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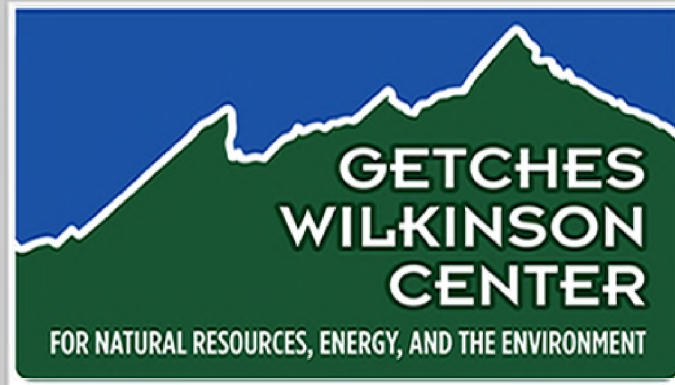
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Day 1: Wednesday, 17 August 2005: Science and the ESA, in ENDANGERED SPECIES ACT CONGRESSIONAL FIELD TOUR 2005 (Natural Res. Law Ctr., Univ. of Colo. Sch. of Law 2005).

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Science and the ESA
Holiday Inn Denver, Downtown

What is sound science and peer reviewed science and what are the limitations? A discussion of the in-house capabilities of the U.S. Fish & Wildlife Service, and examples of the impacts of science on various aspects of implementing the ESA

Panel:

• **Dr. Joy Nicholopoulos, Acting Assistant Regional Director for Ecological Services - Southwest Region - U.S. Fish and Wildlife Service**

Joy Nicholopoulos has been the Service's State Administrator for Ecological Services in New Mexico since March 2003. Prior to being named State Administrator for New Mexico, Joy was the Field Supervisor for the New Mexico Ecological Services Field Office (December 1999 through February 2003). Joy served in the Service's Washington, DC, headquarters from 1995-1999, and served as the national Chief of the Listing Branch. Prior to joining the Service, Joy was employed by New Mexico State University, The University of Texas at El Paso, Texas A&M University, Trident Seafoods - Alaska Fleet, and the Fort Bliss Military Reservation (IPA). Joy has a Ph.D. in biology from New Mexico State University.

As State Administrator for New Mexico, Joy Nicholopoulos chairs the San Juan Recovery Implementation Program, represents the Service on the Middle Rio Grande ESA Collaborative Program, represents the Department of the Interior on Native American water rights settlements in New Mexico, and was a principal contributor for the State of New Mexico's Forest and Watershed Health Plan. Joy has been acting Assistant Regional Director for Ecological Services in the Southwest Region since January 2005.

• **Dr. William Lewis, University of Colorado**

William Lewis received his undergraduate degree in Zoology from the University of North Carolina at Chapel Hill and a Ph.D. in Aquatic Science (limnology) from Indiana University at Bloomington in 1973. He joined the faculty of the University of Colorado at Boulder in 1974, where he is now Professor and Director of the Center for Limnology within the Cooperative Institute for Research in Environmental Sciences. Dr. Lewis and his students have conducted research primarily on biogeochemical processes in aquatic systems, structure and function of aquatic foodwebs, and the effects of human perturbations on aquatic life and aquatic communities. His work is centered in Colorado and at several locations within the tropics. Dr. Lewis has served as chair of several NRC committees dealing with effects of human activities on aquatic ecosystems, and was a member of the Water Science and Technology Board. He is a lifetime associate member of the National Academies. He received the sustained achievement award from the Renewable Natural Resources Foundation in 1996, and the Naumann-Thienemann Medal from the International Society for Limnology in 1998. He was chair of the Committee on Endangered and Threatened Fishes in the Klamath River Basin of the National Research Council, 2002-2004.

Reading:

Endangered Species Act: Success and Challenges in Agency Collaboration and the Use of Scientific Information in the Decision Making Process, U.S. Government Accountability Office, Testimony Before the Subcommittee on Fisheries, Wildlife and Water, Senate Committee on Environment and Public Works. May 19, 2005.

FWS Admits Flawed Science Impaired Habitat Protection. Greenwire, March 24, 2005.

THE ENDANGERED SPECIES ACT

The ESA at 30: Time for Congress to Update & Strengthen the Law

A report by
Richard W. Pombo (R-CA), Chairman

I. The Endangered Species Act - History

The Endangered Species Act (ESA) was signed into law on December 28, 1973, by President Richard Milhous Nixon. *"Nothing is more priceless and more worthy of preservation than the rich array of animal life with which our country has been blessed,"* he said. *"It is a many-faceted treasure, of value to scholars, scientists, and nature lovers alike, and it forms a vital part of the heritage we all share as Americans."*

Thirty years after he signed the landmark law, President Nixon's words still ring true. Recognizing what would forever be a noble and important cause, Nixon sought to give the government both the authority to make early identification of endangered species, and the means to act thoroughly to conserve and recover them to healthy populations.

We as a people have made great strides in species conservation in the second half of the 20th century. In fact, a few of the most widely-recognized species in the world once stood at the brink of extinction in the United States, but have since sustained their populations. The American Bald Eagle, the American Alligator, and the Peregrine Falcon, for example, are great success stories in American conservation efforts.



Efforts to protect and recover these species began long before the ESA was signed into law. For example, the Bald Eagle Act of 1940, which made it illegal to hunt the eagle, many state and local conservation efforts, and a ban on the poison DDT all contributed to the more robust Bald Eagle and Peregrine Falcon populations the United States enjoys today.

Unfortunately, success stories in species recovery due to the ESA are few and far between. The law has fallen victim to unintended consequences, partisan politics, and counter-productive lawsuits filed by environmental organizations. These forces have rendered the ESA a "broken" law that is in desperate need of updating and modernizing after thirty years of failure. Congress has an obligation to address these unintended consequences and refocus the law's application on species recovery, its original intent.

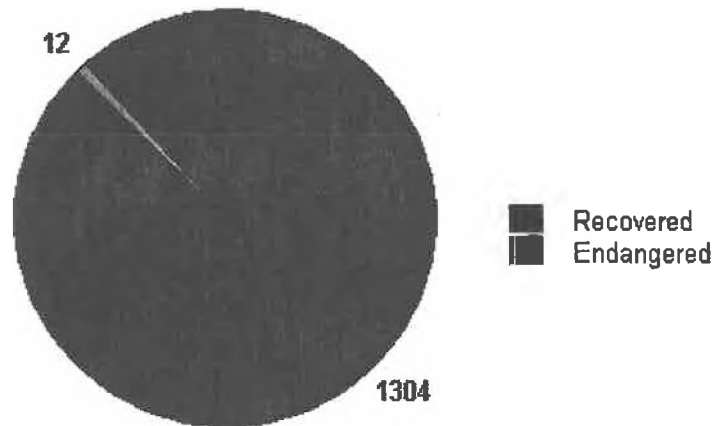
II. ESA by the Numbers: 10 out of 1304 recovered

The Endangered Species Act has become a program that checks species in for protection, conservation, and

recovery, but never checks them out. According to the U.S. Fish and Wildlife Service (FWS), there are currently 1265 species in the United States that are listed under the ESA as threatened or endangered. An additional 39 species were listed and de-listed over the last thirty-years, for a grand total of 1304 species in the Act's history.

Most Americans are surprised to learn that only **10 of these 1304 species** have been recovered in the Act's history, according to the Fish and Wildlife Service's data on de-listed species. **That is an abysmal, less than 1 percent rate of species recovery.** The FWS's statistics show that only 30 percent of species are "stable" and only 9 percent are "improving."

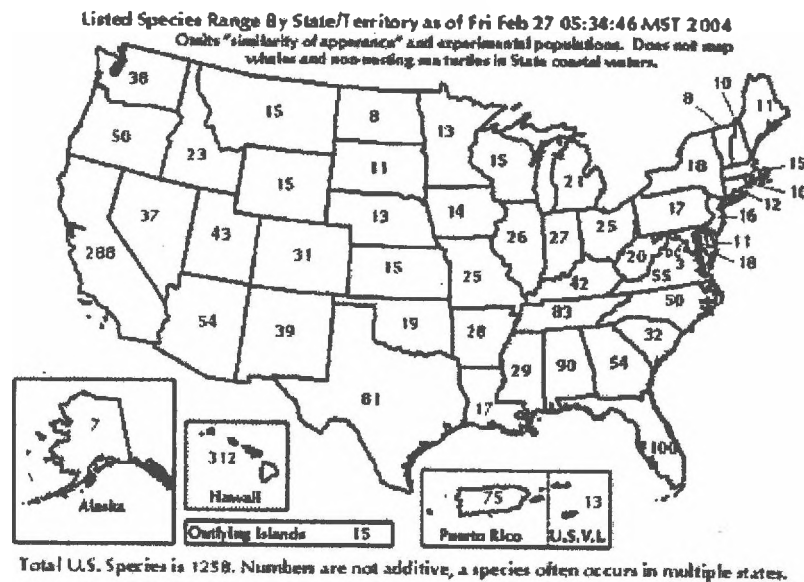
By the Numbers: Endangered Species Recovered



Moreover, numerous qualified studies assert that none of the species listed by the FWS to have been "recovered" in the United States may reasonably be claimed to have recovered as a result of the ESA. The fact is that the few recovery success stories are not even attributable to regulatory protections under the ESA, but unrelated factors such as bans on DDT and other organochlorides.

For example, in its 1997 report, Conservation Under the Endangered Species Act. A Promise Broken, The National Wilderness Institute (NWI) states that "there is no case which required the ESA to bring about the improvement of a species" and in at least four of the claimed recovery cases there was "little demonstrable change in the species' condition attributable to anything other than data error."

In short, the Endangered Species Act has failed to recover species, which was the intent of the law. As a result, the ESA is becoming more and more of an unsustainable program. In addition to the 1265 species currently listed nationwide, 257 additional "candidate" species are now proposed for listing.



III. Unintended Consequences

Environmental Litigation

The Law of Unintended Consequences has been especially unkind to the Endangered Species Act. What was born of a desire to apply American ingenuity to the cause of saving species has become a tool not for species recovery, but for political, ideological, and fundraising goals.

Under the mantra of species protection, radical environmental organizations use the ESA to raise funds, block development projects, and prohibit legal land uses of nearly every kind. By filing inordinate numbers of lawsuits under the ESA, environmental organizations have hand-cuffed the FWS to courtroom defense tables, draining the time, money, and manpower Congress intended the service to spend on species recovery in the field.

