

H.R. 2829 and H.R. 3705

LEGISLATIVE HEARING

BEFORE THE

**COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES**

ONE HUNDRED SEVENTH CONGRESS

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LEGISLATIVE HEARING ON H.R. 2829, TO AMEND THE ENDANGERED SPECIES ACT OF 1973 TO REQUIRE THE SECRETARY OF THE INTERIOR TO GIVE GREATER WEIGHT TO SCIENTIFIC OR COMMERCIAL DATA THAT IS EMPIRICAL OR HAS BEEN FIELD-TESTED OR PEER-REVIEWED, AND FOR OTHER PURPOSES; AND H.R. 3705, TO AMEND THE ENDANGERED SPECIES ACT OF 1973 TO REQUIRE THE SECRETARY OF THE INTERIOR TO USE THE BEST SOUND SCIENCE AVAILABLE IN IMPLEMENTING THE ENDANGERED SPECIES ACT.

**Wednesday, March 20, 2002
U.S. House of Representatives
Committee on Resources
Washington, DC**

The Committee met, pursuant to notice, at 2:03 p.m., in room 1334, Longworth House Office Building, Hon. James V. Hansen (Chairman of the Committee) presiding.

STATEMENT OF THE HON. JAMES V. HANSEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

The CHAIRMAN. The Committee will come to order.

After we fill this room, which we are going to do, I am sure, and if anyone wants to hear audio only, we have an overflow room in 1332 Longworth for those who would just like to pick up the audio.

Good afternoon, everyone, and thank you for being here to discuss two bills that amend the Endangered Species Act, H.R. 2829, introduced by Congressman Greg Walden, and H.R. 3705, introduced by Congressman Richard Pombo, both members of this Committee.

The CHAIRMAN. While there is not too much we do on the Hill which stirs up as much controversy as the issues dealing with the ESA, I may say with some degree of certainty that, for the Resource Committee, there are no debates more contentious as those

which surface when we are discussing endangered species and this act.

There is probably a good reason for this. This is the only act in the country that I am aware of that elevates species of flies, rats, slimy slugs and hosts of other creatures nobody has ever heard of over the needs, desires, and the pursuit of happiness for American citizens. I always thought that we passed laws here in Congress to help people in this country. Instead, however, what we have with the ESA is a law which has devastated thousands of people and their families, has displaced thousands more, has inflicted undue hardships probably on millions of others, and has cost, conservatively, in the billions of dollars.

All of this for the sake of protecting some species that, under their current status, cannot be supported scientifically and that many believe should never have been put on the endangered species list anyway. Unfortunately, we are well beyond that point when this act should have been amended. Recent events have confirmed or convincingly underscored the need for this act to be changed. The agencies responsible for making ESA decisions based upon the best scientific and commercial data have simply failed to carry out this mandate. When laws are passed which simply do not function as they are intended to, it is our duty to make changes and amend the law.

In the case of the ESA, the duty was clearly evidenced by two recent events on which this Committee held hearings which illustrate some of the most egregious abuses by the agencies responsible to use scientifically valid and reliable information to base their decision. One dealt with Klamath River Basin, the other with the planted Canada lynx hair and conclusively show that these agencies base decisions using unsubstantiated scientific information or had deliberately doctored scientific information to achieve desired results.

Although these two incidents clearly call the integrity of these agencies into question, they are not isolated and have been going on for many years. These situations, and others like them, simply will not be tolerated by this Committee nor, I believe, should they be tolerated by the U.S. Congress. Without question, we need to amend the ESA to integrate a system of better science and decisionmaking.

At the end of 2001, there were 1,254 plants and animals listed—740 plants and 514 animals. Two hundred and forty-nine more species remain on the candidate list, and 32 species are proposed for listing. As we have seen, as more species are listed, more problems can be anticipated, unless we change how the ESA is implemented and get better science and peer review into this process.

There is an inseparable link between best science and that science which has been field tested, validated or peer reviewed. It is exactly this connection the responsible Federal agencies need to account for when analyzing data and information within the context of the ESA. It is also this connection that H.R. 2829 and 3705 intend to make.

Both these bills, albeit with slightly different approaches, will establish the peer-review process on nearly all of the findings and

determinations made by the Fish and Wildlife Service and the Marine Fisheries Service.

Both of these bills also give greater weight to information that has undergone some scientific scrutiny, analysis or review.

I will let each of the authors explain their legislation in greater detail, but after my review of these bills, I am sure this is a good first step in amending an act which simply does not function as it was intended and solves many of the fundamental problems we have had with this act for many years.

I am looking forward to hearing testimony from all witnesses today, especially Assistant Secretary Craig Manson, who is making his first appearance before this Committee. I want to welcome each of the witnesses here today.

I will now turn the time over to the ranking member, the distinguished gentleman from West Virginia.

[The prepared statement of Mr. Hansen follows:]

Statement of The Honorable James V. Hansen, Chairman, Committee on Resources, on H.R. 2829 and H.R. 3705

Good afternoon everyone and thank you for being here today to discuss two bills that amend the Endangered Species Act—H.R. 2829, introduced by Congressman Greg Walden and H.R. 3705, introduced by Congressman Richard Pombo, both members of the Resource Committee.

Well, there is not too much we do on the Hill, which stirs up as much controversy as the issues dealing with the ESA. I may say with some degree of certainty that, for the Resource Committee, there are no debates more contentious as those which surface when we are discussing endangered species and this Act.

And there is probably a good reason for this—this is the only Act in this country that I'm aware of that elevates species of flies, rats, slimy slugs, and host of other creatures nobody has heard of over the needs, desires, and the pursuit of happiness of American citizens. I always thought that we passed laws here in Congress to help people in this country. Instead, however, what we have with the ESA is a law which has devastated thousands of people and their families, has displaced thousands more, has inflicted undue hardship probably on millions of others, and has cost, conservatively, in the billions of dollars.

All of this for the sake of protecting some species that, under their current status, cannot be supported scientifically and that many believe should never have been put on the endangered species list anyway. Unfortunately, we are well-beyond the point when this Act should have been amended. Recent events have confirmed and convincingly underscored the need for this Act to be changed. The agencies responsible for making ESA decisions based upon the best scientific and commercial data have simply failed to carry out this mandate.

When laws are passed which simply do not function as they are intended it is our duty to make changes and amend the laws. In the case of the ESA, this duty was clearly evidenced by two recent events, on which this Committee held hearings, which illustrate some of the most egregious abuses by the agencies responsible to use scientifically valid and reliable information to base their decisions. One dealt with Klamath River Basin, the other with planted Canada lynx hair and conclusively show that these agencies based decisions using unsubstantiated scientific information or had deliberately doctored scientific information to achieve a desired result. Although these two incidents clearly call the integrity of these agencies into question, they are not isolated and have been ongoing for many years. These situations, and others like them, simply will not be tolerated by this Committee nor, I believe, should be tolerated by the Congress. Without question, we need to amend the ESA to integrate a system of better science into the decision-making.

As of the end of 2001 there were 1254 plants and animals listed (740 plants; 514 animals). Two hundred and forty nine more species remain on the candidate list and 32 species are proposed for listing. As we have seen, as more species are listed more problems can be anticipated, unless we change how the ESA is implemented and get better science and peer-review into the process.

There is an inseparable link between "best" science and that science which has been field tested, validated, or peer-reviewed. It is exactly this connection the responsible Federal agencies need to account for when analyzing data and information

within the context of the ESA. It is also exactly this connection that H.R. 2829 and 3705 intend to make. Both these bills, albeit with slightly different approaches, will establish a peer-review process on nearly all of the findings and determinations made by the Fish & Wildlife Service and Marine Fisheries Service. Both of these bills also give greater weight to information that has undergone some scientific scrutiny, analysis, or review. I'll let each of the authors explain their legislation in greater detail, but after my review of these bills I am sure that this is a good first step in amending an Act that simply does not function as it was intended and solves some of the fundamental problems we have had with this Act for many years.

I am looking forward to hearing testimony from all the witnesses today, especially Assistant Secretary Craig Manson, who is making his first appearance before this Committee. I want to welcome each of the witnesses here today and I now turn the time over to the Ranking Member, Mr. Rahall.

STATEMENT OF THE HON. NICK J. RAHALL, II, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WEST VIRGINIA

Mr. RAHALL. Thank you, Mr. Chairman.

Mr. Chairman, I had hoped we would not find ourselves at yet another contentious hearing on the Endangered Species Act, but it was not to be. Both of these bills have as their purported purpose the improvement of science used in the implementation of the Endangered Species Act. In reality, they do nothing more than hinder the scientific process by dictating the types of data that must be used in setting up a conflict between the agencies and the outside scientists that will surely lead to more litigation, more delays and more loss of species.

The law already requires that the ESA be implemented using the "best scientific information available." H.R. 2829 abandons that approach by defining what does and does not constitute acceptable data. How is it possible that we will reach better scientific outcomes by basing them on less information? Even more puzzling, it requires that any data submitted by a landowner be considered in a decisionmaking process, regardless of its scientific merit. It would seem then that the best science is not to be identified by scientists through peer review, but by Members of Congress with little or no scientific expertise of which to speak.

Moreover, Fish and Wildlife Service and NMFS policy already require independent peer review of listing recommendations and recovery plans. These bills would extend that process to virtually every decision made by the agencies, though only in cases where agency decisions will result in more protection for the species.

At the same time, H.R. 3705 establishes a standard for review by outside scientists. There is guaranteed resulting conflict with the agencies and provide the basis for more delays.

Mr. Chairman, it is time for efforts to undermine the ESA to end. As human beings, we have a responsible to act as stewards of all of the creatures put on this Earth. We cannot continue to destroy the habitat, use water and pollute the air with no regard to the impacts on other species. Those of us who support the ESA have tried to make this point with secular arguments. Failing that, it is my hope that the fact that every major religion in the world extols the virtue of species protection might carry some weight.

As the word of the Lord came to Ezekiel, "As for you, my flock, it is not enough for you to be on good pasture. Must you also trample the rest of your pasture with your feet? Is it not enough for you

to drink clear water? Must you also muddy the rest with your feet?"

We cannot treat the Earth's resources with disdain as if they are ours alone. If that was God's intention, he would not have told Noah to save two of every species, including man.

We have a responsibility to co-exist with all creatures. If we cannot, it is a sad commentary on our abilities to live in a civilized world.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Rahall follows:]

Statement of The Honorable Nick J. Rahall II, a Representative in Congress from the State of West Virginia

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The CHAIRMAN. I thank the gentleman.

Possibly, we have just a brief explanation from the two authors that are sitting here. Are you ready to go Mr. Walden?

STATEMENT OF THE HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. WALDEN. I can, Mr. Chairman, but I can't start without at least trying to set the record state from the start when it comes

to data from landowners because I think that the ranking gentleman's statement does not reflect the wording in the language of the bill.

What the bill says is that the Secretary would have to accept and acknowledge receipt of landowner data and include the data in the rulemaking record. That is all it says. So I don't think that is asking too much to say accept receipt of the data. Think of a public hearing where you accept receipt of data, receipt of testimony. These are people whose very lives are being turned upside down.

You want to talk about fairness, come out to my district and the Klamath Basin, where you can talk to the people who have had their lives turned upside down because of bad decisions that, once we did have peer review, we found out were not made based on adequate science. The decisions didn't hold up.

So the genesis of the legislation I am proposing says let us get a second opinion before we make a decision to either list or delist, to consult or to recover. I don't think that is bad. If you went to the doctor and the doctor said to you, "Mr. Rahall, we are going to have to take off your right leg," you would probably go get a second opinion. Right now under the Endangered Species Act they just cut you off at the knees. You don't get a second opinion.

Fortunately, this administration did go forward and ask for a second opinion, the National Academy of Sciences' opinion, on the data and the decisions. We found out from the National Academy of Sciences the decisions made weren't based on adequate science or the decisions misinterpreted the data they had. In either case, 1,400 farm families didn't get water, nearly two dozen went bankrupt, and Mike McCowan had a heart attack and died.

That is why I feel so strongly about this, and that is why we tried to take a very reasonable and prudent course not to up-end the Endangered Species Act, but to bring about some sensibility, to simply say, turn to the National Academy of Sciences, have them put together a recommended list that they put forward. Pick from that list, Madam Secretary, three people to do an outside peer review, and then let us set some standards on what science is or is not. Promulgate that.

I am not an expert. I am not sitting here telling you what that science should or should not be. That is something for the experts to determine, but let us set some standards because right now under the Endangered Species Act that is not determined. It is very fluid, very flexible. And then let us go through and look at some of the other issues that would be decided by the legislation I am proposing.

The ESA right now gives the Secretary broad discretion in developing recovery plans. Public input is limited to an opportunity to comment on a draft recovery plan. That is it. Our legislation would say that agencies that are preparing recovery plans are required to identify, solicit, and accept scientific or commercial information that would assist in preparing the recovery plan. In other words, get more information, get better information, do it right and involve the public more.

I talked about the need to set minimum standards for scientific and commercial data not now required by the ESA. The listing actions must be supported by field data on the species and that they

must accept data on species collected by landowners. The ESA does not require peer review of scientific information, nor does it establish any structure for a peer review process. Our legislation would require, again, that every proposed listing, delisting, recovery plan or consultation under the ESA would be reviewed by a peer review panel of three nonbiased scientists.

And, finally, our legislation would require the Secretary to solicit and consider information provided by the States. It allows an applicant to:

One, prior to the release of a draft biological opinion, submit and discuss with the Service an action agency information about the proposed action and possible reasonable and prudent alternatives. Let us look and see if there are some alternatives out there that would be better than what some Government agency is proposing.

Obtain information used to develop the biological opinion and reasonable and prudent alternatives. We ought to have a right to know here before these decisions are made. Where did they get the information?

And, finally, to provide comments prior to publication of the final biological opinion. The Service must include the applicant's suggestions or explain why such suggestions were rejected. Comments and other information submitted shall be made available to the public.

I don't see that the steps we are proposing are one-sided, Mr. Chairman and ladies and gentlemen of this Committee. They could be used by either side in this debate, but it makes the process more transparent, it makes it based on better science, and it gives us a second look at the science that is used and the decisions that are made.

I think it is a prudent and reasonable step to improve and give greater support, if you will, to decisions made by the Endangered Species Act.

I thank you for your indulgence, Mr. Chairman.

[The prepared statement of Mr. Walden follows:]

**Statement of The Honorable Greg Walden, a Representative in Congress
from the State of Oregon, on H.R. 2829**

Sound Science and ESA Actions

- Requires the Secretary to set standards for the scientific and commercial data that is used to take actions under the ESA.
- Requires the Secretary to give greater weight to scientific or commercial data that is empirical or has been field-tested or peer-reviewed.

Sound Science and the Listing Process

- Sets minimum standards for the scientific and commercial data used in listing determinations.
- Listing actions must be supported by field data on the species.
- The listing agency must accept data on the species collected by landowners.

Sound Science and Recovery Planning

- Agencies preparing recovery plans are required to identify, solicit, and accept scientific or commercial information that would assist in preparing a recovery plan.

Sound Science and Peer Review

- Every proposed listing, delisting, recovery plan, or consultation under the ESA would be reviewed by a peer review panel of three non-biased scientists.

Sound Science and the Consultation Process

- Requires the Secretary to solicit and consider information provided by the State.
- Allows an applicant to: (1) prior to the release of a draft biological opinion, submit and “discuss” with the Service and action agency information about the proposed action and possible reasonable and prudent alternatives; (2) obtain information used to develop the biological opinion and reasonable and prudent alternatives; and (3) provide comments prior to publication of the final biological opinion.
- The service must include the applicant’s suggestions or explain why such suggestions were rejected.
- Comments and other information submitted shall be available to the public.

The CHAIRMAN. Thank you, Mr. Walden.
Mr. Pombo?

**STATEMENT OF THE HON. RICHARD W. POMBO, A
REPRESENTATIVE IN CONGRESS FROM THE STATE OF
CALIFORNIA**

Mr. POMBO. Thank you, Mr. Chairman. I thank you of for scheduling this hearing. Like the ranking member said, I, too, think it is time that we stop the contentious hearings dealing with the Endangered Species Act.

After spending months dealing with the ranking member and members of the minority, we came up with a number of ideas that we agreed on, in terms of the science provisions in the Endangered Species Act. Most of those areas that we agreed on are represented in this bill, including a number of the provisions that the ranking member was critical of, are provisions that he and others that worked with me on that working group agreed to. We tried to include provisions that were of agreement in this bill.

Many of the provisions in my legislation are similar, have the same idea as what is in Mr. Walden’s bill. Hopefully, we can come out of this process with a unified bill that both the minority and the majority can agree upon. I am anxious to get into the hearing. I am anxious to hear from our witnesses, so I will just conclude, Mr. Chairman, by saying that there are very, very few people who will say there is nothing wrong with the Endangered Species Act and the science that is being used, regardless of which side of the debate you are on.

Some of the most blatant criticisms that have come from the environmental community on the science that is being used under the Endangered Species Act are things that we are trying to reach some conclusion, to reach some kind of consensus as to the best way to proceed.

I will tell the administration witnesses, I will tell the rest of the witnesses that are here, if there are provisions in my legislation, in Mr. Walden’s legislation, that just don’t work, we will sit down and work with you. We will try to work out what those differences are, but we are going to do this. We are going to figure out a way to do a better job of protecting endangered species, do a better job of implementing the Endangered Species Act without all of the conflicts that Mr. Walden’s constituents, my constituents have to deal with on a daily basis.

My constituents don’t have the advantage of sitting in marble hearing rooms and talking about all of this as if it is theory. To them, it is real. It is every day. It is a business decision. It is

something that they have to live with that they wake up with in the morning, they go to bed with at night. It is not theory to them, it is real life, and we have to figure out a way to do a better job than what we are currently doing.

I thank the Chairman.

The CHAIRMAN. Thank the gentleman from California.

The gentleman from American Samoa, Mr. Faleomavaega?

**STATEMENT OF THE HON. ENI F.H. FALEOMAVAEGA, A
DELEGATE IN CONGRESS FROM AMERICAN SAMOA**

Mr. FALEOMAVAEGA. Mr. Chairman, I want to thank you for calling this hearing and certainly extend my courtesy to Mr. Pombo and Mr. Walden for their efforts in introducing these two pieces of legislation.

The Endangered Species Act is not a new issue here with our Committee, and I certainly want to commend Mr. Pombo for all of these past years that he has tried earnestly in trying to figure out some way or some how the solutions that have been raised by various members and their constituents, problems affecting their districts, not only in the scientific terms, but more especially even the economics and how the lives of the people have been affected because of its implementation. I won't say any more than the fact that since the announcement by the National Academy of Science, Secretary Norton has also put in her contribution, the national media has made a big thing about this, too, and I think it does bear a comprehensive hearing on our part, as members of the Committee that has jurisdiction over this issue.

So I look forward to hearing from our witnesses this afternoon. Again, I thank Mr. Pombo and Mr. Walden for these pieces of legislation to see where we need to go.

The CHAIRMAN. Thank you.

The gentleman from Louisiana, Mr. Tauzin?

**STATEMENT OF THE HON. W.J. "BILLY" TAUZIN, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF LOUISIANA**

Mr. TAUZIN. Thank you, Mr. Chairman.

I will tell you what it is time for, it is time for us to stop saying that every attempt to improve this important act is an attempt to destroy it. It is time to stop saying that. It is time to recognize that people who agree with the way it is working and disagree with the way it is working can have legitimate differences of opinion and try to make it work better, and I hope that is what we begin doing in this Committee. I want to commend my colleagues for trying to do that, trying to make suggestions that will make this work better.

If you have any doubt that it doesn't work well, come to Louisiana and see the alligator population in my State. Alligators were put on the endangered species list erroneously because somebody incorrectly calculated the rate of reproduction of alligators by 300 percent. Now, admittedly, checking on alligators reproducing is not without some risk—

[Laughter.]

Mr. TAUZIN. And getting it done right is probably difficult, but the missing by 300 percent was pretty severe. We used to have a nutria problem. We don't have a nutria problem any more. I would

like us not to have the same thing happen to Cajuns, but we are getting overrun by alligators, truly. Come out and drive the bayous at night with a light, and all you see is red eyes everywhere now. They are just all over the place because I think we made an error in the science, pure and simple.

I am trying to think this through, ladies and gentlemen, in a logical, sort of intellectual way. I thought we should start by thinking about what has rights, who has rights in this American system, on this planet. Start with property. I don't think anywhere in the Constitution, anywhere in our laws, have we created rights that property owns. Property doesn't own rights. It might deserve respect, a property might deserve all sorts of nice treatment and good conservation and environmental lights, but I don't know if we have accorded property itself rights in America, not those of us who advocate so-called property rights nor those who fight them.

When it comes to animals and plants, everybody debates that. What animal rights exist in America, what plant rights? I think we have generally concluded, because we have an Endangered Species Act, we have generally concluded in America that plants, and animals, humans and otherwise all have something of a right to survive as a species. We have a right to survive, at least a fair shot to survive.

We can't control meteorites hitting this planet, and you know destroying life, again, as it maybe once did. We cannot control many things about nature and neither can species and plants. Sometimes the survival of one depends upon the destruction of the other in the history of the planet. We can't control all of that, but we can, in our endangered species laws, give plants and animals a fair shot of surviving. We shouldn't be going out trying to destroy them. We should be trying to create conditions where they have a fair chance to continue. I mean, "What is it all about, Alfie," if it isn't to continue your line, and love life, and enjoy it, and respect it in the process?

The next group we should look at is people. Do people have rights in this society? Absolutely. I mean, one of the basic rights we have in this society is the right to private property in this American system. You can argue about that elsewhere in the world, but here in America in our Constitution we clearly describe a right of people in America to own and enjoy private property. In fact, we say to this Government up here, you cannot take it away from us without fair and just compensation. You can take it away, if you have to, for public purposes only and then only if you take it away and provide just and fair compensation to us.

We know there are many ways in which those rights are abused. They can be abused with regulations that don't make sense, are unreasonable, not properly based, and we end up either taking rights away of the use and enjoyment of property under the Constitution, fairly or unfairly. We should look at that.

For example, do people have a right to know whether a Government regulation takes away their rights to use their property? I think they do. We do not make that clear in the Endangered Species Act well or our wetlands laws. Do people have a right to know that when their rights are restricted it is on the basis of good science? You doggone right they do. They ought to know that when

their lives are disrupted or their economy is turned around or their property lost to them that it was done on the basis of good science at least.

Do they have a right to know that the agencies of Government are respecting good science? I think they do, and that is part of what we are going to discuss today. Communities have rights, too, by the way. They have a right to know, for example, whether or not a decision of an agency of the Federal Government is going to upset the community's economic life.

We had a Critical Area designation proposal in Louisiana to designate millions of acres of land to protect black bears in Louisiana, no public hearings planned. We demanded and got a couple of public hearings. We asked three simple questions: What is this critical area all about? What are we doing now that we can't do? And what are we going to be required to do when this happens? Is it necessary, and what has got to change in this area about the way we live?

The agency couldn't answer, particularly those last two questions. And after the public hearings, they abandoned the Critical Area because they recognized that there is a bear conservation group working in Louisiana that is doing a much better job than any Critical Area would do in restoring the black bear, the teddy bear, in Louisiana to survival rates.

Bottom line, this is a good discussion. We ought to have it, and we ought to quit saying every time we have it that somebody is out to destroy the Endangered Species Act. It ought to work better than it does. Let us try to make it work better.

The CHAIRMAN. Thank the gentleman.

Are there other opening comments?

The gentleman from Montana?

STATEMENT OF THE HON. DENNIS R. REHBERG, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MONTANA

Mr. REHBERG. Thank you, Mr. Chairman.

Real briefly I want to add my voice in the kudos to Mr. Walden and Mr. Pombo for doing this. When Chairman Hansen originally assigned me as a new freshman to the Working Group on Endangered Species, I thanked him. Now I blame him. I didn't realize how controversial this issue had become in Congress.

And, you know, it is kind of interesting because I guess I have not been in Washington long enough to have lost sight of the fact that when people are making jokes about laws, there is probably something wrong. "Shoot, shovel, and shut up" is not a distinction you want to be very proud of, and the people usually make the right decision. It is hard to argue with them when you lose an election. They probably made the right decision, for one reason or another, and they probably will make the right decision when they are very angry about a law that is not working.

This is not incentive based, it is disincentive based, and when Chairman Pombo originally called this, of course, it took several months to even agree what time to meet and where, but once we got beyond the initial decision of getting along, a lot of good ideas came forward from Mr. Rahall, and Mr. Miller, and Mr. Dingell

and such, and this is the direction that we took from the discussions that occurred.

I just thank Mr. Walden and Mr. Pombo for capturing the essence of the consensus that we are trying to build so that we don't have to joke about this law any more.

Thank you, Mr. Chairman.

The CHAIRMAN. The gentleman from Washington?

STATEMENT OF THE HON. JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. INSLEE. Thank you, Mr. Chairman.

I just want to say that Mr. Tauzin made reference to seeing the red eyes glowing at night in the swamp, and I just want to assure I don't care what color their eyes are, we are going to take care of Cajuns in this Committee.

[Laughter.]

Mr. INSLEE. So thank you, Mr. Chair.

Mr. TAUZIN. The Cajuns with red eyes are on Bourbon Street.

[Laughter.]

The CHAIRMAN. Does the gentleman from Pennsylvania have an opening comment?

Mr. PETERSON. No.

[The prepared statement of Mr. Jones follows:]

Statement of The Honorable Walter B. Jones, Jr., a Representative in Congress from the State of North Carolina

Thank you, Mr. Chairman. I won't take too much of the Committee's time today.

I am growing increasingly frustrated with the National Marine Fisheries Service policy of not listening to fishermen regarding the implementation of the Endangered Species Act and the Marine Mammal Protection Act. These fishermen have generations of empirical data that the National Marine Fisheries Service has chosen to ignore on issues like summer flounder, bottlenose dolphins and now monkfish.

Carolina's fishing families are suffering the consequences for the National Marine Fisheries Service's use of inaccurate data and the unilateral preservationist policies of an elite few within the agency.

I want to briefly discuss an incident regarding the Endangered Species Act that occurred in my district on Friday, March 15, 2002. Last Friday with no warning, no cooperation and faulty data, the agency closed the monkfish fishery along the entire North Carolina coast due to purported turtle interactions.

During 2001, the National Marine Fisheries Service had nearly 100% observer coverage in the monkfish fishery in North Carolina and Virginia and a total of 4 turtle interactions were observed during the entire fishing season. However, the agency ignored this data while filing the "Final Interim Rule" and instead used data showing more than 275 sea turtle "strandings" from the year 2000.

No Federal observation took place in the fishery in 2000. The agency merely assumes that the monkfish fishery is responsible for these strandings, whereas empirical evidence collected in 2001 show a minimal impact on turtles by the monkfish fishery. Taxpayers paid for the observers to be aboard vessels in 2001. I wonder how the taxpayer would react if they knew that the agency would dispose of this data that they paid for.

I am glad we're discussing empirical data and the use of sound science today. But empirical data and sound science don't mean a thing if they are not utilized by a Federal agency during the decision-making process.

Lastly, I want to touch on the role of those directly impacted by this closure. My constituents, North Carolina fishermen, personally discussed with Administrator Bill Hogarth a voluntary, cooperative proposal for rolling area closures to address the sea turtle issue. The proposal was endorsed by the North Carolina Division of Marine Fisheries in a letter to the agency dated February 20, 2002. At this time, I'd like to submit these and an additional clarification letter from a constituent of mine, Jim Ruhle, for the record.

I would like to remind members of this Committee that conservation is not a part-time hobby for fishermen, it is a full-time job that feeds our families and theirs. To get fishermen to come forward and endorse a closure, a closure that will negatively impact his business, his employees, his customers and his family, is a profound example of resource stewardship that should be rewarded. Instead, the National Marine Fishery Service rejected this fair, equitable and flexible proposal.

One of the things we've learned from the 9/11 attack is that America needs a safe, locally grown and caught food supply. This action will do little other than to unilaterally disarm our nation by putting our food supply at risk.

Once again, I respectfully request that my natural resource-dependent constituents receive better treatment from their Federal Government. Fishermen face daunting regulations and mortal danger as a part of their livelihood. If my constituents are going to be able to ever trust a Federal agency, that Federal agency must be accountable.

To provide an unbiased, equitable and accountable process is the most important service you can provide, a process designed to allow input from the fishermen who pay the bills of the National Marine Fisheries Service.

In closing, I would like to submit for the record the text of an e-mail sent to my office yesterday that I think gets to the heart of the matter. Dale Farrow is one of my constituents impacted by this closure. He has spent countless hours and dollars in preparation for the monkfish season, now closed by the National Marine Fisheries Service. Dale asks for no change in current law, asks for no compensation from his Federal Government for this closure. All he asks for is to be adequately notified of closures, to be given a chance to compete, to do what he does best, and that is to feed America's families.

Thank you.

[The prepared statement of Mr. Pallone follows:]

**Statement of The Honorable Frank Pallone, Jr., a Representative in
Congress from the State of New Jersey**

Mr. Chairman, I oppose both of the two bills that are before the committee today concerning the Endangered Species Act, H.R. 2829 and H.R. 3705. Protecting our endangered species should be one of our top priorities; therefore we should not be doing anything to undermine them. I have always been an ardent supporter of protecting endangered species, and I believe that these two bills are headed in the wrong direction.

Neither bill is designed to promote sound science or to conserve imperiled species. Rather, both bills are biased against species protection because they require additional independent reviews that would lead to delays in the decision-making process. Peer review policy has been part of the listing process by agencies and adhered to since 1994. These two bills require further peer review at a number of steps, which would not only slow down the decision-making process, but cost more money and reduce flexibility for the agencies. The current Act requires the Services to make biological decisions based upon the best scientific and commercial data available, and therefore increased levels of review are not necessary. Agencies should continue to develop their own policy, and the premise underlying these two bills is that the agencies cannot be trusted to make decisions based on sound science.

Decisions regarding the Endangered Species Act can always benefit from more data, and Congress can support sound scientific decision-making under the Endangered Species Act by appropriating more funds for basic science. However, enacting H.R. 3705 and H.R. 2829 would add costly bureaucracy and delay without promoting sound science or furthering species conservation. They would also require inappropriate deference to industry experts, ultimately leading to reduced species protection efforts.

I strongly urge all of my colleagues to oppose both of these bills.

The CHAIRMAN. I thank the members for their opening statements and we will now start with Panel I.

We are very honored to have Craig Manson, the Assistant Secretary of Fish, Wildlife and Parks, Department of Interior.

Now, Judge, this is your first time in front of this Committee, isn't it?

Mr. MANSON. Yes, it is, Mr. Chairman, and I am very pleased to be here.

The CHAIRMAN. We welcome you here. The judge has an enviable record of what he has been able to do, and we are grateful that he has decided to lend some of this valuable background he has had with the Department of Interior, and we are honored that you could be here with us today.

Rebecca Lent, Deputy Assistant Administrator of Fisheries, National Marine Fisheries Service. We are grateful for you to be here, also.

Ms. LENT. Thank you.

The CHAIRMAN. Now we are not going to limit these two folks to time. We want to hear everything they have to say on this important issue.

Now the rest of you I hope you have got your presentations within 5 minutes because we are going to run out of time, as we do around here. So we are looking forward to hearing from all of you when your time comes, but we are going to have to limit you.

With that, Mr. Secretary, we will turn to you.

STATEMENT OF CRAIG MANSON, ASSISTANT SECRETARY FOR FISH AND WILDLIFE AND PARKS, U.S. DEPARTMENT OF THE INTERIOR

Mr. MANSON. I thank you very much, Mr. Chairman.

During the past several weeks, there has been much discussion about the use of good science in our decisionmaking. We recognize that individuals who have been directly impacted by the Endangered Species Act view it as inflexible. Given the impact that our resource management decisions have on communities and individuals, the species conservation decisions that we make must be based on the best available science. Our data and scientific information must meet the highest possible ethical and professional standards. At the outset, I want to say that improving our science has been one of Secretary Norton's highest priorities, and it will be one of mine.

H.R. 2829 and H.R. 3705 seek to ensure independent scientific review of the science underlying our decisions. Indeed, this is one of the positive aspects we have taken out of the National Academy of Sciences' review of the U.S. Fish and Wildlife Service's decisions in the Klamath matter.

"Independent scientific review" can be a broad concept that goes beyond the traditional expectations of a simple peer review process. With this thought in mind, I offer the following principles that we believe will form a strong basis from which to work. We will keep these principles in mind as we go forward in this process.

First, there is no monopoly on good science. The Department must cast a broad net to take advantage of the independent scientific expertise of groups like the State Fish and Wildlife agencies. We believe that this will ensure that our decisions are based on the best available science, not just one group's or another's interpretation of the science.

We must also acknowledge that science is not exact, that even expert opinions can differ. Where there are differing interpretations of the science behind our decisions, we must provide opportunities

for both Department scientists and stakeholders to air those differences and, wherever possible, resolve them. It must be an open process.

Finally, as I noted previously, our resource management decisions can impact both communities and individuals. For this reason, we need to implement a robust, independent review process for significant resource decisions. Yet we must also recognize that not all decisions have the same impact. The scientific review process should reflect this fact, and it should have the flexibility to be adjusted accordingly.

Although we support the general concepts advanced by these bills, we have concerns with structural and budgetary impacts of enacting this legislation. We also believe that the Department has existing authority to implement improvements that will greatly enhance the science that we use. For example, the Joint Fish and Wildlife Service/National Marine Fisheries Service "Policy on Information Standards Under the Endangered Species Act," published in the Federal Register on July 1, 1994, provides criteria, establishes procedures, and provides guidance to field biologists and managers regarding the use of scientific information in the decision process. We must ensure that this policy is fully and effectively implemented.

We must also recognize that independent scientific review will not, in and of itself, guarantee that good decisions are made. Thus, other efforts to ensure that high standards of scientific integrity and ethics are in place throughout the Department are vital to maintaining public trust and confidence in our decisionmaking processes.

At a hearing before this Committee on March 6, 2002, Dr. Steve Williams, Director of the Fish and Wildlife Service, told the Committee that he is in the initial stages of developing a multi-faceted approach to ensure and enforce high standards of scientific integrity and ethics in addressing the Fish and Wildlife Service's responsibilities. I believe the steps outlined by Dr. Williams will provide long-term emphasis on professionalism and ethics.

At that hearing, Dr. Williams also conveyed our commitment to fully utilize good science support in the administration of the ESA, including bringing independent scientific expertise into that process. We plan to seek advice from respected wildlife management professionals, academia, the States and the private sector. The Department is also examining which decisions and processes from all bureaus, not just the Fish and Wildlife Service's ESA activities, would benefit from the addition of peer review. The findings of this review will be rapidly implemented.

Another initiative that we are developing will assemble multidisciplinary teams that will be assigned to assist Fish and Wildlife Service regional office staff on an as-needed basis. It is our belief that utilizing these teams—to be made up of senior-level agency staff—will bring both experience and multi-decisional thinking to large-scale and difficult issues. We hope to implement this effort soon.

We believe that all of these administrative initiatives are consistent with the intent of H.R. 2829 and 3705.

As I previously mentioned, we appreciate and support the intent of these bills to further ensure the application of sound science and peer review. Nevertheless, we do have concerns as they are currently drafted. In my written testimony, I go into quite a bit of detail on some of those issues.

In general, both bills offer prescriptive solutions and lack flexibility in implementation. For example, both bills prescribe which decisions, regardless of the complexity of the underlying science or nature of the underlying issues, would act as triggers requiring independent scientific review.

We are additionally concerned that the considerable new process required will impact the Fish and Wildlife Service's ability to provide consultations and other decisions in a timely manner.

Mr. Chairman, our ultimate goal is to ensure that better decisions are made. We believe that independent scientific review can help ensure that there is better science behind our ESA decisions. Many of our policies encompass the principles and intentions behind H.R. 2829 and H.R. 3705. We look forward to working with the Committee as we strengthen the scientific integrity of our decisions. I believe we need to be more creative and more consultative as we move forward to improve the implementation of the ESA.

