Statement of:
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Committee on Resources

Mr. Chairman, my colleagues and I have spent a great deal of time studying the strengths and weaknesses of the Endangered Species Act. We support efforts to improve the scientific standards used to promote conservation of rare plants and wildlife, and I appreciate this opportunity to discuss why better science will make the endangered species program more effective.

One of the many problems now plaguing implementation of a responsible and effective endangered species program is its faulty listing process. Under the current program the evidentiary standards for listing are, in a word, bad. I use the word bad because it is an apt acronym for "best available data", or, as it says in Sec. 4 "best scientific and commercial data available". The problem with best available data, or BAD, 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.

Data from the various government reports on endangered species demonstrate how the current standards result in far too many mistakes. For example, one of three grounds for removing a species from the list of endangered species from the list is 'data error.' The fact that this category is often needed demonstrates that solid, verified scientific information is not required for a listing. Numerous species that have been removed from the endangered and threatened list were originally listed based on erroneous data. A look at some of these 'data errors' makes a strong argument against the B.A.D. standard.

or the Federal Register states: "As a result of the Indian flapshell turtle's inclusion on Appendix I of CITES [a United Nations endangered species list] the Service subsequently listed the species as endangered." After listing, rather than before, a "…literature review was conducted to see if supporting evidence justified its current endangered status. No such supporting data could be found." In a further attempt to find supporting information, the Service then contacted turtle experts such as Dr. E. O. Moll, who happened to be researching in India at that time. Moll stated that it was "seemingly the most common and widespread turtle in all of India … How it ever made Appendix I is a big mystery."

The story of another data error, the pine barrens tree frog, is similar. Only those pine barrens tree frogs found in the frog's southern range were listed. After listing, FWS worked with Florida officials to gather information about how many frogs actually existed. According to the Federal Register, "Data were presented which expanded the species' known Florida distribution from 7 Okaloosa County sites to a total of over 150 sites…" in 3 counties. Further studies including Alabama areas revealed a total of 165 more sites than were believed to exist when a fraction of this frog's population was listed--a pretty big error.

The Mexican duck, another error, was determined to be essentially a "blue-eyed version"[not literally] of a common duck, the mallard. Almost comically, the Federal Register states "all reports and observations of 'Mexican ducks' in the United States and Northern Mexico must now be interpreted to be of only 'Mexican-like ducks.'" The notice went on "'Mexican ducks'… are only identifiable segments of the entire population, just as brown-eyed and blue-eyed individuals are phenotypic segments of the human species."

The tumamoc globeberry, a vine that is the most recent data error, was delisted by FWS on June 18, 1993. After including this plant on the endangered species list for 7 years, FWS determined, "surveys have shown *Tumamoc* to be more common and much more evenly distributed across its range than previously believed…." Although never really endangered, during its 7 years on the list this plant soaked up over $1.4 million in funds from the Corps, BLM, DOD, NPS, USFS, and the Bureaus of Indian Affairs, Mines and Reclamation and was the basis for FWS to issue a jeopardy opinion on the Tucson Aqueduct.

It is difficult to know just how many species have been listed on poor grounds but there is evidence to suggest that the number is significant. In a review we did a few years ago of 306 recovery plans we found there was little hard information about the status of listed species. Recovery plans regularly call for "searches for additional sites," "searches for additional populations" and "surveying suitable habitat for additional populations." Few recovery plans state that we reliably know how many of a particular federally regulated species exist. Following are a few example drawn from USFWS approved plans.

Alabama Lamp Pearly Mussel: 'Other aspects of the ecology of this species are totally unknown.' and that 'The historically restricted distribution of *L. virescens* and lack of information about changes in various stream populations prevents a more precise determination of the reasons for the species decline.'

Atlantic Green Turtle: 'More information is needed before detailed distribution maps or estimates of population number and structure can be made...' 'The number of nests deposited in Florida appears to be increasing, but whether this number is due to an increase in the number of nest or more thorough monitoring of the nesting beeches is uncertain.'

Cave Crayfish: 'Sufficient data to estimate population size or trends is lacking.'