According to the Tulane University Environmental Law Journal, "The entire ESA budget runs the risk of being consumed by the bottomless pit of litigation driven listings and designations. It does not end there. As Yogi Berra might say, the bottomless pit is getting even deeper: as soon as the FWS makes a decision driven by a court imposed deadline, it is being sued on the merits of that decision." (16 Tul. Env'tl. L.J. 257)

"This is where the FWS is today: the decisions relating to ESA listings and designations, arguably the most important decisions under the law because they trigger all other protections, are driven solely by litigation. The FWS has lost all flexibility in making its own determinations as to which species is most endangered and should be listed first, and which habitat is most vulnerable and should be designated as critical. Litigation-driven actions prioritize only those species that have a plaintiff behind them (and often a larger political objective), rather than those species that are most endangered." (16 Tul. Env'tl. L.J. 257)

In yet another substantive analysis of ESA lawsuits filed by environmental organizations, the Sacramento Bee found that government biologists are being forced to spend more time on "legal chores" than on field work to recover species. The result? These organizations and their attorneys are collecting millions while species are ignored. (Sacramento Bee, *Environment, Inc.*) Litigation involving the Endangered Species Act has become like 'piecemeal' for these groups, as they seek attorney's fees and court awards from the federal government for the suits they file.

In fact, the flood of environmental litigation became so great that it bankrupted the Fish and Wildlife Service's fund for critical habitat in May of 2003, (U.S. Department of Interior). But this is certainly not new to the current Administration. In a 2001 New York Times op-ed, former Secretary of the Interior Bruce Babbitt described the

effects of environmental litigation thusly: "Struggling to keep up with these court orders, the Fish and Wildlife Service has diverted its best scientists and much of its budget for the Endangered Species Act away from more important tasks like evaluating candidates for listing and providing other protections for species on the brink of extinction."

"The best alternative is to amend the Endangered Species Act," Babbitt continued, "giving biologists the unequivocal discretion to prepare maps when the scientific surveys are complete. Only then can we make meaningful judgments about what habitat should receive protection."

Science Not Defined

The Endangered Species Act relies on a standard of "best scientific data available" for regulatory decision-making such as listing a species as threatened or endangered and designating critical habitat. Unfortunately, Congress failed to define "science" when the law was written in 1973 and to specifically outline whether or not particular data would meet this standard.

The problem with a "best available data" standard is that 'best' is a comparative word. Thus the data need not be verified, reliable, conclusive, adequate, verifiable, accurate or even good. The best available data standard hampers the effectiveness of the program.

This is certainly true in practice. Agencies that evaluate scientific data under the ESA - and courts forced to evaluate agency decisions based upon such data - have found their efforts severely hamstrung by two factors: (1) the ESA's lack of definitional terms and (2) the fact that species data is, by its very nature, often vague, ambiguous, and frequently subject to best-professional judgment rather than objectively quantifiable.

"The scientific community would generally agree that, in terms of ESA, the 'best' science would be comprised of data that had been collected by established standards or protocols, properly analyzed, and then peer-reviewed before published or released to the public. Such information is assumed to be reliable and the conclusions drawn usually can be duplicated to test the accuracy of the information. Unfortunately, the ESA currently has no such standards in either the provisions of law or in the accompanying regulations." (16 Tul. Env'tl. L.J. 387)

Some of our nation's other environmental laws have avoided this problem by requiring peer review. The Safe Drinking Water Act (SDWA), for example, employs the "best available" standard, but also requires that data be "peer reviewed" and "in accordance with sound and objective scientific practices." Given the fact that FWS will even consider oral and anecdotal data on species, the need for a more rigorous scientific review for the ESA, such as that used in the SDWA, is clear.

The absence of clear, objective standards has resulted in a litany of data errors and poor decisions on species protection and critical habitat designations. These errors waste valuable agency resources that could be spent on species in proven need of recovery efforts.

Shoot, Shovel, and Shut-up

Another major unintended consequence of the ESA stems from the fact that it creates an adversarial relationship between government regulators and the people who are most critical to the goal of saving endangered species: America's farmers, ranchers, and private property owners. Known as the "shoot, shovel, and shut up" syndrome, research shows that the ESA has created perverse incentives that prompt land owners to actually destroy species habitat to rid their property of the liability that comes with endangered species.

Michael Bean of Environmental Defense has noted that ESA regulations have

This adversarial relationship and land-owner propensity to preemptively destroy species and their habitats is only perpetuated, if not exacerbated by management actions that are devoid of sound science and common sense.

"unintended negative consequences, including antagonizing many of the landowners whose actions will ultimately determine the fate of many species." In addition, "increasing in evidence that at least some private land owners are actively managing their land so as to avoid potential endangered species problems...not the result of malice toward the environment... but fairly rational decisions motivated by a desire to avoid potentially significant economic constraints...predictable responses to the familiar perverse incentives that sometimes accompany regulatory programs." (1994 Speech, FWS)

In the recent case of the Klamath Basin and the endangered sucker fish, for example, it was determined that the sucker fish needed water supplies more than the area's farmers needed it to irrigate their crops and feed their families. The result was a devastating loss of family farms, human life and economic vitality. Only after the damage was done, the National Academy of Science (NAS) determined that decision by the federal government to shut off irrigation water to nearly 1,200 farmers and ranchers had "no sound scientific basis."

Or, consider the case of the endangered longhorn

elderberry bark beetle and the Arboga levee in California. Weak levees went without repair because the work might have disturbed the habitat of the endangered beetle. The result: a huge flood broke the levee at the exact point where repairs were needed. Three human beings lost their lives. Approximately 500 homes, 9000 acres of prime farmland, and the four largest employers in the poorest county in the state were flooded. Overall, 35,000 people were displaced.

These and hundreds of other horror stories and cases of government abuse (report pages 25-34) under the ESA have fostered an adversarial relationship between government regulators and private property owners. This is incredibly deleterious to the goal of saving species because over 90% have habitat on private lands. (*General Accounting Office, Endangered Species Act: Information on Species Protection on Nonfederal Lands.*)

IV. Problems in Diagnosis and Prescription

When the science is in fact accurate in "diagnosing" a species as threatened or endangered, the "treatment" aspects of the law remain fatally flawed. They are ambiguous, open to arbitrary personal judgment and do not rely on sound science or peer-reviewed research as outlined above. Known as "listing" and "critical habitat" respectively, these key elements of the act are responsible for the misdiagnosis of species as endangered or threatened and the application of a one-size-fits-all solution.

When a species is listed for protection, treatment comes in the form of critical habitat designations, which forbid the use of lands by or for anything but the species. Critical habitat is one of the most perverse shortcomings of the act. It has been interpreted to mean that if an animal is determined to be in trouble, there is only one viable option -- to designate critical habitat -- and "let nature take its course."

This "hands-off" approach fails to recognize amazing strides in technology, biology and medicine over the last thirty years, which is why FWS has long maintained that critical habitat designations afford little protections for the species. It is the FWS' lowest priority. Yet, because of litigation, the FWS will use the entire amount capped for designations for that purpose. It is thus devoting two-thirds of its listing program to actions it believes have little value for the species. (16 Tul. Env'tl. L.J. 257)

Indeed, both Republican and Democrat administrations have agreed that critical habitat designations contribute little, if anything, to species recovery. The Clinton administration's, Fish and Wildlife Service Director, Jamie Rappaport Clark, testified before Congress in 1999 that the critical habitat provision "provides little additional protection to most listed species, while it consumes significant

amounts of scarce conservation resources."

"Critical habitat has turned our priorities upside-down. Species that are in need of protection are having to be ignored. This is a biological disaster."

- Jamie Rappaport Clark, Sacramento Bee, April 24, 2001

Likewise, Craig Manson, the current Assistant Secretary for Fish and Wildlife and Parks, has testified that "the present system for designating critical habitat is broken" and that it provides "little real conservation benefit" but "consumes enormous agency resources and imposes huge social and economic costs." (Manson [testimony](#))

V. Updating and Strengthening the ESA

Many observers of the Endangered Species Act have gauged the law's performance on how many species are listed annually and have avoided extinction. However, merely preventing extinction is not a long-term measurable success, nor was it the intent of the law. The law was intended to conserve and *recover* America's endangered species. In that light, the Act has failed. It must be updated and strengthened to focus on results for species recovery or it will continue to be an unsustainable program that checks species in, but never checks them out.

Among the priorities:

- *Incentivize Stewardship*: Because America's endangered species reside predominantly on private lands, Congress must take steps to get landowners "on the side of the species" by removing unintended consequences and incentivizing species stewardship.

Establishing well-defined scientific standards for listing and critical habitat decisions will be instrumental to this effort by reducing the incidence of data error and focusing the disbursement of valuable agency resources in species most in need of agency attention.

- *Focus on Recovery*: Generally, the Act must also place greater emphasis on recovery actions over bureaucratic listing actions. It must encourage the use of innovative approaches to increase species populations. This can be done, in part, by moving the designation of critical habitat into the development of species recovery planning.

Strengthening the Act includes improving the quality of science used to make policy decisions. This will enable the effective use of federal monies and time in restoring species populations truly in need.

Updating the Endangered Species Act and the way its implementation will provide necessary funding for better implementation of the Act and the tools necessary to enable private landowners and states to be partners in achieving the goals of the Act.

Working in cooperation with conservation organizations and private landowners is the path to species recovery.

- *Encourage States* to play more active roles in state and local based innovation and collaboration that recover species.

Additional Informational Resources

The Congressional Research Service - www.crs.gov -

The National Endangered Species Act Reform Coalition - www.nesarc.org -

Western Governor's Association - www.westgov.org -

The National Wilderness Institute - www.nwi.org -

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Federal Document Clearing House Congressional Testimony

April 30, 2005 Saturday

SECTION: CAPITOL HILL HEARING TESTIMONY
LENGTH: 6594 words
COMMITTEE: HOUSE RESOURCES
HEADLINE: ENDANGERED SPECIES ACT
TESTIMONY-BY: RAY VAUGHAN, EXECUTIVE DIRECTOR
AFFILIATION: WILDLAW

Statement of Ray Vaughan Executive Director, WildLaw

Committee on House Resources

April 30, 2005

As the nation's premier wildlife protection law, the Endangered Species Act (ESA) has received a great deal of attention. Designed to prevent the extinction and to assist in the recovery of the rarest creatures on Earth and particularly those in the United States, the ESA was the first major federal statute to attempt to save species for their own sakes, regardless of any measurable value to humanity. Although it is arguably the strongest of America's environmental laws, in reality, the ESA has done very little to prevent the mass extinction that is currently occurring throughout the world. Neither the economic apocalypse that some opponents claim, nor the wonder law that some environmentalists claim, the ESA needs to be viewed in a proper perspective that reveals its true strengths and weaknesses and its impacts.

There are indeed a limited number of full success stories under the ESA. The recoveries of the American Alligator, the Brown Pelican, the Peregrine Falcon, the Bald Eagle and a handful of other species can be credited to the protections provided by the ESA and the work of the Departments of Interior and Commerce under the Act. For each species that has recovered due to efforts under the ESA, however, there are hundreds of other listed species that have made very little or no progress at all; at best, the majority of species listed under the ESA are just barely surviving and have been given only a short reprieve from extinction. Further, for all those hundreds of species listed under the Act and protected somewhat by it, there are thousands more that await listing and protection. Indeed, a number of species have gone extinct while waiting to be listed and protected under the mechanisms of the ESA. Chronically under-funded, a situation encouraged by Democratic and Republican administrations alike, the recovery efforts of the Fish and Wildlife Service under the Act often amount to nothing more than "too little too late" for most species listed under the Act. Nonetheless, the ESA stands as the United States' best effort to date at preserving the biological diversity of the country.

