2006 Department of the Interior, Environment, and Related Agencies Appropriations Act, P.L. 109-54, provided \$271.9 million for FWS's ESA activities. Overall, FY2006 FWS funding for ESA and related programs is \$6.5 million less than the President's request, and \$11.8 million more than the FY2005 appropriations level. FY2006 funding for ESA programs administered by NMFS was provided in the Science, State, Justice, Commerce, and Related Agencies Appropriations Act, P.L. 109-108. Provisions in P.L. 109-148 (H.R. 2863, the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act) rescinded unobligated balances of \$2 million from FWS's Landowner Incentive Program and \$1 million from the Cooperative Endangered Species Conservation Fund. For FY2007, FWS appropriations are provided in H.R. 5386, which passed the House (amended) on May 18, 2006; the Senate Committee on Appropriations reported this bill (amended) on June 29, 2006 (S.Rept. 109-275).

⁵⁵ For more details on how 109th Congress legislation proposed to address the issues, see CRS Report RL33468, *The Endangered Species Act (ESA) in the 109th Congress: Conflicting Values and Difficult Choices*, by Eugene H. Buck, M. Lynne Corn, Pervaze A. Sheikh, and Robert Meltz.

Table 2. Funding for Endangered Species and Related Programs, FY2006-FY2007

(\$ in thousands)

	FY2006 Request	FY2006 Approp.	FY2007 Request	FY2007 Hse Passed	FY2007 Sen Rptd				
Endangered Species Program									
Candidate Conservation	8,252	8,619	8,063	8,163	10,045				
Listing	18,130	17,630	17,759	17,759	17,859				
Consultation	49,484	47,997	49,337	50,018	50,018				
Recovery	64,243	73,562	65,879	70,670	74,028				
Subtotal	140,109	147,808	141,038	146,610	151,950				
Related programs									
Landowner Incentive Program	40,000	21,667	24,400	15,000	10,000				
Stewardship Grants	10,000	7,277	9,400	7,000	7,277				
Cooperative Endangered Species Conservation Fund ^a	80,000	80,001	80,001	80,507	80,001				
Multinational Species Conservation Fund ^b	8,300	6,404	8,217	6,057	6,800				
Neotropical Migratory Bird Fund ^b	0	3,941	0	4,000	4,000				
Total FWS	278,409	267,098	263,056	259,174	260,028				
NMFS	213,687	181,000	189,000	not available	not available				
Total (to date)	492,096	448,098	452,056						

Sources: Annual budget justifications, House and Senate committee and conference reports.

An April 2005 GAO study found that, although FWS spends almost half of its recovery funds on highest priority species, factors other than a species' priority ranking (e.g., regional office workload, opportunities for partnerships to maximize scarce recovery funds), in practice, determine how funding is allocated.⁵⁶ GAO found that FWS does not have a process to routinely assess funding decisions to ensure that they are appropriate.

For FY2006, the conference agreement derived \$62.039 million from the Land and Water Conservation Fund (LWCF); for FY2007, the Administration requested all \$80.001 million from LWCF

b. From FY2002 to FY2007, the President's budget proposed subsuming the Neotropical Migratory Bird Fund within the Multinational Species Conservation Fund; to date, Congress has rejected this proposal.

⁵⁶ U.S. Government Accountability Office, *Endangered Species: Fish and Wildlife Service Generally Focuses Recovery Funding on High-Priority Species, but Needs to Periodically Assess Its Funding Decisions*, GAO-05-211 (Apr. 6, 2005). Available at [http://www.gao.gov/new.items/d05211.pdf].

ESA Listing Caps, New and Old. Beginning in FY1998, Congress enacted annual limits (caps) on funding FWS could use for its ESA listing function. This appropriations language limits FWS discretion to transfer funds to finance additional listings, so that if courts mandate agency action on listing certain species, other listings may not be able to be funded. FWS supported these limits to assure that funding for other agency programs could not be diverted to finance additional ESA listing activities. However, courts have held that budget constraints do not excuse an agency from compliance, in some circumstances. These limits have been approved by Congress in succeeding fiscal year appropriations bills. P.L. 109-54, the FY2006 Interior appropriations, limits listing activities to \$18.13 million, of which no more than \$12.852 million could be used for activities related to critical habitat designation. For FY2007, the Bush Administration proposed limiting listing activities to \$17.759 million, of which no more than \$12.581 million could be used for activities related to critical habitat designation; the House agreed with the Administration's request, while the Senate Committee on Appropriations has reported limiting listing activities to \$17.859 million, of which no more than \$12.672 million could be used for critical habitat designation.