Higgins' Eye Mussel: 'The historical distribution of L. Higginsi is difficult to accurately assess because of the taxonomic problems involving the species complex to which it belongs.' The plan also states: 'Numerically *L. higgensi* may be less rare today than previously thought, but in all probability this reflects a significantly greater collecting effort and the ability of a larger number of collectors to identify it.'

Hualapai Mexican Vole: '...the subspecies is considered poorly defined owing to limited material available...'

Kentucky Cave Shrimp: 'The very small estimated population size of the species at the time of listing (approximately 500 individuals) made it stand out as being extremely vulnerable to extinction. Since the time of listing, new populations have been discovered...Population estimates...range from approximately 7,000 to 12,000 individuals.'

Knowlton Cactus: 'Because there is inadequate biological data for *P. Knowltonii* and because there is only one viable population, downlisting and delisting criteria cannot be established at this time.

Louisiana Pearlshell Mussel: 'With practically no information on the life history, population levels, and habitat requirements for this species, an estimate of the cost of recovery to the point of downlisting is not possible.

Mona Iguana: 'The status of the Mona Iguana prior to...1972...only can be inferred.'

Palos Verdes Blue Butterfly: 'The historical distribution of the butterfly is unknown...'

Red Hills Salamander: 'There is no evidence that the animal has occurred outside its present range within historic times...' and 'Comparative data relating temporal trends in population densities are unavailable...'

Virgin Islands Tree Boa: 'Population trends cannot be determined because of lack of data.' The plan also states 'lack of available information on this secretive, nocturnal snake precludes formulation of a quantitative recovery level'

Painted Snake Coiled Forest Snail: 'Information on the snail's ecology and natural history is almost completely lacking.'

In at least 79 of the 306 plans I reviewed there was some degree of uncertainty regarding the taxonomic classification of an endangered plant or animal.

Many of the species which have been officially declared as recovered actually were listed based upon inaccurate data. Three birds, the Palau dove, Palau owl and Palau flycatcher, considered recoveries and are limited to a small island nation of Palau about 400 miles east of the Philippines. While FWS calls them 'recoveries,' a GAO report states that "although officially designated as recovered, the three Palau species owe their recovery more to the discovery of additional birds than to successful recovery efforts." Similarly, John Turner, former FWS director revealed during a Senate hearing that the Rydberg milk-vetch, a plant which is one of the few other supposed recoveries was delisted because "further surveys turned up sufficient healthy populations." In plain English, another mistake.

There are a few other species that some people cite as successes. One of these, the American alligator, is thriving, but remains listed as threatened due to a technicality. However, like other officially 'recovered' species, the alligator probably should never have been listed. Florida wildlife officials think the alligator's population dynamics were misunderstood at the time of listing. Even the National Wildlife Federation pointed out in its magazine that the "familiar and gratifying" recovery story of the alligator was "mostly wrong."

From USFWS's reports and statements we know that a large number of the species removed from the list, as well as many others still lingering there, should have probably never been on it in the first place. We know that many of the Act's recoveries are really data errors. We know that for most species we have only qualitative estimates of uncertain value. For a great number of species we know little--as demonstrated by recovery plans which basically state that or which call for a population survey as one of the first steps. And we know that two of the most famous endangered species, the northern spotted owl and the snail darter, were both undercounted.

The weak best available data standard is exacerbated not only by a lack of reliable baseline data but by ideological agendas, programmatic incentives and institutional interests that further skew the program away from sound science. This process not only results in unnecessary costs but also wastes conservation resources that otherwise would be more effectively used. Those who want to see responsible and effective endangered species programs have a serious obligation to honestly address this situation, because these errors cause conflict, drain resources and may plague the Act to the point where it comes to be generally considered as another well-meaning government program gone bad.

The subjectivity of the standards under which the current program operates also allows the law to be enforced very selectively. Economic activity has been almost shut down in parts of the country, particularly the rural west, to protect possible, potential habitat of species of highly questionable authenticity from harm

that is speculative. While in other areas major developments never seem to be inconvenienced by a need to protect species they affect.