On the other hand, critics of the Act claim that it has unnecessarily adverse impacts upon the nation's economy. However, these critics can cite no studies to substantiate this claim. From 1987 through early 1992, almost 74,000 development projects came into potential conflict with endangered species under the Act, yet only 18 of those projects had to be stopped. As Professor Oliver Houck pointed out, "The number of projects actually arrested by the ESA is nearly nonexistent... Alternatives to avoid jeopardy included a mix of measures neither surprising nor in many cases very demanding... Rather, they reflect the bare minimum of alternatives necessary to keep those species that are listed hanging on, unrecovered, for an indeterminate time." Oliver A. Houck, "The Endangered Species Act and Its Implementation by the U.S. Departments of Interior and Commerce," 64 U. Colo. L. Rev. 277, 317-23 (1993). During the later years of the Clinton Administration and throughout the Bush Administration, I am aware of absolutely no projects have been stopped due to the ESA.

Although the ESA will sometimes have an adverse impact on a particular project, the vast majority of economic projects experience no difficulty under the ESA; indeed, at least 99.9% of developments never have an ESA problem at all. In highly publicized instances such as the controversy over the Northern Spotted Owl in the Pacific Northwest, the real cause of any economic problems was gross mismanagement of natural resources, such as logging at unsustainable rates. Rather than causing job losses and economic impacts, the listing of the owl under the ESA was a consequence of resource abuse, just as the economic impacts were. Often, the ESA and the creatures it attempts to protect are used as a convenient scapegoat to hide the fact of years, even decades, of irresponsible wasting of natural resources. When the facts, rather than the rhetoric, are examined, there is no evidence that the

ESA or environmental statutes and regulations in general have any detectible adverse impact on the nation's economy. Political scientist Stephen M. Meyer of the Massachusetts Institute of Technology found that environmental regulations have no perceptible adverse economic impact at the state and national levels. The states with the strongest environmental regulations had the strongest economies, and the states with the weakest regulations had the weakest economies. Meyer, *Environmentalism and Economic Prosperity: Testing the Environmental Impact Hypothesis* (M.I.T. 1992). This study also found that growth in gross state product during the 1980s was more than twice as high in states with strong environmental regulations than in states with weak ones. Construction jobs grew by 53 percent in strong states and fell 1.4 percent in weak states. The same correlation holds true for the 1970s. Further updates by Professor Meyer in more recent years find the same results. See his articles at <http://web.mit.edu/polisci/faculty/S.Meyer.html>.

This brief examination of the claims of both the supporters of the ESA and its opponents gives a better and more accurate perspective of the Act. The ESA is not some powerful, miracle law, and it is also not some kind of economic catastrophe, or even a hindrance. Instead, it is a singular statute that attempts to accomplish something humanity has not tried before through statutory means: the saving of other species for their own good, regardless of whether those creatures have any significance to humanity or not. As such a unique statute, the ESA attempts noble things; however, although the Act sometimes succeeds, it routinely fails in its mission to bring species back from the brink of extinction. In its mission as an emergency room, as a last ditch attempt to prevent extinction, though, the ESA is arguably somewhat successful, because although it has not recovered many species, it has temporarily prevented most of the listed species from continuing to slip into the abyss of extinction. For the person who has to deal with a situation involving an endangered species, it is important to keep the ESA in correct perspective and understand how it really works in order to avoid the exaggerations and self-interested propaganda that can beset an ESA case. Working examples of protecting wildlife under the ESA, and other federal laws, exist in the Southeast.

Basically, the ESA operates blind; there is little effort to see the interaction of various species and to plan for their needs together. As a last resort, the ESA has had, and can have, only limited success. The current state of the law in protecting rare species does too little too slowly, even if the Act and the agencies under it were fully funded. Yet the ESA is still the most important of the few laws we have that emphasize the value of something on this Earth in terms other than its benefit to humans. Further, the ESA is unpredictable and erratic in giving businesses an idea of how to operate. These reasons emphasize the need to make the ESA more efficient. The Act could use strong devices for protecting ecosystems and habitats instead of just protecting species one at a time. If our law provided, for example, that a certain number of Pacific Northwest old-growth forest ecosystems be preserved in their entirety, there would be no need to go through the motions of individually listing and protecting species such as the Northern Spotted Owl and the Marbled Murrelet. Protecting the whole protects all of its parts, and such an approach would be more effective at preserving species and more efficient in handling land management problems and in alerting business as to where and how development projects could be undertaken.

The dismay that the survival of one species among all the countless millions of species in the world could stop a major project is fairly common, but it oversimplifies and minimizes the real idea behind the ESA. The point is not to save one species but to save all species, to protect the entire biodiversity of the Earth upon which all life, including humanity, depends. To developers it seems a small thing to sacrifice one species to their project and their economic interests, but the value of any species is beyond humanity's ability to measure, and what is in danger is not just one species, but the entire ecosystem of which that species is a part. Because of the emphasis placed on saving one species at a time, the operation of the ESA has fueled this erroneous viewpoint to some degree. Again, a change to an ecosystem/habitat approach would put the goals of the Act in a better perspective and allow for the protection of all components of an ecosystem at one time. Furthermore, economic survival depends upon the survival of healthy ecosystems. Since our entire economy is built upon the environment of the Earth, the loss of biodiversity cannot continue for long before a degrading environment leads to degradation of our economy and our own health as a species.

If this were about health care, it is true that the ESA emergency rooms do not work nearly as well as they should, but that is no reason to get rid of those emergency rooms or to make them even less effective. The current crisis points out the need to design, build, fund and operate effectively an ENTIRE health care system so that the need for emergency rooms is reduced and ill health is reduced.

Instead of continuing the interminable traffic jam of litigation over the ESA, people who work with the ESA need to focus on more proactive solutions to conflicts under the Act. We can remain entrenched in a warfare of

wills between environmentalists who demand full implementation of the ESA, faults and shortcomings included, and business interests and an Administration committed to doing whatever it takes to maximize profits. Or we can try something else.

An excellent example of how the current ESA can work to assist development instead of hinder it comes from central Alabama. Developers want to build up the Exit 38 area on Interstate 85 in east-central Alabama, but they do not want to make it a typical exit development; they want a forward-thinking model of quality development that enhances (and is a gateway to) the unique historic heritage of the area (Tuskegee). In the very middle of the planned development is a stream that is designated critical habitat for three listed endangered species. In a normal situation, that could kill, or at least cripple, the plans for development. Instead, WildLaw showed them how this was a great and unique opportunity for a development that would HELP endangered species. The species, all muskies, are currently being hammered by illegal use of off-road vehicles (ORV) riding in the stream. Developing the area will close off access to the stream by ORV users. If the development is also well done in how it handles basic environmental issues (such as sediment, chemical runoff, etc.), as they already plan to do, enclosing the critical habitat in a greenway at the center of the development would IMPROVE the lot of these species, thus making the development a national model and a prime candidate for federal funding from politicians who want to see positive ESA solutions instead of the usual train wrecks, such as Alabama Senator Richard Shelby. Everyone involved in the development LOVED this message and now highlights the ESA issue as part of what they are doing instead of fighting it.

WildLaw could have chosen to litigate over the species and critical habitat at Exit 38. Instead, we chose to try to work with the developers involved. Because the developers were also open to working with us, a solution was found that not only makes things better for the species but also better for the developers' bottom line.

Now, development work throughout that area does not get past the initial planning without environmentalists being brought in and listened to. The paradigm of conflict and distrust is giving way to an era of trust and cooperation. Development and sprawl WILL happen; no willful and unrealistic wishing will stop it, and no stretching of existing law can stop it. The best we can do is guide sprawl and development away from the best remnants of habitat and toward better ways of impacting the environment. Any claims to the contrary are fantasy.

Swift and favorable resolution of potential ESA conflicts begins with early recognition of their possibility. Development projects and other economic activities often give early consideration to possible problems with zoning, geology, labor, architectural requirements, materials availability and costs, transportation availability, real estate costs, water, sewer and electrical infrastructure, and many other possible factors and events that may impact a project. With increasing environmental problems and public awareness of those problems, many business activities now regularly screen for potential hazardous waste problems, toxic contamination difficulties, ground water impacts, surface water pollution concerns, public perception issues, and a host of other possible environmental impacts. With the increasing sprawl development of wildlife habitat and the rapidly increasing rate of species extinction, both in the United States and worldwide, consideration of potential ESA conflicts early in the stages of a planned project is not only prudent business policy but also good public relations material. Redesigning the ESA to encourage more such wise and early planning of development with the impacts to wildlife and biodiversity in mind would be helpful.

But it is absolutely amazing how many development interests NEVER give consideration to these matters. If business interests would be willing to see environmentalists not as natural enemies, they could learn from and profit from the expertise and knowledge of those who work to protect rare species. If environmentalists would be willing to see themselves as something more than just litigators and "warriors" for a dying cause, they might be useful.

Many ESA problems occur long after a project has begun and progressed some way towards completion. Architectural, building supplies, and construction labor contracts are worked on and considered long prior to work starting on the ground, but often, possible wildlife issues are never considered. One would never begin building a 20-story condominium if the architect had only completed a rough sketch for the first floor; one needs to know all the possible architectural issues and engineering challenges before one begins pouring concrete. With the ever increasing depletion of wildlife species and their habitats and the increasing demand for development space, wildlife and ESA conflicts will grow, and the smart business will prepare for them as they would any other reasonably foreseeable event.

ENDANGERED SPECIES ACT Federal Document Clearing House Congressional Test

Mainly, one's chances of having an ESA problem are still very slim. The overwhelmingly vast majority of projects simply never have a potential ESA problem, and the vast majority that have a potential problem are shown not to harm the species in question and are not hindered. The rarity of actual ESA conflicts with developments show that the Act does not cause any major problems to the economy; however, the prudent business person can take a few simple steps to virtually insure that a conflict will not arise and derail a specific project. As these conflicts increase in the future, such prudence will reward those who know the workings of the ESA and are prepared for such problems. Making the ESA more proactive would also help head off and solve more of these problems as they grow in the future.

One major weakness of the ESA that both proponents and critics agree on is that the Act's focus on individual species causes it to be less effective and to give business interests less warning of possible conflicts. Focusing on individual species is an emergency room approach that tries to save a species only after it is already on the brink of extinction. An emphasis on habitat and an ecosystem-wide approach to preserving biodiversity could lead to a more efficient ESA. America would be stupid to base our entire human health care system on emergency rooms alone, but we do that for our wildlife health care system. Identifying ecosystems that need preservation will enable preservation of all the species in those environments before they each reach the edge of extinction. Further, a habitat approach will give more consistent warning to business of where development projects can, and cannot occur. Knowing the habitats that are protected will give development interests more continuity, simplicity and predictability.