We hope we can develop a system that can contain stronger safeguards to ensure our decisions are grounded on sound scientific footing, but yet have the flexibility to ensure that decisions which truly need independent scientific review are the decisions that receive it. We are prepared to work with the Committee toward that end.

Mr. Chairman, that concludes my statement, and I will certainly answer any questions that you or any of the members have on this important topic.

[The prepared statement of Mr. Manson follows:]

Statement of Craig Manson, Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior

Mr. Chairman and Members of the Committee, I am Craig Manson, Assistant Secretary for Fish and Wildlife and Parks at the Department of the Interior (Department). This is my first occasion to appear before you, and I appreciate the opportunity to present the Department's views regarding H.R. 2829, the "Sound Science for Endangered Species Act Planning Act of 2001," and H.R. 3705, the "Sound Science Saves Species Act of 2002."

We greatly appreciate the Committee's interest in endangered species conservation. For the past several weeks, there has been much discussion about the use of good science in our decision-making. We recognize that some individuals who have been directly impacted by the Endangered Species Act (ESA) view it as inflexible. Given the impact that our resource management decisions can have on communities and individuals, the species conservation decisions we make must be based on the best available science. Our data and scientific information must meet the highest possible ethical and professional standards. At the outset, I want to say that improving our science has been one of Secretary Norton's highest priorities, and it will be one of mine.

H.R. 2829 and H.R. 3705 seek to ensure independent scientific review of the science underlying our decisions. Indeed, this is one of the positive aspects we have taken out of the National Academy of Science's review of the U.S. Fish and Wildlife Service's (Fish and Wildlife Service) decisions in the Klamath matter.

"Independent scientific review" can be a broad concept that goes beyond the traditional expectations of a simple peer review process. With this thought in mind, I offer the following principles that we believe will form a strong basis from which to work. We will keep these principles in mind as we move forward in this process.

First, there is no monopoly on good science. The Department must cast a broad net to take advantage of the independent scientific expertise of groups like the state fish and wildlife agencies. We believe that this will ensure that our decisions are based on the best available science, not just one group's, or another's, interpretation of the science.

We must also acknowledge that science is not exact, and that even expert opinions can differ. Where there are differing interpretations of the science behind our decisions, we must provide opportunities for both Department scientists and stakeholders to air those differences and, wherever possible, resolve them. It must be an open process.

Finally, as I noted above, our resource management decisions can impact both communities and individuals. For this reason, we need to implement a robust, independent review process for significant resource decisions. Yet we must also recognize that not all decisions have the same impact. The scientific review process should reflect this fact, and it should have the flexibility to allow it to be adjusted accordingly.

Although we support the general concepts advanced by these bills, we also have concerns with the structural and budgetary impacts of enacting this legislation. We also believe that the Department has existing authority to implement improvements that will greatly enhance the science we use. For example, the joint Fish and Wildlife Service/National Marine Fisheries Service (NMFS) "Policy on Information Standards Under the Endangered Species Act," published in the Federal Register on July 1, 1994 (59 FR 34271), provides criteria, establishes procedures, and provides guidance to field biologists and managers regarding the use of scientific information in the decision process. We must ensure that this policy is fully and effectively implemented.

We must also recognize that independent scientific review will not, in and of itself, guarantee that good decisions are made. Thus, other efforts to ensure that high standards of scientific integrity and ethics are in place throughout the Department are vital to maintaining public trust and confidence in our decision-making processes.

At a hearing on March 6, 2002, Dr. Steve Williams, Director of the Fish and Wildlife Service, told this Committee that he is in the initial stages of developing a multi-faceted approach to ensure and enforce high standards of scientific integrity and ethics in addressing the Fish and Wildlife Service's responsibilities. We believe that the steps outlined by Dr. Williams will provide long-term emphasis on professionalism and ethics.

At that hearing, Dr. Williams also relayed our commitment to fully utilize good science support in the administration of the ESA, including bringing independent scientific expertise into that process. We plan to seek advice from respected wildlife management professionals, academia, States, and the private sector in this endeavor. The Department is also examining which decisions and processes from all bureaus—not just the Fish and Wildlife Service's ESA activities—would benefit from the addition of peer review. The findings of this review will be rapidly implemented.

Another initiative that we are developing will assemble multi-disciplinary teams that will be assigned to assist Fish and Wildlife Service regional office staff on an as-needed basis. It is our belief that utilizing these teams—to be made up of senior-level agency staff—will bring both experience and multi-dimensional thinking to large-scale and difficult issues. We hope to implement this effort soon.

We believe that all of these administrative initiatives are consistent with the intent of H.R. 2829 and H.R. 3705.

As I previously mentioned, we appreciate and support the intent of these bills to further ensure the application of sound science and peer review. Nevertheless, we do have concerns with the bills as currently drafted. We believe that the additional processes added by the two bills would be costly to implement. These process issues include, for example, assembling and compensating the independent review boards and implementing the review board provisions themselves. Moreover, both bills offer prescriptive solutions and lack flexibility in implementation. For example, both bills prescribe which decisions—regardless of the complexity of the underlying science or the nature of the underlying issues—would act as triggers requiring independent scientific review.

We are concerned that the considerable new process required in both bills will impact the Fish and Wildlife Service's ability to provide consultations and other decisions in a timely manner and, in some cases, may compromise the Fish and Wildlife Service's ability to meet statutory deadlines. For example, Section 3 of H.R. 2829 requires that all listing decisions, de-listing decisions, development of recovery plans, or jeopardy findings, must be reviewed by an independent panel before becoming final, with an opinion to the Secretary within 3 months. For listing

decisions, it would be difficult to accommodate this three month provision and still meet the one year statutory time frame between proposed and final rule-makings. The bill would make it necessary to extend comment periods to a minimum of 120 days.

Section 3(c) of H.R. 3705 contains similar review provisions that are equally problematic. Neither bill would extend the existing statutory deadlines for making decisions on petitions. With the additional time needed to comply with these new requirements and the increased workload imposed by these and other provisions in the legislation, it is likely that the Department would not be able to meet the statutory deadlines in many cases, opening the door to additional litigation.

Similarly, section 3(d) of H.R. 3705 would allow "any person" to request an independent review of jeopardy Section 7 biological opinions. Currently, the Fish and Wildlife Service is obligated to provide an opinion within 135 days of the request unless the time period is extended by mutual consent. The process in H.R. 3705 would increase the time period by at least 120 days, and probably longer. It should also be noted that allowing any person to request review of these findings would invite persons not associated with a particular consultation process to request review of information developed through that process. In particular, it would allow an individual or organization who wanted stronger or more restrictive reasonable and prudent alternatives (RPAs) attached to the opinion—not just an unhappy applicant—to trigger the review process. The resulting delay in reaching a final decision could have a detrimental economic impact on an applicant willing to accept the proposed RPAs.

Mr. Chairman, our ultimate goal is to ensure that better decisions are made. As I previously stated, we believe that independent scientific review can help to ensure that there is better science behind our ESA decisions. Many of our policies, both in existing practice and new initiatives, encompass the principles of, and many of the intentions behind, H.R. 2829 and H.R. 3705. I have presented, in very summary fashion, some of the general implementation problems that we have identified in these bills. We look forward to working with the Committee as we strengthen the scientific integrity of our decisions. I believe we need to be more creative and consultative as we move forward to improve our implementation of the ESA.

We hope that we can develop a system that contains stronger safeguards to ensure our decisions are grounded on sound scientific footing but, yet, has the flexibility to ensure that the decisions which truly need independent scientific review are the decisions that receive it. We stand ready to work with the Committee toward that end.

Mr. Chairman, this concludes my prepared statement. I will be pleased to respond to any questions you may have.

The CHAIRMAN. Thank you, Mr. Secretary. We appreciate your statement.

Dr. Lent, you folks notice on the back wall we have a bunch of lights on, and we have got four votes coming up, but I think we can get your testimony in, and I would like to before we break for a vote. So we will turn the floor to you, ma'am.

STATEMENT OF REBECCA LENT, Ph.D., DEPUTY ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION [NOAA]

Ms. LENT. Thank you, Mr. Chairman.

The CHAIRMAN. Pull the mike closer to you.

Ms. LENT. It is my first time, too. Thank you, Mr. Chairman, and thank you to the members of the Committee.

I appreciate the opportunity to come here and talk about NMFS's views on the proposed legislation. Dr. Hogarth asked that I reiterate our commitment at the Fisheries Service to improving the quality and the quantity of data that we use in our policy decisions, also reiterate our commitment to issue a biological opinion, a draft biological opinion, by April 12th so that we can be on our way to delivering water to the farmers in the Klamath.

The National Marine Fisheries Service supports efforts to improve the quality of science used in implementing the ESA. Our goal is to ensure that Federal policy decisions are based on the best scientific and commercial data available. We are working closely with our partners at the Fish and Wildlife Service to find the ways that we can improve Federal implementation of ESA, the administrative process, the science. We appreciate the efforts made by Congress and the members of this Committee to seek ESA decisions that are based on better science and the use of peer reviews.

As my colleague mentioned, we did implement standards in 1994 to provide better direction for information for science-based decisions. These promote the evaluation of all scientific and commercial information to ensure that it is reliable, credible, impartial and that it represents the best available science. Data and science evolve. We always have more to learn, and we need to get that information and those data incorporated into our decisions.

Our policy is that ESA listing, delisting, biological opinions and jeopardy decisions be based on primary and original sources and that they be reviewed at the management level to verify their scientific credibility. We do consider information from a range of entities, including local, State and Federal agencies, tribal Governments, academic and scientific groups and private citizens, private sector groups.

The opinions of independent peer reviews are summarized in biological opinions. We get our peer reviewers from the academic and scientific community and the private sector. The peer reviews don't always support our decisions, but we consider them carefully in reaching our final decisions.

Some of the policies and practices that we already have in place are similar to those in 2829. Using data, we use data from landowners, we use data from fishermen in reviewing our decisions, and the listing process and recovery planning. We use information from the States in making listing determinations and recovery plans. And listing determinations and recovery plans are peer reviewed.

Although we are already implementing these measures, we are willing to review our existing procedures to see how they might be improved. We are concerned, as our colleagues at Fish and Wildlife Service, that some of the requirements in 2829 could make it more difficult for us to meet statutory deadlines. Improvements are possible we know, but we need to issue biological opinions that meet timeliness and satisfy other legal requirements.

We are also concerned that some of the provisions of H.R. 3705 could result in delays in issuing biological opinions, and that could impede economic activities that are awaiting decisions of those biological opinions. Allowing a third-party review could extend listing determinations by 285 days. So more time could improve the scientific review, but it also limits our ability to expedite processing of biological opinions that often seem to be urgent activities.

So, while we have concerns about these bills, we want to work with you to continue to ensure that NMFS's actions under ESA are based on the best scientific and commercial data available, we want to improve the quantity and quality of data available, we want to

work with Congress and our partners at the Fish and Wildlife Service to see that we reach these goals.

Mr. Chairman, I want to emphasize that the scientists at the Fisheries Service are some of the best fishery biologists and marine mammalogists in the world. Some of them are leaders in their field. We don't always fully understand the complex relationships between fish and mammals. We want to extend the funding allowance, we want to improve our understanding of living marine resources, natural history, environmental factors, but in the meantime we are using, and we will continue to use, the best scientific information available to guide us to make our decisions. When we don't have perfect information, we still need to make those decisions.

Thank you, Mr. Chairman. Thank you, members of the Committee.

[The prepared statement of Ms. Lent follows:]

Statement of Dr. Rebecca Lent, Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce

Mr. Chairman and members of the Committee, I am pleased to be here today on behalf of William Hogarth, the Assistant Administrator for the National Marine Fisheries Service (NMFS). I welcome the opportunity to discuss with you our views regarding H.R. 2829 and H.R. 3705, two bills that would amend the Endangered Species Act of 1973.

Although both H.R. 2829 and H.R. 3705 specifically address the Department of the Interior's implementation of the Endangered Species Act (ESA), NMFS welcomes the opportunity to comment on these bills as they affect ESA decisionmaking generally. NMFS supports the goals of improving the quality of science used to implement the ESA and to ensure that Federal policy decisions are based on the best scientific and commercial data available. We are already working with the United States Fish and Wildlife Service (FWS) to identify areas where we can improve Federal implementation of the ESA administratively.

Before I comment more specifically on the bills, I would like to outline our current process for utilizing scientific data and information on ESA-related actions.

NMFS is a partner with the FWS in implementing the Endangered Species Act. Together, we have sought to administer the ESA efficiently and consistently while using the best available scientific and commercial data. This is sometimes difficult, particularly when policy decisions must sometimes be made with data or science that is still developing. NMFS is responsible for over 50 listed species that are, for the most part, wide-ranging, highly migratory and cover millions of square miles of ocean and thousands of miles of U.S. rivers, streams and coastline. Several species are co-managed by NMFS and FWS, such as the Atlantic salmon and four species of sea turtles. Others include anadromous and freshwater species that migrate through the same watersheds, and require close coordination between the agencies.

The ESA requires the Services to use the best available scientific and commercial data when implementing the Act. That is the standard we use for listing determinations as well as writing biological opinions. In 1994, NMFS and FWS provided further guidance to our staffs through policies on information standards and peer review. Let me describe those policies in greater detail.

Information Standards.

To assure the quality of the biological, ecological and other information utilized by the Services to implement the Act, we require NMFS biologists to evaluate all scientific and commercial information that will be used to make decisions under the Act to ensure that the information is reliable, credible, and represents the best available. Further, our biologists gather and impartially evaluate biological, ecological and commercial information that disputes official positions, decisions, and actions proposed or taken by the Services, and they are required to document their evaluation of information that supports or does not support a position being proposed as an official agency position on a status review, listing actions, recovery plans, biological opinions or permits.

Also, they must use primary and original sources of information as the basis for recommendations to place a species on the list of candidate species; add a species to the threatened and endangered list; remove a species from the list; designate critical habitat; revise the status of a species, issue a scientific research or incidental take permit, or make a determination that a Federal action is likely to jeopardize a species or destroy or adversely modify critical habitat. These sources are retained as part of the administrative record supporting an action and referenced in all Federal Register notices and biological opinions. Further, the Services must conduct management-level review of documents developed and drafted by Service biologists to verify and assure the quality of the science used to establish official positions, decisions, and actions taken by the Services to implement the ESA.

Peer Review

It is NMFS' policy to incorporate independent peer review in listing and recovery activities during the public comment period. For listing, we solicit the expert opinions of three appropriate and independent specialists regarding pertinent scientific or commercial data and assumptions relating to the taxonomy, population models and supportive biological and ecological information for species under consideration for listing. We summarize in the final decision document the opinions of all independent peer reviewers and include all reports, opinions and other data in the administration record of the final decision.

For recovery plans, we actively solicit independent peer review to obtain all available scientific and commercial information from appropriate local, state and Federal agencies, tribal governments, academic and scientific groups and any other party that may possess pertinent information during the development of recovery plans. Where appropriate, we use independent peer review to review scientific data relating to the selection or implementation of specialized recovery tasks. We summarize in the final recovery plan the opinions of all independent peer reviews requested to respond and include the reports and opinions in the administrative record.

It is our policy to select peer reviewers from the academic and scientific community, tribal and other native American groups, Federal and State agencies and the private sector. Those selected must have demonstrated expertise and specialized knowledge related to the scientific area under consideration.

If there is a scientific disagreement concerning the listing of a species, the ESA provides for NMFS to extend the statutory rulemaking deadline for six months to consider the uncertainty. NMFS may appoint a special independent peer review group to resolve any unacceptable level of scientific uncertainty. The results of this review become part of the permanent administrative record. The public is given an opportunity to review reports and provide comments for actions where there is a formal public comment period such as listing, designating critical habitat and developing a recovery plan.

We devote a significant portion of our budget to ensure that our scientists stay up-to-date in their respective fields, and that they incorporate state-of-the-art analytical techniques and methods to assess and understand species and their ecosystems. Science is a vital component to the development of sound ESA decision-making. That is why nearly half of NMFS' full time employees across the nation work in the Protected Species program in our Science Centers.

Contents of Petitions

In 1996, NMFS and FWS published specific guidance on what a petition must include before it will be accepted. This guidance covers petitions to list a species, petitions to change the status of a species, or to designate critical habitat. The 1996 guidance augments information standards outlined in joint-NMFS and FWS regulations issued in 1984.

Role of States

NMFS and FWS recognize the important role of States in species recovery, and have worked to foster partnerships with States in this regard. In 1994, the Services published a policy clarifying the role of States in activities undertaken by the NMFS and FWS to implement the ESA. Whether through species conservation prior to listing, listing itself, consultations, habitat conservation plans or recovery plans, we acknowledge that States possess broad trustee responsibilities over fish, wildlife and plants and their habitats. We agree that state agencies compile valuable scientific data and expertise on the status and distribution of species.

State agencies also have close working relationships with local governments and landowners and are in a unique position to assist NMFS and FWS with species conservation. With regard to biological opinions, it is Service policy to inform state agencies of Federal actions that may adversely affect listed species and to request

information from the States that would assist the Services in analyzing the effects of the action. The Services and/or the appropriate Federal agency provide States with copies of the final biological opinion, and we encourage Federal agencies to share draft biological opinions with the States when the opinion may affect state activities.

Time Allowed for Peer Review, Science and Biological Opinions

As Dr. Hogarth testified last week before the House Resources Committee hearing on the National Academy of Sciences report on the Klamath Basin, NMFS is aware of concerns about the scientific validity of the information used to develop biological opinions, and we are now in the process of addressing these concerns in the biological opinion for the Klamath Basin. However, NMFS is required by law to make decisions based upon the best scientific and commercial data available. In writing a biological opinion we use all the information available to us. Frequently, information used to develop an opinion is derived from a biological assessment or evaluation that is submitted from the agency or entity requesting consultation, and NMFS cannot control whether the information in such an assessment has previously been peer reviewed.

Both NMFS and FWS issue a large number of biological opinions every year. While we would, of course, prefer to always use information that has first been peer reviewed, time constraints do not always allow that to occur. The statutory time frame for completing biological opinions is short. Under existing procedures, action agencies and applicants are permitted to review and comment on draft opinions and may extend the consultation schedule to insure that they have a reasonable amount of time to conduct their review. They may also seek additional review by outside experts.

Views on H.R. 2829 and H.R. 3705

H.R. 2829, the "Sound Science for Endangered Species Act Planning Act," would require the Secretary of the Interior to give greater weight to scientific or commercial data that is empirical or has been field-tested or peer-reviewed. While we support the goal of basing our decisions on sound science and peer reviewed science, we believe that if we give greater weight to scientific or commercial data that is empirical or field tested, when evaluating comparable data, we may not be using the best information available. There are other scientific methods (e.g., modeling and statistical analyses) that produce valuable scientific data. It is usually a combination of various types of scientific data that form the basis of our evaluations.

Our current policies and practices already reflect some of the language in this bill. For example, we do request data from landowners or any other party with information about a species when we are in the process of listing a species or preparing a recovery plan. This information becomes a part of the administrative record. Peer review is already required for listing determinations and development of recovery plans. However, this bill's requirement for peer review (e.g., recommendations from the National Academy of Science, compensation for peer reviewers and including jeopardy biological opinions found in Section 3) goes beyond what is in place now by the Service and would make it more difficult to meet the statutory timeframe for ESA decisions.

Section 4 of the bill calls for the use of information from states for recovery plans. Again, this is a current practice of the Service and often, there is a state representative on the recovery team itself. NMFS supports opportunities for the action agency and the applicant to participate in the development of biological opinions and, in fact, our regulations cover some of the proposals here. We would be glad to work with the Committee to expand meaningful participation in a way that, again, would be within the statutory deadlines for completing opinions.

H.R. 3705, the "Sound Science Saves Species Act of 2002," also covers using sound science by addressing the contents of petitions to list a species and independent peer review of ESA decisions including jeopardy biological opinions. I will focus my remarks on Section 3(d) and the requirement for independent peer review of jeopardy biological opinions.

NMFS is concerned that this proposal could interfere with existing or new economic activities that require a biological opinion, because it could block the action agency or applicant from taking any action for at least 30 days after receiving a biological opinion if any third party requests independent scientific review of the opinion. By itself, this language extends the consultation period from 135 days to 165 days. The additional 90 days for scientific review would extend the consultation to 255 days, and public notice requirements would extend the consultation to 285 days.

Even without the additional administrative procedures, these provisions more than double the amount of time needed to complete consultations. These changes

would not necessarily change the outcome, increase the degree to which action agencies or applicants are involved in the outcome, or increase the scientific rigor of the consultation. At the same time, they would limit the flexibility and authority of the Secretary to expedite the processing of biological opinions for urgent activities.

In addition, the provisions requiring the establishment and selection of Independent Scientific Review boards could duplicate or compete with existing Federal, state, tribal, and local efforts to provide personnel and resources for peer review of ongoing species recovery projects, such as the Independent Scientific Review Panel that currently reviews hundreds of millions of dollars worth of salmon recovery projects in the Columbia River Basin in the Pacific Northwest.

Mr. Chairman, while we express concerns with some provisions of these bills, we recognize that we must continue to ensure that all actions taken to implement the Endangered Species Act are performed using the best scientific and commercial information and data available. We must also strive to improve the quantity and quality of data available. We look forward to working with Members of Congress and our partners at the FWS to bring about more effective implementation of the Endangered Species Act.

This concludes my testimony, Mr. Chairman. I would be glad to answer any questions you may have.

The CHAIRMAN. I thank you, Dr. Lent.

We are going to stand in recess and try to get everybody back just as soon as we can. We have a series of four votes. So relax, folks, because we are going to be about a half-hour or better.

Thank you.

[Recess.]

Mr. POMBO. [Presiding.] If we could call the hearing back to order. If I could have our first panel rejoin us at the witness stand.

I call the hearing back to order. First off, I would like to apologize to our panel and all of our witnesses for the delay in the hearing for the recess. It was beyond our control, but I apologize to you for that.

Mr. Manson, I would like to start with you, if I may. Can you describe for me and maybe clarify what the current peer review process is that you have adopted or that the Agency has adopted by rule. What process do you have to go through in order to peer review?

Mr. MANSON. Right. I think you are referring to what I referred to in my testimony, the 1994 policy in the Federal Register. What that policy requires is that the Fish and Wildlife Service, in its various decisions, consider a range of information. In fact, I will just, if you don't mind, turn to it, as it appeared in the Federal Register in 1994.

On listing, it says, "Solicit the opinion of three appropriate and independent specialists, summarize in the final decision document the opinions of those independent peer reviewers." A same sort of process is, a similar process is required for recovery, although it doesn't indicate a number of peer reviewers. It just says, "Utilize the expertise and actively solicit independent peer review and document the use of that peer review." It does indicate that they should be selected from academic, and scientific, and tribal, and Federal and State agencies.

Mr. POMBO. Is that a requirement on a listing or other decisions that are made?

Mr. MANSON. In listing, it is a requirement, and on recovery planning it is a requirement.

Mr. POMBO. Is it required that they review all of the scientific data that has been collected?

Mr. MANSON. When you say "all of the scientific data that has been collected," the policy itself would require that they review that that is collected from the independent peer reviewers who are selected, if that makes sense.

Mr. POMBO. Maybe you could explain that to me.

Mr. MANSON. Well, it does not explicitly require a review of all of the independent data that may exist, but only that which comes from the selected peer reviewers.

Mr. POMBO. What if an outside organization developed a biological opinion and submitted that to be reviewed by Fish and Wildlife as part of a listing process?

Mr. MANSON. If they did it in the course of the public comment period on the rule, that would be reviewed.

Mr. POMBO. And what if it was not part of that process?

Mr. MANSON. Then there is no requirement that it be reviewed.

Mr. POMBO. One of the issues that has been raised is that if we actually went through and put a requirement of a peer review process in place on a number of different decisions, that it would delay or take up a period of time in the process. Could you comment on that, in terms of balancing a requirement for more accurate or in the search of more accurate scientific information versus make any quick decision.

Mr. MANSON. Yes, I can tell you this, that the goal should not be to make quick decisions. The goal should not be to make quick decisions. The goal should be to make decisions that have scientific integrity in them.

Now there is no doubt that some process of peer review might lengthen that process. It does not have to be one that unnecessarily delays a timely decision, and by timely I mean one that is made with all due deliberation given the scientific evidence. So I think there are ways to craft a peer review process and put it in place without unduly delaying a timely decision.

The concern that we have with the particular bill, as it is drafted, is that it conflicts with some of the other existing timeframes that are already in the act.

Mr. POMBO. The statutory deadlines.

Mr. MANSON. Right. Right.

Mr. POMBO. Would an adjustment to those statutory deadlines so that it fits within a balance in terms of the search for better scientific information, you know, instead of just putting an arbitrary deadline in, could we adopt a deadline which matches with a better effort in obtaining science?

Mr. MANSON. That is certainly a possibility. We would be willing to come up with the Committee on coming up with a process that didn't run afoul of the other statutory deadlines or however it would be that we could fit these two processes together.

Mr. POMBO. Thank you. My time has expired.

Mr. Faleomavaega?

Mr. FALEOMAVAEGA. Thank you, Mr. Chairman. I want to thank Secretary Manson and Ms. Lent for their testimony this afternoon. I think both witnesses made reference to a publication or a regulation issued in 1994. This is the Policy on Information Standards

Under the Endangered Species Act. If I quote just specifically some of the provisions, “To ensure that any information used by the services to implement the act is reliable, credible and represents the best scientific and commercial data.”

In addition to that, they are also required to “gather and partially evaluate biological, ecological and other information that disputes official positions, decisions and actions proposed or taken by the services during the implementation of the act.”

I don’t know if I misquoted that specific provision that both of you made reference to. Do the Agency biologists, are they expected to adhere to that policy?

Mr. MANSON. Yes.

Mr. FALEOMAVAEGA. Ms. Lent?

Ms. LENT. Yes, sir, that is our policy.

Mr. FALEOMAVAEGA. Is there any way that this policy can be interpreted in any other way so that it does not become confusing for those who implement the provisions of the act?

Mr. MANSON. Well, I don’t know if it is confusing or not. I do know that obviously there has been, in the news and in the public arena, discussion of scientific issues where we may not have had the very best science and not considered all of the information that might have been available, and we are moving to fix that. I made reference to Director Williams’ management initiatives, which include a Code of Ethics for scientists in the Department as well.

So, to the extent that the policy is not clear, that I think is a management problem, and we are moving to deal with that.

Mr. FALEOMAVAEGA. I also noted, Mr. Secretary, that I take it this must be the official position of the administration that the two bills are too costly? It appears that the current administrative procedures are quite adequate to meet the requirements of the law, and it seems you also mentioned that the bills also lack flexibility.

I think this seems to be the very issue of the bottom-line issue of why we are here today.

Mr. MANSON. Right.

Mr. FALEOMAVAEGA. It seems to suggest that it does not have the flexibility, at least the current provisions of the law. But I have just cited you with this policy standard that was provided in 1994, and I had asked earlier are there any provisions of this policy information standard that you feel is not confusing, that seems to be quite clear and is stated quite clearly? I mean, is there any area that there could be differences of interpretation on how the phrases of this standard could be taken differently than the way that it is currently being implemented?

I am just trying to—

Mr. MANSON. I personally don’t think so. I think it is clear, certainly clear to me, but again, if there have been instances where it has not been adhered to, then those are appropriate for us to deal with from a management perspective.

But, in addition, we continue to believe, as I said in my testimony, that we need a more robust independent scientific review process, and we think that we can accomplish that, and we are ready to work with the Committee to see that we move in that direction.

Mr. FALCOMA. Correct me if I am wrong, Ms. Lent. You seem to suggest in your testimony that the two bills proposed would only extend delays in the process of implementing the Endangered Species Act. It does not expedite the work. It seems that that is just the opposite of what the bills are trying to do is to expedite the work and not to make any more unnecessary delays. I may be wrong on this, but am I wrong in interpreting what you stated in your testimony, Ms. Lent?

Ms. LENT. You are correct, Mr. Congressman. There are areas where we feel this could delay consultation, for example, and delay people being able to move ahead with their economic activities.

However, I also emphasize that there are some areas in the bills that we are already implementing, and we are pleased to see that. We have a peer review process, and a process, and standards for scientific and commercial data, and we are pleased that there are those areas of overlap.

To the extent that these policies in 1994 are not clear, we continue to develop guidance, and guidelines, and training for our staff to make sure this is clear, and it is consistently applied.

Mr. FALCOMA. Mr. Chairman, could I have one more question?

Given the recent announcement made by the National Academy of Science, what is basically the administration's response to the concerns that were issued by the National Academy of Science? Is there any merit to their concerns? Is the administration going to seriously address it or just continue things the way they are?

Mr. MANSON. Let me start off on that.

We took the National Academy report very seriously, and as a result there is, in the Klamath Basin, a new consultation process underway, and both of the services, the National Marine Fisheries Service and the Fish and Wildlife Service, expect to have a draft biological opinion out by April the 12th, which is enough time to move the process along so that the season can start timely up there.

The second thing I would say is that, as we have looked at the whole issue of science and the way science is done and applied in the Department of Interior, at least, that is where it was an opportunity, the National Academy report was an opportunity for us to develop the principles that I laid out in my testimony. That, along with other issues, presented an opportunity for Director Williams to develop his management plan that he laid out before the Committee on March the 6th.

So business will be done differently in the Department of Interior. Now let me add to that that we have many, many outstanding employees who do an excellent job. We think the new measures that Dr. Williams has laid out will strengthen those employees who have done an excellent job and will give guidance to those who need particular guidance. I like to think of the process as one of continuous improvement, and that is where we are going in Interior at least.

Ms. LENT. If I may add to that, Mr. Congressman, we also, at the Fisheries Service, take this National Academy of Sciences' review very seriously. We have gone through the interim report, we have written to the National Academy of Sciences with some

follow-up questions. We will be able to incorporate their responses to the follow-up questions in our final biological opinion, and the draft biological opinion on April 12th will also reflect what we have learned through this process.

Thank you.

Mr. FALCOMVAEGA. Thank you, Mr. Chairman.

In the interest of time, Mr. Chairman, I would like to ask unanimous consent to submit this list of questions for our friends to respond to and be made part of the record.

Mr. POMBO. Without objection.

Mr. FALCOMVAEGA. Thank you, Mr. Chairman.

Mr. POMBO. Mr. Walden?

Mr. WALDEN. Thank you very much, Mr. Chairman.

I understand, from what I have heard, one of your concerns is this bill, either bill, would be too costly. Can you tell me what a peer review costs?

Mr. MANSON. Well, for example, if we are talking something on the scale of the National Academy report, then are talking many, many, many thousands, tens of thousands of dollars.

Mr. WALDEN. And that would be a fairly expansive look, right, for peer review?

Mr. MANSON. Right.

Mr. WALDEN. So tens of thousands of dollars is a pretty good estimate.

Mr. MANSON. I don't have an exact figure for what something like Klamath would cost, but I can get that for you.

Mr. WALDEN. All right.

Mr. MANSON. In fact, I am told that it was \$385,000.

Mr. WALDEN. Do either of you have an extra \$134 million in your account?

Mr. MANSON. No.

Mr. WALDEN. You don't. Because I ask that, and I do it in a semi-serious way because that is the economic loss, according to Oregon State University, based on the decisions of your agencies that the National Academy of Sciences has said was not based on sound science.

Mr. MANSON. Right.

Mr. WALDEN. So I am willing to spend \$300,000 to get it right, to get a second opinion at least. I hope the administration understands the significance of the importance of getting good peer review.

Dr. Lent, can you explain for me the peer review that was done on the Hardy studies, the flow studies on the Klamath River, Hardy I and the current data that is being used under Hardy II?

Ms. LENT. I understand that the Hardy II study was not peer reviewed.

Mr. WALDEN. Was Hardy I?

Ms. LENT. I am not aware of whether it was or not.

Mr. WALDEN. Can you describe for me how those data are collected and for whom they are being collected?

Ms. LENT. Under the Hardy study, Mr. Congressman?

Mr. WALDEN. Yes.

Ms. LENT. I am not aware of the specifics of that. I can certainly get back to you on that. Again, the policy of the Agency is to use

data from all sources and consider all sources of data. There may be more weight given to data and studies that are peer reviewed.

Mr. WALDEN. Do you think there should be more weight given to those studies that are peer reviewed?

Ms. LENT. We believe in the peer review process. However, we often have to take decisions based on whatever information, best information available. Sometimes it is information that is not peer reviewed. It is information provided by user groups, buy fishermen.

Mr. WALDEN. So you wouldn't object to the provisions in my bill then that allow for landowners to simply submit and have their data acknowledged.

Ms. LENT. Absolutely, Mr. Congressman, and we already do that.

Mr. WALDEN. The criteria that I have heard outlined today, which sounds good, I am glad your agencies are taking these steps, and that is really done administratively, isn't it?

Mr. MANSON. That is right.

Mr. WALDEN. Is there anything that would preclude the next administration, if it were to be a different color on the maps, from having different administrative requirements regarding these issues?

Mr. MANSON. Well, frankly, that is why there are elections.

Mr. WALDEN. Thank you, and I am glad of the outcome of the last one. But that is my point, is that while you are making steps that I personally think are valid and good, and I even hear from the minority side that they think these criteria are good, there is nothing to stop some other administration from reversing that now, is there?

And so that is part of why I think we ought to get together and figure out a way to put it into statute so we have some long-term consistency here, so that the data we use we can rely upon and know that it has at least been peer reviewed and is sound, we get a second opinion, because I have just seen too much hardship and loss in the Klamath Basin.

I am not here, despite the environmentalist news releases that are floating around, to gut the ESA. I am here to try and get agreement where we can have sound science and know it, where we can get a second opinion. You have to have that to even publish a medical journal, I believe. Most scientific journals require peer review, don't they, before you can publish? Should we ask for anything less than that in these decisions?

So I hope you will work with us, as you have indicated you will, to work out the timeline conflicts because I think those are real, they are not intentional, and I appreciate your willingness to work with us on that.

Dr. Lent, how would you rectify a situation where an employee did not abide by the process that you have outlined in your testimony regarding the way information is collected and used?

Ms. LENT. Mr. Congressman, I think the most important way to deal with that is to have the training and the information up front on how these activities under ESA are conducted. These documents are reviewed at the management level, and we have accountability, both at the employee level and the management level for those reviews.

Mr. WALDEN. There are issues that have come to light before this Committee in the last few months involving scientists that knew what they were doing was wrong when they submitted lynx hairs to try to test the lab, and they had an alternative way to do it.

There is a report out just now, last week, I believe, about I think it was the Forest Service on spotted owl timber sales, that now taxpayers have spent upwards of \$24 million because they did overflights and said this looks like habitat, but never did the on-the-ground work, and a court ruled that they were arbitrary and capricious in their actions. That is the Forest Service, I realize it is not your agency, but I hope you can understand why some of us are as concerned as we are about trying to get back to where we can trust the science we are getting, trust the decisions we are having to live under and why we feel so forcefully. It is not meant personally at all, it is just from conviction that something has to change.

Thank you, Mr. Chairman.

Mr. POMBO. Mr. Otter?

Mr. OTTER. Thank you very much, Mr. Chairman.

Thank you folks for being here. I apologize for not getting here early enough to hear your verbal testimony, but I assure you I will read the written testimony that you have submitted.

I would like to continue along the lines a little bit of Mr. Walden because coming from Idaho, both Mr. Walden and I have faced many of the same problems.

One of the things that I am most concerned about is that it appears to me that one Federal agency uses one set of science, another Federal agency uses a different set of science in pursuit of the same laudable goal, and that is the survival of the species, whether it be plant or animal.

I would be in hopes that we could do two things. No. 1, we could get a scientific basis upon which all of the Government could agree is valid, and therefore would be providing us with answers that we can go forward and do the correct thing, but I think something needs to happen long before we arrive at that station. I think you two individuals are going to have an awful lot, a large role to play in that because in Idaho right now, you know, I have got 650,000 people that live and work on the watershed. Everything they do, they have been born on that watershed generation after generation, and lived, and worked, and recreated, and raised their families, and when they die, we dig up part of that watershed and put them in that grave and replace the watershed.