Bad conservation science not only misdirects conservation efforts toward unjustified activities; it also blocks protective action where it is truly needed. A glaring example of this occurs here in Washington where massive amounts of harmful, foul-smelling sludge are permitted to be discharged by the Washington Aqueduct through a National Park and into the Potomac where it smothers the spawning beds of the endangered shortnose sturgeon. The Parks Subcommittee recently held a hearing on these midnight dumpings and sought a peer review of the science being used to justify continuation of this midnight dumping through a park.

The peer review panel found that the study was " inconsistent with established scientific and engineering standards and industry practices," that, "Selective collection, application, and interpretation of data leave key questions unanswered and introduce an element of subjectivity into the reviewed study," and that "There are a number of conclusions made in the Report that are based on selective, qualitative interpretation of the data."

Those who have seen Draconian enforcement of the ESA in their districts may wonder why there is apparently so little conflict between rare species and human activities in other areas. They may be a surprise to learn that in the government's own back yard ESA is simply not enforced the way it is elsewhere. Here, the benefit of the doubt is not given to the endangered species. Here, economic considerations outweigh species protection. Here, science, or what purports to be science, is employed to provide cover so that needed projects can proceed unimpeded by the ESA.

Let me quote from the scientific panel that reviewed a study EPA and the Corps of Engineers planned to rely upon to justify continued discharge of toxic sludge here in Washington:

Virtually all of the interpretation is focused on explaining why the aquatic aluminum standard should not be applied down gradient of the Washington aqueduct. However, very little of this interpretation is supported by the presented data…

In sum, the Report does not appear to contain sufficient analysis and study to substantiate the conclusion that sediment discharges have no adverse impact on essential fish behavior such as feeding and seeking shelter…

"The Washington Aqueduct's sludge discharges can harm fish or other aquatic life within designated mixing zones through toxicity, chemo-sensory disruption, or other environmental stress or by affecting essential behavior patterns, such as feeding, migrating, spawning, or seeking shelter.

The review panel's primary recommendation for the Washington Aqueduct is that dumping into the Potomac be stopped.

"The operator of the Washington Aqueduct should be urged to undertake an effort to avoid discharges into the Potomac River…" through, as the first choice, "Construction of a treatment plant on-site for solids dewatering prior to off-site on-land disposal of the solids" This is really no more than almost every other similar water treatment plant does.

The National Wilderness Institute has gone to court to try to force a number of very reluctant federal

agencies to end the political favoritism and special treatment used to exempt this area from needed conservation and recovery efforts for endangered species that occur here.

There are other examples I could give of how the current scientific standards apparently allow selective non-enforcement to occur. There are some highly endangered invertebrates, similar to the listed fairy shrimp though far rarer and far more endangered, that occur in a few springs in the Washington area. One of these small crustacean species is known from only one location, another from only two locations. Yet petitions to have them listed have been arbitrarily rejected.

Another example of the sorry state of endangered species science was exposed a few years ago when Secretary Babbitt bragged that a couple dozen species will "…be flying, splashing and leaping off the list," and claimed that his plan to delist species proves "the Endangered Species Act Works…period." This claim proved to be false.

Of the species Babbitt planned to delist several were already extinct or were taxonomically invalid. Many other species never had been actually endangered, they had been undercounted or the threat to them had been overestimated. Some others on Babbitt's list had actually improved but did so primarily because of events unrelated to the Endangered Species Act such as the ban on DDT or management by state agencies or private conservation efforts. Here is a list of the Secretary Babbitt's species and the real reason for their possible delisting.