Still, the ESA in its current form can work much better than it often does; the problem is not in the law but in the attitudes and actions of people. Several general points on handling an ESA problem under the current law are: (1) full cooperation in the consultation process will normally speed up and facilitate a favorable result. (2) The hiring of "experts" to say what one wants them to say rather than speaking the truth and dealing with it does not help. Hire only the best and have them work with the Service rather than taking an adversarial approach. (3) Taking an adversarial stance with the Service increases negative media exposure of the project and increases the chances that environmental organizations will become involved. Environmental groups tend to look favorably upon the Fish and Wildlife Service, particularly the Service's field personnel who do the real work of wildlife conservation, and are naturally suspicious of any development that will have an impact on a rare species. The lack of full disclosure and cooperation makes the environmentalists believe that the project is harmful, even if it is not. If a project is not harmful to a species, cooperation, not confrontation, will prove that point and allow things to proceed. If the project turns out to be harmful in some unexpected way, then cooperation again allows for a speedier and better result by showing the developer's sincerity and willingness to adapt to the needs of the listed species.

Consider the habitat conservation plan (HCP) submitted by International Paper (IP) on the Red Hills Salamander. The Red Hills Salamander lives only in a specific hillside habitat of the Red Hills of southern Alabama; it is such a unique species that it is the only member of its genus. Most of the salamander's habitat is owned by a number of large timber companies. The first company to request a '10 permit and to submit a HCP on the salamander was IP. Instead of hiring a biologist who would just say what the company wanted him to say, the company opted for hiring a member of the Alabama Natural Heritage Program who was widely respected both by Fish and Wildlife Service personnel and by environmental groups. Instead of hiring the best "biostitute" they could find, IP hired the undisputedly best field biologist in all of Alabama. Wanting to know the truth rather than wanting just to hear what seemed least expensive for the company, IP allowed this biologist full access to its property and its records on the salamander and its timber practices. The result was a report that no one questioned as to its accuracy and completeness. Basing its HCP on that report and adopting most of the biologist's suggestions, IP came up with a good plan. The Fish and Wildlife Service was pleased with the HCP, and the world's top expert on the salamander, while not as pleased, found it acceptable. Environmental groups who were watching the salamander and IP's actions found the plan acceptable, and IP got its permit without a contest. IP's open and cooperative attitude along with full opportunity for the environmental community to participate produced a swift and favorable result for the company and an improved situation for the salamander. Because no one was actively surveying and managing their timber lands for the salamander, IP's HCP would set a standard for the other companies when they requested their '10 permits. Thus, before IP's HCP, the salamander's condition and future were uncertain; after IP's HCP, the state of the species was better known, its habitat was better protected, and IP was shielded from potential '9 liability, all without any difficult media or court confrontation.

In an opinion piece in *The Wall Street Journal*, Mark Suwyn, the executive vice president of IP's forestry and specialty products division, stated that IP took great satisfaction in developing the Red Hills Salamander HCP.

Suwyn, "We Saved the Salamander-- But It Wasn't Easy," The Wall Street Journal (November 29, 1993). However, he noted that the success of IP's HCP was due to the company's great financial assets, and he surmised that small land owners might not be able financially to go through the HCP process, thus leaving themselves exposed to possible S 9 liability if they proceed or economic loss if they do not. The Service has found successful ways to "group" small landowners into one HCP process, such as the Red-cockaded Woodpecker HCPs for entire states such as Georgia, which then eliminates the vast bulk of expense and difficulty for smaller landowners. While such groupings will not work for every species, they do work for wide-ranging species that have well-known habitat needs. Information on the success of that approach for the RCW can be found at "Georgia's Red-Cockaded Woodpecker Safe Harbor and Habitat Conservation Plan," <http://www.ncedr.org/casestudies/hcp/georgia.htm>.

In all honesty, it must be stated that for every successful HCP I have seen, I have seen at least twice as many that failed utterly to do anything to protect or enhance the welfare of wildlife. The HCP process CAN be used successfully, but it has also more often been abused.

Although there are a few small fringe groups that do take contrarian positions as a rule, no matter what, the vast majority of major national and state environmental groups are not opposed to development. Any claims to the contrary are issued by those without any knowledge of how environmental organizations work or by outright liars. Most active environmentalists do not oppose development that is well-planned and that provides economic growth. Further, most environmental groups take reasonable stands on development issues, and if they can be shown that a project will not have significant adverse environmental impacts, most will not oppose it. Knowing this, the developer who confronts a potential ESA conflict should engage in active cooperation with the environmental community rather than in reactive confrontation. Indeed, environmentalists have real and unique knowledge that can not only avoid a conflict but also might make the business more money in the long run.

Where does the ESA go from here

The Endangered Species Act has been due for a reauthorization since 1992, but the numerous controversies surrounding it have prevented any changes from being made to the Act. The ESA needs a strong reauthorization which focuses on recovery, not just the survival of listed species, and that will shift the focus more toward ecosystems and entire habitats instead of just a species-by-species piecemeal approach. Currently political realities make real improvements to the ESA very difficult, at best.

Litigation under the ESA as it exists now seems destined to continue. WildLaw has filed a share of the cases under the ESA, especially in the southeast, but we have always tried to be careful and very strategic in deciding what cases to file and when. We have sought to protect either critically imperiled species or umbrella species such that protecting them would protect many other species and much habitat. A key example was our nine-year fight (consisting of three lawsuits) to get protection for the Alabama Sturgeon. Protecting the Alabama Sturgeon protects the entire Alabama River from unnecessary water withdrawals. What water withdrawals are we talking about? Atlanta's plan to withdraw up to 90% of the water in the two main tributaries of the Alabama, the Coosa and Tallapoosa Rivers; the usage of water from the rivers by Alabama and its industries does not harm the fish. The Coosa River has already experienced the largest mass extinction documented in American history, the loss of more than 60 aquatic snails and mussel species due to the construction of the string of dams on it by Alabama Power in the early 1900s. Far from being a burden on economic development in Alabama, the Alabama Sturgeon is literally the state's last hope for legally limiting the endless sprawl of Atlanta that, if fully realized, would mean the destruction of Alabama's economy. Try running and growing a state's economy on 10% of the water that the state used to have.

Other litigation, however, does seem more of an exercise in ability than in reality. The ESA does have set timelines for making decisions, and a case over a failure to meet those guidelines is generally an easy case to win for an environmental group. Many lawsuits under the ESA do appear to be nothing more than grabs at "low hanging fruit," without much, if any, consideration of the strategic and even biological values to be won. Has too much litigation been filed under the ESA? Absolutely, BUT that litigation is NOT the problem; it is a symptom of the problem.

The problem is that we, as a society, have not decided yet whether we care enough about God's other creatures, and even about our own species' long-term environmental and economic health, to address fully what has to be done to protect biodiversity in the United States and the world.

But what can be done right now with the ESA? Due to too much litigation and the constant refusal of the Administration and Congress to give the Fish and Wildlife Service the funding it really needs to do its ESA adequately, the Fish and Wildlife Service is caught in a vice grip. This impasse can be broken one of several ways: (1) Congress can adequately fund the work under the ESA (that will most likely never happen, especially since the agency never asks for anything within two orders of magnitude of full funding), (2) environmentalists and business interests can find ways to try real solutions to species problems so as to avoid ESA showdowns (some of this does occur, as seen above, but not nearly enough), (3) Congress can fundamentally change the ESA so as to eliminate these legal problems (but that would increase the ecological problems for rare species), or (4) Congress can bring ALL the stakeholders together to find ways to truly improve the ESA to make it better at protecting biodiversity while not harming economic interests.

Option 3 seems popular on Capitol Hill right now, but "reforms" that are really just quickie political tricks to thwart legal problems will not make the real problems go away. Option 4 is the only one with a chance of actually doing something positive, both for imperiled species and for the long-term health of the human economy. Here are some of my random ideas for starting option 4:

In February 2003, the U.S. Forest Service brought together approximately 100 interested people to discuss options for protecting biological diversity on the National Forests under the new National Forest Management Act regulations. I was one of the participants in that workshop and the only environmentalist/conservationist who gave a presentation at it. While the agency ultimately ignored everything this group suggested, the people and the balance of types of people (agency, industry, scientists, enviros, etc.) at that workshop was excellent. No party of interest could claim not to be adequately represented there. Given a few more days and a real mandate to find common ground solutions to problems on the National Forests, I guarantee that that group would have found at least a handful of common sense solutions 98% of everyone would have agreed with. The agency could have then moved forward on those consensus items and left more contentious issues aside for the time being, thus accomplishing much needed work in the public forests and reducing litigation significantly. The Forest Service chose to go another route and now remains mired in litigation, most of which it loses.

Before Congress goes about changing the ESA in ways that people "think" will improve it, why not pull together the best minds and all the interested parties and task them with finding solutions, with finding changes that make sense for us to agree to try? Changing the law just to change it in response to litigation will result in one thing, more litigation to find new ways to use the law in litigation. As long as the Endangered Species Act exists, a conservative judge somewhere (and I mean a real conservative) will require the agencies to do something. Once they have to do something, people will litigate over that something endlessly, so long as the underlying conflicts exist. You cannot give agencies unbridled discretion in an attempt to make them untouchable in court. Unbridled discretion is totally anathema to the conservative ideal of limited government. Thus, a true conservative judge, not a "liberal" one, will be the one who will resurrect the litigation wars over the ESA if all you do is amend the Act in an attempt to limit litigation. I have practiced in front of more than 100 judges, and the ones who do the most to enforce the ESA the strongest are ALL Reagan and Bush I appointees.

If and when such a brain trust on the ESA is convened, my humble suggestions for ideas to consider follow: It seems to me that the two driving forces need to be: (1) what will work better to improve the survival chances for rare species (the current system has hit a wall trying to be an emergency room and nothing else), and (2) how can (1) be accomplished in ways that give incentives to private landowners and interests to assist in species conservation and that do not penalize people for using their land in otherwise legal ways.

As a private forest landowner myself, I feel that, on the private lands side of the ESA, all punitive measures need to be removed, except for direct, willful killing of a listed species (such as shooting a bald eagle). Indirect takings of listed species need to be made noncriminal and non-illegal civilly, but tied to some tracking/study mechanism so we can learn just how much damage those things (like development, timber harvest, etc.) really do or do not adversely impact species. We could set up a system whereby if landowners, developers, etc., agree to report all the impacts from indirect take (such as the bald eagle leaves its nest due to the construction of condos next to the next tree), their activities are permitted and they have full immunity from all such takes and harm. The agencies' budgets and abilities for doing such monitoring would have to be enhanced. Underfunding these agencies is a key reason for the problems (especially the litigation) we face now.

Thus, permitting would not be the convoluted mess it is now trying to modify development plans to minimize impacts, but a swifter process that notifies the federal agencies and then sets up monitoring by those agencies for

scientific purposes; once monitoring plans met requirements set in the Act or by regulations, the permit would be automatic. All this would be tied to an incentives program (such as tax credits, assistance programs, conservation easements and their tax breaks, etc.) that would reward private landowners and developers for doing more than the minimal monitoring program, such as setting aside areas for the species, changing plans to minimize impacts, etc. Direct takings, such as shooting or trafficking in listed species, would be much more aggressively funded, pursued and prosecuted.