The problem right now is everybody is suspicious of a Government report. Can you imagine what would happen to an individual with, as Mr. Walden said, the folks in Wenatchee National Forest were truly valid in their effort to test the voracity of the labs that were testing the lynx hair, can you imagine what would have happened to the logger that went into that test area and pulled the hair off of that test patch? Can you imagine what would have happened to anybody that filed an IRS report which was in error to test the voracity of the accountants and the tax lawyers at the IRS?

How can this Government ever again go forward with an individual and a private citizen and hold them responsible for action that they have done on purpose and still have 12 people someplace in this Government that we know about that falsified that report

in the Wenatchee National Forest, that falsified the reports that Mr. Walden just referred to relative to the spotted owl?

My concern for this is the 650,000 people that live on my watershed, on the watershed in the First Congressional District of Idaho. My concern is also for all of the folks that lost their jobs when we shut down 38 lumber mills in my district in the last 8 years. My concern continues to be for the lives of those folks that have been inalterably changed because we no longer have those job stations, we no longer have those opportunities available to them. My concern is for the folks that live in the Silver Valley that have withstood assault, after assault, after assault from the Environmental Protection Agency, and the National Marine Fisheries and other agencies that have sought to create a Superfund site that probably would be the largest in the continental United States.

But setting all of that aside, there are a couple of questions that I really need to know the answer to.

It has been the practice of the Government agencies right now, any of those that contribute to the listing of an endangered species, that when it is suspected that it may be endangered, usually all activity within the potential habitat is drawn to a halt until that agency can investigate whether or not there truly is an endangered plant or an endangered species in that area. This has happened time after time.

My concern, obviously, is for when you stop all of that activity at a potential site. Is there any priority given to reach a satisfactory answer as to that potential listing so that we can hurry up and get back to living while we are studying whether or not something is truly endangered?

Ms. LENT, I would ask you that question.

Ms. LENT. Thank you, Mr. Congressman.

We have consultations going on all of the time, too many consultations, too little time and lots of deadlines, but we do have a system for prioritizing it. Obviously, when we are in a situation where we need to prioritize because of economic activities being stopped, this is taken into account.

Mr. OTTER. Have you ever heard of an open season on an endangered species? That is not a loaded question. The reason I ask that question is the specific Northwest salmon run, which is an endangered species, and the headlines in the newspapers all up and down the Salmon and the Snake river are on our record fish catches. In fact, the U.S. Fish and Wildlife and the Idaho Department of Fish and Game have recently increased the take to 15 fish a day because there are so many of them.

Now, obviously, those are hatchery fish, some of those are hatchery fish, because we know that we have got every postdorsal fin out of those, every one of those hatchery fish, and there has been no cross-breeding between them. Now we know that with certainty because some Government biologist did their science and told us that, and we are expected to believe that. But I do not know how you can have an open season on an endangered species. That has been one of the real conflicts that I have had ever since I got back.

But if you want to pursue that, I would have a list for you and all of the rest of the folks that are engaged in establishing the endangered species and the habitat, I would have a big list on those

endangered species that I would like you to declare an open season on as well.

Thank you, Mr. Chairman. I appreciate it.

Mr. POMBO. Thank you.

Mr. Osborne?

Mr. OSBORNE. Thank you, Mr. Chairman.

I wasn't here earlier, and I apologize for having to ask you this question, but, Dr. Lent and Mr. Manson, are you recently appointed or how long have you been in your present positions?

Mr. MANSON. I was confirmed by the Senate on January 25th. I have been on the job for 29 days.

Mr. OSBORNE. OK.

Mr. MANSON. I am not looking for any particular consideration for that.

[Laughter.]

Mr. OSBORNE. No. Well—

Mr. MANSON. Just answering just the facts, sir.

Mr. OSBORNE. That is a good point. It is well taken.

Ms. LENT. Mr. Congressman, I am not a political appointee. I have been at the Fishery Service for 10 years, which I guess makes me a good target.

Mr. OSBORNE. We are not here to target anybody. I was just kind of interested in knowing your background.

Just a follow-up on an issue that Mr. Walden raised earlier, and that is the amount of spending required by the bills. I think we all know the cost to the Klamath Basin. I have been involved in a situation in the State of Nebraska which has been unpleasant, to say the best. We have 56 miles of river, the Platte River, that has been designated as critical habitat for the whooping crane, and that was done in 1978. I think really the designation got out ahead of the science because since that time they have done electronic tracking of 18 whooping crane, and there weren't that many. That was about 35/40 percent of the total population. They did it for a period of two and a half years, and at no time did any of those cranes ever even land in the Platte Valley. Less than 1 percent of the whooping crane population has even been seen near the Platte River during that 20-some-year stretch and none of them use the river itself, and yet that is designated as critical habitat.

Now that wouldn't be too bad, except there have been a lot of modifications. They have designated 140,000 acre feet of water per year for the endangered species. Now that is water that is generally lost to irrigation, to power and is very expensive and very difficult because water is short in that area. We also have no new depletion since 1997, no new wells can be dug in the alluvion of the Platte River unless there is an offset, unless another well is shut down.

We have been ordered to push sediment into the Platte River because they want pulse flows, which will result in flooding and also remove sediment from the river. So now they want to replace the sediment that the pulse flows will cause, and they even at one point talked about 100 dump truckloads a day each day for maybe as long as 100 years to replace the sediment. Now they have even backed off a little bit on that, but they want to bulldoze some islands.

So what I am saying is this is a substantial inconvenience and tremendous cost. It is estimated that the cost of the plan alone, just the cost of getting a cooperative agreement between Colorado, Nebraska, Wyoming to furnish all of this water and the sediment replacement and so on, will be somewhere in the range of \$160 million. Now that does not say anything about the cost of the water, no new depletions, replacing the sediment. That is just to formulate the plan.

So what I would really like to emphasize with you is it is critical that we get it right the first time. Right now we are not getting it right, and we are paying a huge cost. I mean, the cost of another study or a 6-month delay or whatever is a tiny fraction of what cost we are exacting from farmers and other people who own the land.

So that is the thing I just want to emphasize, to drive home to you. It is not just Klamath. There are other places where this is happening.

I guess the question I have—I have kind of violated our rule. You know, we invite experts in, and then we make a speech, which is kind of endemic to this occupation—but if it does appear that there has been a mistake made in the designation, do you feel that your agencies are willing to backtrack or to make a new designation, to rectify a mistake? Either one of you or both.

Mr. MANSON. Let me address that first.

If there is evidence that a critical habitat designation needs to be revisited on a scientific basis, then I expect the Fish and Wildlife Service to review that scientific evidence and revisit the critical habitat designation if necessary.

Mr. OSBORNE. Thank you.

Doctor?

Ms. LENT. Mr. Congressman, I would echo that comment, that when we receive petitions to list or delist based on new information, also, when we receive information that might change consultation process, the information upon which a consultation is based, we will reinitiate consultation.

Mr. OSBORNE. I appreciate that. And what conversation I have had with Secretary Norton would certainly fall in line with what you have said, and we appreciate that because, obviously, we are going to try to revisit this situation in the Platte Valley.

My time has expired, Mr. Chairman.

Mr. POMBO. Mr. Radanovich?

Mr. RADANOVICH. Thank you. Thank you, Mr. Chairman.

Just briefly I want to mention, and I don't know if the two panelists are going to be leaving here after your testimony, the next two panels can offer I think some valuable insight into problems that many people are having with the Endangered Species Act.

One of those panel members will discuss two things here in Washington; the dumping of sludge into the Potomac River and also the Wilson Bridge, which I would like to highlight to you and ask you to turn your attention to that. Because if Klamath terms were applied to the dumping of the sludge in the Potomac and the Wilson Bridge, construction on the bridge would be halted at this moment, and they would be hauling sediment through Georgetown in about 15 dump trucks per day, and you would be halting the dumping of the sludge into the Potomac.

It is my big problem with the Endangered Species Act, as vague as it is, it is allowed to be interpreted in rural parts of this country, where there are no votes, but basically ignored in urban America, and we are seeking justice in that.

So go take a look at those two, and if you care to stop the bridge construction so that the Endangered Species Act can be dealt with here in the Congress, I would applaud you for it, as well as stopping the dumping in the Potomac.

Thank you.

Mr. POMBO. Mr. Rehberg?

Mr. REHBERG. Thank you, Mr. Chairman. I ask unanimous consent to enter a letter and an article in the record, if I might, please.

Mr. POMBO. Without objection.

[The information submitted for the record by Mr. Rehberg follows:]

Assault by the Environmental Movement

(THE GREAT PRAIRIE DOG HOAX)

GARY MARBUT 06.02.01

Let's see if we can understand this. There's an animal that has 10 million members in 11 states stretching from Mexico to Canada, and it is also on the verge of extinction and must be protected by listing under the Endangered Species Act (ESA). This is the claim that the National Wildlife Federation (NWF) has made about the Black-tailed Prairie Dog in its petition for listing to the U.S. Fish and Wildlife Service (FWS). To understand this, we'll have to dig a little deeper.

In July of 1998, the NWF submitted a petition to the FWS asking it to use its authority under ESA to list and protect Black-tailed Prairie Dogs under ESA.

Prairie dogs, of course, are not dogs, they are rodents.

NWF bills itself as the nation's largest conservation organization. In this case, "conservation" could be defined as "we care more for animals, plants and the natural environment than we do for Man and his needs".

NWF predicates its petition for listing on the presumption that it can demonstrate the shrinkage in prairie dog populations over time, and that such shrinkage is destined to lead to extinction of the prairie dog without interference by the Federal Government. We will look at these assumptions in a moment, but first, it is important to understand the philosophical orientation of the people making the argument.

In reading the NWF petition for listing, it stands out that what concerns the NWF even more than threat to prairie dogs is the loss of habitat in general, especially to agriculture. It becomes apparent when reading the petition that the NWF sees as the only long-term solution to the "endangered" status of the prairie dog the restoration of the animal throughout its original habitat—move the people out and move the rodents in.

The mentality of the people setting policy for this environmentalist organization is that Man is an unnatural element in any ecosystem, and that true balance can only be restored by taking modern Man out of the equation. Thus, it stands to reason that especially human agricultural endeavors must be halted in order to restore critical endangered critters such as the prairie dog.

It is also true, according to the environmentalist mindset, that there has been frustratingly little control over what private people can do with their private property. Then, along comes ESA, and suddenly there is a tool to restore the "natural order" by stripping people of the choice about how they utilize any private property containing an endangered animal or plant.

And, what better life-form to choose for this great power shift than one alleged to have once occupied most of the West. The Montana Prairie Dog Management Plan (Montana Plan), a privately-crafted document inspired by NWF-type thinking recognizes this when it says, "Any prairie dog conservation strategy that addresses prairie dogs on a State-wide basis must address the private landownership factor."

So, what exactly is the basis for the extravagant claims of prairie dog habitat and population reduction used as the underpinning for claims of imminent extinction? NWF quotes as authority the Lewis and Clark diaries where it is asserted that "this animal appears here in infinite numbers."

NWF makes similarly vague claims to “establish” the “fact” that prairie dogs once occupied vast regions where they now do not, in unimaginable numbers.

In truth, there probably has been a lot of ground once occupied by prairie dogs which has been plowed and planted, making it unavailable for these rodents. There have been extensive campaigns to eradicate prairie dogs with wholesale poisoning, and the plague does occasionally make substantial inroads in their populations. Also, it is claimed by the enviros that recreational shooting is significantly to blame for alleged declines in prairie dog populations. What is very debatable is both the extent of early prairie dog numbers and range, and the success of elimination or reduction attempts, including by recreational shooting.

Of course, the petition to list the prairie dog as threatened or endangered presumes that without government management, the critter will become extinct. However, there are arguments to the contrary that sneak into the listing petition. The petition mentions one prairie dog population in Colorado in which 95% of the dogs were poisoned, but where the population was back to 100% of original numbers in just five years! The NWF petition casually admits, “on a distribution map black-tailed prairie dogs appear to occupy most of their original range of 100–250 million acres in the United States.”

The junk science used to establish the baseline for the claims of shrinking prairie dog numbers and habitat ought to amaze anyone. The Montana Plan says, “The black-tailed prairie dog ecosystem on the Great Plains was extensive prior to settlement. It might have dominated as much as 10–20% of the landscape, but there is no written record to verify this.” Sure, prairie dogs might have been planted by extraterrestrial visitors too, but there’s no “written record” to verify this either.

It is also useful to understand that the FWS would gain a lot of bureaucratic prestige from becoming the manager of a species that numbers in the millions and is spread over at least 11 states.

So, the NWF submitted its petition to list prairie dogs under ESA to a sympathetic FWS. But, there was a problem. How could the FWS justify listing as on the verge of extinction an animal numbering over 10 million in 11 states? The answer is that they couldn’t. They knew that they wouldn’t last a day in Federal court defending such a decision. I recently spoke with counsel at the well-reputed Mountain States Legal Foundation in Denver, and was given the informal but concurring verbal opinion that there’s no way the FWS could sustain a decision to list prairie dogs in court.

The FWS was temporarily stuck, and needed to find a way out. A clever resolution to the problem would be to not list prairie dogs at all, but to cause all of the resultant protections to happen anyway. In a successful burst of imagination, the FWS issued a letter saying that prairie dogs were warranted for listing and endangered, but that they wouldn’t list them just now because they had too many other species to list. And, they continued, if the states in which prairie dogs now live didn’t pick up the slack and protect the critters, the FWS would probably take the management prerogative out of their hands and list the animal Federally.

Suddenly, the fish and wildlife agencies of 11 states were scrambling to protect prairie dogs, and convincing their policymakers to give them whatever authority was needed just to protect the state from the FWS. This was a great win/win situation for the state fish and wildlife agencies because they were suddenly in the position to dramatically expand their agencies to service an animal with huge range and numbers, requiring major new expenditures of manpower and money.

The first on the agenda of items the FWS demanded states accomplish was to change state laws to designate prairie dogs as a protected animal. Local committees and “study groups” were drummed up by the state fish and wildlife agencies in all states to convince landowners that unless they caved in to the demands for changing state laws to protect these rodents, the FWS would list them and regulate the landowners out of business.

Panicked landowners came to support the efforts to give state fish and wildlife agencies statutory authority acceptable to the FWS to “manage” prairie dogs. In Colorado, shortly after the legislature gave the fish and game commission the authority to manage prairie dogs, the commission outlawed any killing of these rodents. Other states are expected to follow suit.

In Montana, a bill was introduced to allow the Department of Fish, Wildlife and Parks (MDFWP) management authority over prairie dogs. At every hearing on the bill, the threat was made that “if we don’t change our laws and manage prairie dogs the way the FWS wants us to, the FWS will list prairie dogs and take the prerogative out of our hands and we won’t have any control at all.” The chief proponent of this view was the MDFWP, which, of course, stands to gain immense bureaucratic prestige (manpower, money and mission) with the assumption of management authority over prairie dogs.

In the public hearing testimony on the Montana prairie dog bill before the Senate Fish and Game Committee, this author told committee members, "I first testified before a committee of the legislature in 1971. In the many years I've participated in the formulation of public policy before the legislature, this bill is the greatest hoax to ever be perpetrated upon this body."

So, here is the hoax: The 11 states containing prairie dogs are stampeding to do what the FWS can't do (regulate prairie dogs), because the FWS has threatened that if the states won't do what FWS can't, FWS will do what it can't and the states will lose control. The current leading advocates of this effort have become the state fish and wildlife agencies, who stand to gain significant bureaucratic prestige from managing such an abundant and widespread species. To gain this bureaucratic advance, state agencies are glad to scamper to effectively do the bidding of the FWS and the environmentalists, operating on the announced theory that they are avoiding the dreaded FWS listing.

There is no way that the FWS could get away with listing prairie dogs as endangered, because there are so very many of them, spread so widely.

There are more prairie dogs in these 11 states than there are elk, deer, antelope, moose and coyotes combined. To assert that they are on the verge of extinction is nothing short of ludicrous.

However, during the Clinton years, America has been treated to such a vulgar lesson in the abuses of Federal power that few state decision-makers are willing to take the alleged risk of the threatened FWS prairie dog listing. That is how this great hoax is being successfully perpetrated.

The Montana Shooting Sports Association is the primary organization asserting the rights and prerogatives of gun owners and hunters in Montana. MSSA President, Gary Marbut, grew up on a 5,000-acre cattle ranch in Western Montana, is also an officer of the Western Montana Fish and Game Association, Montana's oldest and largest regional organization of hunters and anglers, and is a lifetime hunter, a student of precision rifle, who hunts elk with a revolver.



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor
William G. Ross Jr., Secretary

Division of Marine Fisheries

Preston P. Pate Jr., Director

February 20, 2002

William T. Hogarth, Ph.D.
NOAA Assistant Administrator for Fisheries
1335 East-West Highway
Silver Spring Metro Building # 3, 14th Floor
Silver Spring, Maryland 20910

Dear Dr. Hogarth:

Mr. Jimmy Ruhle, acting on behalf of local fishermen, requested that the North Carolina Division of Marine Fisheries (NCDMF) contact the National Marine Fisheries Service (NMFS) in support of their proposal for large mesh gillnet closures off the coasts of North Carolina and Virginia as a pro-active measure for protecting threatened or endangered sea turtles. Mr. Ruhle's letter of February 16, 2002, is co-signed by one monkfisherman and one seafood dealer. Additionally, the letter includes the names of three North Carolina fishermen who verbally supported the proposed closure but were unavailable to provide signatures.

The proposed closures are based on information that local fishermen provided to the NCDMF during preparation of an application to the NMFS/Northeast Region for an Exempted Fishing Permit (EFP) for the monkfish fishery in 2001 and 2002. I feel that the proposal is sound and will help minimize interactions between threatened and endangered sea turtles and gill nets off our coast during the spring. I do not anticipate that the proposal will negatively impact fisheries that are traditionally prosecuted off our coast. However, since some large mesh fisheries may have been overlooked, I recommend that the closures be for seven inch and larger mesh gillnets only and that this year's closures not extend beyond October 31, 2002.

I recommend that the time/temperature closures for large mesh gillnets as proposed by Capt. Ruhle and other North Carolina fishermen be implemented as soon as possible after March 15, 2002, as a pro-active measure to protect threatened and endangered sea turtles off the coasts of North Carolina and Virginia. It is requested that the North Carolina Division of Marine Fisheries and the Virginia Marine Resources Commission be given the opportunity to review the final draft of the closure notice to assure that traditional fisheries are not adversely impacted by the closure.

Yours truly,

Preston P. Pate, Jr.

PPP:FHM:jtg

Enclosure

cc: Jimmy Ruhle
Jack Travelstead
David Bernhart

3441 Arendell Street, P.O. Box 760, Morehead City, North Carolina 28557
Phone: 252-726-7021 FAX: 252-726-0254 Internet: www.ncdenr.net

February 16, 2002

Mr. Preston P. Pate, Fisheries Director
North Carolina Division of Marine Fisheries
PO Box 769
Morehead City, NC 28557

Dear Mr. Pate:

We, the undersigned fishermen from Dare County, North Carolina, are concerned that a possible increase in gillnet fishing effort for monkfish off the coast of North Carolina during the spring of 2002 may result in increased threats to threatened and endangered sea turtles. Should sea turtle mortalities occur as a result of monkfish gillnets being fished in waters where sea turtles are abundant, several other North Carolina gillnet fisheries could be adversely impacted through closures or fishing restrictions. We feel that "rolling closures" of specified areas to monkfish gillnet gear can be used as a means of protecting sea turtles off our coast during the spring. Such closures, as described below, would occur on specific dates or would be triggered if sea surface temperatures in an area exceeded 60 degrees Fahrenheit for a three day period.

We offer the following information in support of our proposal which is taken from the January 22, 2002 Application By The North Carolina Division of Marine Fisheries For An Exempted Fishing Permit From the National Marine Fisheries Service/Northeast Region. During late April and early May 2000, approximately 320 threatened or endangered sea turtles stranded on North Carolina ocean facing beaches between Ocracoke and Oregon Inlet, NC. The first massive stranding event occurred during the last two weeks of April when approximately 100 sea turtles stranded between Ocracoke Inlet and Cape Hatteras, NC. The stranded sea turtles were in advanced stages of decomposition and it was not possible to determine the cause of death through necropsies (pers. comm., R. Boettcher, NC Wildlife Resources Commission, May 2000). During the first two weeks of May 2000, a massive stranding of more than 200 sea turtles occurred between Cape Hatteras and Oregon Inlet, NC. These sea turtles were also badly decomposed and the cause of death could not be determined through necropsies. However, four of the sea turtles from the second stranding event were trailing small pieces of 10 to 12 inch mesh gillnet webbing. This mesh size is commonly used in the monkfish fishery off North Carolina. The NMFS issued a Temporary Rule on May 12, 2000 closing the Atlantic Ocean to the use of gillnets with a mesh size larger than six inches from Cape Hatteras, NC to a point near the Virginia/Maryland border for a 30-day period to protect threatened or endangered sea turtles (NMFS, 2000).

There is limited data on which to link the massive sea turtle strandings of April and May 2000 to the monkfish fishery because there was only one NMFS observer trip in the monkfish fishery from North Carolina ports in 2000. North Carolina fishermen feel that many of the strandings could have been related to cold water stunning. However, satellite sea surface temperature imagery for several weeks prior to the strandings indicated no major cold water

masses north or south of Cape Hatteras. Fishermen feel that since sea surface imagery only gives temperatures for several meters below the surface, the sea turtles could have been stunned by subsurface masses of cold water. They feel that since monkfish gillnets are normally set off North Carolina in water depths of 30 to 60 meters, migrating sea turtles that are not actively feeding would not be expected to interact with monkfish gillnets set on the bottom and fished with 48 inch tie-downs.

From April through June of 2001, sea turtle strandings on the ocean beaches between Ocracoke Inlet and Oregon Inlet, North Carolina numbered 26. Although 2001 strandings between Ocracoke Inlet and Oregon Inlet were less than 10 per cent of those of 2000, North Carolina fishermen are concerned about the perception that the monkfishery may be responsible for a high number of sea turtle mortalities. The fishermen have suggested a system of closures triggered by dates, water temperatures or observed sea turtle interactions to minimize the impact of the experimental fishery on threatened or endangered sea turtles. The following management measures are proposed to minimize the probability of interactions of threatened and endangered sea turtles with monkfish gillnet gear:

MANAGEMENT MEASURES TO MINIMIZE INTERACTIONS BETWEEN MONKFISH GILLNET GEAR AND THREATENED OR ENDANGERED SEA TURTLES

Fishing Time/Areas:

Gillnets greater than 7 inches, stretched mesh, will be authorized in areas and during time periods as specified below:

Area 1 - North of a line running 090° (M) from Avon, NC, 35°20'30" N, to a line running 090° (M) from Chincoteague, VA, 37°56'00" N, from March 16 through March 31, 2002;

Area 2 - North of a line running 090° (M) from Oregon Inlet, NC, 35°46'00" N, to a line running 090° (M) from Chincoteague, VA, 37°56'00" N from April 1 through April 30, 2002;

Area 3 - North of a line running 090° (M) from Currituck Beach Light, NC, 36°22'30" N, to a line running 090° (M) from Chincoteague, VA, 37°56'00" N, from May 1 through May 31, 2002;

Area 4 - North of a line running 090° (M) from Cape Henry, VA, 36°55'54" N, to a line running 090° (M) from Chincoteague, VA, 37°56'00" N, from June 1 through June 15, 2002; and

Area 5 - North of a line running 090° (M) from Wachapreague Inlet, VA, 37°34'36" N, to a line running 090° (M) from Chincoteague, VA, 37°56'00" N, from June 16 through June 30, 2002.

Water temperature closures:

Should observers or fishermen report surface water temperatures in excess of 60 degrees Fahrenheit for three consecutive days within an area described above, gillnets greater than 7 inches, stretched mesh, will be prohibited in that area and all area lying south of it. All fishing operations employing gillnets greater than 7 inches, stretched mesh, shall move northward to the next time-specific fishing area.

We request that you support our proposal for enactment of these pro-active measures to protect sea turtles and request that you contact the National Marine Fisheries Service on our behalf and request that they implement the proposed closures for gillnet larger seven inch, stretched mesh, effective March 16, 2002, or as soon as possible after that date.

Yours truly,

James A. Ruhl
James A. Ruhl, Sr.

Co-signed by the following fishermen:

Name	Affiliation	Phone number
Tommy Dauchise	Monk Fish	252 480
F/V Handful	Gillnetter	2977
Billy C. Tillatt	Mom Tillatt Fish Co.	252 73-2323

The fisherman listed below have requested via telephone, their names be added to this letter as they are all UNAVAILABLE to sign in person.

RANDALL MORGAN	F/V Miss Donna Gillnetter	252-796-1343
TAMES SIDWELL	F/V catch em Gillnetter	252-493-2945
CHRIS NICKMAN	F/V About time Monkfish Gillnetter	252-986-2217

Phone (252) 473-3210

James Alan Ruhle
P. O. Box 302
159 Jovers Lane
Wanchese, North Carolina 27981

Fax (252) 473-4831

March 19, 2002

Honorable Walter B. Jones
422 Cannon House Office Building
Washington, DC 20515-3303

Mr. Jones:

The following events took place as a prelude to a request by North Carolina fishermen to the NC Division of Marine Fisheries, (NCDMF) requesting a pro-active management measure be implemented by NMFS to protect sea turtles off the NC coast this spring.

I personally met with Dr. Hogarth on February 8, 2002 in his office in Silver Springs. At his request, I provided documentation of Bluefin Tuna catches off the NC coast aboard "Bureau of Commercial Fishing" research vessels from Gloucester MA., as well as personal observations of Bluefin catches during the time frame of 1957 thru 1965.

The next issue discussed pertained to the NC fisherman's recommendation of an area closure. In 2001, the NC Fishing Industry requested and received an experimental fishery permit, (EFP) for 5 vessels to determine the abundance of Blackfin Monk Fish off the coast of NC and VA. Incorporated in the EFP were a series of area closures (rolling closures) designed to help address concerns of interactions with sea turtles. The EFP was not approved until early May, 2001, however the vessels fishing prior to the EFP's approval utilized these area closures even though they were not a regulation. NMFS had required all Monkfish vessels to carry observers in the fishery south of 38° N latitude, (Chincoteague, VA). Last spring the NC fishery had between 80-90 observed trips and had only ONE sea turtle interaction.

I asked Dr. Hogarth his opinion on this very pro-active request by the fishing industry and the best way to get it implemented. His reply was that he agreed with this idea, and to formally request this action. We did this with a letter to the NCDMF dated Feb. 16, 2002.

James A. Ruhle

Mr. REHBERG. Is it Dr. Manson?

Mr. MANSON. No.

Mr. REHBERG. I am sorry. I misunderstood.

Mr. Manson, you are familiar with the warranted, but precluded designation within the Endangered Species?

Mr. MANSON. Yes.

Mr. REHBERG. As far as the two pieces of legislation that we are talking about today, would the black tail prairie dog be put into that category if these two pieces of legislation had passed the Congress?

Mr. MANSON. That I cannot answer because, if I understand your question, it is if we had the type of peer review that these two bills would institute, would that have resulted in the same decision to make that species warranted, but precluded?

Mr. REHBERG. That is correct.

Mr. MANSON. I am afraid I can't answer that. I have not seen the specific science that went into that determination.

Mr. REHBERG. That has actually been one of our problems. We cannot, for the life of us, see what science was used in making that determination.

Is the warranted, but precluded category, I am asking this question because I don't know it, and that is does it need to be reviewed each year?

Mr. MANSON. I don't believe we review those every year.

Mr. REHBERG. Are there different categories of warranted, but precluded that you are aware of?

Mr. MANSON. Not that I am aware of.

Mr. REHBERG. I guess I was struck by Dr. Lent's comment about the prioritization of time because I am told that, in fact, they do have to be reviewed on an annual basis, and if they do have to be reviewed on an annual basis, wouldn't it make sense to the administration that the time and effort that you spend having to continue to reconsider this category for something that, for the life of us, we still don't get it? It would save you time and money if you were to support something like these two pieces of legislation.

Mr. MANSON. Well, in fact, we do support the bills in concept, and we do agree that there ought to be a robust independent peer-review system. The problems that the Department of Interior has with the bills, I would characterize as more procedural than substantive.

Mr. REHBERG. Within the consideration of your administration at this time, coming up with something administratively to do the same thing, albeit cheaper, are you making a determination that you will not include some of what we consider to be the junk science or, I don't know what I am trying to say, Mr. Chairman.

It seems like when the comment is made that the user groups, such as the fishermen, and the hunters and all, you know, that has been one of our complaints historically about the Endangered Species, that it doesn't seem to take much to raise the flag, but it takes a lot to lower the flag, and the deck is kind of stacked against those that don't want them listed, because if a fair peer reviewer considered, any ideological human being would say, well, clearly, the black tail prairie dog shouldn't have been considered for listing in the first place.

Mr. MANSON. Well, certainly, science ought to be judged on its scientific merit and not on whether it came from one particular group or another. It ought to be judged solely on its scientific merit, and I think that a robust peer-review process helps ensure that science is judged only on its scientific merit.

Mr. REHBERG. Thank you. I would like to echo Mr. Radanovich's comments as well. We have watched the Wilson Bridge and the Potomac issue with some interest, and unfortunately there are those within the administration that seem to be thwarting our attempts to see a little bit of fairness, and I hope that you will go back to your administrators and anyone that will listen within the administration to tell them that we do want a fair consideration on that issue because it doesn't look fair to us from west of the Mississippi.

Thank you, Mr. Chairman.

Mr. POMBO. Thank you.

I am going to go ahead and dismiss this panel at this time. Thank you for your testimony. Thank you for answering questions. I will tell you that I know there are a number of members of the Committee that had additional questions. They will be submitted to you in writing. If you could answer those in a timely fashion so that we could include them in the hearing record, I would appreciate it.

Mr. MANSON. Thank you, Mr. Chairman.

Ms. LENT. Thank you.

Mr. POMBO. I would like to call up our second panel of witnesses.

Mr. Robert Gordon, Stephen Lilburn, Peter Illyn, James Anderson, and Andrew Dobson, if you would join us at the witness table, please.

Those of you that are standing over here, please feel free to take the seats here in the front. Just go ahead and fill in.

Thank you very much. I think you are all familiar with the timing system, the series of lights in front of you. You will all be allowed 5 minutes for oral testimony. Your entire written testimony will be included in the record, but if you could just kind of summarize that and include it in the 5-minute oral testimony, we would appreciate it.

Mr. Gordon, if you are ready, you may begin.

**STATEMENT OF ROBERT E. GORDON, JR., EXECUTIVE
DIRECTOR, NATIONAL WILDERNESS INSTITUTE**

Mr. GORDON. Thank you, Mr. Chairman.

I appreciate the opportunity to testify on behalf of the National Wilderness Institute on proposals to improve science used in ESA decisionmaking. NWI has been highly critical of ESA. We understand the frustrations by those in rural America who see their communities, livelihoods, and homes threatened by the application of this law, often triggered by highly questionable data. Such is the case in Klamath, where Federal officials withheld water from those who use it to provide food and fiber to the rest of us on unsubstantiated grounds, according to the National Academy of Sciences.

I have good friends in Klamath who struggle to make sense of why Federal agencies behave this way and jeopardize their ranch and their ability to care for their two little boys. While I understand such frustrations, NWI's criticism has not been on economic

or social grounds, but because ESA has not worked well in terms of wildlife conservation. I believe this is, in part, because it depends almost entirely on punitive regulation and to trigger that regulation, agencies must have at least a patina of scientific basis.

Consequently, determining an appropriate conservation management regime that can lead to an endangered species being brought back becomes less important than triggering the ability to regulate by listing. How many are on the list, not how many have been taken off, has become the measure.

Testifying today, however, is a bit different for me because I want to use this opportunity to talk about something in my backyard so to speak, where I fish, and canoe and hike, and why peer review of science used to justify Federal actions with regard to endangered species management is a good idea in general.

While agencies have been quick to take water from Western family farms and ranches on account of an endangered shortnose sucker, Federal agencies have done everything possible to enable the nighttime dumping of hundreds of thousands of tons of sludge, including 10,000 tons of aluminum through a national park into an American heritage river in the Chesapeake Bay tributary, and according to Federal biologists, in the "primary, if not only," potential spawning site for the endangered shortnose sturgeon on the Potomac.

The dumping comes from the water treatment plant run by the Corps and EPA permitted that provides drinking water in the D.C. area. It produces sludge from a process of chemically forcing the impurities from river water by the addition of alum, as do many other facilities. But unlike other facilities on the Potomac, the Chesapeake Bay in EPA's Region 3 or on the East Coast of the United States, rather than treat or landfill the sludge from its settling basin, the Corps typically, under cover of night, dumps it into the Potomac, the equivalent of 15 dump trucks a day.

For purposes of comparison, in Virginia such facilities are limited to discharging no more than 30 milligrams per liter total suspended solids to prevent smothering of aquatic life. This facility has discharged as high as 241,000 milligrams per liter. Here is what the tail end of a dump looks like early in the morning in C&O Park above Chain Bridge. EPA allows this while a new permit is considered since the last one expired in 1994.

One of the factors that seems to have stopped the building of a sludge facility, according to the Corps and EPA documents, is that sludge-carrying trucks would have to go through "affluent" neighborhoods.

The EPA required a study of the discharges and has accepted the study in its entirety. That study argues that there is little effect and that with sufficient dilution, everything will be just fine. A peer review conducted by the Institute for Regulatory Science, and released yesterday, disagrees. The review suggests that the discharge toxicity test samples were biased. That yellow line indicates the concentration of one of the three key pollutants in toxicity tests compared with the actual concentrations of that pollutant for all discharge represented by the bars.

The peer review found that the risks to the aquatic community were underestimated. When the Corps dumped sludge, it can cover

two football fields' worth of MPS river bottom, 4 to 5 inches deep, in about 4 hours. Not surprisingly, the review's No. 1 recommendation for management of the facility is urging the operator to stop dumping.

Perhaps the peer review will force different behavior. These agencies know there are problems. The National Park Police have filed reports about dead eels left on park lands in the sludge's wake. Police have reported discharges so "highly chlorinated" that it "burned their eyes and throats from 30 feet."

Police records show an assistant United States attorney this December discussed this with an EPA special agent and declined to pursue it. Within weeks of being issued inspection reports detailing violations, the Corps testified to the Park Subcommittee that they abide by their CWA permits.

I appreciate the opportunity to speak to you, as I have been trying to put a stop to this for 2 years now. And despite whatever differences that might exist, I cannot imagine that any member of this Committee supports this outrage. I know Secretary Norton, EPA Administrator Whitman, and the National Marine Fisheries Service Administrator are well aware of this, as is the Corps. Why they will not do their jobs and stop this is unclear. Peer review, however, has exposed the bogus science for what it is.

Thank you.

[The prepared statement of Mr. Gordon follows:]

**Statement of Robert Gordon, Executive Director,
National Wilderness Institute**

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.

Regarding one data error 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 jeop-ardy 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 beaches 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. higginsi* 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
 Lloyd’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
 heliotrope milkvetc -- Management Activities
 spring-loving centauray -- 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.

[The Inland Action Inc. "San Bernardino International Airport and Trade Center Issue" submitted for the record by Mr. Gordon follows:]



SAN BERNARDINO INTERNATIONAL AIRPORT & TRADE CENTER ISSUE

Kangaroo Rat Habitat Designation At San Bernardino International Airport

1) Introduction

The United States Fish and Wildlife Service has proposed to include much of the former Norton Air Force Base (now known as the San Bernardino International Airport and Trade Center or for short the property as critical habitat for the San Bernardino kangaroo rat, a species listed as endangered under the federal Endangered Species Act. The proposed critical habitat designation encompasses (1) all of the runway areas; (2) the golf course; (3) the approximately 210 acres currently proposed as open space under the Former Norton Air Force Base Conservation Management Plan, Final March 1998; (4) the approximately 50 acres currently proposed as conservation management areas under the 1998; (5) the areas to the south and West of the golf course; and (6) a relatively large area to the north of the main runway and east of the already developed area on the base. The attached map shows the boundary of the former Norton Air Force Base and the proposed habitat designation areas.