Common Name Reason

Guam broadbill Extinct

Oahu tree snail Extinct

Oahu tree snail Extinct

Oahu tree snail Extinct

Mariana mallard Extinct

Truckee barberry Taxonomic Error

Virginia roundleaf birch Taxonomic Error

Lloyde's hedgehog cactus Taxonomic Error

Ewa Palains 'akoko Taxonomic Error

Dismal swamp southeastern shrew Data Error

Virginia northern flying squirrel Data Error

running buffalo clover Data Error

Tinian monarch Data Error

Hawiaian hawk Data Error

Island night lizard Data Error

Hoover's wooley star Data Error

Missouri bladderpod Data Error

tidewater goby Data Error & Non - ESA

Aleutin Canada goose Data Error & Management

bald eagle Non - ESA Factors

peregrine falcon Non - ESA Factors

Columbian white-tail deer Non - ESA & Management

brown pelican Non - ESA

Eureka Valley evening primrose Pre-ESA /Management

Eureka Valley dune grass Pre-ESA /Management

Columbia white tail deer Pre-ESA , Est. Refuge & Hunting Restriction

Robbin's cinquefoil Management Activities

Loch lomond coyote thistle Management Activities

Heliotrope milk vetch Management Activities

parhump poolfish Management Activities

heliotrpoe milkvetch Management Activities

spring-loving centaury Established Refuge

Ash Meadows sunray Established Refuge

Ash Meadows gumplant Established Refuge

Ash Meadows amargosa pupfish Established Refuge

gray wolf Hunting Restriction

Poor scientific standards are a threat to private conservation.

The relationship between private ownership of land and conservation is of special interest to NWI. Private conservation is actually more important to the environment than government efforts. Although the federal

government owns vast amounts of land, private land is often richer in wildlife, plants and water. When I speak of private conservation I do not refer only to-for-profit environmental organizations but also commercial activities - ranching, farming, forestry, recreation industries and others - that make tremendous contributions to conservation as a byproduct of business activity. The North Maine Woods land, for example, is a vast area - over two million seven thousand acres - of privately owned commercial forest land that provides not only extensive wildlife habitat and public recreation opportunities, but contributes to our economy. Much of this land is still owned by the many descendants of the original landowners who got the land when Maine became a state in 1820.

In some cases, conservation is directly related to a business enterprise. Sea Lion Caves, a for-profit organization, protects the only mainland rookery of the Steller sea lion. It is a major tourist attraction on the Oregon coast and receives over 200,000 visitors annually. Had not the area been privately owned, developed and protected, especially when the State of Oregon paid a bounty for slaughtered sea lions, the sea lions caves area would undoubtedly be void of sea lions and other marine life and this natural wonder would probably not exist today.

The opportunities to improve the quality of our environment by creating incentives for property owners are not limited the case of Sea Lion Caves but are vast. In Utah, Deseret Livestock's land produce elk that have a higher calving ratio, preferable bull to cow ratio and a higher average weight that on adjoining public land. In Texas private ranchers are providing habitat and thereby maintaining a total number of a rare African antelope that is greater than in Africa itself. In these cases not only are the landowners and the species benefiting from private conservation activities but also the public. If any of these beneficial activities made the property owner vulnerable to a regulatory taking of his property, they would surely be reduced in size and scope and might not occur at all.

Michael Bean of the Environmental Defense Fund described the problem in a talk to U. S. Fish and Wildlife Service employees when he said there is "increasing evidence that at least some private land owners are actively managing their land so as to avoid potential endangered species problems." He went on to say:

The problems they are trying to avoid are the problems stemming from the Act's prohibition against people 'taking' endangered species by adverse modification of habitat. And they're trying to avoid those problems by avoiding having endangered species on their property. Because the woodpecker primarily uses older trees for both nesting and

foraging, some landowners are deliberately harvesting their trees before they reach sufficient age to attract woodpeckers, in their view, and in fact before they reach the optimum age from an economic point of view. In short, they're really nothing more than a predictable response to the familiar perverse incentives that sometimes accompany regulatory programs...

Sam Hamilton, former USFWS State Director in Texas, said, "The incentives are wrong here. If I have a rare metal on my property, its value goes up. But if a rare bird occupies the land, its value disappears."

Other wildlife officials have pointed out how listing a species under the present law can further imperil its prospects. Larry McKinney, Director of the Resource Protection Division of the Texas Parks and Wildlife Department stated:

I am convinced that more habitat for the black-capped vireo, and especially the golden-cheeked warbler, has been lost in those areas of Texas since the listing of these birds than would have been lost without the

Endangered Species Act at all.

The current combination of politicized science and the perverse incentive structure created by some regulations hurts wildlife conservation because less desirable management decisions than would otherwise occur are made. Upgrading the scientific standards of the endangered species program is a necessary first step in making this program a truly effective conservation tool.

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