To make up for lessening species protections on private lands, protections of species on public lands would need to be increased by beginning ecosystem monitoring and restoration/conservation programs that would look to harmonize management with doing minimal harm to species and preventing more species from needing listing. Basically, we need to move away from the emergency room only approach of the current law and build a health care system for critters (although the emergency room would still have to be there to some lesser extent). This would be tied to a larger and more targeted land acquisition/conservation easement program to gain key lands and ecosystems into public protection from willing sellers.

Efforts to restore degraded public lands would fit in well with increased ESA protections for species there. A national model of success on protecting wildlife on public lands can be found in the National Forests of Alabama. In 1992, the National Forests in Alabama were the WORST of the forests in the whole Forest Service system; they violated every federal law as often as they could in order to "get the cut out." Yes, it did take a series of lawsuits, appeals and other legal actions to finally shut down all illegal logging in the National Forests in Alabama in 1999. Since then, however, the leadership of the Forests and much of the staff changed. Instead of continuing the fights over bad management, they decided to meet with us and see if we could find agreement on solutions for good management.

Now, all the National Forests in Alabama are implementing scientifically-valid restoration programs, all of which were prepared under (and in full compliance with) the 1982 NFMA regulations and the ESA. These restoration programs are immensely successful. Being the first to do this new type of restoration work, the Conecuh National Forest prepared a full Environmental Impact Statement (EIS) on what restoration is needed for that forest's unique Longleaf Pine/Wiregrass ecosystem (the rarest forest type in North America) and on what work could be done in five years to correct past mismanagement and restore the natural and healthy forest native there. That restoration plan was not challenged legally in any way and succeeded, and it has won national awards. National Forests in Louisiana, Florida and parts of Mississippi are also doing great work at Longleaf Pine restoration, all in compliance with NFMA and the ESA. Survey data on threatened, endangered and sensitive species is being collected and analyzed. Public participation is open and good. NEPA analysis for most of these projects is exemplary and does not slow down the agency at all. Indeed, these forests have found that doing NEPA analysis right, instead of trying to shortcut NEPA, makes their final decisions better and more successful. The same could work for the ESA.

I personally do not oppose revising the scientific standards portion of the ESA, SO LONG AS the scientific standards that are adopted are indeed SCIENTIFIC, and not political in design. Why not convene a blue-ribbon panel of scientists from many perspectives and with credentials that no one from any side could attack and have them develop standards for listing, delisting, critical habitat, recovery plan designs, etc.? As for critical habitat, I would make its protections stronger on public lands and, for private lands, make it advisory, so that it guides conservation efforts (like land acquisitions, conservation easements, local planning, incentive programs) but has no actual limiting impact on private landowners. Indeed, if the incentives package is designed well enough, having land designated critical habitat would actually be an economic boost to a landowner, if and only if, they decided to make advantage of it. If they wanted to pave the critical habitat over anyway despite the incentives to do something better, they could do so freely.

And further, because every species is a unique and special creation of the God who made us all, perhaps we should not be so cavalier about those that have passed into extinction at our hands. We should not forget so easily. We should do something to remind ourselves and recommit ourselves to doing a better job of stewardship with what the Lord has given us in trust for future generations. As we have memorials to every war, so the brave dead and the lessons of that war are not forgotten, just as we have the Civil Rights Memorial in my home town of Montgomery, so that those who gave their lives for equality are not forgotten, perhaps we should erect a fitting monument to the species that have gone extinct during our watch. As my friend Professor Dan Rohlfs said:

"Society remembers things for many reasons, not all of which are pleasant. Wars, calamities, and episodes of genocide are seared in society's collective memory in museums, memorials, books, and other cultural expressions, in part to remember victims, and in part to remind society of the tragedy and horror of these occurrences in an effort to prevent similar ones in the future. However, there are few, if any, reminders of extinct species. Therefore, as Cokinos points out, people quickly and unfortunately become accustomed to a biotic landscape that no longer has clouds of passenger pigeons (*Ectopistes migratorius*) numbered in the millions or billions, or huge ivory-billed woodpeckers, called by some the 'Lord God Bird,' drumming on huge trees deep in Southern swamps. Other monuments have demonstrated the power of a simple list of names of the fallen as a spare, yet potent, means of keeping memories and knowledge alive. A list of extinct species could perhaps do likewise. It may be an uncomfortable reminder of human and agency failures. Yet it would almost undoubtedly serve as a source for interest in species that no longer exist, and in the causes of their demise. And with this interest, increased resolve to protect and restore the biosphere's biological heritage, and thus hope for the future of all species on the threatened and endangered lists, may follow."

Daniel J. Rohlf, "Section 4 of the Endangered Species Act: Top Ten Issues for the Next Thirty Years," 34 *Envtl. L.* 483, 552-53 (2004).

The ultimate issue comes down to: what is it we want to accomplish here? Do we want to find solutions to improve the environment and the survival of God's special creatures, and thus improve the long-term chances of the survival and advancement of our own society and economy? Or are we just going to keep playing expedient, short-term political games with extinction, something all sides and people involved (including me) are guilty of?

I deeply appreciate this opportunity to address the Committee and present this testimony before it. I remain committed to working with the Committee's members and staff to find real solutions for making the ESA a better and more effective law. Representative Joe Barton has publicly invited environmental groups "to come out of the trenches" and meet y'all halfway. If that invitation is truly sincere, as I believe it is, I am here to do that.

Thank you, Ray Vaughan

GAO

Testimony

Before the Subcommittee on Fisheries,
Wildlife and Water, Committee on
Environment and Public Works, United
States Senate

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ENDANGERED SPECIES ACT

Successes and Challenges in Agency Collaboration and the Use of Scientific Information in the Decision Making Process

Statement of Robin M. Nazzaro, Director
Natural Resources and Environment





Highlights of GAO-05-732T, a report to the Subcommittee on Fisheries, Wildlife and Water, Committee on Environment and Public Works, United States Senate

Why GAO Did This Study

The purpose of the Endangered Species Act is to conserve endangered and threatened species and the ecosystems upon which they depend. This law currently protects more than 1,260 animal and plant species. Within the Department of the Interior, the Fish and Wildlife Service implements and enforces the act. In addition, all federal agencies, such as the Department of Defense and the Bureau of Land Management, must ensure that their activities do not jeopardize a protected species' continued existence or adversely modify or destroy habitat that has been designated as critical to its survival.

The Endangered Species Act and its implementation can be controversial when there are conflicting uses for a natural resource as, for example, when timber on federal lands is both habitat for endangered and threatened species and a valuable commodity to be harvested. Conflicts also occur over the adequacy or interpretation of scientific information in making species protection decisions.

GAO has issued numerous reports on the implementation of the Endangered Species Act. This testimony is based primarily on four of these reports and addresses (1) collaboration among federal agencies to conserve threatened and endangered species and (2) utilization of scientific information by the Fish and Wildlife Service.

www.gao.gov/cgi-bin/getrpt?GAO-05-732T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Robyn Nazzaro at (202) 512-3841 or nazzaror@gao.gov.

ENDANGERED SPECIES ACT

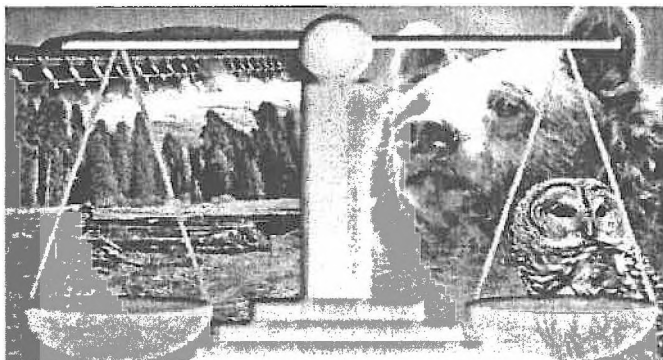
Successes and Challenges in Agency Collaboration and the Use of Scientific Information in the Decision Making Process

What GAO Found

We have found that effective agency collaboration can reduce conflict over competing uses of natural resources and improve agencies' abilities to protect species while carrying out other mission-related activities. While we have noted several instances of effective interagency cooperation, we have also discovered that agencies could be doing more to work together to find effective species protections. For example, at one military facility, Air Force officials worked with the Fish and Wildlife Service and others to entice the endangered Sonoran pronghorn—a species similar in appearance to antelope—away from military training areas. As a result, the agencies were able to minimize the impact of species protections on training exercises. Previously, Air Force officials had reported that 32 percent of their live-fire missions were either cancelled or moved due to the presence of the pronghorn. However, we have found that there are obstacles to further agency collaboration that need to be addressed.

We have found that the Fish and Wildlife Service generally used the best available information in key endangered species decisions, although the agency was not always integrating new research into ongoing species management decisions. For example, since the Bureau of Land Management eliminated sheep grazing on more than 800,000 acres in tortoise habitat in California, neither the Bureau or the Fish and Wildlife Service had ensured that necessary research was conducted to assess whether this action had benefited the tortoise. Unless managers link research findings to recovery actions, they cannot develop a scientific basis to make decisions about whether land use restrictions—such as limiting grazing or other activities in tortoise habitat—should remain unchanged, be strengthened, or whether alternative actions are more appropriate. Developing such information is important as some of the restrictions imposed to protect the tortoise have been controversial because of their broad impact and some affected by the restrictions have questioned whether they are necessary for the tortoise's recovery.

Agencies Must Balance the Use of Natural Resources with the Protection of Species



Sources: GAO, Nova Development Corporation, U.S. Army Corps of Engineers.

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Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss our work related to the Endangered Species Act. As you know, the purpose of the act is to conserve endangered and threatened species and the ecosystems upon which they depend. This law currently protects more than 1,260 animal and plant species. Under the act, no one may “take” a protected species, which is defined as harming, harassing, pursuing, shooting, wounding, killing, trapping, hunting, capturing, or collecting, or attempting any such conduct. In addition, federal agencies and federally authorized activities may not jeopardize a species’ continued existence or adversely modify habitat deemed critical for a species’ survival. The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS)—collectively referred to as the Services—are responsible for working with other federal agencies, tribal, state, and local governments, private companies, and citizens to ensure that species are appropriately protected. In addition, all federal agencies are directed by the act to utilize their authorities to conserve threatened and endangered species.

The act requires FWS and NMFS to list as endangered any species facing extinction and to list as threatened any species likely to become endangered in the foreseeable future. When a species is listed, the act also generally requires the agencies to designate critical habitat—habitat essential to a species’ conservation—because the loss of habitat is often the principal cause of species decline. FWS and NMFS are also required to develop a plan to recover the listed species to the point that they are no longer endangered or threatened, an achievement marked by their removal, or delisting, from the list of endangered or threatened species.