2) Proposed Habitat Area is Over-Inclusive.

It seems clear that the area designated as k-rat habitat is over-inclusive of that which is necessary to protect the k-rat. The proposed habitat area includes runway areas as well as other paved areas that could not possibly be suitable habitat for the k-rat. In addition, the golf course is clearly a disturbed area which is no longer suitable habitat. The San Bernardino International Airport Authority as well as the East Valley community is seeking a reasonable compromise for habitat designation at the Trade Center.

3) Habitat Designation Impact on Development

The finalization of the k-rat habitat over extensive portions of the Trade Center will substantially and adversely affect potential reuse and development of the Trade Center. Because of past reports of kangaroo rat in adjacent areas, it is likely that any private party development of the habitat area would require either a Section 7 consultation with the Service, if federal action also is required, or an application for a Section 10 permit. Under either permitting process, proposed adverse impacts to the area designated as critical habitat would require mitigation. If a Section 7 process is used, construction activities may not commence until the Section 7 consultation is complete and a Biological Opinion is issued.

In short, the over-inclusive habitat designation would have serious adverse impacts on development of the former Norton Air Force Base. The time delays alone would prevent developers at the Trade Center from competitively bidding for users (manufacturing and

warehouse) who are intending to locate in this area and would otherwise be prime candidates for development at the Trade Center.

In addition, the requirement of mitigation would add an additional cost to development which would probably make any site at the Trade Center uncompetitive. Because of the existing, outdated infrastructure and the need to demolish buildings with asbestos and lead-based paint, development costs on Trade Center are already high. The addition of mitigation costs would probably stop all future development at the Trade Center.

4) Proposed Conservation Management Plan.

SBIAA has challenged inclusion of the Trade Center within the k-rat critical habitat area, and made a strong case for exclusion. The final decision regarding designation of the critical habitat has not yet been made. One of the strongest arguments made by SBIAA is that it is in the final process of having approved by the Service a Conservation Management Plan. The CMP includes designation of an approximate 210 acre "Open Space Management Area" and an approximate 51 acre "Core Management Area" which will be perpetually reserved as open space for preservation of species. The attached map shows the location of the Open Space Management Area and the Core Management Areas.

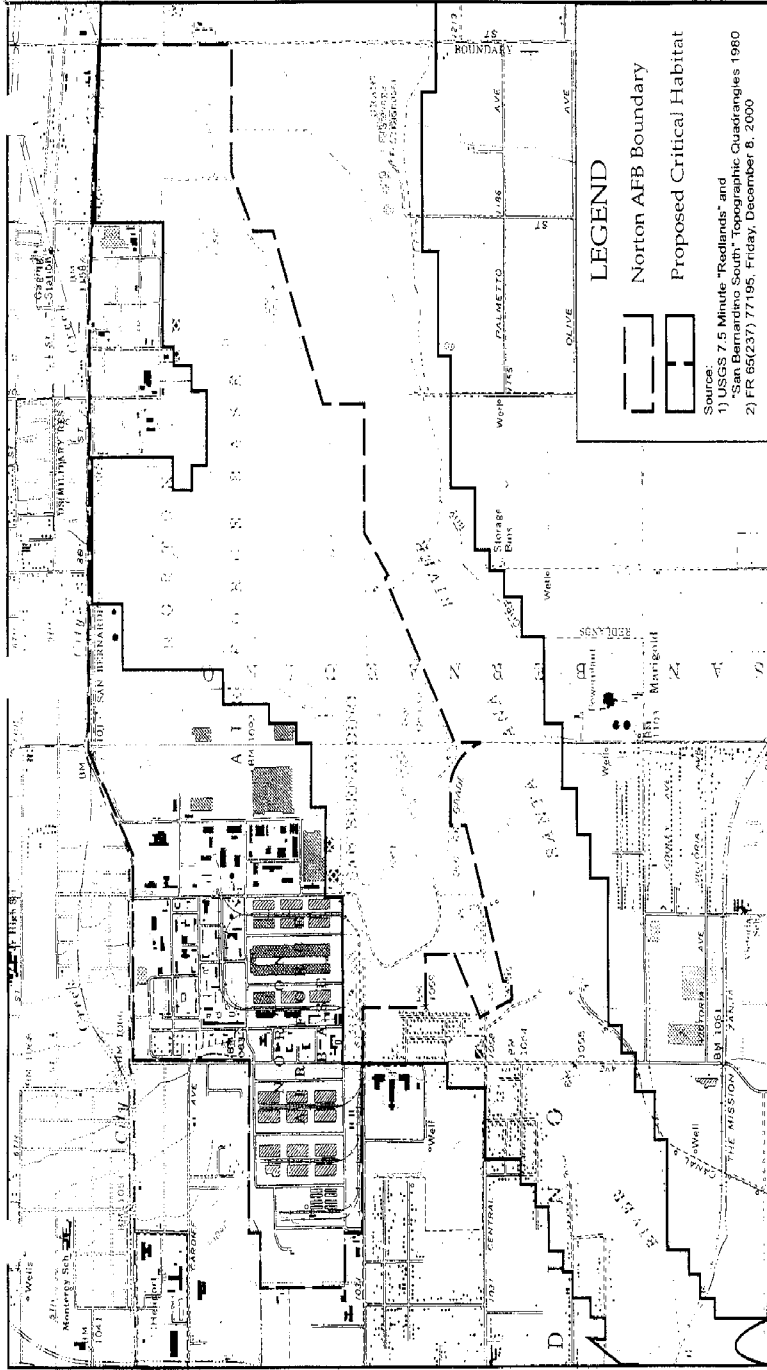
The strong argument in favor of exclusion of the Trade Center from the designation of critical habitat is that there will be (upon approval of the Conservation Management Plan) an on-site plan for preservation of species. The Conservation Management Plan will be the guide to species maintenance at the Trade Center. There is no need for an additional overlay of the critical habitat designation.

5) Request Support for Exclusion from K- rat Habitat Designation

Inland Action requests legislative and administrative support for the Congestion Management Plan proposed by SBIAA and exclusion from the k-rat critical habitat designation. The proposal is a sensible compromise between the need for providing habitat for the k-rat (through the Conservation Management Plan) and the need to proceed ahead with development of the Trade Center. It seems clear that the proposed habitat designation was done on a gross, regional basis, not taking into account the actual nature and characteristics of the Trade Center property. No good arguments can be made for designating runways, paved areas, and other disturbed areas as habitat for the k-rat.

6) Timing is Critical

In this case, a quick acceptance of the SBIAA Conservation Management Plan (and exclusion from critical habitat) is as important as acceptance itself. Final negotiations are underway with Hillwood Development to Master Plan the Trade Center. Hillwood has immediate proposals for use of portions of the property that are included within the proposed habitat designation. It is critically important that the SBIAA plan be approved immediately so that redevelopment of the Trade Center can proceed forward. Redevelopment of the base is a critical economic driver for the economy of the East Valley.



LEGEND
Norton AFB Boundary
Proposed Critical Habitat

Source:
1) USGS 7.5 Minute "Redlands" and "San Bernardino South" Topographic Quadrangles 1980
2) FR 65(237) 77195, Friday, December 8, 2000

Mr. POMBO. Thank you.
Mr. Lilburn?

**STATEMENT OF STEPHEN LILBURN, PRESIDENT,
LILBURN CORPORATION**

Mr. LILBURN. Mr. Chairman and members of the Committee, thanks for the opportunity to speak with you today.

I am an environmental planning consultant from San Bernardino, California. My specialty is securing permits for both industry and Government, and I practice principally in the Western States, primarily in California.

I am here today representing Inland Action, which is a nonprofit, nonpartisan group from the area, concerned about the economic well-being of what we call the Inland Empire, which is essentially Riverside and San Bernardino Counties.

I have worked with the Endangered Species Act throughout my career, prepared and negotiated Section 7 consultations, 10A consultations, HCPs, banking agreements, biological opinions, programmatic permits, environmental assessments, impact reports and impact statements. I always sit across the street or the aisle from the Service typically, often representing Governments, both State and local, in that process.

I am here today to speak in support of H.R. 2829, Mr. Walden, and 3705, Mr. Pombo. Both are similar in their approaches to improving the act. I have provided my written testimony and will simply summarize my position.

In California, where land use authority doesn't come quickly or cheaply, the ESA is now the most cumbersome, costly and difficult land use permit to secure. Let me restate that. The Federal Endangered Species Act is the most difficult land use entitlement process in California. I the impacts both private and public properties, private industry, public agencies alike. It doesn't make any difference. Its implementation is being driven now in California, particularly, by lawsuits, judicial interpretation and settlement agreements between the Service and the myriad of special interest groups that initiate those lawsuits, and then there is always the interpretation of the individual representing the service that you are sitting across the table from.

Congressional intent is never discussed. The ramification of these listings on the public, of course, are tremendous, and I know a number of you have personal experiences with those. At the very least, Congress should ensure that the assumptions and baseline science supporting them is accurate and complete. I have provided three examples in my written testimony, which I have personal experience about—the Arroyo Southwestern toad, the San Bernardino kangaroo rat, and the Delhi Sands flower loving fly.

I have referenced two documents, copies of which I have provided to staff so they could be entered into the record. The first is a short discussion with maps on impacts to the former Norton Air Force Base by the San Bernardino kangaroo rat listing, and the other is a report I wrote a few years ago on the impacts of the listing of the Delhi Sands flower loving fly on the San Bernardino County Hospital. This is the site where we spent \$3.5 million moving our county hospital 250 feet north to protect 2 acres on which we

suspected there may be eight flies. This comes to a cost of \$441,000 per fly which, by the way, from a patient standpoint, is the equivalent of serving 527 inpatients or over 25,000 outpatients.

I believe both of these listings would have been questioned if they had been subject to scientific peer review. If 2829 or 3705 were to authorize a review committee, I would encourage you to provide as broad-based a committee as possible, bring some balance and expertise beyond just biology, but I am thinking along the lines of spacial data applications, and land forms, and some expertise in that area.

Be critical of the listing's potential for success and be specific in the Act so that it is clear that what is expected of the committee, and later what is expected of us, is clear to those interpreting it, otherwise some Tenth Circuit judge is going to be telling us what you really meant to say, and that is what we will be doing.

I appreciate the opportunity to speak with you today.

[The prepared statement of Mr. Lilburn follows:]

Statement of Stephen T. Lilburn, President, Lilburn Corporation

My name is Stephen T. Lilburn. I am an environmental planning consultant from San Bernardino, California. I am the president of Lilburn Corporation, a consulting group that specializes in securing land use permits for industry and government. I am also past president and current chair of the environmental committee for a citizens group called Inland Action.

I have been consulting in the areas of environmental regulatory compliance for 24 years. My practice is centered in the area of the National Environmental Protection Act (NEPA), the California Environmental Quality Act (CEQA), the California Surface Mining and Reclamation Act (SMARA), the Endangered Species Act (ESA or Act) and various state and Federal processes. My work is conducted in the western states, principally in California. A resume of my professional experience is attached.

I have been asked to testify on behalf of H.R. 2829 by Mr. Walden and H.R. 3705 by Mr. Pombo.

I have reviewed both bills and see both as an attempt to interject scientific peer review into the endangered species listing process. I support both bills in concept.

I would suggest that these advisory committees [(3705) p. 13-23 and (2829) p. 5-21] composed of individuals with biological science expertise, also include those with expertise in spatial distribution (geography), climatology and geomorphology. All these resource areas are critical in the analysis of single and multi-species habitat delineation and threat assessment. Biology is the basis of species protection but habitat management and recovery potential is a much broader issue requiring broader expertise. A review committee should have enough background to question the broadest aspects of species viability and background presentation.

In light of recent 10th Circuit Court decisions regarding economic effects in California, it may also be appropriate to include an individual with expertise in economics and cost benefit analysis. This may be critical in analyzing the impact of implementation and feasibility of conservation and attempts at recovery.

Many question the need for refinement of the ESA; however, working with the Act on a daily basis it is my opinion that many of the problems associated with its implementation by the U.S. Fish and Wildlife Service (USFWS or Service) is the lack of specific congressional intent within the Act. Unless you want the Service or a court to interpret the Act, Congress should be more specific in their intent and direction.

I have spoken with several of the framers of the original Act and it is clear that it was not initially intended as a tool for land use regulation. Yet that is certainly what it is today. In fact, few had an understanding of the depth and breath of regulation that would evolve with this Act.

A lack of specific congressional intent has led to an Act that is now driven by law suits, judicial interpretation and legal settlements. Listing packages are being processed not by need or scientific justification, but by volume based on settlement agreements dictating a number of listings to be completed within a fixed time frame.

Listings are being processed without knowing the extent of or availability of critical habitat needed for survival. This process can take years after the listing to develop and is itself subject to litigation. Yet you would think that critical habitat for a species survival would be fundamental in the evaluation of a species threat. In addition, listings do not include recovery plans or consider the financial feasibility of their implementation. If we are going to commit to a species protection, can we expect to wait years following its listing to determine a plan for its survival. And typically, no one critically reviews or questions the field data, assumptions, techniques or accuracy of the information presented in these listing applications.

The result in California is that the ESA is being implemented as interpreted by biologists and attorneys at USFWS as directed by courts and settlement agreements. It has turned into the single most complex land use regulatory process in the state of California. More Section 10A (private lands) consultations are conducted annually in California than in all the other states combined by the largest USFWS staff dedicated to this effort in the country. Every consultation, Section 7 or 10, is individually negotiated as interpreted by staff at that time. No two agreements are identical. Although based on biologic intent, the process has affectively become one of the most costly, time consuming and complex real estate transaction processes in the state. All of this without the benefit of a single real estate professional on the part of USFWS.

To refocus on the listing process and the Bill at hand, I know of at least two incidences where emergency listing were initiated with the specific intend of affecting those negotiations in progress. In both cases peer review may have questioned the listing process and its supporting data.

1. Arroyo Southwestern Toad

On December 16, 1994 the USFWS determined the Arroyo Southwestern Road to be endangered. At the time, biologists at USFWS were consulting on a project in the Los Padres National Forest that could impact wetlands habitat associated with the toad. By listing the toad the occupied habitat would be subject to formal consultation and probable conservation. Discussions with biologists following the listing indicated that they believed the toad had been eliminated in most of its historic range and that listing the species would not impact projects much beyond the area in question. Their data indicated their distribution was extremely limited and their survival exceptionally compromised. This of course was not true. Based on subsequent studies, we now know that the toad occupies several river and stream habitats in Orange, San Diego and San Bernardino counties, its historic range. Several state and local projects are now consulting on impacts to this species.

I wonder if forced to discuss the listing package, its assumptions and potential ramification of the decision with a peer review group, the Service would have reacted with the same rush to adopt the listing package. A detailed discussion of the literature and study results appeared four years later as the species recovery plan began to circulate in draft form.

I believe the process of listing without immediate consideration of actual occupied habitat and a strategy for recovery, allows for emergency listing to act as a means of protecting potential habitat. Thus, it transfers the burden of proof of species occupancy to the property owner. A logical conservation strategy but based on time, cost and recovery potential, an unfair burden to the private property owner or public land use authority.

I wonder if objective critical review of the facts would support past listing rationale.

2. San Bernardino Kangaroo Rat

The San Bernardino kangaroo rat was emergency listed in January 1998. At the time, USFWS personnel had been in heated negotiations with a land user and property owner to complete consultation on potential impacts to plant species in the upper reaches of the Santa Ana River. As indicated in the listing package and notes of both the USFWS personnel and land users, both sides were extremely frustrated with the state of discussions. The land user's representative, operating under an approved land use permit indicated in a meeting that, if a resolution was not reached soon, several more months, he would proceed with the approved site clearing. Within one week, the rat was emergency listed. The principal rationale for listing, threats to take rats by a property owner.

This obviously changed the balance of the discussion throwing leverage back to the USFWS. The area was also the home of the largest Federal public works project at the time, the Seven Oaks Dam. Upon publication of the listing, construction at the Dam was halted because several acres of borrow area had yet to be cleared within San Bernardino kangaroo rat habitat. Within 24 hours from initiation, the local

USFWS office was able to prepare and approve a biologic opinion for the Dam on the impacts of continuing its construction on San Bernardino kangaroo rat (USFWS Biological Opinion for the Seven Oaks Dam, February 4, 1998). The Biological Opinion determined that the project would remove 70 acres of occupied habitat and issued a take permit. The land user blamed for the threat has negotiated to this day to receive permission to use the property originally in question.

The threatened property, approximately 300 acres, was suspected to be occupied on approximately 60 acres at the time. Since it was possible to remove 70 acres of occupied habitat without significant impact to the species, it would appear that the emergency was overstated or in-fact non-existent. I wonder if a scientific review panel would have supported this science based listing decision.

The ramifications of the San Bernardino kangaroo rat listing extend even further with the critical habitat currently being considered. It includes the runways, golf course and open space of the former Norton Air Force Base currently under redevelopment. This "historic range" was graded and developed in the 1940's. The open space is currently mowed seasonally to help maintain another sensitive plant species, the Santa Ana woolly star, which thrives there. It is hard to understand how the San Bernardino kangaroo rat will adapt to annual mowing. The scientific justification for including this area in the critical habitat for the San Bernardino kangaroo rat screams for objective review.

I believe that scientific peer review of listing packages should extend to critical habitat designation and recovery plan proposals. Ideally these would all proceed concurrently. In light of the Arizona Cattle Growers Association (ACGA vs. USFWS) decision, it would seem that scientific review of each aspect of the listing and protection would benefit from review both to quality and thoroughness of process and compliance with the intent of the Act. Emphasis should be placed on significance and actual injury to species. The more detail and clarification of congressional intent that can be inserted into the Act the more likely the USFWS will be able to meet that intent and avoid litigation. As I stated earlier—litigation is driving ESA in California and ESA is now the most costly, cumbersome and time consuming land use approval process in the state.

Another issue currently outside the consideration of these two bills but of needed consideration by the Committee, is the economic cost benefit of listing species. This is not to imply that the cost of implementation should out way protection, however it should be a consideration in weighing the viability of protection and recovery and would be useful in identifying funding needs and resources for habitat management. Let me give one example of which I am directly familiar.

The Delhi Sands Flower Loving Fly (DSFLF) was listed in September 1993. The fly lives in remnant sand dunes in and around Colton, California. It is clear that this fly is very rare. Only a few specimens reside in collections and it is rarely seen in the field. At the time of its listing, nothing was known of its larval habits below the sand including its lifespan or emergence sequence. A total population of 300 adults at emergence was estimated. Its historical range was approximately 24,000 acres of what was now urbanized southern California. The most populated habitat was in-fact within the property of an active cement plant.

Upon listing, it was discovered that a newly designed County hospital was being constructed within potentially occupied habitat. This resulted in a consultation with USFWS. The ramifications of this effort were documented in a paper I prepared in 1994 and revised in 1996 for Inland Action. I brought a copy of that paper with me today (Impacts of Mitigation for the Endangered Delhi Sands Flower Loving Fly on the San Bernardino County Medical Center, Inland Action, 1994; revised 1996).

In summary, that consultation resulted in the movement of the hospital footprint 250 feet north, a redesign of the facility and the set aside of 1.92 acres of fly habitat believed to be occupied by eight flies. The cost of this effort in 1994 was \$3,310,000 dollars or \$413,774 per fly, by 1996 the cost had risen to 3.5 million or \$441,000 per fly.

Since the listing, only two private sites within the habitat of the fly have completed consultation with the Service. What concerns me about the DSFLF listing is that if the habitat is looked at from a regional prospective, it becomes apparent that the conditions contributing to the historical habitat no longer occur. Aeolian sand sources upwind of the area are no longer available having been covered by development or mined. Much of the historic habitat has been altered by farming or development. The area is the most heavily urbanized portion of the San Bernardino Valley. Biologists for both the Service and the private sector will readily admit that the feasibility of successful protection of this species is very doubtful. To date consultation efforts and mitigation expenses for this species probably exceed 100 million dollars including halting a Federal enterprise zone funded by \$650 million dollars in HUD bonds.

I would like to think that scientific review by an objective, involved oversight committee would have asked hard questions regarding this listing, the impacts of its implementation and the feasibility of its implementation and the potential success of the effort.

The examples I have presented sound outrageous but should not be considered atypical. They are the norm and they are the reason why listing packages proposed under this Act need careful scrutiny before resources, both personnel and financial, are committed.

I support both of these bills as an initial effort to specify the congressional intent expected in the ESA. Critical oversight is long overdue. California is paying the price in untold millions of dollars for this lack of control. I also believe that if, after close scrutiny and critical review of every aspects of a species conditions and circumstances, it is determined to warrant endangered status, that it is then in the national interest to protect the species. Its protection and survival should then be budgeted for at the Federal level and a commitment guaranteed. The scientific review panel should determine if the data warrants a national commitment to a species protection.

Thank you for your time and consideration.

Mr. POMBO. Thank you.

Mr. Illyn? And I apologize if I mess up your name.

**STATEMENT OF PETER ILLYN, EXECUTIVE DIRECTOR,
RESTORING EDEN**

Mr. ILLYN. You have got it. It is million without an "M," Illyn.

I am here today to talk about the Biblical principles of environmental stewardship. I am the executive director of an organization called Restoring Eden. Our official name is Christians for Environmental Stewardship. I recognize that I am not a scientist, and I am not here to talk about the specific aspects of scientific analysis and peer review, but I am here to remind this Committee that there is moral implications to the extinction of species.

From a Christian perspective, these are very simple. I travel throughout the country. I live in Washington State, in the Gifford Pinchot, and I travel down to the Klamath Basin, and I spent 10 years as a minister in the Foursquare Church, which is a very conservative evangelical denomination.

I would like to say that I am humbled to be here today because I recognize the difficulty of this task, and I have talked with farmers in Klamath Basin, and I know what it is like to lie in bed at night and stare at the ceiling and realize that your world has radically changed, but I also read in Proverbs 31, Verse 8, the verse that says, "Speak out for those who cannot speak for themselves." Our group, Restoring Eden, works to make sure that the voice of all of God's creation, which is part of all of God's household, does have a voice.

There is a misnomer that says, "God created the Earth for us." God created the Earth for God's pleasure, and we are a part of it. Throughout creation, at every instance, God said it was good, and when God put humanity in the midst of creation, God called it very good. We are a part of the Earth, but we are not the point of the Earth.

I travel and speak all around the country, and I recognize that thousands upon thousands of Christians are recognizing that the viability, the protection of species is, first and foremost, a moral issue. I recognize you are faced with the difficult task of making

economic, and scientific, and cultural decisions, but for those of us extinction is not stewardship.

In Genesis we read, "God created the different species and called them good; God blessed the different species; God protected the different species," and you all know the covenant God made with Noah to protect the different species.

My favorite verse though, should I ever get a tattoo this will be it, it says, "The Earth is the Lord's and everything in it."

And, also, "In wisdom you made them all, the Earth is full of your creatures."

When I read that verse and recognize what it says, it says in wisdom you made them all. It says that somehow in the wisdom of God, which I don't even pretend to understand, he also made the flower loving fly, and he made the suckerfish, and he made the spotted owl, and God made all of creation according to God's purpose, and it is not my place to destroy what God called good. It is not my place to stand aside and let, for economic or even political reasons, allow the destruction of God's good creation.

God entrusted us to tend and keep the garden. We are allowed, and we are even expected, to eat from the fruitful bounty of the garden. But just because we have power, doesn't mean we have the right to trample and defile that same garden. There is no Christian justification to destroy the fruitfulness of the Earth or to blaspheme the wisdom of God that is expressed in biodiversity. Again, extinction isn't stewardship. We believe it is sin caused by our arrogance, our ignorance, and our greed, and I am part of a grass-roots movement that is growing throughout the country of people recognizing this fact.

I would like to close with two quotes, the first being the Patriarch Bartholomew of the Orthodox Church, who writes, "To commit a crime against the natural world is a sin. For humans to cause species to become extinct and to destroy the biological diversity of God's creation, these things are sins."

But since not many people here are Antiochian Orthodox, I would also like to read what Reverend Billy Graham wrote. He said, "It is not right for us to destroy the world that God has given to us. He has created everything; as the Bible says, 'The God who made the world and everything in it is the Lord of Heaven.'" To drive to extinction something he created is wrong. He has a purpose for everything. We Christians have a responsibility to take the lead in caring for the Earth. Again, I say extinction isn't stewardship.

I applaud the difficult decisions you have and the choices you have to make, but we do feel that, bottom line, as we travel around the country, the work is simple. God is a good God, God made a good Earth, and God calls us and entrusts us to be good stewards, and that is the moral message that we are taking out and the response that we are hearing in communities throughout the country.

[The prepared statement of Mr. Illyn follows:]

Statement of Peter Illyn, Executive Director, Restoring Eden

My name is Peter Illyn. I'm here today to testify about the biblical principles of environmental stewardship and how these relate to the protection of endangered species. I have read the bills that are being discussed here today. I realize that I am not a scientist and cannot accurately testify about the specific aspects

concerning scientific analysis. I am, however, a preacher. I would like to discuss the theology of creation care and how this is becoming a growing movement within the church.

I spent 10 years as a minister and a preacher in the Foursquare Church, a conservative evangelical denomination. I am now the Executive Director for a ministry called Restoring Eden. I live in SW Washington, and spent five years as a professional outfitter in the Gifford Pinchot National Forest. I also do some networking with churches in the Klamath Basin. I am well aware of the recent events in both places.

I am humbled to be here today as I recognize the difficulty of your task. The protection of endangered species is a very complex and interwoven problem. Most potential solutions have ecological, political and/or economic ramifications. But as I travel through-out the country speaking about the call to care for God's creation, I am amazed at what I see and what I hear. Thousands upon thousands of Christians have recognized that extinction of species is first and foremost a moral issue.

The Bible is clear on this subject. Humans have no right to wipe out that which God called "good."

In Genesis we read:

That God made the different species (and called them good.)

That God blessed the different species (and told them to fill the earth.)

That God protected the different species.

And that God made a covenant with the different species.

In Psalms we read two more biblical and theological truths.

"The earth is the Lord's and everything in it. (Psalm 24:1).

"In wisdom you made them all, the earth is full of your creatures."

(Psalm 104:24)

These scriptures reveal the heart and the will of God as it relates to the protection of biodiversity. In wisdom and in goodness, God created, blessed, protected and made a covenant with the all the different species. God called them to fruitfulness; to fill the earth. We are a part of creation, but we are not the point of creation.

God entrusted us to tend and keep the garden. We are allowed, even expected, to eat from the fruitful bounty of God's garden. But we have no right to trample the garden; to destroy the fruitfulness, to blaspheme the wisdom of God expressed in biodiversity.

Extinction isn't stewardship. It is sin caused by our arrogance, our ignorance and our greed. I'm part of a grassroots Christian movement that is taking place in churches and in college campuses through-out the country. We are Bible-believing Christians who recognized that we have a God-given responsibility; yea, a moral duty, to be stewards of the earth.

We are seeing the beginning of a new morality, one that will be used by future generations to judge the environmental decisions made by this committee and enacted by this Congress. We do not stand alone in this. Almost every major denomination in the country has a position condemning the human caused extinction of species.

Patriarch Bartholomew of the Orthodox Church writes, "To commit a crime against the natural world is a sin. For humans to cause species to become extinct and to destroy the biological diversity of God's creation," these things are sins."

And the Rev. Billy Graham is quoted as saying, "It is not right for us to destroy the world God has given us. He has created everything; as the Bible says, "The God who made the world and everything in it is the Lord of heaven" (Acts 17:24) To drive to extinction something He created is wrong. He has a purpose for everything. We Christians have a responsibility to take the lead in caring for the earth. The Lord said we are to look after his Garden," and he said "we are responsible for it."

In the past few years, our ministry, Restoring Eden, has developed relationships at over 40 Christian colleges. We have members in hundreds of churches through-out the country. Our call is simple. God is a good God. God made a good earth. And God calls us to be good stewards.

Thank you.

Mr. POMBO. Thank you.
Mr. Anderson?

**STATEMENT OF JAMES J. ANDERSON, Ph.D., RESEARCH
ASSOCIATE PROFESSOR, SCHOOL OF AQUATIC AND FISHERY
SCIENCES, UNIVERSITY OF WASHINGTON**

Mr. ANDERSON. Thank you, Mr. Chairman. It is an honor to be here talking about this very important issue, how to bring peer review to the Endangered Species Act.

I am a scientist, I grew up as a scientist, I think as a scientist, and I also realize and always thought that the best science, one of the components of best science was it was peer reviewed and reproducible. As I started to look at the Endangered Species Act, I realized that peer review was not really part of the process, and so peer review, external peer review, needs to be part of the Endangered Species Act. I think this has brought out some problems, and many of these have been brought up today.

I will list just a few: The delisting of the Oregon coho, just with the stroke of a pen; the pygmy owl, they set aside its critical habitat; the reevaluation of the Northwest salmon is going to go on. There is 19 critical habitats which are going to be reevaluated; and, of course, the Klamath National Academy of Sciences' review. All of these are reversals of decisions that were made by agencies.

I think the reason these happened is because the agencies felt they were protected by the Endangered Species Act from standing up to do science with peer review, and I think you are trying to address that with your bills. Now the agencies realize, of course, that peer review is important. Recently, there was a review of the habitat conservation plans. Twenty-five percent of them do have review boards. This is actually quite a low number. The study that evaluated these concluded quantitatively that those 25 percent were the best of the habitat conservation plans. The ones which had no peer review were the worst. So I think there is much evidence to show that the peer review is good, external peer review is very important.

Now I would just like to mention a couple of types of peer review because it is a complex issue how we get peer review in a standardized form.

Now, in the Klamath example, there was a single one-time review panel that came in, looked at the situation, made their comments, and then they moved out. In terms of the Columbia, which I am quite familiar with, Columbia River endangered salmon, there is a standing scientific review panel which then oversees 11 technical recovery teams. So these are standing panels, and they are working on a very complex situation to deal with a very complex issue, the recovery of many stocks in the Pacific Northwest.

What these point out to me is that a bill that, as you try to introduce peer review into the Endangered Species Act, it must be scalable. So, for a small issue, it can be done in a very efficient fashion with a small group, and for a large issue, like Columbia River salmon, there might be a need for some kind of standing group, as an example that I just mentioned. So scalable is one of the things that the panels need to consider in developing this peer review system that needs to be standardized.

As I looked into what peer review is, I found a number of references and quite a bit of literature on how peer review should be done. Secretary Manson was also mentioning that they are looking

into this, and there are a lot of studies, and I would encourage the Committee to bring this information together to put together a very good bill that will address the complex issues. So bringing together this information, and of course doing it in a timely fashion because there are many important issues that need to be addressed, and peer review needs to be part of making these decisions.

With that, I will conclude my testimony. Thank you.

[The prepared statement of Mr. Anderson follows:]

Statement of James J. Anderson, Research Associate Professor, School of Aquatic and Fishery Sciences, University of Washington

My name is James Anderson; I am a Research Associate Professor in the School of Aquatic and Fishery Sciences at the University of Washington. For over two decades I have conducted research on the influence of the Columbia/Snake River hydrosystem on salmon. I have also published articles on animal behavior and human decision processes. I have been involved in a number of review processes. Currently I am a member of the California Environmental Water Account (EWA) Review Panel. The EWA is a new water management tool designed to protect fish from harmful impacts of state and Federal water exports from the Sacramento–San Joaquin watershed.

I wish to thank the Resource Committee for this opportunity to testify on H.R. 2829 and H.R. 3705 which would amend the Endangered Species Act to give greater weight to science. My testimony focuses on the need for peer review of Endangered Species Act (ESA) decisions.

The Problem

As enacted in 1973, the ESA requires the Secretary to make determinations solely on the basis of the best scientific and commercial data available. Although this directive is clear and powerful it has one significant omission: its determination of the best science does not follow the procedures used by the scientific community. In the science community, work is judged by peer review. However, the ESA has no formal requirement for peer review. It is true that the agencies responsible for implementing the ESA spend considerable time reviewing petitions and soliciting public opinion; however, these activities simply do not provide the disciplined analysis of independent external peer review. Because critical ESA actions and decisions are not peer reviewed, agency scientists are inadvertently susceptible to acting as if their decisions are protected by the Endangered Species Act. Recent history has proven otherwise. In three cases the courts reviewed agency decisions and found them deficient. In another case, a National Academy of Sciences review criticized the agency decision as scientifically unfounded. These after-the-fact reviews were highly controversial; regardless of their final outcomes, which are not clear at this time, they will have significant impacts on both the environment and the economy. They are compelling examples of the need to strengthen the review process in the ESA.

- In September 2001, a U.S. District Court ruled to de-list Oregon coho, stating that the National Marine Fisheries Service (NMFS) had been “arbitrary” in distinguishing between “two genetically identical” salmon “in the same stream” (NMFS 2001a, Kaiser 2001).
- In September 2001, a U.S. District Court set aside the Fish and Wildlife Service designation of pygmy-owl critical habitat. The judge noted that the habitat designated included areas not surveyed for, but in which the agency scientists thought pygmy-owls could live (ESWR 2001).
- In February 2002, the National Academy of Sciences released a report criticizing the judgment of Federal fisheries biologists on the recommended water restriction to protect suckerfish in Upper Klamath Lake (Science Scope 2002).
- In March 2002, the National Marine Fisheries Service agreed to rescind critical habitat designations for 19 west coast salmon listed under the Endangered Species Act. The settlement was triggered in part by the National Association of Home Builders’ discovery of an inter-agency memo stating “when we [NMFS] make critical habitat designations we just designate everything as critical, without analysis of how much habitat an ESU needs” (NHBA 2002, NW Fishletter 2002a).

The ESA Current Review Processes

Currently, the ESA allows agencies to make decisions without independent peer review of the major steps including: 1) decisions on petitions to add and remove

species to endangered and threatened species lists, 2) decisions on jeopardy opinions, and 3) plans for recovery.

As the ESA is now implemented, public opinion is solicited on recovery planning, but not on the decision to list a species, or on jeopardy opinions. For example, in the case of the Columbia River salmon recovery plan, thirty-five parties, other than Action Agencies, commented on the NMFS Final 2000 FCRPS Biological Opinion (NMFS 2001b). Because the letters and supporting documentation represented thousands of pages, responses, typically a paragraph in length, were made to categories of comments.

Although there is no requirement to provide peer review in developing recovery plans agencies are beginning to do so. In a sampling of 43 US Fish and Wildlife Service (USFWS) Habitat Conservation Plans, 11 plans employed science advisory boards with half the members from within government and the remainder with industry, academic and environmental affiliations (Harding et al. 2001). The National Marine Fisheries Service set up a two-tier review structure in 2000. A six member Science Review Panel (NMFS 2000c) oversees the work of nine Technical Recovery Teams (NMFS 2001d) that set biological goals needed for salmon recovery in the Northwest and California. The Northwest Power Planning Council has implemented a similar process through its Independent Scientific Advisory Board and Independent Scientific Review Panel (NPPC 1997).

A Case for Additional Review

Review through solicitation of public comments (NMFS 2000) is important but is ineffective in providing substantive inputs to decisions. The importance of peer review was quantitatively illustrated in a study of 208 habitat conservation plans (Kareiva et al. 1998). In a detailed study on 43 of the plans, the 11 that included science advisory boards in the plan formation were of significantly higher quality than the plans without boards. In the lowest quality plans, biological experts were not consulted (Harding et al. 2001). From my own observations, the NMFS two-tier review process and the NPPC review process provide substantive reviews of the recovery process. However, all these review processes address actions after the species are listed. The decisions to list species and designate critical habitat are solely the responsibility of the overseeing agencies, which act without external guidance and review.