The act’s success in protecting species depends on one’s point of view. Some believe it has been successful because in the face of chronic underfunding only 9 species have gone extinct since the act’s inception, others say it has been a failure because only 9 species have been recovered. Advocates on both sides of the argument would likely agree, however, that the Endangered Species Act and its implementation have served as lightning rods in the ongoing national debate concerning the tradeoffs that must often be

made between economic, social, and environmental values. The tradeoffs required to implement the act were vividly apparent in 1978, when the Supreme Court ruled that construction of the Tellico Dam could not be completed because doing so would jeopardize the continued existence of the endangered snail darter—a species of fish.¹ The dam, which has since been completed,² is located on the Little Tennessee River and provides flood control, hydropower, and water supply. In this case, the Court ruled that the Endangered Species Act explicitly prohibits activities that would jeopardize the continued existence of an endangered species or result in the destruction or modification of its habitat, and stated that the act represents a congressional decision to require agencies to give greater priority to the protection of endangered species than to their other missions. Under the Court’s decision, federal agencies generally are prohibited from authorizing, funding, or carrying out actions, such as dam construction, permitting timber harvesting and livestock grazing, and wetland dredging, if doing so would jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify their critical habitats.

The legacy of this decision continues to this day as federal agencies struggle to balance their obligation to protect species and carry out other mission-related activities that often involve ensuring industries, ranchers, farmers, recreational enthusiasts, tourists, and others, appropriate access to and use of the very natural resources on which those species depend. One prominent recent example is the federally-operated Klamath Project—dams, reservoirs, and associated facilities—that sits on the California-Oregon border. Here, under extreme drought conditions, several federal agencies—including the Services and the Bureau of Reclamation—are trying to balance the water needs of irrigators and others who receive water from the project, and threatened and endangered fish, which must have sufficient water to survive. In 2002, thousands of fish died while water was delivered for agricultural irrigation; the prior year, farmers experienced crop losses while water was used to maintain stream flows for fish.³ Another prominent

¹ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978).

² Legislation, passed in 1979, allowed for completion of the Tellico Dam.

³ For a more comprehensive assessment of the status of the nation’s freshwater supply see U.S. General Accounting Office, *Freshwater Supply: States’ Views of How Federal Agencies Could Help Them Meet the Challenges of Expected Shortages*, GAO-03-514 (Washington, D.C.: July 9, 2003).

example involved the threatened Northern spotted owl. In the early 1990s, timber sales on federal lands that are habitat for the Northern spotted owl were brought to a virtual halt by federal court injunctions. In various rulings, the federal courts enjoined the Forest Service and Bureau of Land Management from selling timber until they addressed issues related to protecting the habitat of the owl.⁴

More recently, controversies surrounding the act have centered on the adequacy of the scientific information used to make decisions about whether and how to list species. Just in the past few months sparks have flown in response to scientific decisions concerning the Florida panther, the Preble's meadow jumping mouse, and the greater sage grouse. In the first case, FWS conceded weaknesses in the data used to craft some of its plans to protect the endangered panther. While critics of FWS claim the agency's use of faulty information was politically motivated, FWS officials defend it as an honest mistake made in the context of an ever-evolving body of knowledge. In the case of the Preble's mouse, FWS announced in January 2005 that it will propose removing the mouse from the endangered species list because new research indicates that it is genetically not a separate subspecies of meadow jumping mouse as previously thought. Critics of the act cite this as evidence that the act does not require sufficient scientific evidence before a species is listed. Finally, FWS also recently announced that it will not place the sage grouse on the endangered species list. Critics of the decision are concerned that politics interfered with a scientifically justified decision to list the species. FWS claims that the decision was the result of an extensive review of scientific data and analysis.

While there are no simple answers to the conflicts and controversies surrounding the act, we believe that the federal agencies responsible for managing endangered species and their habitats can be more effective in how they manage these conflicts or potentially avoid conflicts altogether. We have issued more than 15 reports in the past 10 years addressing how the Endangered Species Act is being implemented. (These reports are listed in Appendix I along with other GAO reports that discuss the effect of the act on

⁴ For a fuller account of this controversy and efforts to resolve it, see U.S. General Accounting Office, *Ecosystem Planning: Northwest Forest and Interior Columbia River Basin Plans Demonstrate Improvements in Land-Use Planning*, GAO/RCED-99-64 (Washington, D.C.: May 26, 1999).

other programs). Today, I am going to discuss our work on two of the major issues currently being debated concerning the Endangered Species Act—the difficulty of balancing species needs with other resource uses and the use of science in implementing the act. Specifically, this testimony addresses (1) collaboration among federal agencies to conserve threatened and endangered species and (2) utilization of scientific information by FWS in key Endangered Species Act decisions.

This testimony is based primarily on four previously issued reports. In general, we did not perform additional audit work in preparing this testimony. We made recommendations in these four reports and have updated the status of agencies' efforts to implement our recommendations. Our work was conducted in accordance with generally accepted government auditing standards.

Summary

In summary, we found that federal agencies have taken steps to improve collaboration as a way to reduce conflicts that often occur between species protections and other resource uses, but that more could be done to promote routine use of collaboration and clarify agencies' responsibilities under the Endangered Species Act. In September 2003, we reported on efforts taken by the Department of Defense (DOD) to coordinate with other federal land managers in order to reduce the impact of species protections on military activities. We found several cases where such efforts were successful. For example, at the Barry M. Goldwater range in Arizona, Air Force officials worked with officials at FWS and the National Park Service to enhance food sources for the endangered Sonoran pronghorn in locations away from military training areas. As a result, the Air Force was able to minimize the impact of restrictions on training missions due to the presence of the pronghorn. However, such cases were few and far between because, among other things, there were no procedures or centralized information sources for facilitating such collaboration. In March 2004, we reported on collaboration that takes place pursuant to section 7(a)(2) of the act—referred to as the consultation process—in the Pacific Northwest. In this area, large numbers of protected species and

vast amounts of federal land conspire to make balancing species protection and resource use a contentious endeavor. We found that steps the Services and other federal agencies had taken made the consultation process run smoother and contributed to improved interagency relationships. However, some problems have persisted. For example, some agencies disagree with the Services about when consultation is necessary and how much analysis is required to determine potential impacts on protected species. In each of these reports, we made recommendations intended to further improve collaboration among federal agencies with regard to balancing species protections and other resource uses, and—in the March 2004 report—to resolve disagreements about the consultations process. DOD and FWS have begun discussing an implementation strategy to improve collaboration regarding species protection on military and other federal lands and development of a training program. With regard to the consultation process, while FWS and NMFS have continued to take steps to expand their collaboration processes, the agencies did not believe that disagreements about the consultation process require additional steps. They believe that current training and guidance is sufficient to address questions about the process.

With regard to the use of science, we have found that FWS generally used the best available information in key Endangered Species Act decisions, although the agency was not always integrating new research into ongoing species management decisions. In addition, we identified concerns with the adequacy of the information available to make critical habitat decisions. In December 2002, we reported on many aspects of the decision making for species protections regarding the Mojave Desert tortoise. We found that the decision to list the tortoise as threatened, its critical habitat designation, and the recommended steps in the species' recovery plan, were based on the best available information. However, despite over \$100 million in expenditures on recovery actions and research over the past 25 years, it is still unclear what the status of the tortoise is and what effect, if any, recovery actions are having on the species because research has not been coordinated in a way to provide essential management information. Such information is critically important as some of the protective actions, such as restrictions on grazing and off road vehicle use, are vigorously opposed by interest groups who

question whether they are necessary for the tortoise's recovery. Accordingly, we recommended that FWS better link land management decisions with research results to ensure that conservation actions and land use restrictions actually benefit the tortoise. In response, FWS recently established a new office with a tortoise recovery coordinator and plans to create an advisory committee to ensure that monitoring and recovery actions are fed back into management decisions. In August 2003, we found that, similar to the decision making regarding the tortoise, FWS decisions about listing species for protection under the act were generally based on the best available information. However, while most critical habitat designations also appeared to be based on the best available information, there were concerns about the adequacy of the information available at the time these decisions are made. Specifically, critical habitat decisions require detailed information of a species' life history and habitat needs and the economic impacts of such decisions—information that is often not available and that FWS is unable to gather before it is obligated under the act to make the decision. As a result, we recommended that the Secretary of the Interior clarify how and when critical habitat should be designated and identify if any policy, regulatory, or legislative changes are required to enable the department to make better informed designations. FWS has not responded to our recommendation.

Collaborating to Protect Endangered Species

At the heart of many of the controversies surrounding the Endangered Species Act is the competition for natural resources—competition between the needs of threatened and endangered species and resource extraction industries, land owners, and other users of the natural resources on which those species depend. Our work has largely focused on the challenges that agencies face in protecting species while carrying out their other mission-related responsibilities, some of which could have a negative impact on protected species. While our work has highlighted positive examples where collaboration between federal agencies has reduced conflict, there is still room for improvement.

Collaboration Can Help the Military Sustain Critical Functions While Protecting Endangered Species

We saw the importance of collaboration among federal agencies in our work evaluating the protection of threatened and endangered species and habitat on military installations in the United States. Many DOD and other federal agency officials have recognized that military lands often provide some of the finest remaining examples of rare wildlife habitat for protected species. In fact, more than 300 threatened or endangered species inhabit military lands. However, DOD officials are concerned that the presence of protected species may constrain essential military training. DOD officials have identified the Endangered Species Act, along with other factors such as competition for air space and urban growth around military installations, as issues affecting or having the potential to affect military training and readiness.⁵

In September 2003,⁶ we issued a report on the extent to which DOD and other federal land management agencies are cooperatively managing the protection of endangered species affecting military training ranges, and the factors that can limit such collaboration. We found several cases where DOD and other federal land managers have entered into cooperative agreements that have benefited both the species and the military. For example, collaboration among federal agencies around the Air Force's Barry M. Goldwater Range in Arizona, minimized the impact of restrictions on training exercises that were necessary to protect the endangered Sonoran pronghorn (a species similar in appearance to an antelope). Previously, Air Force officials reported that 32 percent of their live-fire missions were either cancelled or moved due to the presence of the pronghorn. Air Force officials worked with FWS and National Park Service officials to jointly fund forage enhancement plots, which provided food sources for the Sonoran

⁵ U. S. General Accounting Office, *Military Training: DOD Lacks a Comprehensive Plan to Manage Encroachment on Training Ranges*, GAO-02-614 (Washington, D.C.: June 11, 2002). See also U.S. General Accounting Office, *Military Training: DOD Approach to Managing Encroachment on Training Ranges Still Evolving*, GAO-03-621T (Washington, D.C.: April 2, 2003); and U.S. General Accounting Office, *Military Training: DOD Needs a Comprehensive Plan to Manage Encroachment on Training Ranges*, GAO-02-727T (Washington, D.C.: May 16, 2002).

⁶ U.S. General Accounting Office, *Military Training: Implementation Strategy Needed to Increase Interagency Management for Endangered Species Affecting Training Ranges*, GAO-03-976 (Washington D.C.: September 29, 2003).

pronghorn. The plots enticed the pronghorn to an adjacent national wildlife refuge and away from military training areas and, as a result, minimized the impact of restrictions on training missions.

However, the instances of collaboration between DOD and the Departments of the Interior and Agriculture were limited. Although the departments have entered into memorandums of understanding that contain specific actions to be taken to implement cooperative management—such as forming interagency working groups, identifying geographic regions for species management, and identifying reporting requirements—many of the specific actions in these agreements were never fully implemented and most agreements had expired. When there were examples of cooperative management efforts between DOD and other federal land managers, they were often initiated in response to a crisis, such as a marked decline in a species' population or land-use restrictions that significantly impacted federal land managers' abilities to carry out their missions. The Departments of Defense, the Interior, and Agriculture identified a number of factors that can limit interagency cooperative management for endangered species affecting military training ranges. In addition to the absence of a shared sense of crisis among federal land managers, other obstacles to agency collaboration included limited agency interaction, resource constraints, lack of land manager training and experience, and the lack of centralized or otherwise easily accessible sources of information.

In our September 2003 report, we recommended that the Secretaries of Defense, the Interior, and Agriculture develop and implement an interagency strategy, a comprehensive training program, and a centralized data source for cooperative management efforts. The departments concurred on the need to improve interagency cooperation. The Department of Defense, FWS, and others have initiated plans for an interagency strategy, training program, and information sharing mechanisms.

Collaboration Can Help Reduce the Contentiousness of the Consultation Process

Collaboration is central to the consultation process required under section 7(a)(2) of the Endangered Species Act, where federal agency officials must jointly assess the potential impacts of agency activities on protected species. The process can get contentious, however, because it sometimes pits officials at the Services against officials from other agencies who are attempting to carry out typical agency activities. For example, the process can become difficult when an agency such as the Corps of Engineers is planning an activity in accordance with its mission to support navigation in the nation's waterways, such as issuing permits for dock construction, and the Services recommend project changes in order to meet the requirements of the Endangered Species Act. Such changes can impact the nature of the original project, and add to the time and cost necessary to complete what some agency officials described as seemingly benign or insignificant activities.

We issued a report in March 2004 that evaluated the consultation process in the northwestern United States.⁷ We were asked to evaluate the consultation process in this region because of persistent concerns about the time and cost that consultation added to federal activities and activities that are federally-permitted or funded. In the northwest United States, the consultation process is a prominent feature of federal land management because of the region's combination of large areas of federal land and significant numbers of listed species. Endangered or threatened species in this region include the Northern spotted owl, grizzly bear, Canada lynx, bull trout, and various species of salmon.

Between 1997 and 2000, 25 species in the northwest were identified for protection under the Endangered Species Act. This prompted concerns about the consultation process because many projects in the region were delayed, sometimes for years, because of the

⁷ U.S. General Accounting Office, *Endangered Species: More Federal Management Attention Is Needed to Improve the Consultation Process*, GAO-04-93 (Washington, D.C.: Mar. 19, 2004). See also U.S. General Accounting Office, *Endangered Species: Despite Consultation Improvements Efforts in the Pacific Northwest, Concerns Persist about the Process*, GAO-03-949T (Washington, D.C.: June 25, 2003).

Services' inability to address the associated workload increases. For example, according to a local community representative, before salmon were listed for protection in the late 1990s, the Corps of Engineers' permitting process for activities such as constructing or modifying private docks on Lake Washington generally took only 2 or 3 months and averaged about 5 percent of construction costs. Since salmon were listed, the Corps must consult with NMFS when issuing these permits. This representative said that, as a result, the timeframes for permits have increased to about 24 months and permitting costs have increased to about 33 percent of construction costs.

We found that, in response to concerns about the consultation process, the Services and other federal agencies had taken steps in three general categories to make the consultation process more collaborative and efficient.

- The Services and other federal agencies took steps to facilitate collaboration among their staffs so that disagreements about species protections and project modifications could be resolved before they slowed down the consultation process. Officials at the agencies cited several benefits of these steps such as increased trust between the Services and other agencies, better communication, and earlier involvement in projects, which many officials emphasized as important for consultations to run efficiently.
- The Services and other federal agencies also developed approaches to reduce the consultation workload, such as including multiple related activities in a single consultation. According to officials, this has increased the efficiency of the consultation process and enabled the agencies to deal more quickly with activities for which the effects on species are known.
- The Services and other federal agencies took steps to increase the consistency and transparency of the consultation process, such as providing interagency training courses and posting guidance and information on agency Web sites. For example, to address disagreements between the Services and other federal agencies, the Services issued guidance on how to assess the effects of right-of-way permits on protected species.

Despite efforts to improve the consultation process, officials with the Services and other federal agencies still have concerns about two key issues. First, officials at the agencies are still concerned about workload. While staff levels have increased in recent years, increases in personnel have been outpaced by the increasing number and complexity of consultations. Officials told us that more activities are going through the consultation process than before and that projects are becoming more complex, requiring greater analysis and staff time to identify potential impacts on species and any necessary protections. Second, officials at the Services and other federal agencies sometimes disagree about the extent to which consultation is necessary. Some agency officials said they feel pressured by the Services—and by the fear of litigation—to seek consultation, regardless of the likely effects of an activity on protected species, including in situations where they feel consultation is unnecessary. Officials at the Services also cited the fear of litigation, and said they believed that they were simply fulfilling their responsibilities under the act to consult on projects that may affect protected species regardless of the level of the potential impact. The result is a continued sense of frustration among agency officials regarding what protections are necessary under the Endangered Species Act and the time it takes to reach agreements in agency consultations.

Because many concerns about the consultation process center on its timeliness, we recommended in our March 2004 report that FWS and NMFS work with other agencies to determine how best to capture data on the level of effort devoted to the consultation process and use this information to manage the process. We further recommended that the Secretaries of the Interior and Defense, the Under Secretary of Commerce for Oceans and Atmosphere, and the Chief of the Forest Service work together to resolve disagreements about when consultation is required and how detailed an analysis is necessary. Both FWS and NMFS have taken steps to improve information management of the consultation process, although it is unclear whether they have determined how to capture the level of effort devoted to the process—admittedly, a difficult task. While FWS and NMFS have continued to take steps to expand collaborative processes, in an update on their actions, the agencies stated that they did not believe that disagreements

about the consultation process require the adoption of additional measures. They believe that the current training and guidance on consultation is sufficient to address questions about the process.

Using Scientific Information to Make Decisions

Scientific information is a key component of most decisions regarding the implementation of the Endangered Species Act. Our work has largely focused on how FWS has used information in key decisions about endangered species, such as listing threatened and endangered species, designating critical habitat, and developing species recovery plans. While we found that FWS has generally done a good job using available information to make decisions, there is still room for improvement.

While Many Key Protection Decisions for the Mojave Desert Tortoise Were Based on the Best Available Information, FWS Has Not Always Integrated Research Into Ongoing Recovery Decisions

In a December 2002 report,⁸ we found that key FWS decisions were supported by the best available information. We relied on experts identified for us by the National Academy of Sciences to review FWS listing, critical habitat, and recovery plan decisions for the Mojave Desert tortoise. Based on their review of the information available at the time the respective decisions were made, the scientists we consulted agreed that the listing of the desert tortoise in 1990, the critical habitat designation, and the recommendations in the recovery plan were reasonable. These scientists recognized that, as is often the case with such decisions, little published data on the species were available. However, they agreed that FWS's decisions were appropriate and consistent with their understanding of the agency's responsibilities under the act.

Our report, however, was less positive with regard to what FWS had learned about the tortoise since their decisions were made. We found that while over \$100 million (in

⁸ U.S. General Accounting Office, *Endangered Species: Research Strategy and Long-Term Monitoring Needed for the Mojave Desert Tortoise Recovery Program*, GAO-03-23 (Washington, D.C.: Dec. 9, 2002).

constant 2001 dollars) had been spent on research and recovery efforts over the past 25 years, there was still little known about the species' status, the key threats to its survival, or the effectiveness of management actions implemented to help the tortoise. While many actions intended to protect the tortoise have been taken, necessary research had not been conducted to determine whether these actions were effective. For example, the Bureau of Land Management prohibited sheep grazing on more than 800,000 acres of tortoise habitat in California and implemented restrictions on off-road vehicles in tortoise habitat. While individual studies had been conducted on these issues, the research had not been coordinated in a way to answer questions about the impact of such actions on tortoise populations or habitat. Determining the effectiveness of such protective actions is important because they affect large areas of land, were recommended on the basis of limited published data, and in some cases, are vigorously opposed by certain interest groups. Unless managers link research findings to assessments of recovery actions that have been implemented, they cannot make determinations based on scientific information as to whether land use restrictions should remain unchanged, be strengthened, or whether alternative actions are more appropriate.

To ensure that the most effective actions are taken to protect the tortoise, we recommended in our December 2002 report that the Secretary of the Interior develop and implement a coordinated research strategy for linking land management decisions with research results and periodically reassess the recovery plan for the tortoise. In response, FWS recently established a new office with a tortoise recovery coordinator and three field coordinators who will help coordinate research and management. In addition, the agency plans to create an advisory committee to ensure that monitoring and recovery actions are fed back into management decisions. FWS previously utilized an expert committee to review the recovery plan for the tortoise. Although the committee found that the plan was fundamentally sound, it similarly recommended that ties between research and management be strengthened.

Species Listing and Critical Habitat Decisions Are Based On Best Available Information, but Concerns Remain About the Adequacy of that Information

Recent concerns about FWS listing and critical habitat decisions have focused on the role that “sound science” plays in the decision making process and whether FWS properly interprets scientific data and bases its decisions on adequate scientific information. Critics of FWS decisions warn that improper listing and critical habitat decisions may disrupt social and economic activities and divert funding and attention away from species truly facing extinction. The Endangered Species Act requires FWS to use the best available information when making decisions to list species or designate critical habitat. It is important to note that the “best available” standard does not obligate FWS to conduct studies to obtain new data, but prohibits the agency from ignoring available information. FWS goes through an extensive series of procedural steps that involve public participation and review by outside experts (i.e., peer reviewers) to help ensure that it collects relevant data and uses it appropriately.

In August 2003, we reported on FWS’s use of available scientific information in making listing and critical habitat decisions.⁹ Because of the number of species decisions to analyze and the inherent difficulties in independently assessing available scientific information and determining what constitutes a scientific sound decision, we identified several proxies for assessing the reliability of FWS listing and critical habitat decisions. These proxies entailed reviews of:

- The procedures FWS follows for gathering information and internally reviewing decision documents;
- Comments from peer reviewers on listing and critical habitat decisions;
- The outcomes of legal challenges to these decisions; and
- Subsequent changes to FWS listing and critical habitat decisions, such as after additional scientific information had been gathered.

⁹ U.S. General Accounting Office, *Endangered Species: Fish and Wildlife Service Uses Best Available Science to Make Listing Decisions, but Additional Guidance Needed for Critical Habitat Designations*, GAO-03-803 (Washington, D.C.: Aug. 29, 2003).