Although we can only speculate on how peer review would have altered the outcomes of the four cases noted previously, it is highly probable that through peer review the agencies would have been compelled to address the scientific weaknesses in their decisions, making them less vulnerable to challenge. Furthermore, stronger scientific foundations in agency decisions serve all parties. The ESA states that critical habitat designation will be based on the best science while also taking into consideration the economic and other relevant impacts. The recent court decisions have emphasized this important balancing of needs and impacts. Peer review will better illuminate the strengths and limitations of the science, which will facilitate a fair balance between parties with differing standpoints on the needs of the species and the needs of the economy. As the examples illustrate, non-reviewed ESA decisions can be one-sided and vulnerable to court challenges.

The Science of Peer Review

Peer review is an imperfect process that can be manipulated, or simply fail for procedural reasons. Fortunately, considerable research has gone into the peer review process and many of the pitfalls have been identified and can be avoided. However, peer review in regards to the important task of species recovery does appear to have its own challenges and the structure of peer review in the ESA should be carefully considered. Hundreds of articles have addressed the subject. In preparing this testimony, I relied on a comprehensive and extensively documented study by Kostoff (1997a, b) that addressed peer review issues, Federal agency peer review practices, and recommended peer review processes plus a thoughtful discussion of peer review issues by Ford (2000). From these works, a number of salient points on ESA peer review emerge.

- The Review Process: For an efficient peer review of ESA actions the process must be understood, developed, and standardized.
- The Agency: Success requires senior management's commitment to high-quality reviews. Rewards and incentives are required to encourage such reviews.
- The Review Manager: Functionally, a review process has a manager that guides the questions and discussion in the review. The manager generally selects the participants, and if the manager does not follow the highest standards in selecting the reviewers, the review's outcome may be substantially influenced before the review process begins.

- The Reviewers: The selected reviewers should be competent in the required sub-disciplines and, together the group, should cover the topic. The group should also include generalists that can address the overall issues and larger questions. Reviewers come to a process with a standpoint that influences their approach. For example, a conservation biologist and an agriculture economist are likely to have different perspectives in reviewing critical habitat designations.

Specifics as Related to H.R. 2829 and H.R. 3705

The intent of H.R. 2829 and 3705 is to strengthen the use of science in actions pertaining to the listing, jeopardy opinions, recovery actions and the delisting of endangered and threatened species as determined under the Endangered Species Act (ESA). Both H.R. 2829 and 3705 would introduce independent peer review into the procedural steps of the ESA. H.R. 2829 would implement review boards on: 1) the species listing process, 2) the species de-listing process, 3) determinations of jeopardy, and 4) development of recovery plans. H.R. 3705 would implement review boards on: 1) reviewing scientific information in listing petitions, 2) decisions to add and 3) remove a species from a list, and 4) decisions on jeopardy.

It is my belief that enactment of either bill would improve the implementation of the ESA. I believe it is critical that the review process involve listing, de-listing, recovery actions and jeopardy opinions. However, I believe an improved bill would draw further from studies of the peer review process and meld with existing review processes.

Issues arise about how to incorporate existing review processes into an amended ESA. In the case of the West Coast Salmon, the existing peer review process addresses questions related to recovery and jeopardy. However, the process is not standardized and its responsibilities are not fully articulated. For example, is the Science Review Panel allowed to review NMFS harvest policies (NW Fishletter 2002b), will it review the new habitat designations promised by NMFS, or the new rules needed to disentangle Oregon's wild and hatchery coho? The National Academy of Sciences review of the Klamath water policy was akin to the review structure outlined in H.R. 2829. The peer review processes for the Klamath and the Columbia basins are different, the Klamath involving a one-time National Academy of Sciences review, the Columbia involving an ongoing process closely connected with the agency. Which structure best fits into the ESA? What can be learned from each, and how can ongoing review processes be incorporated into a bill? Scientific studies on peer review indicate that these issues need to be understood and a formal process developed and standardized.

Peer review processes, if not carefully constructed, may be either too small or too large. A brief three day panel may be sufficient to review research proposals, but is insufficient to review a complex program. On the other hand, a multi-year review by a large working group such as was conducted on the Columbia River by PATH (Marmorek 2000), can become unmanageable through its complexity and advocacy (Anderson 2000, Marmorek et al 2002). An alternative peer review process, the Science Court, mimics a legal procedure, with advocates, critics, and a jury. It is a unique and potentially powerful technique, but like any tool, can be misused if not understood and applied properly (Kostoff 1997). Kostoff noted that the Science Court probably had more debate and surfacing of crucial issues than any other concept he evaluated; however, it was time-consuming compared to a standard panel assessment.

Before peer review is incorporated into the ESA questions such as the size of panels, their tenure, the process of selection, and the extent of their responsibilities need to be resolved. Congress should not delay in this effort because the nation faces many important decisions on endangered species and these decisions will be better made with sound science founded in critical independent peer reviews.

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Mr. POMBO. Thank you.
Mr. Dobson?

STATEMENT OF ANDREW DOBSON, Ph.D., ASSOCIATE PROFESSOR, DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY, PRINCETON UNIVERSITY

Mr. DOBSON. Thank you. I would like to thank you for this opportunity to present this testimony. As a scientist, a professor at Princeton University, I have a range of serious concerns about the legislation before us today.

One concern is the bill would limit scientists' ability to use some of the most important mathematical tools, as well as data. It allows us to examine endangered species. A second concern is that the bills distort and misunderstand the nature of the peer review process. The third concern is that these bills, particularly the excessive use of peer review, would create time delays in the legislative process that will not only increase the risk of extinctions, but also frustrate landowners and lawmakers.

In the 1990's, the Ecological Society of America drafted a white paper that addressed science and the Endangered Species Act. The National Academy did the same thing. Both of those reports say

the act, as it stands, is a powerful and sensible way to protect biological diversity.

I am submitting a copy of the Ecological Society paper to the written record. I also have with me a letter signed by many eminent conservation biologists criticizing the act, and I would also like that to be submitted to the written record.

[The information submitted by Mr. Dobson follows:]

"The [Endangered Species] Act is a powerful and sensible way to protect biological diversity." Ecological Society of America (1996).

"[T]here has been a good match between science and the ESA." National Academy of Sciences National Research Council (1995).

Dear Members of Congress:

As scientists concerned about loss of biological diversity, we are writing in support of a strong Endangered Species Act ("ESA") that will lead to recovery of threatened and endangered species. We commend policy makers for caring about scientific matters important to ESA decisions. However, current debate over science and the Endangered Species Act should not lead to changes that could weaken the Act's provisions to stem the loss of biological resources.

Issues raised in recent ESA debate – scientific uncertainty and how to make the best endangered species decisions in light of this uncertainty – are not new to us. As individual members of the scientific community, we would like to share a portion of our thinking about making ESA decisions in a world where knowledge typically is not complete, and never will be.

In addition, we are concerned about current proposals to change the Endangered Species Act (such as H.R. 2829, S. 1912, H.R. 3705, and similar legislation) that could seriously impact the way "best available science" is defined and considered. We would like to share some of our thoughts about principles that need to guide reflection on science and the Endangered Species Act.

Additional Delays and Bureaucracy. There are many species hovering on the brink of extinction and they need scientifically based action to help in their recovery. Any changes in the Endangered Species Act are troubling if they slow crucial decisions, such as those pertaining to listings, consultations concerning federal actions that may harm listed species and their potential for recovery, or the development and implementation of recovery plans. We cannot afford to bog down this process or to overburden an agency that already does not have sufficient resources. As the Ecological Society of America noted in a major 1996 report, "delaying the decision to provide protection and recovery will bring most . . . vulnerable species even closer to the brink of extinction, restrict the options available for achieving recovery, and increase the eventual cost of the recovery process."¹

Peer review. Any discussion about peer review ought to recognize that FWS and NMFS regulations already provide for independent peer review, for "listing and recovery activities" and in cases of "special circumstances."² In addition, the ESA currently requires public comment periods for major actions, and such comment periods offer opportunities for scientists, as well as others, to give input and express concerns: "The current public review process involves the active solicitation of comments on proposed listing rules and draft recovery plans by the scientific community [and others]."³

Scientific Standards and Methodology Defined by the Scientific Community. It is important to maintain current requirements in the ESA for making listing decisions based "solely on the basis of the best scientific and commercial data available" and not to make changes to the Act that would weaken this key ESA principle. To fulfill the requirement for basing listing and other ESA decisions on the "best scientific and commercial data available," such data should be identified and analyzed by scientists free from political pressure and with adequate resources. Moreover, the ESA should not place statutory limits on the use of scientific methodology (such as population viability analysis) for the collection and analysis of scientific data relevant to ESA decisions.

Sarah Reichard, Ph.D.
Assistant Professor
University of Washington, WA

Alan H. Savitzky, Ph.D.
Associate Professor of Biological Sciences
Old Dominion University, VA

John Terborgh, Ph.D.
James B. Duke Professor
Duke University, NC

David Wilcove, Ph.D.
Professor of Ecology, Evol. Biology and Public Affairs
Princeton University, NJ

* Signatures as of March 20, 2002.

¹ Carroll, R., et al. 1996. Strengthening the Use of Science in Achieving the Goals of the Endangered Species Act: An Assessment by the Ecological Society of America, Ecological Applications 6(1): 1-11, and available via <http://www.esa.org/whitepapers.htm>. Founded in 1915, the Ecological Society of America is "the nation's leading professional society of ecologists representing 7,500 ecological researchers" (<http://www.esa.org>).

² Notice of Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities, 59 Fed. Reg. 34270 (1994).

³ *Id.*

⁴ National Research Council, National Academy of Sciences, Science and the Endangered Species Act (1995).

⁵ *Id.* at 1.

Mr. DOBSON. Being here today means that I have stopped working for 4 days on a mathematical model that predicts the spread of an infectious disease that could either be introduced accidentally into a population of endangered species or inadvertently into the human population by bioterrorists. There is a direct analogy between the type of mathematical models I build for that process, and the ones we use to see whether species go extinct.

There is an important example of this type of modeling, direct analogy to the type of things we do with the Endangered Species Act. Consider the outbreak of foot-and-mouth in Britain last year. Within 2 weeks of that epidemic starting, the Government was entirely dependent on a group of ecologists to predict the outcome of that epidemic. Ultimately, determining when the Prime Minister called the election was determined by a group of scientists who predicted when the epidemic would end.

If the same thing happened here, you would have to come to a bunch of ecologists to tell you what would happen if you had another epidemic, the same group of people who look at endangered species. If we were to follow the same procedures, as I laid out in these bills, rather than develop mathematical models and use those to predict what would happen, these bills suggest we should just watch people dying and collect that data.

Now some of the proponents of the bills might want to stand by their principles, but I get the feeling that their staff, as in the Postal workers, would find that a bit of a hard nut to swallow.

If we look at the Endangered Species Act, it is fundamentally sound. It is one of the few pieces of legislation that require many important decisions to be based solely on science. Unfortunately, from a scientific point of view, the proposed bills don't seem to have any understanding of how science works. To talk of data as being peer reviewed, seems to simply illustrate a lack of comprehension between the product, which is data and the process of producing it, which of course has to be peer reviewed.

The main problem with all of this peer review is that it slows down the rate at which species get listed and, as I said, upsets policymakers. It makes them, not only policymakers, it upsets landowners, the people whom these decisions most affect.

There also seems to be an underlying assumption that a National Academy of Sciences committee could be assembled at any time to sit in judgment on any vaguely contentious case. Although such a committee could come up with a suitably august judgment, what seems to be happening here and what this bill effectively says is it is the equivalent of going to the police and saying we are going to take away your speed detectors, and we are going to let you guess the speed of vehicles, and if you are wrong, the person that you have said was speeding has to go to the Supreme Court to debate over speeding tickets. That is the equivalent calling in the National Academy.

The main problem with the Endangered Species Act is it is massively underfunded. Both of the costs that were quoted early on exceed the annual cost that the Department of Interior has to pay for the Endangered Species Act, which is around \$125 million.

Let me make a pertinent comparison here. The current levels of funding for the Endangered Species Act are equivalent to less than

6 hours of the annual Pentagon budget. Indeed, the Pentagon will spend more time during the course of this hearing than is actually spent on the Endangered Species Act. I don't, and I am a father, as well as a scientist, I don't consider that national security is that large an issue for the future well-being of my children as having a healthy environment to live in.

To conclude, what I would like to say is that I think the proposed bills are sheep in sheep's clothing. They will make the Endangered Species Act more woolly and slow-witted. What is really needed is a bill that reflects one of the ESA's major successes, the reintroduction of wolves into Yellowstone. Such a bill would have the teeth of cutting-edge science and the focused ability to allow landowners to benefit from the presence of endangered species on their land, just as the Yellowstone Park and surrounding economy have benefited from the reintroduction of wolves.

Thank you for the opportunity to talk to you today. I am available at any time. I am busy with infectious diseases, but I am happy to address written questions.

[The prepared statement of Mr. Dobson follows:]

**Statement of Andrew Dobson, Professor of Ecology and Epidemiology,
Princeton University**

Thank you for the opportunity to present this testimony. As a scientist, I have a range of serious concerns about the legislation before us today. One concern is that the bills would limit scientists' ability to use some of the most important mathematical tools used widely in the scientific community today and could limit tools of the future. A second concern is that the bills distort and misunderstand the nature of the peer review process.

In the mid-1990s the Ecological Society of America drafted a white paper that addresses science and the Endangered Species Act. Similarly, the National Academy of Sciences National Research Council published a detailed final report entitled "Science and the ESA." Both these studies, by two of the largest and most eminent associations of scientists in this country, reached the same basic conclusion: "The Act is a powerful and sensible way to protect biological diversity" (Ecological Society of America); and "There has been a good match between science and the ESA." (National Research Council). I am one of the authors of the Ecological Society of America report, which I am submitting for the record. In addition, I have here, which I'm also submitting for the record, a letter signed by a number of leading scientists that raises concerns that the bills before you could seriously impact the way best available science is defined and considered. Also submitted is a paper from Science on the geographic distribution of endangered species in the United States, which illustrates that a relatively small area of land is needed to conserve endangered species. I greatly appreciate the opportunity to share a few additional thoughts with you today.

1) There are distinct similarities between conserving endangered species and preventing disease outbreaks:

A) Preventing an endangered species from going extinct and controlling the spread of pathogens and infectious diseases present similar challenges.

Both exercises seek to make the world a healthier place—both require a mix of mathematics, statistics, and the collection and analysis of data from the laboratory and field.

B) As an important example of this consider last year's outbreak of foot and mouth disease in the United Kingdom. Within two weeks of the outbreak starting the government was entirely dependent upon a group of mathematical ecologists and the models they developed to predict the effectiveness of a control strategy for the epidemic. Their predictions for when the epidemic would die out ultimately determined when the government could hold the National election. If there were a similar disease outbreak in the US—of livestock or humans—you would need the aid of similar models and expertise. It's the same mathematical problem as preventing species go extinct.

- C) Many of the people involved with the conservation of biological diversity are the same people involved with controlling infectious diseases of humans and domestic livestock. All of the people at the cutting edge of those disciplines use a mixture of mathematical models, long-term data, and experiments to understand the natural world.
- 2) The Endangered Species Act and the proposed changes to the peer review process
- A) The Endangered Species Act is fundamentally sound. It's one of the few pieces of legislation that require many important decisions to be based solely on science. As the Ecological Society white paper points out: "Biologists in the agencies responsible for implementing the Endangered Species Act generally try to use the best scientific information and methods available. Failure to use the best available information and methods is generally due to inadequate budgets and overworked staff." Ecological Society of America 9.
- B) From a Scientific point of view the proposed Bills don't seem to have any understanding of how science works. To talk of data as being "peer-reviewed" simply illustrates a lack of comprehension between the product (data) and the process of producing it and reasoning from it (which may need to be peer-reviewed).
- C) A key point here is that both of these bills propose peer review for jeopardy opinions, but not for non-jeopardy opinions. This creates an egregious asymmetry in the way that species would be dealt with. In particular it will slow the listing process for species for which simple and effective protection may be developed, while focusing agency attention on a tiny minority of species. As the Ecological Society pointed out in their white-paper: "For species deserving protection, delaying the decision to provide protection and recovery will bring most of these vulnerable species even closer to the brink of extinction, restrict the options available for achieving recovery, and increase the eventual cost of the recovery process."
- D) There also seems to be an underlying assumption that an NAS committee could be assembled at any time to sit in judgement on any vaguely contentious case. While such a committee may eventually come to a suitably august judgement, in most cases the local agency people will know much more about the species in question. However, the last thing that scientists (and agency people) need is to be bogged down in an endless peer-review process. There is no career incentive for scientists to take part in such reviews. Equally there is no incentive for the NAS/NRC to endlessly spend their time reviewing each transgression of the ESA. The proposed Bill effectively suggests the equivalent of removing speed detectors from the police, allowing them to guess the speed of vehicles, and then suggesting that traffic offenders appeal to the Supreme court over speeding tickets.
- 3) Funding for the Endangered Species Act
- A) The main problem with the ESA is it is massively under-funded. The annual funding for implementation of the ESA in the Department of Interior is around \$125 million. This year the Administration has requested just \$9 million for listing and critical habitat designations. Last year the FWS estimated that it needs \$120 million to process the current backlog of needed listings and critical habitat designations. According to the FWS there are more than 250 species waiting for protection under the ESA. The longer we leave them unlisted, the harder and more expensive it will be to effectively protect them once listed.
- B) Let me make a pertinent comparison here: the current levels of funding for Endangered Species are equivalent to less than six hours of the annual Pentagon budget and less than half their Advertising budget. Yet conservation of biological diversity is an equally important National and International Security issue. As a scientist and epidemiologist, I would argue that the health and security of my children is as dependent upon a healthy and intact environment, as it is upon military preparedness.
- C) As an example consider that more than half the people in this room will probably die from a natural resource exhausted in our lifetimes—antibiotics capable of effectively controlling harmful bacteria. Antibiotic resistance is a direct example of misuse of natural resources (and a wonderful example of evolution in action). This proposed bill will allow similar misuses of natural resources that will ultimately reduce the quality of life for most Americans. Again its ironic that we see biological weap-

ons as a threat to National Security, while discussing bills that have all the potential to create biological disasters that may have a huge impact on human health.

- 4) The importance of conserving biological diversity
 - A) Biological diversity is the world's ultimate resource—it supplies humans with food, medicine, and ecosystem services. The global economy and whence global security are wholly dependent upon a healthy and intact environment.
 - B) Biological diversity is produced by the world's most powerful force—evolution by natural selection. This creates the ultimate irony. The Endangered Species Act isn't designed solely to protect biological diversity. Its long-term goal is to protect us from the folly and short-term greed of our own actions. Nature can ultimately and relatively effortlessly recover from some of the effect of human activity, although the loss of any species is irreversible. The more pertinent question is can humans coexist with nature in a way that will maintain a healthy and secure world for our children?
 - C) The proposed Bills change the definition of best available science by removing some of the principal scientific tools such as mathematical modeling and population viability analysis and replacing them with “expert opinions” that may be easily distorted by significant conflicts of interest. This again illustrates a deep lack of understanding of the scientific process. Science is only viable when it uses the most up-to-date variety of tools to develop insights into the underlying process. Each member of the committee should ask themselves “If you were ill, would you trust a physician who restricted himself to the use of nineteenth century technology and diagnostic techniques?”
 - D) The Bills we have discussed today cannot easily be tinkered with and fixed “they will suffocate the Fish and Wildlife Service under a flood of pointless additional bureaucracy. This is most clearly illustrated by its emphasis upon inappropriate peer-review and the removal of the use of mathematical analysis from the Listing Process. This is the direct equivalent of saying: “We have lots of ‘soon to be unemployed friends’ at Arthur Anderson, let's get them to run the economy and let's also do away with the models developed by Alan Greenspan and his colleagues at the Federal Reserve”. Instead members of the committee should realize there are deep similarities between the mathematical models that economists use and those used by ecologists. In essence, economics is just the ecology of money and jobs. As the global economy is a wholly owned subsidiary of the natural economy, the future health and wealth of the planet depends upon a dialogue between economists and ecologists. The common language of this dialogue is mathematics. As it is in all the sciences.
 - E) I personally find it unfortunate that these bills are under discussion. Today's debate is occurring at a time when we should be strengthening the science and funding for the Endangered Species Act. Indeed, if the US is genuinely concerned with long term, global security, we should actually be debating the ratification and signing of the Convention on Biological Diversity. The continuing failure of the US Congress to endorse and strengthen these fundamental pieces of environmental legislation increasingly reflects a chronic long-term misunderstanding of the major underlying processes that determine human health, wealth, and global security.

[NOTE: The Ecological Society of America report entitled “Strengthening the Use of Science in Achieving the Goals of the Endangered Species Act” has been retained in the Committee's official files. It is also available at <http://www.esa.org/pao/esarpt.htm>. The Science Magazine article entitled “Science and the Protection of Endangered Species” by H. Ronald Pulliam and Bruce Babbitt has also been retained in the Committee's official files. It is available at <http://www.sciencemag.org/cgi/content/full/275/5299/499>.

Mr. POMBO. Well, I thank you. I thank the entire panel for your testimony.

Mr. Dobson, your testimony somewhat intrigues me. I had the opportunity to read your testimony last night, your prepared testimony, and there are a number of things that I think that you may be a very brilliant man who may understand science more than I ever will, and I will give you that, but I don't think you have a clue how the Endangered Species Act works in the real world and what the impact is.

In 1995, they listed the fairy shrimp in my district. It was based upon one of your mathematical models. They took a right-of-way that they surveyed. They determined that a certain amount of habitat was being lost within that area, and based upon that information that they had, it was listed as an endangered species. Subsequent to that, they found out that they do not just live in that one area, but they live throughout California. I contend that if they had had a peer-review process in place, if they actually had field data, that they would never have listed that particular species. And, in fact, one of the people that was hired by Fish and Wildlife Service to peer review their work, at the time that we had a hearing, said that he had never seen all of the information that was presented at that hearing and would support delisting the fairy shrimp based upon that. Those are the kind of things that we are trying to get at.

Now, as far as the peer-review process, I have yet, in the 10 years that I have been doing this, met two scientists who agreed what peer review was, and you know that as well as I do. It is in the eye of the beholder, it is in the eye of whichever scientist is having his work peer reviewed, they come up with different opinions.

Now, Mr. Anderson, in your testimony you talked about the different ways to peer review work. I have read some of those reports that you talk about and am committed to finding the best way to peer review the information that Fish and Wildlife and NMFS bases their decisions on. It may not be the way that I do it in my bill. The way that we came to was, in consultation with the minority and kicking back and forth different ideas of ways to do this, this was the way that we came up with that everybody seemed to have the least problem with.

There were a number of other ways that we looked at that we could do this. It was the best way that we felt would fit within the job that we assigned to Fish and Wildlife Service and to National Marine Fisheries. It may not be the best way, and if you have other ways of doing that, if you think that there is a better way of doing that, I am willing to listen to that. I am willing to take those ideas. I am willing to take that to Fish and Wildlife and ask them will this work, is this a better way of doing it?

All we are trying to do is find a way to have the decisions that are made by Fish and Wildlife Service and by NMFS, to have those decisions based upon as accurate a science as we can possibly come up with at the time that those decisions are made. Most of us sitting up here don't feel that that is happening. A lot of my constituents don't feel like that is happening under the way that we are doing it right now. We are trying to find a better way of doing it.

If the decisions on the fairy shrimp, if they had done a full-blown scientific biological survey, and they had done the field surveys, and they came back with the decision that it was in danger, we could live with that. But the question that was pulled in was that the science was faulty. From the very beginning, before it was ever listed, they were told the science was faulty. And as a direct result of that, it has cost people in my district millions of dollars in order to meet the implementation, the cost of the implementation of the Endangered Species Act on what I believe was a faulty listing from the very beginning.

We are just trying to figure out the best way to do this. I don't sit up here in front of you and claim to be a scientist, and I don't sit up here in front of you and tell you that I have got all of the ideas. All I can tell you is that I have chaired over 30 hearings on the Endangered Species Act, I have listened to dozens of scientists, to hundreds of witnesses, and we are trying to come up with the best way to answer these questions.

So, having said that, Mr. Walden?

Mr. WALDEN. Thank you very much, Mr. Chairman. I appreciate your comments.

I just want to make one comment. I believe, Dr. Dobson, your analysis on hoof-and-mouth disease or foot-and-mouth disease, I understand why you do mathematical models and run it out and see it, but actually there would be data collected in the field, wouldn't there, ahead of that? Because, obviously, there was an outbreak, and cattle were dying, right?

Mr. DOBSON. Exactly.

Mr. WALDEN. So you looked at the rate that they were dying at, correct?

Mr. DOBSON. No, you look at the rate at which the disease is spreading the population.

Mr. WALDEN. Oh, so you do measure the population?

Mr. DOBSON. That is exactly the analysis process. You are trying to extrapolate into the future, which is what we are trying to do with the Endangered Species Act—how will manipulations that we make to the environment affect whether that population increases or decreases.

Mr. WALDEN. But there is field data collected.

Mr. DOBSON. Yes, it is a happy dialog between data and models.

Mr. WALDEN. Right. I don't object to any of that. My point is but how do you design your model if you never had field data? If there had never been an outbreak—

Mr. DOBSON. You do both at the same time. You use the model to design how you collect and interpret the data.

Mr. WALDEN. But if there is never—

Mr. DOBSON. In the limited budget, it tells you how to increase the efficiency of the data collection.

Mr. WALDEN. Right. But my point is data gathered on the ground provides the foundation for you to model, right?

Mr. DOBSON. No, it is a two-stage process. You do both.

Mr. WALDEN. Right.

Mr. DOBSON. You could write a model without any data, based on your biological understanding of the system, a simple model, which would then allow you to collect data—

Mr. WALDEN. Where would you get the biological understanding of the system if there had never been an outbreak of the disease?

Mr. DOBSON. Well, all diseases work in roughly the same way. You have a healthy population, you add a disease, people get sick. That is a simple thing you can write down as a—

Mr. WALDEN. So every disease is equal in the way it spreads?

Mr. DOBSON. Well, no. The thing you want to do is collect the data that allows you to quantify the rate it spreads, depending on—

Mr. WALDEN. Thank you. That is my point. That is all I am saying here is if you collected actual data in the field, shouldn't that have a higher value? Isn't that an incredibly important part of any modeling that would occur thereafter? Can you have a model without any data collection from the field?

Mr. DOBSON. Our entire understanding of the structure of the universe is based on models, as much as it is on data collected from the field.

Mr. WALDEN. As much as it is data collected from the field.

Mr. DOBSON. Well, actually, our understanding of the structure of the universe is more based on mathematical models than it is on data collected from the field.

Mr. WALDEN. But there had to be data collected from the field, right? Some measurements made, correct? How fast things are expanding and—

Mr. DOBSON. Yes, but you wouldn't have known to go and measure those things without the models.

Mr. WALDEN. I understand. But my point is we have had some decisions made where they basically run models and give higher value to the models than actual data that has been collected. It seems to me that if we have—don't you operate where there are standards for how data is collected?

Mr. DOBSON. Absolutely.

Mr. WALDEN. We ask for that in my bill, too, that the Secretary would set standards for how the scientific data is collected. Is that a bad thing?

Mr. DOBSON. The models help you set those standards. They tell you the sample sizes you need to see whether you are actually measuring the right birth rates and mortality rates that you need.

Mr. WALDEN. Right. I don't have any problem with modeling, but I think you have to have standards, and you have to have a basis for those standards, and how you collect the data and include the data that is out there.

Mr. Gordon, where do you see this peer review effort? I mean, how critical is this to the decisions?

Mr. GORDON. I think it could be a valuable addition. I think that there is a track record of making mistakes and finding that out later. Now you have got to recognize that the Endangered Species Act incorporates kind of the assessment that you want to shoot first and ask questions later, and that is particularly true in the case of the emergency listing, as opposed to the regular listing process.

But I think the standards have been weak enough, right now the law is the best available data. Some people use the acronym "BAD," because best doesn't mean it has to be good or reliable or

even sufficient to reach a scientific conclusion. As a consequence, you have a lot of things that get listed that may not merit protection.

Now I have heard a lot of people argue that, well, if you subjected that decisionmaking process to peer review, it would increase the amount of time that it takes to list a species, and therefore further imperil them and cost money. But you have to put that in the context of how the act works overall, and would requiring higher standards that cause species that shouldn't be listed not to get listed and thereby funds not to be expended on them be available for other species that truly merit endangered species status, would that be worth more? I think when you have provisions like emergency listing, it may well be.

I think that right now the standards are subjective enough that they allow a lot of political consideration. For example, in the case of something called the Indian flapshell turtle, this was added to the list based on the grounds that it had simply been added to Appendix 1 of CITES, which is the international version of the Endangered Species Act. Based on that, it was, de facto, added to the endangered species list. After that, a data search was done to see if that listing was merited, and the Fish and Wildlife Service found that, in fact, it was seemingly the most abundant aquatic turtle species in all of India. Then it was delisted. Well, you know, it is just a paperwork exercise, but listings and delistings cost tens of thousands of dollars each time, and in that sense, you see here was some money that was wasted on something that didn't merit it because there were very loose standards.

On the flip side, I will say my organization filed a listing petition for a crustacean that occurs in Virginia. It had not been seen since 1947, and it has only been seen once since 1947. And when we petitioned the Fish and Wildlife Service to list it, it came to the conclusion that since it has been seen once since 1947, it indicates that it is rare, but it is not in imminent danger of extinction. Now I think that is on the other side of the list. Here is where a peer review would merit a species being listed, despite the Agency's decision. So I think it could affect things in both directions.

Mr. WALDEN. Thank you.

Mr. POMBO. With the Committee's indulgence, Mr. Gordon, hearing you say that, we had testimony that there could be 800,000 fairy shrimp in one mud puddle, and yet it is endangered, and seeing it once since 1947 means it is rare, but not endangered?

Mr. GORDON. It wasn't in imminent danger of extinction. I think the exact words were since it has been seen since 1947, it still persists, and therefore is not in imminent danger of extinction.

I don't know, I mean, it seems to establish a new standard that, in fact, you have to be extinct to merit listing, but it was quite shocking, I thought.

Mr. POMBO. I hadn't heard of that one.

Mr. GORDON. But I don't think that decision would pass peer review.

Mr. POMBO. Do you have a copy of that that you could submit for the record, please?

Mr. GORDON. Yes, I do.

[NOTE: The information submitted by Mr. Gordon, Inland Action Inc.'s "Impacts of Mitigation," has been retained in the Committee's official files.]

Mr. POMBO. Thank you.

Mr. Otter?

Mr. OTTER. Thank you, Mr. Chairman. I thank the panel for being here.

My earlier statement to the first panel notwithstanding, I do appreciate some of the good things that have happened as a result of the Endangered Species Act because they have been instrumental in making some other decisions for us, which I think are important to encourage proper handling, if you will, of nature.

One of the characters that I find about the Endangered Species Act is all of the unknowns, and if most of my 650,000 constituents that have lived day-to-day and been adversely affected in some cases and in some cases helped by the Endangered Species Act had listened to certain members of the panel, they would be even more confused than they would have been about the importance of the Endangered Species Act.

One of the things that I think most sincere Members of Congress try to do is to make things a little more understandable. I find many times when I go home, and I have voted on a bill or I have voted on an issue or took a position on an issue, a lot of folks, although they may get a report about that in the paper, don't understand the why or the where, and so I have to go into a much deeper explanation, and in many cases cite some analogy that they would be familiar with in Idaho. I think that that ought to be part of the process that we hope to achieve here. I think, in some cases, this bill does just that, and it makes it more understandable.

One of the great, natural things about our Government is that it is mostly a voluntary Government, with some encouragement. You know, people pay their taxes because they want to make a contribution, but they also know what happens if they don't make that contribution. But for the most part, people obey the law, and they want to obey that law, but first they have to understand it.

One of the other things that I have found about the Endangered Species Act and many of the other acts that have come into existence back here is that, for those people that have not been directly and adversely affected by it, it is great, but for those people that have been adversely by it, and they don't understand it, then it becomes something which they learn to hate, and they learn to have disagreement with.

And so I have hopes that if this bill doesn't do that, I hope that with all of the legitimate minds and legitimate concerns that we have coming before this Committee, that we will come up with something which is a simple explanation to all of the folks that are adversely affected by it of the good that it intends to do in its implementation and, to the absolute best of our ability, the science that we are going to use to make these decisions which can affect their lives is the best possible science that is available to us, and that it is not falsified, and it is not somebody's whim. And whether it is a mathematical formula or if it is some other formula that somehow we simplify that to the point that people understand not only the methods that are used in order to measure the potential

extermination of a species or a plant, but also the good that needs to be done as a result of keeping that in existence.

Because right now, you know, I am reminded so many times, and I was the lieutenant Governor of Idaho for 14 years, and when we had a Federal agency come into the State of Idaho and say, "We are from the Federal Government and we are here to help, you can imagine, you know, what are they going to do to us now?"

I would be in hopes that we could evolve the Endangered Species Act and the agencies that have to deal with that to the same degree that OSHA was. I remember when OSHA started, there was probably not a more hated agency than the Department of Labor and the Occupational Safety and Health Act. But once they discovered that in order to achieve the mission that the Occupational Safety and Health Act hoped to attain, that they had to get the voluntary help of all of those people that could help them, and then they found great partnerships.

One time in Idaho, for about the first 10 or 12 years, I guess, if an OSHA inspector walked into a plant, you know, everybody was scared to death, and everybody avoided making reports on accidents, and making reports on dangerous things that went on in plants because they didn't want that investigation. They didn't want that oversight because they knew that that oversight could mean the loss of the job, the loss of the plant, the loss of a way of life. And now, as I said, today, OSHA is a partner. You can drive almost anywhere where there are construction jobs going on, and you will see that the construction company is in partnership with OSHA for safety and health, and that is because they finally evolved into an agency, which we had hoped that they would, that they are there to help people be safe, and to protect lives, and to protect folks from being named.

I would just hope that if Mr. Walden's bill doesn't do that, and if that is not how we are going to achieve it, and if this isn't one of the evolutionary steps, I hope you will find us an evolutionary step which the Endangered Species Act can become user friendly because that is what we need.

Thank you, Mr. Chairman. I yield back the balance of my time.

Mr. POMBO. Mr. Radanovich?

Mr. RADANOVICH. Thank you, Mr. Chairman.

Mr. Gordon, maybe you can help me here. It seemed at one time, maybe it was the Supreme Court decision at the time of the Tennessee Valley Authority, TVA, that when the Supreme Court was faced with the issue of interpreting the Endangered Species Act, ruled that when a habitat of an endangered species is discovered that all work must stop and no matter the cost or the disruption.

Mr. GORDON. You are referring to TVA v. Hill, I think. It is one of the more famous Supreme Court rulings on the Endangered Species Act in regard of the construction of the Tellico dam in Tennessee, and the snail darter was discovered to be in the vicinity of the dam. The possibility the dam could jeopardize the snail darter, required the dam to be stopped midconstruction. I think the exact words of the Supreme Court are that the Congress intended the species to be recovered, and protected, and conserved "whatever the cost."

Mr. RADANOVICH. So the decision with the suckerfish habitat in the Klamath area was really pretty much in keeping with the way that at least the courts have interpreted the Endangered Species Act; isn't that right?

Mr. GORDON. With regard, perhaps, to the obligation to do something without concern to the economic impact when you are talking about something being jeopardized, although certain provisions of law, like critical habitat designation, allow for consideration of economic impact, yes. However, obviously, the question of the underlying data, whether it was sufficient to justify their actions is a different matter.

Mr. RADANOVICH. In the case of the Wilson bridge and the Washington aqueduct, some of the stuff that the National Wilderness Institute has been involved in, I am aware that in the brief, very brief environmental assessment that they did for constructing the Wilson bridge there, they were aware of the endangered sturgeon there, but their plan for protecting that endangered species was to wipe out the clam beds in and around the bridge, which was basically the habitat of the sturgeon, thinking if they just wiped the habitat out, then the sturgeon wouldn't be hanging around to get blown up when they sink the pilings for the new bridge. Am I wrong?