In each case, we determined that, overall, FWS species listing and critical habitat decisions were based on the best available information. However, experts and others knowledgeable about the Endangered Species Act have expressed concerns about FWS's ability to designate critical habitat for some listed species given the amount of information available on the species' habitat needs at the time decisions must be made—at the time of listing or shortly thereafter. Unlike listing decisions that are more straightforward—requiring FWS to answer only a “yes or no” question as to whether a species warrants listing—critical habitat decisions often require more detailed knowledge of a species' life history and habitat needs and call for FWS to factor in the species' special management needs as well as the economic impacts of the designation. FWS officials, experts, and others with whom we spoke agreed that the amount of scientific information available when they are required to designate critical habitat is limited and often affects FWS's ability to adequately define the habitat essential to the species' conservation. While some interested parties stated that FWS designated areas too broadly and included lands unsuitable for several species, others said that FWS did not designate enough habitat for some listed species. According to FWS officials, the resource and time constraints under which its scientists work often preclude them from collecting new information and, as a result, their ability to produce adequate critical habitat designations may be limited by the information available for some species. We found that most scientific disagreements surrounding recent critical habitat designations concerned whether the area chosen as critical habitat is sufficiently defined or whether the overall information used to support the designation is adequate. In order to increase the amount of information available on which to base critical habitat designations, FWS and others, including the National Research Council, have recommended delaying designations until recovery plans are developed.¹⁰

We also reported that FWS's critical habitat program faced a serious crisis that extended well beyond the use of science in making decisions. Key court decisions have invalidated certain practices adopted by the agency, causing its critical habitat program

¹⁰ National Research Council, *Science and the Endangered Species Act* (Washington D.C.: National Academy Press, 1995) pp. 71-93.

to become overburdened by litigation. Specifically, a key court case in 1997 invalidated FWS's policy regarding when it was prudent to designate critical habitat for listed species.¹¹ Prior to the decision, FWS had designated critical habitat for only about 10 percent of listed species. Since then, court orders and settlement agreements have compelled FWS to designate critical habitat in cases that the agency had previously determined doing so was not prudent. In 2001, FWS lost another key lawsuit, challenging the adequacy of the economic analyses the agency used to support its critical habitat designations.¹² Since this decision was issued, court orders and settlement agreements have prompted FWS to re-issue some critical habitat decisions. The Department of the Interior believes that the flood of litigation over critical habitat designation is preventing FWS from taking what it deems to be higher priority activities, such as addressing the approximately 250 "candidate" species waiting to go through the listing process (listing and critical habitat activities are funded under the same line item in the department's budget).

Because FWS's critical habitat program faces serious challenges, including questions regarding the role of critical habitat in species conservation, we recommended in our August 2003 report that the Secretary of the Interior provide clear strategic direction for the critical habitat program by clarifying the role of critical habitat and how and when it should be designated and recommending policy, regulatory, and/or legislative changes necessary to address these issues. The Department did not respond to our request to comment on a draft of this report and has not formally indicated whether or not it intends to implement the recommendation.

Conclusion

We recognize that passions run high when issues concern the Endangered Species Act. The act, with its broad powers to restrict the use of natural resources and impinge upon individual property rights, coupled with its noble purpose to conserve the ecosystems

¹¹ *Natural Resources Defense Council v. United States Department of the Interior*, 113 F.3d 1121 (9th Cir. 1997).

¹² *New Mexico Cattle Growers v. United States Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001).

upon which threatened and endangered species depend, provides a crucible for an ongoing national debate concerning the tradeoffs between economic, social, and environmental values. As members of the Subcommittee are well aware, there are no easy answers. However, there is common ground among everyone concerned about the act and its impact on the nation and its resources. All can agree that reducing the negative impacts of implementing the act—whether it be the loss of credibility for the Services over debates about “sound science” or the perceived injustice of limited resource use due to needed species protections—while improving the status of threatened and endangered species is a worthy goal. In our testimony today, we have highlighted just a few examples where federal agencies, working cooperatively and diligently, have achieved just that. Unfortunately, we found too few examples of this in our work. We believe more can be done. The task before us is to identify how all concerned parties—federal, tribal, state, local, and private—can work together to improve the status of threatened and endangered species while further reducing the negative impacts of implementing the act. As we begin a new review of how species recovery plans are being implemented—work that was requested by a bipartisan group of Senators and Congressmen including the Chairman of this Subcommittee—we hope that the successful examples on collaboration and the use of science we noted here are harbingers for future cooperation and success.

Appendix I: GAO Reports Concerning the Endangered Species Act

Reports Addressing Implementation of the Endangered Species Act

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. Washington, D.C.: April, 6, 2005.

Protected Species: International Convention and U.S. Laws Protect Wildlife Differently. GAO-04-964. Washington, D.C.: September 15, 2004.

Endangered Species: Federal Agencies Have Worked to Improve the Consultation Process, but More Management Attention Is Needed. GAO-04-93. Washington, D.C.: March 19, 2004.

Military Training: Implementation Strategy Needed to Increase Interagency Management for Endangered Species Affecting Training Ranges. GAO-03-976. Washington, D.C.: September 29, 2003.

Endangered Species: Fish and Wildlife Service Uses Best Available Science to Make Listing Decisions, but Additional Guidance Needed for Critical Habitat Designations. GAO-03-803. Washington, D.C.: August 29, 2003.

Endangered Species: Despite Consultation Improvement Efforts in the Pacific Northwest, Concerns Persist about the Process. GAO-03-949T. Washington, D.C.: June 25, 2003

International Environment: U.S. Actions to Fulfill Commitments Under Five Key Agreements. GAO-03-249. Washington, D.C.: January 29, 2003.

Endangered Species: Research Strategy and Long-Term Monitoring Needed for the Mojave Desert Tortoise Recovery Program. GAO-03-23. Washington, D.C.: December 9, 2002.

Columbia River Basin Salmon and Steelhead: Federal Agencies' Recovery Responsibilities, Expenditures and Actions. GAO-02-612. Washington, D.C.: July 26, 2002.

International Environment: U.S. Actions to Fulfill Commitments Under Five Key Agreements. GAO-02-960T. Washington, D.C.: July 24, 2002.

Endangered Species Program: Information on How Funds Are Allocated and What Activities Are Emphasized. GAO-02-581. Washington, D.C.: June 25, 2002.

Canada Lynx Survey: Unauthorized Hair Samples Submitted for Analysis. GAO-02-496T. Washington, D.C.: March 6, 2002.

Unauthorized Hair Samples Submitted for Analysis. GAO-02-488R. Washington, D.C.: March 6, 2002.

Accidental Contamination of Samples Used in Canadian Lynx Study Rendered the Study's Preliminary Conclusion Invalid. GAO-01-1018R. Washington, D.C.: August 14, 2001.

Endangered Species Act: Fee-Based Mitigation Arrangements. GAO-01-287R. Washington, D.C.: February 15, 2001.

Fish and Wildlife Service: Challenges to Managing the Carlsbad, California, Field Office's Endangered Species Workload. GAO-01-203. Washington, D.C.: January 31, 2001.

Fish and Wildlife Service: Weaknesses in the Management of the Endangered Species Program Workload at the Carlsbad, California Field Office. T-RCED-00-293. Washington, D.C.: September 14, 2000.

Endangered Species: Caribou Recovery Program Has Achieved Modest Gains. RCED-99-102. Washington, D.C.: May 13, 1999.

Department of Commerce, National Oceanic and Atmospheric Administration: Endangered and Threatened Species; Threatened Status for Two Chinook Salmon Evolutionarily Significant Units (ESUs) in California. OGC-00-5. Washington, D.C.: October 15, 1999.

Department of Commerce, National Oceanic and Atmospheric Administration: Endangered and Threatened Species of Salmonids. OGC-99-38. Washington, D.C.: April 7, 1999.

Estimated Costs to Recover Protected Species. RCED-96-34R. Washington, D.C.: December 21, 1995.

Reports Related to the Endangered Species Act

Military Training: DOD Approach to Managing Encroachment on Training Ranges Still Evolving. GAO-03-621T. Washington, D.C.: April 2, 2003.

Transboundary Species: Potential Impact to Species. GAO-03-211R. Washington, D.C.: October 31, 2002.

Military Training: DOD Lacks a Comprehensive Plan to Manage Encroachment on Training Ranges. GAO-02-614. Washington, D.C.: June 11, 2002.

Military Training: DOD Needs a Comprehensive Plan to Manage Encroachment on Training Ranges. GAO-02-727T. Washington, D.C.: May 16, 2002.

Consequences of the Ruling by the 11th Circuit Court of Appeals on Forest Management Projects. GAO-01-51R. Washington, D.C.: November 30, 2000.

Timber Management: Forest Service Has Considerable Liability for Suspended or Canceled Timber Sales Contracts. GAO-01-184R. Washington, D.C.: November 29, 2000.

Army Corps of Engineers: An Assessment of the Draft Environmental Impact Statement of the Lower Snake River Dams. RCED-00-186. Washington, D.C.: July 24, 2000.

National Fish Hatcheries: Authority Needed to Better Align Operations With Priorities. RCED-00-151. Washington, D.C.: June 14, 2000.

Fish and Wildlife Service: Agency Needs to Inform Congress of Future Costs Associated With Land Acquisitions. RCED-00-52. Washington, D.C.: February 15, 2000.

Fish and Wildlife Service: Management and Oversight of the Federal Aid Program Needs Attention. T-RCED-99-259. Washington, D.C.: July 20, 1999.

International Environment: Literature on the Effectiveness of International Environmental Agreements. RCED-99-148. Washington, D.C.: May 1, 1999.

Ecosystem Planning: Northwest Forest and Interior Columbia River Basin Plans Demonstrate Improvements in Land-Use Planning. RCED-99-64. Washington, D.C.: May 26, 1999.

Forest Service: Distribution of Timber Sales Receipts, Fiscal Years 1995 Through 1997. RCED-99-24. Washington, D.C.: November 12, 1998.

Water Resources: Corps of Engineers' Actions to Assist Salmon in the Columbia River Basin. RCED-98-100. Washington, D.C.: April 27, 1998.

Federal Land Management: Estimates of Value and Economic Effects of Canceled and Suspended Timber Sale Contracts in the Pacific Northwest. RCED-98-18R. Washington, D.C.: October 6, 1997.

Forest Service: Unauthorized Use of the National Forest Fund. RCED-97-216. Washington, D.C.: August 29, 1997.

Tongass National Forest: Lack of Accountability for Time and Costs Has Delayed Forest Plan Revision. T-RCED-97-153. Washington, D.C.: April 29, 1997.

Federal Power: Issues Related to the Divestiture of Federal Hydropower Resources. RCED-97-48. Washington, D.C.: March 31, 1997.

Timber Management: Opportunities to Limit Future Liability for Suspended or Canceled Timber Sale Contracts. RCED-97-14. Washington, D.C.: October 31, 1996.

Bureau of Reclamation: An Assessment of the Environmental Impact Statement on the Operations of the Glen Canyon Dam. RCED-97-12. Washington, D.C.: October 2, 1996.

Northwest Power Planning Council: Greater Public Oversight of Business Operations Would Enhance Accountability. RCED-96-226. Washington, D.C.: August 30, 1996.

Animas-La Plata Project: Status and Legislative Framework. RCED-96-1. Washington, D.C.: November 17, 1995.

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