Mr. GORDON. Roughly, yes, the biological assessment prepared by the Federal Highway Administration noted that prior to demolition, dredging would remove the clam beds, Asiatic clam beds that might attract shortnose sturgeon to the area. Therefore, essentially, I guess that means it is functioning as a conservation measure to remove their food from the action area.

Mr. RADANOVICH. It apparently wasn't the case in Klamath either, but also in the Washington aqueduct, in that case, the alum that is used to settle the water and then the discharges going into the river, under an EPA permit, by the way, which knowingly dumps this 200,000 tons of sediment into the Potomac River on what is known to be the spawning grounds for the endangered sturgeon, which is stuff that you have been working on, and you can verify this or tell me if I am wrong, but that is indeed what is happening. Why is this happening?

Why is it that in the case of Klamath that when the habitat of an endangered species is found, that they basically shut the water off, when, in an area like on the Potomac River, with both the Wilson bridge and the aqueduct, you see it here, and people seem to turn an eye or certainly don't want to enforce the Endangered Species Act in that way? Do you care to speculate?

Mr. GORDON. It is hard to know exactly why. There are several documents that hint at various reasons the agencies have not initiated formal consultation on the aqueduct; one being one of the arguments made in court was that the act of discharging this sludge didn't constitute an action that required consultation. But other than that, the records available that we have looked through indicate repetitively that there was a concern that construction of sludge treatment facility would require trucks to remove sludge through effluent or "high-value real estate." Additionally, there was a concern that the aqueduct's customers, the aqueduct is on a pay-as-you-go basis, and it serves D.C., Arlington, and Falls Church

and parts of Fairfax, that they would have to pay the cost of constructing a water treatment facility.

EPA's own analysis, however, showed that right now customers of the aqueduct are at comparable or lower rates than most of the adjoining jurisdictions, and that increase in cost wouldn't be much more—it would bring them on par, essentially, with other folks.

The only other rationale I have seen explained is that the EPA has argued that by the year 2010, water clarity limits would be in place on people who are above the point where the aqueduct withdraws water and that these new clarity limits or controls will reduce the amount of sediment going into the Potomac, so that by the time the water reaches the aqueduct, the sediment will be reduced, so there will be no concern by the year 2010 that this enormous point source is dumping. So I guess they kind of rather focus on the pig farmers, and the chicken farmers, and the cow-calf operations or rural areas and cities and towns above Washington, as opposed to the point source here in Washington.

Mr. RADANOVICH. Does it suggest to you that maybe one endangered species is a little more important than perhaps another endangered species?

Mr. GORDON. Well, in fact, that argument has been made. The National Marine Fisheries Service has hinted that there is some possibility that these sturgeon have come over from the Delaware River. Now they haven't gone on and said that means you can go ahead and blow them up, but they have kind of thrown that idea out, that these fish are from the—there is a potential that they have Delaware blood or mixed with Delaware shortnose sturgeon, and therefore we can take them.

Now, under the law, you could issue a take statement that would allow shortnose sturgeon in the Potomac of Delaware origin to be taken by blowing up the bridge, but you have to go through formal consultation or you would have to issue an incidental take statement, and they haven't done any such thing.

Mr. RADANOVICH. Interesting.

Mr. Illyn, I would like to kind of explain to you something that happened out in California and get your reaction to that, if I have a little bit of time.

In January 1997, we had a big flood. A warm rainstorm came in the middle of river and caused floods throughout the Western—you got it up in Washington. You know what happened. During that time, there were floods in the San Joaquin Valley near Sacramento when a levee broke and killed three people. The story is that goes beyond that is that the levee was known to be in bad shape for 6 years. In fact, for 6 years they were trying to get permits from the Fish and Wildlife Service to go in and effect repairs, but since it was the habitat of the elderberry bark beetle, they wouldn't allow them to fix this weakened levee. Finally, they did get a permit, but I think it was like a week before the storm. They didn't have the time to get the equipment in and get it fixed, and the levee broke and killed three people.

I think after that, Mr. Pombo and Mr. Herger came to Washington to try to change the Endangered Species Act so that under a threat of human life, water agencies, such as this one, could go in and effect those repairs and protect human life. That measure

lost by 80 votes in Congress. It was quite alarming to people like me.

In an instance like this, where the Endangered Species Act was directly responsible for the death of three people, do you think that is good?

Mr. ILLYN. Well, I can't address the facts in the case because I just take your comments, but we red flag when we see what we consider the either/or mentality that says it is farmers versus fish, it is loggers versus the spotted owl. So we take the stand that we are a part of creation, and we have to work together. Obviously, all legislation and circumstances don't always work out the way people plan. So I guess I can't specifically address your issue. I avoid being put in situations where the mentality seems to be it is people versus creation. If we are already at that point, then we failed as stewards.

Mr. RADANOVICH. If there is a case of imminent danger to human life, do you think that the Endangered Species Act ought to be modified so that water agency could go and effect those repairs? I mean, this is a small thing. I mean, I don't think you see anybody up on this podium who wants to wipe out the Endangered Species Act, and I think that there are many of us that believe that if we go into this thing with a balanced attitude, we can protect human life and preserve a species, but in this case, the Endangered Species Act was directly responsible for the death of three people, and the Congress could not change that law. So, basically, the same thing could happen again.

If that is the case, do you think that the Endangered Species Act needs to be modified?

Mr. ILLYN. During those same floods, we had numerous mud slides in Oregon and Washington that killed many—killed people up in Bainbridge Island, killed folks down, I believe, in the Roseburg area, and the mud slides came down the hill and destroyed homes as well. I mean, so—

Mr. RADANOVICH. Did the Endangered Species Act or maintaining the Endangered Species Act, did it cause those accidents?

Mr. ILLYN. What I see is that it was unsustainable logging on steep hillsides that caused that accident.

Mr. RADANOVICH. Sir, never mind. You are not going to answer my question. But I have got another question, if I may.

Mr. POMBO. OK. Go ahead.

Mr. RADANOVICH. Mr. Dobson, I enjoyed your testimony.

Would you care to comment on the issues on the Washington aqueduct or the Wilson bridge, as far as the unequal enforcement of the Endangered Species Act? Because this is really what we are asking for. I mean, can you tell me if an endangered species, do you think an endangered species found in Central Park in New York should be just as protected as an endangered species found in the Klamath Basin?

Wait. Let me clarify that. Knowing the Supreme Court says, when a habitat of an endangered species is threatened, you all must cease and desist, no matter what disruption or no matter what the cost, until that species is taken care of?

I don't believe your mike is on.

Mr. DOBSON. I would think that a case such as Central Park, which is bound to be inflammatory, you would have to have some special sort of hearing than just apply the law in a very, very pedantic way. That seems to be what is happening in Washington. But I have to admit straight away, it is not a situation with which I have knowledge.

Mr. RADANOVICH. You might want to get familiar with it.

Thank you very much.

Mr. POMBO. Thank you. I am going to dismiss the panel. I want to thank you for your testimony and for answering the questions. If there are further questions of this panel, they will be submitted to you in writing. If you could answer those in a timely manner so that they can be included in the hearing record, the Committee would appreciate that. So thank you.

I would like to call up our third panel, Mr. Simmons, Mr. Dueser, Mr. Vogel and Mr. Bean.

Thank you very much. Before this panel begins, I wanted to take the opportunity to apologize to you on behalf of the Committee. I know that you have been here for a long time, and I appreciate you being here. I appreciate what you have to offer to the Committee.

Mr. Simmons, we are going to start with you, so if you are ready, you may begin.

**STATEMENT OF RANDY SIMMONS, Ph.D., PROFESSOR OF
POLITICAL SCIENCE, DEPARTMENT HEAD, UTAH STATE
UNIVERSITY**

Mr. SIMMONS. Thank you. I am a political scientist. I teach environmental policy. Occasionally, I teach a course in leadership and politics, where I use the Old Testament as the text, and I would like to begin by respectfully suggesting that whoever wrote Mr. Rahall's comments at the beginning of the hearing might ask if the 34th chapter of Ezekiel applies equally to mountaintop mining in West Virginia, as it is claimed to apply to the Endangered Species Act.

Having suggested that, let me suggest that any attempt to change the Endangered Species Act is difficult because of its symbolic value. The act has so many symbolic messages that are sent that it is hard to talk about it in any sort of careful way, and I appreciate the Committee for attempting to consider some practical changes.

It appears to me that you are trying to accomplish three specific things. You are trying to establish some principles. The first is peer review; the second is, if not the primacy of field data, at least elevating the value of field data in comparison to computer modeling; and the third is the establishment of a more rigorous process for listing a species.

The listing process, by the way, I am sure you are aware, was dealt with, to some extent, in Mr. Miller's bill in the last Congress, and it appears to me that Mr. Miller's process lies halfway between the two of you. So somewhere in there, there maybe the best way for dealing with the process of listing a species.

Your bills also raise some suggestions about the precautionary principle and for questions about what science is—what is science and what is policy. I think those are all interesting implications.

I address all of those in my testimony, but rather than deal specifically with what is in the testimony, let me talk about wolves in Yellowstone, briefly, because it has been suggested as the appropriate process to follow.

The idea of reintroducing wolves in Yellowstone has been around for a long time. Some of the most creative thinking that has been done about wolves is done by folks at Defenders of Wildlife, I believe. Hank Fisher, who is with the Defenders, has been incredibly creative in trying to figure out how you might reintroduce large carnivores and still have people in the landscape, and so I really respect and admire Hank's work, but what worries me is the science behind the claims about wolves in Yellowstone.

It has been claimed by the former Director of the Park Service that there is little scientific basis for most objections being raised to wolf reintroduction. The president of the Defenders of Wildlife claim that after the court decision that allowed the wolf reintroduction to continue, he says, "The wolf has been given a new lease on life and so has the principle that science, not politics, should guide wildlife restoration in America."

What I am going to suggest is that reintroducing wolves and having an Endangered Species Act are noble efforts, but often noble efforts are vulnerable to lots of odd human traits, including aggressiveness, dogmatism, whatever. And I think what happened with wolves is a good example.

According to the recovery plan, if a minimum of 10 wolf packs breed in one recovery area for 3 successive years, the wolves in that area will be downlisted from endangered to threatened. So you need 10 wolf packs, a breeding pair in each wolf pack. You get that for three successive years, and the wolves get downlisted.

Now, according to the Fish and Wildlife Service, the goal of 10 breeding pairs in each of three recovery areas was established after extensive literature review and consultation with a number of U.S. and Canadian biologists and wolf researchers. Well, a colleague of mine and I wanted to know who did they talk to? What studies did they review? Which experts were consulted?

I had to file a Freedom of Information Act to get that information, and the Agency replied, the Fish and Wildlife Service said it had "not contracted or undertaken any studies which would deal with minimum viable populations of the Northern Rocky Mountain wolf." They further said, "There are no records in the files of our Denver Regional Office or the Cheyenne Fish and Wildlife Enhancement Office referencing any specific materials used in determining recovery numbers."

So not contracted or undertaken any studies, and no specific materials are in any of their files referencing any specific materials used in determining recovery numbers. So what we have is wolf recovery reports, wolf population models, studies regarding the possible impacts on big game based on 10 wolf packs, a total of 100 wolves in the recovery goal. But if they were determined without any studies that deal with minimum populations, without referencing any specific materials in determining recovery numbers, those reports, those models, those studies are arbitrary.

And if reintroducing wolves to Yellowstone, as was suggested in the last panel, is the appropriate model, there is something wrong

with that model, and we need to think more seriously about what are the appropriate processes for establishing science.

I would just like to end by suggesting that there are other things about the Endangered Species Act that I think are really important to be addressing, things like what are the incentives created for landowners, the “no surprises” policy isn’t no surprises, safe harbors isn’t safe harbors. And if the Committee doesn’t deal with that, I would hope that the administration does.

Thank you.

[The prepared statement of Mr. Simmons follows:]

Statement of Randy T. Simmons, Professor of Political Science, Department Head, Department of Political Science, Utah State University

Mr. Chairman, thank you for the opportunity to present my views on H.R. 2829 and H.R. 3705. As a political scientist I understand full well that even talking about making the slightest changes to the Endangered Species Act is going to be seen by many as attempting to make changes to holy writ. The symbolic value of the ESA has successfully swamped practical considerations about changing the act since at least 1992. Now, however, seems a good time to consider some practical changes to the way science is used under the ESA.

Although the two bills under consideration for this hearing have somewhat different approaches to the use of science in the listing, recovery planning, and consultation processes, they attempt to establish some common principles. Those principles are peer review, the primacy of field data over computer modeling, and the establishment of a more rigorous process for listing a species. These also have implications for the use of what has become known as the precautionary principle and for questions about what is science and what is policy.

Peer Review

Peer review can be understood as a form of scientific quality control. It is commonly used in the social and natural sciences to establish and maintain professional standards. It is a check on the exuberance of researchers who might not be satisfied to let the data speak for itself. The American political system is based on the notion that politics is more likely to achieve good results if there is a system of checks and balances. No one is willing to assume that good intentions and hard work are enough to produce good political results. There must be checks on political exuberance, on good intentions and on bad ones. The same is true in science. I believe that most researchers mean well and conduct their studies carefully. But they will be more careful and more restrained in “torturing their data” to meet their own preconceptions if they know their work will be reviewed by a set of peers. If a good system of peer review is in place, at least two things are accomplished: 1) the people doing the initial work are going to produce a better, more defensible product, 2) the public and decision-makers are going to have more confidence in the scientists’ work.

It is important to have a good peer review process in place, not just any process. The first consideration in peer review is who chooses the reviewers. The Fish and Wildlife Service and National Marine Fisheries Service established a peer review process in 1994 that appears to have had little effect. But that is the predictable result because the FWS and NMFS are selecting the peer reviewers. Under that system a rational bureaucrat will select peer reviews from a stable of weak or pet scientists who will rubberstamp his or her assessments. For peer review to be effective, the ability to select reviewers must be removed from the agencies.

Another consideration is who is going to be the reviewer. H.R. 3705 places such severe restrictions on who can be a reviewer that finding good reviewers may be impossible. H.R. 2829 provides a better process. For a workable alternative, the committee may want to look at the process the National Academy of Science used to review the Klamath Basin issue. The Administration and Congress could have the NAS establish a permanent committee to oversee ESA science and have that committee prepare periodic assessments.

One more consideration is whether peer reviews should be anonymous. I do not know of data that demonstrate that this is preferable to having reviews signed. My preference is that reviewers identify themselves so that their reputation stands behind their reviews.

Field Data and Computer Models

Whether field data should be considered superior to computer projections is a contentious issue among endangered species analysts. The best example is the conflict over rates of species loss. Some claim human actions are causing the sixth great species extinction. Edward O. Wilson, for example (1992:280) estimates that in rain forests “the number [of species] doomed each year is 27,000. Each day it is 74, and each hour 3.” Adding possible rain forest extinctions to those that may be occurring in the rest of the world leads him to think that, worldwide, more than 100 species are going extinct daily. The London Zoological Society’s internet site, Web of Life (2001), claims that “an average of 137 life forms are driven into extinction each day—or 50,000 a year.” If such claims are correct, then somewhere between one-quarter to one-half of all species will disappear in our lifetimes.

These claims are based on the species-area relationship, a theoretical tool for estimating species loss. It is widely accepted and used by biologists and ecologists as a theoretical tool. The problem for policy discussions is that the grand predictions of species loss are not supported by field data. That is, by counting species that are known to have gone extinct, it is not possible to justify claims that 100 species per day are disappearing. IUCN can only identify about 1000 extinctions in 400 years. In the 10,000 years before Europeans came to North America, just two North American bird species are known to have gone extinct, the flightless marine duck and a small turkey. In the last 200 years five bird species have been lost. Internationally, the documented loss of mammals and birds has increased in the last 150 years from about one species every four years to one each year (Lomborg 2001: 254). That is a disturbing number, but far less disturbing than 3 per hour.

I am not arguing that computer modeling is inconsistent with doing sound science, just that field data may not support the claims made by the modelers. Part of the scientific method is to draw conclusions about the future based on available information and theories about what the information means. As the available information improves or changes or theories are modified, the conclusions about the future can then be changed. Scientists who base predictions about future species losses do just that—they revise their predictions as available information changes. What ought to be important for endangered species policy is that there is a process in place to make sure that as more field data becomes available, it is used to modify policy conclusions.

Improving the Listing Process

Among the more persistent complaints about the Endangered Species Act are claims that there is little rigor in the listing process and that landowners are often ambushed as species that occur on their property are listed without landowners having adequate opportunity to participate in the listing process. These bills address each of these issues. First, requiring peer review will make sure that those proposing a listing meet the standards of the scientific process. Second, by requiring the Secretary to consider data from landowners and other affected interests ensures that the Secretary takes more information into account.

H.R. 3705 takes the notice requirements one step further by requiring the Secretary to publish the petitions to list species on the Internet, publish the receipt of the petitions in a local newspaper in the affected area, and notifying the Governor of the affected state. H.R. 3705 also creates a review of the Secretary’s finding on a petition to list or delist a species. These changes would help the affected state and landowners by providing them notice and an opportunity to present the Secretary with more information, earlier in the process. In turn, providing the Secretary with more information earlier in the process would help the Secretary to make better decisions.

One improvement in the petition process was included in Mr. Miller’s H.R. 960 from the 106th Congress. Section 104 of that bill improved petition requirements by calling for more information in the listing petition. H.R. 2829 could be enhanced by including these improvements. H.R. 3705 increases these requirements even more than Mr. Miller’s bill. While it would be valuable to increase the requirements beyond what Mr. Miller called for, the only concern I have is that the requirements in H.R. 3705 may be more cumbersome than is necessary.

The Precautionary Principle

One argument the committee may hear is that taking the time for reviewing the science behind agencies’ proposed decisions might be dangerous. If we are going to err, such arguments go, we should err on the side of caution and caution demands moving ahead quickly to protect a species that may be in trouble.

But if we want to exercise caution, it would be useful to know which the cautious decision is. For example, environmental groups and some agency personnel argued

that exercising caution in the Klamath Basin meant increasing stream flows down the Klamath. But increasing those flows from the reservoir meant that more warm water was added to the river, potentially raising the water temperature to higher than lethal levels. Which was the cautions thing to do, add the water or not? As the NAS has shown, there was no scientific basis for adding the water, just the strong feelings of some well-meaning agency bureaucrats.

Sound science requires just that—sound science. Sound science does not mean that we act “cautiously” when we don’t know what “acting cautiously” means in a given case. As the Klamath situation shows, if we act cautiously as some argue, we actually do more harm than good. This is neither cautious nor sound.

Science and Policy

Sound science is also not policy decisions cloaked as scientific decisions. One of the aims of these bills is to separate out policy and science. It is obvious that the drafters of these bills recognize there is a great deal of uncertainty in science and that is why, I believe, they want to establish clear, workable review processes—they hope the reviews will highlight where the science is relatively certain and where it is not certain. That highlighting can help separate science from policy. Where the science is relatively clear, the policy choices are often relatively clear. But when the science is not clear and a choice has to be made anyway, it is important that it is clear that a political decision, as opposed to a scientific decision, is being made. Again, the Klamath Basin is an example. When the policy was established to increase river flows and keep Upper Klamath Lake at high levels, the FWS and NMFS claimed these were scientific decisions. The NAS disagrees and claims that the decision did not have a substantial scientific basis. Agencies must make policy choices, but they should disclose what is science and what is policy.

Conclusion

I thank the Committee for the opportunity to testify on these bills. I hope we can make some changes so the ESA will work better for species and people alike. I will be pleased to answer any questions.

Mr. POMBO. Thank you.
I believe it is Mr. Dueser?

STATEMENT OF RAYMOND D. DUESER, Ph.D., PROFESSOR OF FISHERIES AND WILDLIFE, ASSOCIATE DEAN OF THE COLLEGE OF NATURAL RESOURCES, UTAH STATE UNIVERSITY

Mr. DUESER. Correct, Ray Dueser.

Good afternoon. It is an honor to be here. I am a professor of Fisheries and Wildlife at Utah State University, and I have been involved with endangered species work now for the better part of the last 20 years. I have served on one recovery team and been involved as an advisor to a number of others. So I am fundamentally here as a working scientist who has seen the Endangered Species Act primarily from the perspective of recovery planning and implementation.

My message today is simply that we need to find a way to expand the role of science in the administration and interpretation of the Endangered Species Act. The act, as written, is expressed in terms of best data available. We have heard that referred to several times today. My sense of it is that referring simply to best data available is really understating the role of science, particularly the ecological sciences, in their potential contribution to endangered species restoration.

Science brings more to the table than data. It brings principles, it brings theories and hypotheses, it brings scientific methods, it brings standards and expectations. How do we inject each of these things somewhat more explicitly into endangered species restora-

tion? How do we, in fact, bring all of science to bear, not just the relatively narrowly focused issue of good data?

The best answer I have come up with to this question really focuses on the process of peer review. I know you have heard a lot about peer review today. You will probably hear more. Peer review is a critical issue. It is the reality check, if you will, that we apply to all of the other parts of science, to hypotheses, theories, even sampling methods. Peer review is the heart of the both basic and applied science. If we can find a way to increase the importance, the significance, and the application of peer review, we will have gone a long way I think toward making the implementation of the Endangered Species Act more reliable and a lot more acceptable, if you will.

Frankly, I am a little surprised. I mean, I am not surprised in this particular case, but I am disappointed. The tone of the bills that we are here to discuss today is fairly negative, there is an air of skepticism and almost an air of disappointment in these bills. In my own experience, I have to say I have seen recovery teams at work. I have seen them work very effectively. I would like to suggest that those who are really skeptical about the implementation of the Endangered Species Act try to spend a couple of days somewhere in a hotel with a recovery team. Try to get to see how those folks work, see what kind of questions they bring to the table, see what the issues are, see what their sensitivities are. I know it is not universally true, but certainly in my own experience, the level of concern, the level of commitment, and frankly the level of expertise that these teams tend to bring to the job is really substantial. I think you would find it reassuring to observe these folks at work. I think you would find the attitudes, the knowledge, the skills, and so forth of these people very encouraging, particularly given the constraints under which recovery teams operate.

Having said that, and I know you won't be able to spend a lot of time in the room with recovery teams, I understand that. It seems that it would be really helpful to know how often train wrecks like Klamath Basin actually occur. Probably every Member of Congress has a story. I really don't know that, but it may well be the case. Certainly, I don't really have that understanding. Klamath is a disaster. There is no question about that, and I sympathize with the folks out there. The folks in the Klamath Basin must feel like they have been abandoned by their Government in some ways, and while the Government was headed out of town, it sort of took the family silver with it.

But I just don't know how often these kinds of extreme events occur. It might be worth the National Academy undertaking a study, as a matter of fact, to try to put this whole issue in a broader perspective.

Thank you.

[The prepared statement of Mr. Dueser follows:]

Statement of Raymond D. Dueser, Utah State University

GREETINGS AND SALUTATIONS

Mr. Chairman, Members of the Committee. I am honored to have this opportunity to appear before you to speak on the issue of the role of science in the implementation of the Endangered Species Act (ESA).

My name is Ray Dueser. I am a Professor of Fisheries and Wildlife and Associate Dean of the College of Natural Resources at Utah State University. I am proud to reside in the 1st Congressional District of Utah. I am affiliated with a number of professional societies and organizations which have publically-stated interests in the re-authorization of the ESA, and I have worked been engaged in endangered species research and recovery since 1984. I have worked with the U.S. Fish and Wildlife Service, several State agencies and a host of private conservation organizations on issues related to the ESA. I have been especially deeply involved with the recovery of the endangered Delmarva fox squirrel (*Sciurus niger cinereus*) on the beautiful Eastern Shore of Maryland. Nevertheless, I am here today simply as an informed citizen, invited by a member of the Committee, and not as a representative of the organizations with which I am affiliated. Any reference to positions these organizations may espouse relative to the ESA are based on my knowledge as a reader of the scientific literature.

THE ENDANGERED SPECIES ACT OF 1973

The ESA of 1973 is widely regarded as a landmark piece of legislation. The purposes of this Act are:

“to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth [elsewhere in this Act]” (16 U.S.C. 1531 et seq.).

These few words effectively changed how America manages and conserves its rich natural heritage of animals, plants and ecosystems.

To accomplish these far-reaching objectives, the Act provides a process for determining whether a species is at risk of extinction, removing the “threats” that endanger the species, and restoring the species to a viable condition. The essential steps in this process include: (1) identifying and listing “threatened” and “endangered” species of animals and plants on the basis of their risk of extinction, (2) designating the “critical” habitat required for the survival of the species, (3) providing immediate protection against acts that would further jeopardize the species, (4) developing and implementing a plan for the recovery of the species to a viable condition, and ultimately (5) “delisting” the species when the threat of extinction has been reduced (Carroll 1996). The strict provisions of the Act vest substantial regulatory and enforcement powers with the Fish and Wildlife Service (FWS) of the U.S. Department of the Interior (for terrestrial and freshwater species) and the National Marine Fisheries Service (NMFS) of the U.S. Department of Commerce (for marine and anadromous species).

In formulating this Act, Congress required that all decisions made under the ESA be based “... solely on the basis of the best scientific and commercial data available ...” [Section 4. (b), emphasis mine]. Science and scientific data have thus served to inform ESA decision-making from the very beginning. This strong reliance on scientific data is meant to ensure the factual basis, objectivity and reliability of decisions regarding the status of species, their critical habitats and their risk of extinction.

THE SCIENTIFIC UNDERPINNINGS OF THE ESA

The first wide-ranging review of the scientific principles underlying the ESA was motivated by a 1992 letter from the leaders of Congress to the Chairman of the National Research Council (NRC). The Congress requested that the NRC convene a “Committee on Scientific Issues in the Endangered Species Act” to study several scientific matters related to the ESA (NRC 1995). The distinguished membership of this Committee represented expertise in ecology, systematics, population genetics, wildlife management, risk and decision analysis, ESA legal and legislative history, economics, and the implementation of the ESA from both public and private perspectives. The Committee was asked to review a host of thorny scientific issues and how they relate to the ESA. These issues included the species concept, conservation conflicts between species, the role of habitat conservation, recovery planning, risk analysis and decision-making under uncertainty, and issues of timing in the ESA decision-making process.

The overall conclusion of this wide-ranging review was that “... the ESA is based on sound scientific principles” (NRC 1995:4). Indeed, this review stands today as one of the clearest summaries of the scientific underpinnings of the ESA.

THE ROLE OF SCIENCE IN ESA IMPLEMENTATION: A SELF-CONSCIOUS REVIEW

The ESA has emerged over the past quarter century as a public policy lightening rod. This act provides a "voice" for the animals, plants and ecosystems of America, and for those citizens who value natural diversity as a core element of the American heritage. In doing so, however, it frequently creates conflict over the enforcement of the public's will in a society founded on the core concept of individual rights. This is particularly true when conflicting demands are made on a shared public resource such as water or timber and when the public's interest in the survival of a species somehow constrains the use of a privately-owned resource such as land.

Despite the intended reliance of the ESA on a strong foundation of science, there has emerged on multiple fronts over the past several years the realization that the scientific base for ESA implementation should be both broader and deeper. For example, many of the professional and scientific societies whose members are involved with endangered species research and recovery have taken a self-conscious approach to assessing and enhancing the value of their science to recovery planning and implementation. Similarly, the academic and research community recently has undertaken several large-scale, scholarly reviews designed to identify both the realized and potential contributions of ecological science to endangered species recovery.

The Ecological Society of America in 1992 established an ad hoc Committee on Endangered Species to "... undertake an analysis of how scientific information could be used more effectively to assist in the preservation of the Nation's biological resources" (Carroll et al. 1996:2). The Committee found that ecological science might be used more effectively in the listing process, the establishment of recovery priorities, and the delisting process. Among the Committee's suggestions were three based directly on advances in ecological science that post-dated the passage of the ESA in 1973:

- (1) Revise the scientific guidelines for setting priorities in the listing process to include (A) the "inclusive benefits" afforded by the protection of a species, (B) the ecological role played by a species in a community, (C) the "recovery potential" of a species, and (D) taxonomic distinctness.
- (2) Expand the use of "population viability analysis" to (A) examine the prospects for a species' recovery in a variety of biological-environmental contexts, (B) identify alternative ways to recover and sustain a species, perhaps at different economic and/or social costs, and (C) improve the odds of success for recovery plans.
- (3) Increase the likelihood of successful recovery by (A) spreading the risk and (B) planning and acting expeditiously.

Carroll et al. (1996) were generally encouraged by the obvious influence of ecological science on the implementation of the ESA up to that time, and were optimistic about the potential contributions yet to be made.

The academic and research community recently focused close scrutiny on the Habitat Conservation Plan (HCP) concept within the ESA. Introduced through amendment of the ESA in 1982, the HCP is essentially a land use plan that allows a non-federal landowner to obtain an "incidental take permit" for a listed species in exchange for making conservation commitments on that land. The HCP is intended to minimize and mitigate the taking. This take permit authorizes a landowner to carry out specified development activities on the land, even if those activities alter protected habitat or otherwise harm ("take") threatened or endangered species. The HCP concept was developed as a means of reducing the level of tension between the FWS and private-sector landowners. Given the rapid proliferation in both the number of approved HCPs and the cumulative acreage represented by these agreements, questions arose in the mid-1990s about both the scientific basis of HCPs and the effectiveness of the HCP as a recovery and conservation tool (James 1999).

The American Institute of Biological Sciences (AIBS) and the National Center for Ecological Analysis and Synthesis (NCEAS) recently collaborated on a critical review of 208 HCPs written and approved in compliance with the ESA. A more detailed analysis was applied to a representative subset of 43 HCPs. This review was undertaken, among other reasons, to "... identify ecological theory and methods that can be applied to strengthen the design, management and monitoring of HCP areas" (Kareiva 1997). The final report was posted on the NCEAS Web site in January 1999 (Kareiva et al. 1999). The major finding was that many of the HCPs recommended conservation actions that were not supported by the "best available data." While using the "best available data" may have justified an HCP legally (and politically), that data still may not have been sufficient to support the approved management actions. Sufficient supporting data simply did not exist in many cases. Insufficiency took a variety of forms, including the lack of information about current

status and population trends, the absence of quantitative estimates of the proposed “take” of the species or its habitat, and the lack of information about the likely efficacy of proposed mitigation strategies.

Given this finding, Kareiva et al. (1999) made a host of recommendations for improving the HCP agreement process, including:

- (1) Important data gaps should be acknowledged explicitly in the HCP. The uncertainty resulting from these gaps may, in some cases, be offset by more stringent mitigation requirements.
- (2) Management and monitoring should be viewed as an exercise in “adaptive management” (Walters 1986), in which management and monitoring are designed to provide feedback (and possible corrective insights) into future management decisions.
- (3) Proposed HCPs should be reviewed by independent, qualified advisory panels.

Amendments that were made to the FWS habitat conservation planning handbook in the months after release of Kareiva et al. (1999) incorporated many of these recommendations, and thereby significantly improved the HCP process.

The ESA stipulates the development of a recovery plan for most threatened and endangered species. This plan then guides decision-making related to the recovery program and directs the actions of managers in the implementation of the program. Through a collaborative effort supported by the Society for Conservation Biology, the FWS and NCEAS, Boersma et al. (2001) undertook an extensive systematic review of a random subset of recovery plans for the 931 listed species for which the FWS was responsible in 1998. This large sample, representing nearly 20% of the listed species for which a recovery plan had been approved at that time, included 85 plant and 96 animal species; 100 single-species, 29 multiple-species, and 6 ecosystem recovery plans; and 68 species plans which had been revised at the time of the review and 113 plans which had not been revised. Boersma and a team of 325 researchers drawn from the ranks of faculty, post-docs and graduate students at 19 universities exhaustively reviewed the selected plans for a long list of attributes such as plan length, length of time between listing and plan completion, number and composition of individuals on the recovery team, and number of species included in the plan. They also scored each plan for scientific content based on factors such as the amount of biological and natural history information available for the species, prescribed management actions, monitoring protocols, and recovery criteria.

Boersma et al. (1999) used the FWS “trend” category for each species as an index of recovery plan effectiveness. Each species was classified as improving, stable, declining, extinct or unknown. These data were then used to test four principal hypotheses:

- (1) Revised plans would be more effective than unrevised plans.
- (2) Plans developed by a diverse group of authors would be more effective than those written only by Federal agency employees.
- (3) Plans in which recovery criteria were explicitly linked to a species biology would be more effective than those lacking such links.
- (4) Multi-species plans would be more effective than single-species plans, because they incorporate a broad view of threats and tend to be more integrative.

Analysis of this massive and complex data set yielded several general results and more than a few surprises:

- (1) Recovery plans tend not to improve in effectiveness with revision.
- (2) Participation of non-federal team members in plan development seems to have a positive influence on plan effectiveness.
- (3) The value of linking recovery goals to species biology is less clear-cut than expected, but nonetheless important for effective recovery planning.
- (4) Multi-species plans tend to be less effective than single-species plans.
- (5) Management tends not to be monitored sufficiently to determine whether it is working, effectively precluding the use of adaptive management as a recovery protocol.
- (6) Recovery plans typically take too long to write, delaying the implementation of management.
- (7) Plan length is not a good predictor of plan effectiveness.

Overall, the results reported by Boersma et al. (2001) tended to be more ambiguous than was anticipated. They nevertheless confirmed the value of using sufficient, defensible data in recovery planning, implementation and monitoring. The authors concluded with a call for increased reliance on adaptive management in the revision of recovery plans, the inclusion of diverse perspectives and viewpoints in the recovery planning process, close linkage between species biology and recovery goals, and close monitoring of multi-species recovery plans. They repeatedly call for the incorporation of more, better and relevant science in recovery planning.

An even more extensive analysis and synthesis of this data set has been completed by Hoekstra et al. (In press), and will be published in June 2002, as an issue of the journal *Ecological Applications*. I have seen the abstracts, but not the manuscripts for this set of papers. Review of even the abstracts confirms the creative commitment of the academic and research community to expand the role of sound—i.e., reliable, relevant and sufficient—science in conservation management. Publication of this volume no doubt will represent an historic benchmark in the evolution of ecological science as a self-conscious servant of public policy.

WHEN SCIENTIFIC WORLDS COLLIDE: A TRAGIC CASE STUDY

The recent experience of the resource managers and citizens of the Klamath River Basin (KBR) of southern Oregon illustrates what can happen when scientific worlds collide. The water resources of the Basin are managed by the U.S. Bureau of Reclamation (BOR), while the threatened and endangered fish of the Basin are managed (protected) by the FWS (shortnose sucker and Lost River sucker) and the NMFS (Southern Oregon/Northern California Coasts coho salmon), under the “best science available” administrative and regulatory requirements of the ESA. A sequence of decision-making occurred within and among these agencies in 2001 that ultimately precipitated both a management tragedy in the form of shaken public confidence and a human tragedy in the form of economically and socially stressed communities. Without wishing to offend by brevity, I will attempt to summarize the essential facts (as I have received them) in a few sentences.

In January 2001, the BOR issued a biological assessment that operation of the Klamath Basin (Water) Project would be harmful to the welfare of the threatened coho salmon without specific constraints on stream flows in the Klamath River. The BOR then proposed relatively low monthly minimum flows for 2001. In April 2001, the NMFS issued a biological opinion that operation of the Klamath Project as proposed by the BOR would place the coho salmon in jeopardy. The NMFS then formulated a reasonable and prudent alternative (RPA) incorporating, among other things, monthly minimum flows in the Klamath River higher than those proposed by the BOR.

Similarly, in February 2001, the BOR issued a biological assessment that operation of the Klamath Project would be harmful to the welfare of the endangered suckers without specific constraints on water level in the Klamath lakes. The BOR proposed to operate the lakes at very low monthly elevations. In April 2001, the FWS issued a biological opinion that operation of the Project as proposed by the BOR would place the coho salmon in jeopardy. The FWS then formulated an RPA incorporating, among other things, monthly lake levels higher than those proposed by the BOR.

In meeting its statutory responsibilities to provide water to its users, the BOR proposed to operate with low lake levels, low flows and significant irrigation diversions. In meeting their own statutory responsibilities to enforce the ESA in the protection of threatened and endangered fish, the FWS and NMFS proposed to operate with high lake levels, high flows and reduced diversions. The FWS and NMFS biological opinions and RPAs prevailed, and water management in the Basin was changed for 2001. No irrigation water was provided to farmers for the 2001 growing season. To further complicate matters, 2001 was a year of historic drought in the Basin.

Recognizing the benefits of stringent peer review of scientific and technical judgments, the Departments of the Interior and Commerce jointly requested an NRC review of “... the scientific basis for the biological opinions that resulted in changes of water management for year 2001” (NRC 2002:xi). The NRC recently issued an interim report on the matter in which it found, among other things, that:

“... all components of the biological opinion issued by the USFWS on the endangered suckers have substantial scientific support except for the recommendations concerning (higher) minimum water levels for Upper Klamath Lake (emphasis mine)” (NRC 2002:2).

“... there (also) is no scientific basis for operating the lake at mean minimum levels below the recent historical ones (1990–2000), as would be allowed under the USBR proposal” (NRC 2002:3).

“... (there is no) clear scientific or technical support for increased minimum flows in the Klamath River main stem” (NRC 2002:3).

“... reduction in main-stem flows, as might occur if the USBR proposal were implemented, cannot be justified” (NRC 2002:3).

The interim NRC report thus concluded that there was no substantial scientific basis for either maintaining higher lake levels for the endangered suckers or maintaining higher minimum river flows for the threatened coho. The report also concluded that there was no substantial scientific basis for the USBR proposals to

maintain both lower lake levels and lower river flows. With respect to minimum lake levels and minimum river flows, both sides in the dispute were operating without strong scientific support. Important elements of the RPAs stipulated by the FWS (high lake levels) and the NMFS (high river flows) were without sufficient scientific support. In reality, the position of the BOR (low lake levels and low river flows) also were without sufficient scientific support—but the FWS and NMFS RPAs had priority.

The outcome for the Klamath Basin was an economic nightmare. But from the perspectives of the agency parties involved, each was trying to meet its mandate: more water for people (BOR), more water for lake fish (FWS), and more water for river fish (NMFS). Each of these agencies behaved in a risk-averse manner from its own perspective, seeking to maximize the gain (and minimize the risk) for its constituents. BOR wanted to ensure plenty of water for irrigators—so it proposed to maintain uncommonly low lake levels and river flows. FWS wanted to ensure plenty of water for its lake fish—so it proposed to maintain unusually high lake levels. NMFS wanted to provide plenty of water for its river fish—so it proposed to maintain unusually high stream flows. And all of this occurred in a year of abnormally low water availability!

Final resolution of this controversy awaits further review by the NRC committee. Nevertheless, this incident already has precipitated intense public scrutiny of the reliance on “the best science available” in the implementation of the ESA, including the listing, recovery and downlisting sections of the law. Others on this panel are more qualified than I to comment on the details of the biological assessments, biological opinions and NAS review involved in this particular case. The recent release of the Final Biological Assessment by the BOR (USBR 2002) strongly suggests that constructive steps are being taken to formulate—based on the best science available—a more balanced approach to resource management in the Klamath Basin.

CONGRESS’ OWN SEARCH FOR SOUND SCIENCE

In the meantime, there is substantial interest in this case even within this Committee. The letter inviting me to testify indicated that the hearing would concern two proposed amendments to the ESA—H.R. 2829 introduced by Mr. Walden of Oregon and H.R. 3705 introduced by Mr. Pombo of California—which are intended to enhance the role of scientifically credible data, independent peer-review and public involvement in the implementation of the ESA. I have neither legislative experience nor legal training. There undoubtedly are fine points and nuances in the subject bills that elude me. With this caveat, I have nevertheless tried to review these bills from the perspective of a working scientist with some ESA experience. As I read it, H.R. 2829 would:

- (1) require the Secretary of the Interior, when evaluating otherwise comparable data, to “... give greater weight to scientific or commercial data that is empirical or has been field tested or peer-reviewed,”
- (2) require the Secretary to establish (written) criteria for the admissibility of scientific and commercial data to be used in a listing determination,
- (3) require the submission of “... data obtained by observation of the (candidate) species in the field ...” prior to a status determination,
- (4) mandate both the “acceptance” of landowner-provided data on the status of a species and the inclusion of this data in the record for any status determination,
- (5) require the Secretary to publish “... a description of additional scientific and commercial data that would assist in the preparation of a recovery plan,”
- (6) require the Secretary to solicit the submission of such data by any interested party, and describe any plans “... for acquiring additional data,”
- (7) require the independent, scientific review of any proposed listing, delisting, recovery plan, jeopardy opinion or RPA decisions rendered by the Secretary,
- (8) require the evaluation and consideration of any such independent, scientific reviews in a final determination
- (9) require the Secretary to actively solicit and consider information provided by States in any Section 7 consultation, and
- (10) ensure the right of “... any person who has sought authorization or funding from a Federal agency for an action that is the subject of the consultation” to be fully informed about (and throughout) the process.

Similarly, as I read H.R. 3705, it would:

- (1) mandate the basic types of scientific information to be included in a petition,
- (2) require that the Secretary acknowledge receipt of such a petition, and provide public notice of the petition to each landowner possibly affected by the petition and to the Governor of each State possibly affected by the petition,

- (3) require the independent, scientific review of petitions and findings regarding petitions, including review of "... the sufficiency of all relevant scientific information and assumptions in the petition relating to the taxonomy, population models, and supportive biological and ecological information ..."
- (4) require the independent, scientific review of "Whether the methodology and analysis supporting (a) petition meet the standards of the academic and scientific community" and "Whether the petition is supported by clear and convincing evidence ... that the petitioned action may be warranted,"
- (5) require the appointment and convening of a review board to conduct an independent, scientific review of any finding issued by the Secretary,
- (6) require full public disclosure of the findings of the independent review board, any points of disagreement between the Secretary and the board, and the basis for resolution on any such disagreement,
- (7) require an independent review of jeopardy opinions issued by the Secretary, and
- (8) stipulate that any species for which a petition (for listing or delisting) has been declined "... may not be considered (again) by the Secretary for one year."

Both of these bills emphasize increased use of "good" (i.e., relevant and reliable) and sufficient science in ESA decision-making, enlarge the role of peer review in the evaluation of ESA decisions, increase the amount of public disclosure about the decision-making process, and increase Federal-State consultation. Both would provide for greater scientific and public scrutiny of the ESA process, and both would appear to set a demanding performance standard for the Secretary of the Interior. Each of these changes has the potential to improve the operation of the ESA in significant ways.

On the other hand, these improvements would come at some real cost of bureaucracy, time delays and expense. Given the volume of review and comment already required for ESA implementation each year, and the apparently significant expansion of review called for in these bills, the expense of administering the ESA is likely to go up dramatically. Furthermore, the plan to compensate decision reviewers with cash payments would produce another substantial new expense. Without an accompanying increase in budgets, these requirements will reduce the amount of funding available for actually implementing recovery. These bills have the potential to harm recovery programming in the absence of new funding.

Furthermore, as I understand them, each bill prompts several specific questions and comments. For example, would the requirement in H.R. 2829 that the determination of threatened or endangered status be "... supported by data obtained by observation of the species in the field—preclude the reintroduction of an extirpated species that might not have been seen in a region for 50 years or more? Also, what are the implications of the proposed requirement that landowner-provided data about the status of a species on the land be included in the rule-making process? Not all "data" represents information. The information content of "data" often is determined significantly by the sampling protocol and procedure(s) by which the "data" was obtained in the first place. Also, is the call in both bills for increased reliance on the use of "empirical data" a procedure for minimizing the role of analytical and simulation models in the decision process? (Often, such models are the only way to integrate complex data into a simplified but realistic description of overall system behavior.) Finally, in H. R. 3705, the disqualification for service on review boards of anyone "who is, or has been, employed by or under contract to the Secretary or the State in which is located the (subject) species" would have the effect in most cases of eliminating any and all otherwise "qualified" individuals.

It is gratifying to see the members of the Congress and the members of the academic and research community both so deeply engaged in the search for ways to make to science—meaning scientific data, scientific principals and scientific reasoning—increasingly relevant to the administration and implementation of the Endangered Species Act. The ESA merits no less than our combined best efforts. Thank you for your consideration.

PARTIAL LIST OF REFERENCES

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Mr. POMBO. Thank you.
Mr. Vogel?

**STATEMENT OF DAVID VOGEL, SENIOR SCIENTIST,
NATURAL RESOURCES SCIENTISTS, INC.**

Mr. VOGEL. Mr. Chairman and members of the Committee, thank you for the opportunity to testify at this important hearing. My name is David Vogel, and I am here to support H.R. 2829 and H.R. 3705 because concepts in these bills will significantly improve the scientific integrity and implementation of the Endangered Species Act.

I am a fisheries scientist who has worked in this discipline for the past 27 years, including 15 years with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. I have been extensively involved in ESA issues, including research on threatened and endangered species, listing of species, Section 7 consultations, biological assessments, biological opinions and recovery planning.

Mr. Chairman, I only have two points to make here today: First, to point out where and how some aspects of the ESA can damage scientific implementation of the act and, last, how this serious problem can be rectified through peer review and placing greater weight on empirical, instead of theoretical, information.

The most recent, prominent example where the ESA process went awry occurred last year in the Klamath Basin. When I started working on endangered species issues in this region more than 10 years ago, the ESA process was open and dialog occurred among all parties. It allowed for scientific data, and information exchange and technical input from all individuals. However, over time, the process became closed. This resulted in a series of actions where only selected information and individuals were included in the formulation of two biological opinions that cutoff water to the Klamath project. Other highly relevant scientific information was either overlooked or ignored.

Additionally, the agencies gave greater weight for theoretical information to support an assumption for high lake levels and high reservoir releases without acknowledging empirical data that did not support their premise.

As you know, a recent National Academy of Sciences' review of those opinions concluded, among other findings, that there was insufficient scientific justification to support the Fish Agency's assumptions on lake levels and reservoir releases. Notably, the Academy's 12 committee experts were unanimous in their conclusions on both biological opinions.

The ESA allows one individual to essentially serve as judge and jury. This process permits the following undesirable scenario: An inexperienced individual has a speculative idea that evolves into an assumption. Over time, that assumption turns into a fact. Ultimately, the presumed fact becomes a mandate under the Endangered Species Act. In my experience, once this occurs, it is next to impossible to change.

A more rigorous scientific approach is essential for the welfare of species. It would allow for the development of scientific alternatives that, in my experience, will lead to innovative measures to avoid

impacts to listed specie and, more importantly, develop proactive actions for improving habitats and increasing populations.

Without question, there is uncertainty in science. However, peer review will, at a minimum, disclose what is known and what is not known when empirical data are not available. This can culminate into the most well-informed resource management decisions. Too often the doubtfulness is not revealed in the present-day ESA process. Scientific debate is not only common, but is expected and must occur in order for our knowledge to advance.

I would like to emphasize that peer review is used in other Government work on natural resources. For example, I have been performing multidisciplinary research for CALFED, a collaborative effort among 23 State and Federal agencies to improve water supplies and the health of the ecosystem in California. Peer review of my work and the work of many others for CALFED is mandatory. Why should it be any different with the ESA, when the natural resource ramifications are greater and more global? At the very least, peer review will elevate ESA technical issues to a higher scientific standard of quality and instill greater confidence in the decisions.

In conclusion, the existing ESA does not ensure sufficient and balanced scientific input. These circumstances can, and do, work to the detriment of the Endangered Species Act. This problem can be rectified through peer review and placing greater weight on empirical, instead of theoretical, information. Good science will lead to good policy, and because science is constantly evolving, so should policy.

These bills will ensure that the Endangered Species Act progresses with science to the ultimate benefit of fish and wildlife resources.

Thank you.

[The prepared statement of Mr. Vogel follows:]

**Statement of David A. Vogel, Senior Scientist,
Natural Resources Scientists, Inc.**

Mr. Chairman and members of the Committee, thank you for the opportunity to testify at this important hearing. My name is David Vogel. I am a fisheries scientist who has worked in this discipline for the past 27 years. I earned a Master of Science degree in Natural Resources (Fisheries) from the University of Michigan in 1979 and a Bachelor of Science degree in Biology from Bowling Green State University in 1974. I previously worked in the Fishery Research and Fishery Resources Divisions of the U.S. Fish and Wildlife Service (USFWS) for 14 years and the National Marine Fisheries Service (NMFS) for 1 year. During my tenure with the Federal Government, I received numerous superior and outstanding achievement awards and commendations, including Fisheries Management Biologist of the Year Award for six western states. For the past 12 years I have worked as a consulting scientist on a variety of projects on behalf of Federal, state, and county governments, Indian tribes, and numerous other public and private groups. During my career, I have been extensively involved in Endangered Species Act (ESA) issues including research on threatened and endangered species, listing of species, Section 7 Consultations, Biological Assessments, Biological Opinions, and recovery planning. I have been a long-time supporter of the fundamental principles of the ESA.

Mr. Chairman, I am here to enthusiastically support H.R. 2829 and H.R. 3705 because these bills will significantly improve the scientific integrity and implementation of the ESA. First, providing peer review when necessary is a proactive approach to prevent the probability of faulty decisions that may be unbeneficial, if not harmful, to species. Second, giving greater weight to empirical information (as compared to theoretical) will increase the probability that the best possible decision is made when it comes to the welfare of fish and wildlife species. These two measures

described in the bills will result in substantive improvements and instill greater confidence in future ESA actions.

The ESA Scientific Process: When It Works and When It Does Not

During my career, I have observed many examples of when the ESA process is effective and when it is not effective. I have had extensive involvement with both USFWS and NMFS implementation of the ESA and have seen successes and failures. I have observed examples where the lack of outside input and insufficient emphasis on empirical data served to undermine the ESA process. The most recent, prominent example took place in the Klamath basin. When I started working on endangered species issues in this region more than 10 years ago, the ESA process was open and dialogue occurred among all parties. Scientific data and information were exchanged and the ESA process allowed for technical input from all individuals. However, over time the process became closed. This culminated into a series of ESA-based actions where only selected information and individuals were included in the formulation of the two final Biological Opinions that cut off water to the Klamath Project in 2001. Only certain information was used by the USFWS and NMFS and additional relevant science-based information was either overlooked or ignored. The agencies gave greater weight to theoretical information to support an assumption for high lake levels and high reservoir releases without acknowledging empirical data that did not support their premise. As you know, a recent National Academy of Sciences' (NAS) review of the 2001 Klamath Biological Opinions concluded (among other findings) that there was insufficient scientific justification to support USFWS's demand for higher-than-historical lake levels for two species of endangered suckers and NMFS's demand for higher-than-historical reservoir releases for threatened coho salmon. Notably, the NAS committee members were unanimous in their conclusions on both Biological Opinions.

In my experience, a common factor in all instances where the ESA process worked effectively has been when the process was open, constructive, and collaborative. The Federal employees sought input from knowledgeable scientists and stakeholders both within and outside the government on all sides of the issues. Sometimes scientific debate ensued, but the process improved the agency's decision-making abilities. This open method worked not only to the benefit of potentially affected parties, but also the listed species. This works well because many individuals within USFWS and NMFS do not have all the information and expertise necessary to make the most appropriate decisions and ensure the welfare of species. Simply because an individual works for the Federal Government does not guarantee his or her scientific authority on fish and wildlife. Commonly, the Federal agencies have people with little or no practical field experience in administering the ESA. Having worked within the USFWS and NMFS for 15 years, I believe these two Federal agencies need all the technical assistance they can get. I have worked with many outstanding credible biologists. Conversely, I have observed many inexperienced biologists. Additionally, I have seen a high turnover rate in some Federal offices resulting in the agency losing their most knowledgeable staff. Peer review would provide these agencies with that necessary technical assistance, if needed. Why wouldn't biologists in these agencies be expected to effectively use the best available scientific information and perspectives? The current ESA does not ensure this situation; H.R. 2829 and H.R. 3705 will. Good science and the best application of accepted scientific principles demand diversity in perspectives and opinions, as well as data/information input from more than sources who are "like-minded".

Benefits of Peer Review and Empirical Data

Inserting peer review into the ESA process is an overdue concept. Furthermore, providing greater weight to empirical, instead of theoretical, information makes sense. These are good measures, not bad, for fish and wildlife resources. The lack of application of good scientific principles in ESA processes can serve to the detriment of these resources. A more rigorous scientific approach is essential for the ESA. It allows for the development of scientific alternatives that, in my experience, will lead to innovative measures to avoid impacts to listed species, and, importantly, develop proactive actions for improving species habitats and increasing the populations.

Selective, one-sided use of information is inappropriate in the ESA process. In some recent ESA procedural actions, one-sided information was used whereas alternative information was overlooked, ignored, or casually dismissed. The existing process allows one individual to essentially serve as judge and jury. Peer review will provide balance and fair treatment of all information. This is particularly important when other valid, relevant empirical data are available. When the stakes and ramifications are high on both sides of an issue, peer review becomes all the more impor-

tant. Peer review will also insulate a Federal employee from outside pressure that could influence the individual's actions in an improper direction. This latter example points out the fact that it is necessary to protect these people from "peer-pressure" science and engage peer-review science.

Although scientists are supposed to be the most-demanding critics of their work, they sometimes succumb to their strong belief in a particular hypothesis. When this occurs, the scientist becomes attached to that belief and acquires a parental affection to his or her hypothesis. Sometimes the affection is so strong, the individual overlooks or ignores empirical data that is contrary to the person's belief. In this context, the existing ESA process permits the following undesirable scenario: an inexperienced individual administering the ESA has a speculative idea that evolves into an assumption. Over time, that assumption turns into a fact. Ultimately, the presumed fact becomes a mandate under the ESA. In my experience, once this occurs, it is next to impossible to change. Such circumstances can be prevented with appropriate peer review and better use of empirical information instead of conjecture or theories.

There is uncertainty in science. Peer review will, at a minimum, disclose what is known (placing the greatest weight on empirical data) and what is not known when empirical data are not available. This can culminate into the most-well-informed resource management decisions. Too often the doubtfulness is not revealed in the present-day ESA process or is inappropriately veiled behind the over-used phrase, "the best available information". Scientific debate is not only common, but is expected and must be part of the process in order for our knowledge to advance and not remain stagnant. The scientific basis or validity of decisions under the ESA will be improved with these bills.

Peer review is common in many other forums of government work on natural resource issues. For example, I have been performing multi-disciplinary research for CALFED in the Central Valley of California. CALFED is a collaborative effort among 23 state and Federal agencies to improve water supplies in California and the health of the San Francisco Bay-Sacramento-San Joaquin River Delta watershed. Peer review of my work and the work of many others for CALFED is mandatory. Why should it be any different with implementation of the ESA when the natural resource ramifications are greater and more global?

I want to emphasize that peer review is not necessary for each and every ESA action. The legislation could specify thresholds of potential ESA procedures that would require peer review based on factors such as calculated risks to the species, potential economical impacts, petitions by affected or concerned individuals, etc.

Additionally, it is important to recognize that instances will arise where some individuals on either side of a controversial ESA issue will not agree with the outcome of peer review. But at the very least it will elevate technical issues in the ESA to a higher scientific standard of quality and instill greater confidence in the decisions. I have never heard anyone say that peer review is enjoyable, but I firmly believe it is necessary for the advancement of science and the welfare of the species.

Conclusion

In conclusion, many future errors in implementing the ESA could be minimized through a proper peer review of the agencies' rationale for their actions and by placing greater weight on empirical, instead of theoretical, information. However, it is imperative that the execution of peer review not be made into a facade of "like-minded" individuals or agencies promoting or protecting their hypotheses, policies, or positions. Data must be examined with clear objectivity using widely accepted, fundamental scientific principles. Agency policies and positions are not part of the objective equation or scientific process. Good science will lead to good policy and because science is constantly evolving, so should policy. H.R. 2829 and H.R. 3705 will ensure that the Endangered Species Act progresses with science to the ultimate benefit of fish and wildlife resources.

Mr. POMBO. Thank you.
Mr. Bean?

STATEMENT OF MICHAEL BEAN, CHAIRMAN, WILDLIFE PROGRAM, ENVIRONMENTAL DEFENSE

Mr. BEAN. Thank you, Mr. Pombo and Mr. Walden. I appreciate the time you have spent today listening to testimony. I appreciate your interest in this topic.

I am Michael Bean. I am the Chairman of the Wildlife Program of Environmental Defense. I have, for the last 25 years, been deeply involved in endangered species issues as a nonscientist working very closely all of that time with many scientists.

I have also had the pleasure of serving as a member of the Board on Environmental Studies and Toxicology of the National Academy of Sciences, the board which was one of the two boards under whose auspices the recent Klamath study was done and the board under whose auspices the 1995 study on science and the Endangered Species Act was done. I have also served on a number of study committees for the National Academy of Sciences.

I very much share the view that decisionmaking under the Endangered Species Act should be inclusive. The Fish and Wildlife Service should reach out for input from other scientists. I do, however, fear that the bills that you two gentleman have offered will probably not accomplish a good objective, and let me explain what my concerns with the bills are.

First, both of you, and others on this Committee, have said that their objective is to ensure the use of good science and the best scientifically based decisions in the Endangered Species Act, but I notice a considerable disparity as to when the special requirements of peer review are required.

For example, in your bill, Mr. Pombo, when the Secretary of Interior determines that there is sufficient evidence warranting proposal of a species, then additional science is needed before that step can be taken. On the other hand, when the Secretary determines that a proposal of a species is not warranted by his status review, there is no requirement in your bill for similar peer review.

In your bill, Mr. Walden, when the Secretary makes a final decision to list a species, peer review is required to make sure the science is right. But if the Secretary goes through a rulemaking process, at the end of which he concludes that listing is not appropriate, your bill does not require that that decision receive peer review.

And both of your bills require that when the Secretary carries out a Section 7 consultation that results in a determination of jeopardy to the species, there must be peer review in order to ensure that the best possible science underlies that decision. But when, as is the case about 98 percent of the time, the Secretary determines that jeopardy will not result from a proposed action, there is no requirement for peer review then.

I think a skeptic looking at that would wonder whether the objective really is improving the quality of science and decisionmaking in general or just improving the quality of science when decisions are made to extend protection to endangered species, rather than to withhold it.

The second point I would make, and this echoes administration testimony, I do believe that the imposition of peer review requirements will require significant additional resources and time for the Fish and Wildlife Service and the National Marine Fisheries Service to do that. The statutory deadlines currently in the law will be difficult to meet, and I think you are both familiar that both this administration and its predecessor have complained vigorously about the fact that they have been whipsawed by frequent litiga-

tion driving their agenda. Most of that litigation has been because they have been unable to meet the existing deadlines. My concern is that the new procedural requirements will make it even less likely that they can meet those deadlines in the future.

The last point I would make about the bills is that, in some respects, and I say this with due respect to both of you, I think the bills do not reflect an understanding of some scientific principles that scientists would readily comprehend.

There is, I would note as a threshold matter, there is a tension between, on the one hand, saying you want the Fish and Wildlife Service to use the best available scientific data and your trying to prescribe in the bill which data should always be given preference over other types of data. I think that is an inherent tension.

It also is troubling that, in some respects, there is a sort of flawed understanding. For example, data is, I believe, never peer reviewed. Data is gathered. Data is collected. It is used as the basis for reasoning to reach results. The reasoning may be persuasive or unpersuasive, and that reasoning may be peer reviewed, but the data itself is not. Yet this bill seems to assume it is.

So my conclusion is that I am very supportive of the goal of improving the quality of decisionmaking. I am very much of the belief that it is helpful to the Fish and Wildlife Service to have external input, but I also believe that it is a mistake to try to prescribe that in a form and format that applies across the board to all of the decisions we have been talking about today because I think the nature of these decisions are simply such that a single, uniform approach doesn't work in every case.

Thank you.

[The prepared statement of Mr. Bean follows:]

**Statement of Michael J. Bean, Chairman, Wildlife Program,
Environmental Defense**

Thank you for the opportunity to present this testimony on behalf of Environmental Defense.

The two bills that are the subject of today's hearing address various aspects of the role of science in the administration of the Endangered Species Act. That is a very important topic, one for which I hope I can offer a helpful perspective.

Before addressing the substance of the two bills, I will briefly describe for the committee my experience and that of my organization relevant to the topic at hand. The organization for which I work, Environmental Defense, was founded in 1967 by a group of scientists concerned about the effects of the pesticide DDT on wildlife. Their efforts eventually led to the elimination of widespread use of DDT in the United States, an action that has made possible a dramatic improvement in the status of the nation's symbol, the bald eagle, as well as the peregrine falcon, brown pelican, osprey, and still other species.

Beginning with the scientists who founded Environmental Defense, we have throughout our thirty-five year history been firmly committed to finding scientifically sound solutions to environmental problems. Our staff is drawn from fields as diverse as biology, hydrology, toxicology, biochemistry, engineering, medicine, anthropology, ecology, economics, and law. My training is in law, but my career has been spent working closely with scientists and with scientific organizations. I have, for example, served on the Board of Environmental Studies and Toxicology of the National Research Council of the National Academy of Sciences, the very board under whose auspices the recent preliminary study pertaining to the Klamath Basin was done, and the board that produced the 1995 report, Science and the Endangered Species Act. I have frequently published articles with scientists as co-authors, and have written for a wide variety of scientific journals, including the Journal of the Washington Academy of Sciences, Quarterly Review of Biology, Nature, Natural History, Bioscience, Conservation Biology, Marine Pollution Bulletin, and Conservation Biology in Practice. For the last of these journals I serve on the editorial advi-

sory board. I also have served as a peer reviewer of manuscripts submitted for publication in various of these journals.

One other aspect of my background warrants mention. I work closely with landowners on projects to enlist their cooperation in the conservation of endangered species. Indeed, finding ways to enlist landowners—particularly private landowners—as allies, rather than adversaries, of endangered species conservation has been the overriding focus of my work for the past half dozen years. I am convinced that the help of private landowners is essential for recovery of many endangered species. After all, they own the land where recovery must occur, and only they have the ability to manage that land in ways that facilitate recovery. My colleagues and I at Environmental Defense are cooperating with landowners to help endangered species in many different parts of the country. We work with forest landowners in Virginia, the Carolinas, Georgia, Alabama, and Mississippi, with ranchers in Texas and Utah, and with farmers in California. In my experience, winning the cooperation of landowners, particularly “working landscape” landowners such as farmers, ranchers, and foresters often depends on four things: (1) keeping things simple; (2) expediting agency decisions; (3) providing agencies with adequate resources to make speedy and intelligent decisions; and (4) giving landowners real and meaningful incentives to manage land (and water) for the benefit of endangered species.

The two bills before the committee today do not address these needs. They make aspects of the Endangered Species Act still more complex, rather than simpler; they slow agency decision-making, rather than expedite it; they provide no new resources to cope with new procedural obligations; and they do nothing to create positive incentives for conservation action by private landowners. All of that is not to deny that there is a problem with the scientific bases for decision-making under the Endangered Species Act. These bills, however, misdiagnose that problem and prescribe a remedy that will do little or nothing to solve it. More troubling still is that in places, the bills reveal a dizzying ignorance of science itself.

The fundamental problem with the scientific bases for decision-making under the ESA is hardly new. The National Research Council acknowledged it in its 1995 study, *Science and the Endangered Species Act*. Many of the key decisions required by the Endangered Species Act, including whether a species should be listed as endangered, and whether a particular action is “likely to jeopardize the continued existence” of any such species are at bottom judgments about the risk of extinction that a species faces. The amount and quality of information underlying such judgments affects one’s confidence in them, yet, as the National Research Council report noted, “there will always be uncertainty in the estimates of risk used to trigger decisions under the ESA, requiring policies and processes for making decisions with incomplete and uncertain data” (p. 175, hardcover edition). Underscoring this inherent uncertainty, the National Research Council noted that “for even the best-studied endangered species, essential pieces of information might be lacking, yet decisions must be made—(p. 159). The “best studied” endangered species, of course, are very few, for, as the National Research Council noted, “our biological understanding of many rare, threatened, or endangered species does not extend far beyond a taxonomic description and a coarse geographic distribution,” yet “that lack of data should not be the basis for failure to list a species if other information is available to indicate that listing is otherwise warranted” (p. 182).

Since listing decisions and jeopardy determinations are, by definition, judgments about the risk of extinction that are always made with incomplete data, it is erroneous and misleading to label such judgments as correct or incorrect. Yet, that is exactly what the Pombo bill (H.R. 3705) requires when it obliges the Secretary to evaluate a review board judgment that differs from his own prior judgment about the need to list a species. A somewhat similarly flawed understanding of the nature of these decisions is reflected in the Walden bill (H.R. 2829) requirement that the Secretary “give greater weight to scientific or commercial data that is empirical or has been field tested or peer-reviewed.” Making sense of this requirement is a challenge, inasmuch as data—the factual information used in reasoning—are never peer-reviewed. Instead, data are collected and then used to test hypotheses. Peer review focuses on whether the use of data (i.e., the reasoning) is sound. Peer review may call into question whether data were properly collected, or whether the right kinds of data were collected, but the data themselves are not peer-reviewed. Nor does it make much sense to refer to data that are “field tested” for much the same reasons. Thus, rather than improve scientific decision-making, this language is likely only to cause scientists to wonder what Congress could possibly have meant. Perhaps what the drafters of this language really intend is to discourage the use of models—which typically employ both known information and assumptions to predict future outcomes—in endangered species decision-making. Here again, the National Research Council has addressed the use of models in endangered species decision-

making, noting that “although most of these models have shortcomings, they do provide valuable insights into the potential impacts of various management (or other) activities” (p. 142).

One can only hope that the apparent aversion to the use of modeling reflected in the Walden bill does not extend to the realm of hurricane prediction. Predicting where, or whether, hurricanes will make landfall is akin to predicting that a species may go extinct in the foreseeable future. Both deal with significant uncertainties. At least two members of this committee, Mr. Jones and Mr. Gilchrest, are likely to remember Hurricane Felix of August 1995. It churned for days off the mid-Atlantic coast with wind gusts of 145 miles per hour, one of the longest-lived hurricanes on record. Hurricane warnings from South Carolina to Chesapeake Bay prompted mass evacuations of beach communities at the height of the tourist season. The lives of millions of people were disrupted, as were thousands of businesses. And yet, the hurricane never came ashore. It was, in the end, a false alarm. The National Weather Service, relying on its most sophisticated models, erred on the side of caution, and properly so, because the consequence of not issuing a warning and being wrong would have been far more disastrous. In much the same way, if we find out after the fact that we should have protected a species, but didn’t, the consequence is the loss of the species. Some members of this committee may debate how important that is, but this much they cannot debate—it is irreversible.

The bills now before the committee are also flawed in their understanding of the threats affecting species. For example, the Pombo bill would require that petitions to list species present clear and convincing evidence that “the population of the species is declining or has declined from historic population levels and beyond normal population fluctuations for the species.” What this entirely overlooks is the fact that some species can be in serious peril of extinction as a result of demonstrable threats, even though no decline in population has occurred. A ready example is the Devil’s Hole pupfish of Nevada, which has been on the endangered list since 1967, even though its population has been relatively constant for millennia. Because the pupfish occurs only in one desert pool, the threat of groundwater depletion has long been recognized as putting that species at risk of extinction. Thus, for species like the pupfish, that occur in highly restricted habitats and are vulnerable to clearly recognized threats, the Pombo bill would impose a requirement impossible to fulfill.

Both bills would impose significant new procedural requirements that would make it virtually impossible to meet many of the statutory deadlines prescribed by the ESA. For example, both bills require additional independent reviews and new Federal Register notices for listing decisions and jeopardy determinations under Section 7 of the ESA. Both listing decisions and Section 7 consultation requirements are subject to statutorily prescribed deadlines. It is worth noting that a very large portion, perhaps most, of recent Endangered Species Act litigation is due to the government’s failure to make listing and other decisions within the statutorily prescribed deadlines. Indeed, the administrators of the Endangered Species Act in both the Clinton and Bush administrations have decried the fact that their agendas have been driven by litigation, much of which consists of various deadline suits. The new procedural requirements of these two bills virtually guarantee that the government will miss even more of its statutory deadlines, thus exacerbating the very problem that has vexed the current and former administrations.

Each of the above problems could, I presume, be fixed by better-informed and more careful drafting. However, the end result would still be a pair of bills that fail to address the central needs for well-informed decisions and an effective Endangered Species Act. For the former, the central need is adequate resources to generate more and better information about imperiled species, their needs, and the likely impacts of human activities upon their survival prospects. For the latter, the central need is a set of significant incentives for landowners to cooperate with endangered species conservation efforts. These bills provide neither.

Mr. POMBO. Mr. Walden?

Mr. WALDEN. Thank you very much.

Mr. Bean, I appreciate that. I appreciate the comments that you have made. You have hit on some things, frankly, that others have not addressed, and I appreciate the manner in which you have raised them and the ones that you have raised.

Let me ask you a question. If we were to change this legislation to require peer review on no listing decisions and no jeopardy decisions, would that ease your view?

Mr. BEAN. Well, it certainly would ease my concern that the bill is not balanced, if you will, in when it chooses to require peer review. It would, I have to admit, exacerbate the other problem I mentioned, which is the problem of resources and time because you will be imposing these requirements to a larger set of activities.

Mr. WALDEN. Certainly. Certainly. No, I understand that. Because I actually thought we had it fairly well covered by doing listings, delistings, consultations, and recovery programs, but I have not really focused on this other issue of no jeopardy decisions and no listing decisions, and I would be open to discussing that.

Your comment about data is interesting as well because it is probably the inartful way we drafted this. Obviously, what we are after is to talk about how the data are collected, what are the protocols that are in place, and then are the conclusions drawn from those data correct. As you may or may not know, the situation in Klamath, the NAS said, yes, a number of the decisions made were accurate and the science is there to back it up, and then there are these others where either they looked at the science wrong or, in many cases, the decisions weren't supportable.

The interesting thing that I think draws me into this discussion on the ESA is what the National Academy of Sciences found was that decisions that were made didn't help the farmers, clearly. They got their water cutoff, but it potentially could have hurt the coho salmon by calling for releases of water out of reservoirs at a temperature which would be lethal, potentially, to the very fish that are on the endangered list.

And so I guess that is where I have become an even stronger advocate for peer review because here you have the "Perfect Storm," if you will, of bad decisions, according to the NAS, saying it didn't help the environment, it didn't help the farmers. What if we had had that peer review first? Maybe we could have avoided both potential problems.

Mr. BEAN. Well, perhaps in that case. I do think it is important, though, to emphasize one characteristic of endangered species decisionmaking. Fundamentally, all of these decisions, the decision that a species should be on the list or not on the list, the decision that a particular course of action will cause jeopardy or not cause jeopardy, those are fundamentally judgments about probabilities, certainly. They are not simple questions like sort of, "Who is buried in Grant's tomb?" These are judgments about likelihood of extinction as a result of some future events.

Peer review or certainly external review is helpful to the Fish and Wildlife Service in making those decisions, but it doesn't change the fundamental fact that, at bottom, somebody has to decide, based on the evidence at hand—

Mr. WALDEN. I understand that.

Mr. BEAN. —it either does or doesn't, and that is often going to be a decision on which reasonable people will disagree.

Mr. WALDEN. Absolutely, and I fully understand that.

I guess, as a policymaker, I want to get to the point where, when we make those judgment calls, we can probably both agree that the data that leads up to the decision is beyond reproach and that the decisions are backed up by the data that we have.

Mr. BEAN. I would like to think that as well, but experience tells me that when these decisions are made, they will always be made on the basis of less data than one would like to have.

Mr. WALDEN. I understand, but we have also witnessed some decisions of late, a court suit down in California on a logging case where the Agency just simply didn't do the work on the ground, and then they were capricious in the way they operated. We have got to get that out of the process, and that is where I am hoping we can get there.

Mr. Vogel, can you describe how the Agency peer review operates, as opposed to the independent peer review process included in the bills we are discussing today?

Mr. VOGEL. I can tell you, based on my experience, there has been a wide variety of how the agencies have performed peer review, if they, in fact, even do perform peer review. In the Klamath instance, it clearly was a very closed process. They did not allow for significant outside input, particularly if there were alternative scientific perspectives brought to bear in the process.

I was very pleased to hear Craig Manson say today that from now on, if I understood his comments, that it will be an open process because it definitely was not last year.

My experience, based on working for the agencies, and with the agencies, and being on the other side of the issues in some cases, is that too often the agencies seek like-minded individuals to support their arguments, where, in my perspective, I think it is more important to actually go out and seek alternative perspectives to challenge. So I think that is one of the big deficiencies.

I am concerned that if administratively the agencies say, "Trust us. We will do all of our own peer review process," they won't aggressively seek those outside alternative perspectives on these issues.

Mr. WALDEN. Mr. Chairman, if I can just make one other comments.

Mr. POMBO. Have at it.

Mr. WALDEN. I can't resist, but to follow up on—is it Mr. Dueser?

Mr. DUESER. Dueser.

Mr. WALDEN. —when you said the people in Klamath must have felt abandoned by their Government. Let me suggest they didn't feel "abandoned," they felt attacked by their Government. It has been an extraordinary experience over the last year and especially now, in light of the NAS findings, what they went through. You can imagine the deep-seated anger that exists there about this act, this Government, the decisions made by this Government, the losses suffered, and the lack of improvement, frankly, in the habitat there in the intervening year.

I mean, that is probably to me the most frustrating thing is we have known for 10 or 20 years what needs to be done to improve water quality, and quantity, and fish passage, and I can rattle them off. I have got them memorized now. It is about five pages of items. For some reason, we have never gotten them done. We have got a little irrigation dam blocks 95 percent of the suckerfish on Chiloquin Dam on the Sprague River. We had Dr. Lewis here last week saying the suckers would be lining up to breed if we could just, I have visions of rabbits, if you could just get passage,

and they have been telling us that for a long time. We have passed a bill in this chamber to do that, and the Senate has got it bollixed up.

You know, there are things that were promised that would improve water quality and quantity in this basin. The Government has got to get at it and do the things that would make a difference, many of which have been outlined by Mr. Vogel and others in the work they have done that would really improve the habitat and give us the water we need for everybody.

So the real crime in that basin is that the Federal Government promised the tribes the water, and they promised the farmers, if they would come out, veterans, if they would come out and settle and use this productive land that had been reclaimed, they would have the water. Then we passed the Endangered Species Act and promised it to the species. And every one of those is a claim somebody is coming at you on, and we have run out of water, and we have got to figure out how to fix that.

I, occasionally, get on my soap box here on that issue. I apologize, but I feel pretty darn strongly about it.

Thank you, Mr. Chairman.

Mr. POMBO. I think we have all heard you talk about Klamath at some point before.

Mr. DUESER, I tell you that I would glad accept your offer to go sit down with one of the recovery teams and watch and listen to the process that they go through, but at the same time, I would make the offer to you that, in your statement you talked about Klamath and how you didn't know if there were that many cases like Klamath that were out there, and I would make the offer to you. You name which Western State you want to go to, and I will take you there, and you can sit down with a group of farmers or homebuilders or property owners and hear the same kind of story. I won't even set it up for you. I mean, you just tell me which State you want to go, and we will do that.

Mr. DUESER. I understand that must be the case. You know, in Utah, where we are really beginning now to make some progress in this area is through a lot more public involvement and community commitment to conservation programming, and this works for us on some of the smaller issues. You know... you have prairie dogs in some part of the State, yeah, you can deal with that. An issue that involves the entire Pacific Northwest, old growth forests and so forth... that is going to be a little trickier perhaps to create community-based programming. But certainly for—

Mr. POMBO. It is not. It really isn't, and I have always contended that if they really wanted to solve the problem with any number of these different endangered species cases that we have had, they could; you know, at least reach a consensus where the people who actually live and work in that community could continue to live and work in that community, and we could do a better job of recovering the species.

On the forest issues, Quincy Library Group is a perfect example of how the community actually got together and solved the problem. Unfortunately, for them, they have had a very difficult time convincing the Federal Government that they could actually do it. The Federal Government usually thinks that they know more than

anyone else, so they have held up their efforts in order to do that, but I think that they have proven that they can do that.

I think that just about on every one of these there is a way to move forward, and it does involve public participation, it does involve the community that is actually impacted by the decisions being involved. Unfortunately, under the current implementation of the act, that very, very rarely happens, and that is a major problem.

Mr. DUESER. Well, community-based programming is certainly starting to pay huge dividends in the State of Utah and elsewhere I think in the inter-mountain West.

Mr. POMBO. Mr. Simmons, you come at this from I think probably a different angle than a lot of the folks who have testified before this Committee in years past. I think you probably have a greater understanding of what we have to deal with in terms of trying to deal with this act. It has become, you know, the law of the land. It is the preeminent law of the land. It takes precedence over any other function of our Federal Government. And when you talk about making any change, removing one comma from the act, the accusations that are made are that you are trying to gut the act.

Unfortunately, the media that covers this issue rarely takes the time to actually understand the legislation. They just repeat what accusations are being made. And the folks out in the real world outside the Beltway very seldom hear, I think, an unvarnished truth of what the debate is and what we are trying to do. I appreciate your testimony. I appreciate you being here.

Mr. Bean, I understand what your concerns are. I spent some time reading your testimony last night and trying to understand exactly where you are coming from because you and I have had the opportunity over the years to talk, to interact on this on a number of occasions.

I think that, when it comes to my legislation, you kind of just make a general statement about what is included and what is not included, what is peer reviewed, what is not peer reviewed. I went back and looked at my bill in relationship to the existing law, and when it comes to the jeopardy opinion, you are correct. It does not require peer review on a no jeopardy opinion. It does require a peer review on every listing petition, based upon what decision, not based upon what decision the Secretary makes. It requires a peer review on a listing petition.

So the information, what I am trying to get at, is the information that he or she is basing their decision on is the best science that we can possibly put together at that moment in time, regardless of what decision they make, yes or no, on the list, off the list, threatened, endangered, it is the best decision, the best science that we can gather at that particular point.

That is the attempt that is being made, and I think that in your written, as well as in your oral testimony here today, that you somewhat misstate what the act actually does or what the law does or my amendment does in context of what the law actually says.

So I would like to disagree with you on that point.

Mr. BEAN. May I address that, sir?

Mr. POMBO. Yes.

Mr. BEAN. I will certainly re-read your bill very carefully. However, my understanding is, with respect to petitioned actions, your bill requires—potentially requires—peer review at two points; one, when the Secretary makes a determination as to whether a petition presents substantial evidence. You are correct. In that instance, as I understand your bill, whether his decision is, yes, it does present substantial evidence or, no, it does not, your bill appears to require peer review, either outcome.

However, the next stage of the process, some 90 days later, is a determination whether or not proposal may be warranted. At that stage, your bill, as I understand it, says that if the determination is that a proposal of the species may be warranted, peer review is required. On the other hand, if the Secretary decides that a proposal is not warranted, peer review is not required by your bill. That is what I meant to say in my testimony and thought I said.

Mr. POMBO. Well, the goal of this particular legislation is to get the best available science that we can, which I do not believe is currently the case. I think that, even though there are areas where we do disagree in terms of the Endangered Species Act, I think we would both have to agree that there are times when the science that the decisions are based upon is not exactly the best that we could do.

I would also like to say to the entire panel that, as we work our way through this process, and in an effort to move this legislation and other legislation that has been introduced, there are other areas, and Mr. Bean points this out and a couple of you have stated this as well, that there are other areas of the act that need to be addressed. There are other problems with implementation that need to be addressed, and I wholeheartedly agree with you. There are other areas that we need to make legislative changes to.

And as we work our way through this entire process, first, with the science bill, later on with habitat issues, with incentives for property owners, I look forward to working with you. Any ideas that you have for ways that this would work, I would be more than happy to take those and see if there is any way that we could make that fit.

In terms of this particular legislation, you guys have other ways of doing peer review, send them to us. I am not a scientist, as I have said before. I know Mr. Bean said he is not a scientist. There are scientists who have testified today that they like what we did, there are scientists who have testified that they didn't like what we did.

So, if you have other ways of doing this, have at it. I am open to it. And we will see if we can put together a bill that actually works, so that when all of you are sitting down and trying to make this work out in the real world, we get something that works a little better than what we have now.

But I want to thank you all for your testimony, for answering questions. I will remind you that there are additional questions that other members of the Committee will submit in writing to you. If you can answer those in writing, for the benefit of the Committee, it would be greatly appreciated.

I would, also, before I close the hearing, say that the hearing record will be held open for 10 days. We had a number of other

people who did want to testify whom we were not able to accommodate. I know that I received a request from homebuilders, as well as others, that they wanted an opportunity to testify here today. The record will be held open. If anybody has additional testimony that they would like to submit to be part of the record and to be considered as part of our decisionmaking process in this, please submit that to the Committee, and it will be included in the record.

So thank you all very much, and the hearing is adjourned.

[Whereupon, at 5:53 p.m., the Committee was adjourned.]

The following information was submitted for the record:

- American Farm Bureau Federation, Statement submitted for the record
- Garczynski, Gary, on behalf of the National Association of Home Builders, Statement submitted for the record
- Marbut, Gary, President, Montana Shooting Sports Association, Letter submitted for the record by The Honorable Dennis Rehberg

[The statement of The American Farm Bureau Federation follows:]

Statement of The American Farm Bureau Federation

Last year the Bureau of Reclamation, acting on recommendations contained in biological opinions from the US Fish & Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), shut off the flow of irrigation water to over 1400 farms and ranches in the arid Klamath Basin in Oregon and California. The water was needed, the agencies concluded, to keep lake and river levels high enough for endangered sucker and salmon. Farmers suffered severe financial hardship as their fields lay fallow. Communities suffered as businesses closed, and residents moved away. Desperate farmers sought to sell their farms for a fraction of their worth.

The National Academy of Sciences (NAS) was asked to review the scientific basis for the decision to favor fish over farmers. Its preliminary report issued last month finds that there was not sufficient scientific evidence to support the decision to deny water to the Klamath Basin last year.

The most celebrated case involving an endangered species remains the snail darter. This small fish halted a multi-billion dollar water project in Tennessee. A lawsuit over this human-endangered species conflict went to the Supreme Court, and remains the only substantive case on the Endangered Species Act (ESA) to have been decided by that forum. Following the decision in Tennessee Valley Authority v. Hill, Congress passed a law exempting the Tellico Dam project from the strictures of the act.

A few months later, several more areas were found to be inhabited with snail darters. The species was soon thereafter downlisted from "endangered" to "threatened." Millions of taxpayer dollars were wasted because of incomplete scientific information.

These are but two examples why it is critically important that decisions made under the ESA be made on the basis of sound science. The ESA is so pervasive and its provisions so restrictive that there is simply too much at stake for farmers, ranchers and others for ESA decisions to be made with inadequate or incomplete scientific justification.

The ESA needs to be changed to ensure that decisions are based on sound science instead of agency whim. H.R. 2829 and H.R. 3705 are steps in the right direction to accomplish this. Both bills provide for increased emphasis on verifiable, field-tested scientific data, and both bills provide for a system of scientific peer review of agency decisions.

Much of the problem arises from the scientific standard applicable to ESA decision-making. ESA decisions currently are required to be made on the basis of "the best scientific and commercial data available." The "best" scientific data available might be as little as one monograph on the subject by a student working toward a master's degree who might have an interest in having the species listed.

The “best scientific data available” standard is really no standard at all. It provides no incentive for agencies involved in species decisions to obtain accurate and up-to-date information necessary to make an informed decision. All too often, decisions are made on outdated or misinformed data. Unverified hypotheses or assumptions made by one researcher often become truth for the next researcher who does nothing more than glance through the earlier work.

Often, the correct scientific data is easily obtainable through little effort. For example, in the case of a listing of the five snails in Idaho, the Idaho Farm Bureau Federation hired an independent biologist to check the FWS data. With minimum effort, he readily discovered that these snails exist in far greater numbers and in a greater number of places than determined by the government. Such information, however, was largely ignored in the final decision.

With affected species occupying greater habitat areas and affecting more basic, pre-existing human activities (as opposed to new, proposed projects) than ever before, there is too much at stake to make such decisions based on inadequate scientific evidence.

The ESA also requires the Secretary of the Interior to “determine whether any species is an endangered species or a threatened species.” This requirement implies a burden of proof on the Secretary to justify such a finding. It implies a minimum scientific requirement that must be met. In practice, however, the FWS has ignored this minimum requirement, made decisions without regard to sufficiency of the evidence and forced landowners and others challenging a decision to carry the burden of proof.

We are troubled that private landowners are being required to prove that government data is incorrect. Private landowners do not have the resources that are available to the government; and even in the face of contradictory evidence, there is no guarantee that the government will accept it. We submit that precious time and resources will be saved if the listing agency or the agency making the decision is required to do it right in the first place.

Furthermore, requiring an affected private person to disprove the government’s data places the ultimate burden of proof for ESA decisions on the private party. Instead, the burden of proving that a species deserves to be listed or that certain management prohibitions are appropriate should be on the government agency proposing the action. The act requires the FWS to make decisions whether or not to list certain species, and those decisions should at the very least be based on sound science. The agency has greater resources available to it, is in a better position to obtain required data and should be required to justify its actions.

The term “best scientific and commercial data available” must be defined or clarified to incorporate minimum scientific standards and procedures necessary to sustain a decision that a species be listed or that some other action be taken. This amendment is necessary to ensure that decisions affecting entire regions of the country are not being made on outdated information or on bare assumptions that could easily be disproved.

Once such a standard is in place, there must be an unbiased, objective review prior to a decision to ensure that the proffered data meets minimum scientific standards.

To accomplish this, we suggest the creation of a truly independent peer review process to scrutinize ESA decisions prior to their proposal to ensure that there is sufficient scientific data to support the conclusion. Providing independent scientific peer review for most types of agency decisions will both validate the scientific conclusions of the agency and also help to restore public confidence in agency decision-making. Independent evaluation will lessen the possibility that decisions will result from any bias by the scientist.

Independent peer review does not change the statutory standard of using the “best scientific and commercial data available,” but it can inform the agency whether there is a sufficient scientific basis for making a determination to list, de-list or designate critical habitat. It may help restore the agency’s responsibility to justify its decisions. Decision-making authority would still rest with the agency, with the report of the independent peer review panel being part of the administrative record.

The peer review process must be streamlined so that it can be used for all agency ESA decisions. It must be a process that will not unduly prolong the decision it is supposed to review. The National Academy of Sciences process that was used in the Klamath decision is not suited for review of agency decisions on a routine basis. We look forward to working with the committee to craft a workable process.

[The statement of Mr. Garczynski follows:]

**Statement of Gary Garczynski on behalf of the National Association of
Home Builders on H.R. 3705**

Chairman Hansen and members of the Resources Committee, I am pleased to share with you the views of the National Association of Home Builders (NAHB) concerning the "Sound Science for Endangered Species Act Planning Act" (H.R.2829) and the "Sound Science Saves Species Act" (H.R. 3705). My name is Gary Garczynski. I am a homebuilder and developer from Woodbridge, Virginia, and the 2002 President of the National Association of Home Builders. I submit this testimony on behalf of our 205,000 NAHB members.

When homebuilders develop land and construct homes and apartments, the process may occur within or adjacent to an area where there may be endangered or threatened species or their habitats. As a result, in seeking to comply with the Endangered Species Act (ESA), many of our members are prevented from developing their property or are required to submit to extensive mitigation requirements in order to move forward.

For years, private landowners, who have been burdened with carrying out the responsibilities of the ESA, have repeatedly questioned the science behind the decisions made by the Federal agencies implementing the ESA. Because of the vast and often severe social and economic impacts of each ESA decision, the aggregate results of erroneous ESA decisions are broad, harmful effects on the housing market and the national economy, and at times damage to the species we are trying to protect. Legislation that requires better science to help prevent accidental or intentional errors in ESA decision-making is long overdue.

As members of this committee know, for over a decade the political realities of the diverse interests in the U.S. Congress and on this committee have made reaching consensus on ESA reforms very difficult. However, given the recent public attention to ESA errors and the introduction of narrowly focused reform legislation before us, I believe that Congress must act on the heightened urgency to pass reforms to this act.

The two bills before this committee, H.R. 2829 introduced by Congressman Greg Walden (R-OR) and H.R. 3705 introduced by Congressman Richard Pombo (R-CA), are steps in the right direction to provide more effective protection to endangered species while making certain that regulatory burdens placed on specific segments of the public are scientifically sound and defensible. These narrow legislative changes to the Act, through the requirements of sound science, would address many of the systemic problems in the ESA, on which I will elaborate below.

Setting aside the community benefits of developing balanced neighborhoods, the economic impact of home building extends itself deep into the economy of the U.S. The economic activity generated by home building is three to four times the typical homebuyer's down payment. Hence, a typical \$34,000 down payment on a new home generates nearly \$160,000 in new economic activity (the underlying land value is subtracted from the calculation). Many aspiring homebuyers are just on the edge of being able to qualify for a mortgage and make the required payments. Even a small change in home prices, interest rates or delays in construction can determine whether they can buy a home.

Home builders are generally entrepreneurial members of the small business community. 82 percent of home builders build fewer than 25 homes a year and 60 percent of our members build fewer than ten homes a year. Many of these small-volume builders and subcontractors do not have the capital to withstand the devastating effects of an accidental or intentional error in an ESA decision.

Therefore, NAHB believes the listing of species as threatened or endangered and the designations of critical habitat for those species must be based on reliable, accurate and solid biological and scientific data.

The following publicly reported events, although somewhat recent, are not isolated occurrences but are the latest in a chain of examples of bad Federal agency decisions based on faulty or absent scientific data. Considered individually, they demonstrate how single decisions under the Endangered Species Act (ESA) can have a widespread effect on the regulated community. Considered cumulatively, these events signal fundamental and systematic problems with the ESA.

- Several Forest Service and Fish and Wildlife Service employees admit to planting false samples of Canadian lynx hair in Washington state national forests.
- A scientific review by the National Academy of Sciences reveals that Fish and Wildlife and the National Marine Fisheries Service did not have enough scientific evidence to justify cutting of irrigation water to hundreds of farmers in the name of protecting fish.

- The Forest Service used faulty data of spotted owl habitat to block logging projects in California and as a result, has recently agreed to pay one logging company \$9.5 million in damages.
- The National Marine Fisheries Service has agreed to rescind the overly broad critical habitat designations for 19 salmon species and re-designate based on better science and economics.

Six Necessary ESA Reforms for Science

The ESA calls for the use of the “best scientific data available.” However, there is no definition of this phrase within the Act or in implementing regulations. Therefore, the following reforms are necessary to define what constitutes the phrase “best scientific data” and to ensure that ESA decisions are made stronger and more defensible, while providing protection to our threatened and endangered species.

I. Reliable, Accurate and Solid Data

The underlying data used by the agencies in making ESA decisions must be reliable, accurate, and solid. Species should be listed on the basis of field-tested data, including actual observation of the species, not merely on population projections and speculation. Currently under the ESA, a species can be listed as endangered or threatened based on one letter from a landowner claiming that “there are less of the species than there used to be.” The golden-checked warbler was listed on the basis of one letter from a private individual. This is unacceptable. Although this type of information may constitute “best science available” under the current ESA, the agencies should not be allowed to continue to make such fundamental and important decisions based upon such a blatant lack of information about the species. Petitions to list a species should be founded on clear and convincing evidence that a listing is warranted.

There are other important decisions made by the Federal agencies that are based on flawed or absent data. For example, as a result of a lawsuit brought by NAHB and 17 other organizations and municipalities, the National Marine Fisheries Service agreed to rescind its critical habitat designations for 19 salmon and steelhead species in the Pacific Northwest due to the lack of science and proper economic considerations. In 2000, NMFS designated critical habitat for these populations covering 150 watersheds over the states of Washington, Oregon, Idaho, and California. Thousands of our members within this four-state area were encompassed by this over-broad and expansive designation. Many of their projects were prevented or were subjected to expensive mitigation requirements.

The lack of science in these decisions is best summed up by a 1998 inter-agency memo from Donna Darm, the then Acting Regional Administrator for the National Marine Fisheries Service, when she said, “When we make critical habitat designations we just designate everything as critical, without an analysis of how much habitat an ESU needs . . .” NAHB strongly believes that ESA reform is overdue and that Congress should act now to prevent these grievous errors from happening again.

In another recent development, the Forest Service has agreed to pay \$9.8 million to a logging company for four cancelled timber sales. The settlement arose out of a February 1998 decision by an U.S. Court of Federal Claims judge that Forest Service officials knew their scientific data regarding the California spotted owl was faulty before canceling several timber sales.

These ESA decisions have far-reaching consequences for the public. Therefore, the Federal agencies must be able to support these decisions with sound and defensible science to justify that the hardships inflicted on the public are absolutely necessary to protect and conserve these species.

Both H.R. 2829 and H.R. 3705 seek to give greater credibility to field-tested and empirical data. H.R. 2829 sets minimum standards for the scientific and commercial data used in listings and H.R. 3705 requires minimum standards for the listing petitions used to initiate the protection of a particular species.

II. Consideration of New or Additional Data

The Federal agencies must be required to consider any additional or new science involving the species or its habitat. Once a species is listed, or its critical habitat is designated, the agencies often ignore additional or new science that supports the de-listing of that species, or removal of protections for its habitat. When the Fish and Wildlife Service listed the Coastal California gnatcatcher as a threatened species in 1993, it refused to seriously evaluate evidence that the population was not a valid subspecies and was genetically indistinguishable from the millions of gnatcatchers in Baja, Mexico. The best scientific data available on this issue, the first-ever range-wide genetic study of the gnatcatcher (co-authored by the original petitioner for the listing and published in the October edition of the *Journal of Con-*

servation Biology) now demonstrates that the Coastal California gnatcatcher is not a distinct subspecies and is not genetically distinguishable from the millions of gnatcatchers in Baja, Mexico. However, the Coastal California gnatcatcher remains on the ESA list and the battle regarding its removal is now being fought through litigation.

In another example, the Fish and Wildlife Service is still continuing to regulate areas in Tucson, Arizona as “potential or suitable habitat” for the cactus-ferruginous pygmy owl although a court has invalidated the critical habitat designation for that species. The Fish and Wildlife Service is requiring our members to set aside 80 percent of their property as undeveloped. Yet, both survey protocols and reports by local biologists in the area show that there is no scientific justification for those requirements and that in fact, many of the areas being regulated are not suitable habitat for the pygmy owl at all. However, the Fish and Wildlife Service refuses to take this data into consideration and often dismisses it outright. Scientific studies conducted by entities such as landowners, biologists, municipalities, and consultants must be taken into consideration by the agencies.

H.R. 2829 seeks to require agencies to accept data from landowners regarding a species or its habitat. This is an important step in ensuring that regulatory decisions under the ESA are always based on the most up-to-date and reliable science available.

III. Independent Peer Review of Scientific Conclusions Must Include Underlying Data

Independent peer review must be required of underlying scientific data supporting ESA decisions. It is extremely important that the peer review take place outside and independent from the agency making the policy decision. Furthermore, it is vital that the review encompasses the materials used to support the decision. For example, review of an ESA “jeopardy determination” will not reveal the fundamental problems with the science unless all documentation used to reach that jeopardy determination can also be examined and reviewed. Likewise, not only should a proposal to list a species be reviewed, but also the underlying biological data, including any species counts, population models, and other relevant information used in that listing decision.

The best example of this is the recent independent study conducted on the scientific and biological data used by the Fish and Wildlife Service and National Marine Fisheries Service in the decision to cut off irrigation water to hundreds of farmers in the Klamath basin. The National Academy of Sciences reviewed the supporting data and found no justification for the decision to cut off the irrigation to the farmers in the name of protecting the threatened and endangered fish. In fact, the review showed that allowing the water to remain in the basin was likely harmful to the fish due to the temperature level of that water. Without this independent review, the agencies would have continued to withhold water from the farmers and possibly harm the fish they are mandated to protect under the ESA.

Both H.R. 2829 and H.R. 3705 contain provisions that would require independent peer review of ESA decisions and the underlying scientific and biological data supporting those decisions. H.R. 2829 would require peer review of species listings, delistings, recovery plans, and jeopardy determinations. H.R. 3705 requires peer review of the underlying petition used to request that a species be listed as threatened or endangered and of jeopardy determinations.

IV. Public Access to Science

Any scientific and biological data used as a basis for a regulatory action affecting a landowner should be open for that landowner to review. If the Federal agencies require a landowner to submit to specific regulatory requirements due to the presence of an endangered species or its habitat, the landowner should have the opportunity to request the biological and scientific data used by the agency to determine those requirements. Often our members are forced to bring litigation under the Freedom of Information Act (FOIA) in order to view the information that the agency is using to justify placing restrictions on our members’ property. A landowner should not have to rely on the “word” of the Federal agencies that an action the landowner will take might effect a particular species or its habitat. In many cases, the agencies will not even disclose to landowners where particular species or the boundaries of critical habitat are located. This affords a great amount of discretion to the Federal agencies to regulate as they see fit, without obligation to base their actions upon actual biological or scientific data.

For example, the Fish and Wildlife Service has refused to turn over information disclosing where particular members of the cactus-ferruginous pygmy owl exist in Southern Arizona. Without knowing where the species are located, our members

cannot make the appropriate decision to avoid particular areas and they are forced to submit to permit denials or project modifications simply based on what they are told by the Fish and Wildlife Service.

H.R. 2829 provides the ability for a landowner to review information used by the agencies in biological opinions and the alternatives developed for the particular project under that opinion. However, another piece of legislation, H.R. 3706, introduced by Congressman Pombo would require the agencies to release information regarding a particular species or its critical habitat to the owner property affected by such species or habitat. NAHB fully supports that legislation as a means to prevent situations like that in Arizona where our members are not even allowed to obtain information about species or habitat on their property, yet are still required to be extensively regulated by the agencies.

V. Manifest Requirements

Situations like those involving the false samples of lynx hair demonstrate that there must be strict manifest and reporting requirements for the tracking of biological and scientific data. Such requirements will compel the agencies to demonstrate both the origins and handling of the data. Amendments requiring better science for the ESA should encompass a requirement that the Federal agencies develop comprehensive manifest and reporting requirements for collecting and tracking scientific data. For example, the Department of Transportation has regulations covering the sample collection and "chain of custody" requirements for drug samples collected for chemical testing. The Resource Conservation and Recovery Act (RCRA) contains provisions to track the transport and storage of hazardous materials. These types of quality control requirements would help to ensure that the biological and scientific data used in making ESA decisions is sound and would also work to hold those responsible for false data samples accountable for their actions.

Currently no legislative proposals exist to address the need for manifest and reporting requirements within the agencies. NAHB believes that these requirements are necessary to ensure the validity of the underlying scientific and biological information used in ESA decisions and urges your attention to this needed reform.

VI. Agency Responsibility for Data Collection

Any scientific and biological data used as a basis for an ESA regulatory action, such as a listing or critical habitat designation, is the obligation of the Federal agency to collect. Often the Federal agencies pass their obligations to collect scientific and biological data under the ESA onto the landowner. For example, in many areas of the country, landowners are required to conduct "survey protocols" of their property to determine if there are species or potential habitat present. The protocols require a landowner to prove the non-existence of a listed species or its habitat by conducting surveys at various times of the year. In many cases, the failure of a landowner to find a species is not considered proof that it does not exist on their property, and the Federal agencies still regulate the landowner under the ESA. Survey protocols impose real, time-consuming and costly burdens on the regulated community and put the burden of proving where species are on the landowner not the Federal agency where it belongs. These survey protocol requirements are being forced upon landowners by Federal agencies in Pennsylvania, Massachusetts, California, Arizona, and Texas.

The committee should keep in mind that the responsibility to conduct proper science in their ESA decisions is frequently passed on to individual landowners. Our members are often unfairly burdened by requirements to complete extensive science that often does not have a direct relationship to the effect that the project will have on the species or its habitat. In strengthening the requirements for scientific and biological data, the committee should remind the agencies of their obligation to complete these scientific requirements.

Conclusion

In conclusion, species protection without essential scientific basis has an unjustified real and direct impact on our members and others in the regulated community. NAHB supports the goals of the ESA in protecting endangered and threatened species and their habitats, but these protection measures must be based on reliable, accurate and solid biological and scientific data. Our members are often prevented from developing their property or must submit to extensive mitigation requirements based upon what are often hypothetical and speculative impacts to species and their habitats. Greater weight must be given to updated science that is empirical, peer-reviewed and it should be accessible to the affects.

Both H.R. 2829 and H.R. 3705 will provide more accurate, reliable, and solid data that is independently peer reviewed. H.R. 2829 also requires the consideration of new and additional information pertaining to species and habitat. While manifest

and reporting requirements are not provided by these proposals, we urge the committee to consider those requirements as necessary measures to ensure the validity of ESA decisions. NAHB also asks Congress to reinforce the agency responsibility to conduct these scientific studies and data collections pertaining to species and habitat before being allowed to make regulatory decisions under the ESA. Land-owners must not be required to bare the weight of these responsibilities.

Continuing to apply unsound, unreviewable, and at times fraudulent evidence in ESA decisions could endanger the very species it seeks to protect, and it will certainly continue to unfairly raise the cost of housing, lock families out of the housing market, and have harmful effects on our economic recovery.

We look forward to working with you and other members of the House Resources Committee on the important issue of sound science in implementing the Endangered Species Act. H.R. 2829 and H.R. 3705 represent narrow legislative solutions to documented science problems with the ESA. I urge this committee to support this legislation and move it to the floor of the House of Representatives for consideration. I appreciate the committee's leadership on this issue and your consideration of NAHB's views.

[A letter submitted for the record by Mr. Marbut follows:]

MONTANA SHOOTING SPORTS ASSOCIATION

JANUARY 22, 2002

Field Supervisor
U.S. Fish and Wildlife Service
420 South Garfield, Suite 400
Pierre, South Dakota 57501

Dear Sir,

It is our understanding that the U.S. Fish and Wildlife Service (FWS) Finding by which the Black-tailed Prairie Dog (hereinafter PD) was determined to be "warranted but precluded" for listing as a threatened or endangered species under the Endangered Species Act (ESA) is coming up for annual review and reconsideration. We wish this letter to be considered as official comment upon this annual review and reconsideration.

In general, we object to the Finding that PDs are actually warranted for listing. We observe that the FWS has relied too heavily on the assertions and claims of the petitioner, the National Wildlife Federation (NWF). In doing so, the FWS has replaced its responsibility to apply honest and accurate science to this issue with the advocacy which constitutes the position of the petitioner. Specifically, the USFWS has relied far too heavily on the assertions made by petitioner in their petition without verifying these assertions with scientific data—without sufficient fact checking.

Throughout the finding, there are hedge terms used that demonstrate the FWS lacks certainty or scientific proof. For example, the Finding (as published in the Federal Register of February 4, 2000) uses the phrase "we believe" about 32 different times. We assert that an issue as consequential to various stakeholders as the listing of ten million animals, occupying vast areas of many states, as threatened or endangered must be done according to hard facts and proof, not merely someone's belief. These facts and proof must be able to be stated as facts, not the simple reiteration of the wishes and beliefs of the petitioner wildlife advocates. Such a decision needs to be based on real science, not wishful pseudo-science.

Allow me to discuss some specific areas of real concern about the ongoing position of FWS that PDs are warranted for listing.

1. There are no adequate benchmarks to document the historic range and habitat of PDs. In much of its publicity pushing PD listing, the petitioner NWF claims that PDs now occupy only 1% of their historic habitat (Denver Post, January 06, 2002). This assertion is repeated by the FWS in its Finding. Although there is little doubt that many acres of historic PD towns have been tilled into cropland, and some acreage has been lost to human habitation, there is actually no census data whatsoever to validate current claims of PD habitat and range a century, two centuries or five centuries ago. It's all guesswork.

For example, the "A SPECIES CONSERVATION PLAN FOR THE BLACK AND WHITE-TAILED PRAIRIE DOGS IN MONTANA" (the Montana Prairie Dog Conservation Plan of 1999, adopted by the Montana Department of Fish, Wildlife and Parks) points out on page 10, "The original abundance of prairie dogs in Montana is unknown. Despite the reputation for occurring in incredible numbers, many 19th

century Montana journalists recorded very little about prairie dogs. The Lewis and Clark journals probably contain the best accounts of prairie dog colonies in Montana. Lewis and Clark reported that prairie dog colonies along the Missouri River were common, some were 3 to 7 miles long, and that their last encounter with prairie dogs was at the Three Forks of the Missouri (Burroughs 1961).

While this makes for an interesting tale, it is hardly scientific information or accurate census data upon which it may be validly concluded that we have lost 99% of historic PD habitat. We object to the unsupported and unsupportable premise in the Finding that PDs currently occupy only 1% of their historic range.

2. The data we have now suggests significantly higher numbers of PDs extant than the lowball estimates of the petitioner NWF that seem to be the primary basis for the Finding. For example, recent inventory of habitat by the Colorado Division of Wildlife suggests much more extensive extant PD habitat in that state than the amount considered by FWS in its decision to award PDs (and NWF) the “warranted” status. As with estimates of the historic range and habitat of PDs, the numbers used for the current range and habitat are somewhere between guesswork and blind acceptance of the assertions made by petitioner and wildlife advocate NWF in its petition to list. Although a lot of more accurate census and habitat measurement has been done since the first FWS decision to call PDs warranted for listing, the truth is that we still don’t have complete and reliable numbers for PD habitat extent, although the more we look, the more we learn that PDs are much more numerous than the numbers upon which the original Finding is based. We object to designation of PDs as “warranted” for listing based on inexact and lowball estimates of current numbers.

3. Much weight is given to the effects of plague on PD populations. While there is little doubt that plague constitutes a potential threat to PDs, we certainly challenge the use of the plague threat as any proper basis for listing PDs. First, we do not believe that the ESA contemplates giving governmental agencies the power to determine which species will prevail as a Darwinian success in the natural environment. No doubt there is an ongoing conflict between PDs and the plague bacillus (one species against another), but the ESA does not contemplate making the FWS the final arbiter of which species ought to be given an advantage over others. Second, although the NWF and the FWS point back to the earliest noticed effects of plague on PD populations, there is no proof whatsoever that these first observations constitute the first occurrence of that phenomenon. This is similar a child’s view that the Universe began with their first conscious memories. The finding states in its conclusion. “Plague is a new phenomenon in North American ecosystems.” With the same scientific validity, one might just as well state that microbes only happened since the microscope was invented. Much is made of the presumption that plague is a new and artificial factor in PD populations, and one for which the FWS must regulate and compensate, only because the FWS has not yet demonstrated an earlier existence of the phenomenon. This is not science.

So, we object to factoring plague into the listing decision because it is an intervention into the natural order and among species not supported by the ESA, and because there is no proof that plague is not a naturally-occurring phenomenon. It may be that the rise and fall of PD numbers because of plague is as natural as the ebb and flow of the tides, not exactly something the FWS is obliged to rush to fix.

4. It is a strange mindset indeed that would assert that inadequate regulation is a threat, especially coming from a governmental agency. There is absolutely no limit to the mischief that could be done to the liberties of the people under this theory. Of course, the regulations contemplated are not regulations to regulate PDs, but to regulate people. The theory that government must step in to regulate people who are inadequately regulated—that if a regulatory vacuum can be identified, it must be filled—is indeed novel, and is inconsistent with the republican and limited form of government mandated by our constitution and especially asserted in the Tenth Amendment thereto. While it is not surprising that a government agency would think this way, it is at best a bit strange, and at worst dangerous. We object to the application here of the theory that a regulatory void is a threat that must be corrected with government intervention.

5. Synergistic effects. In its rush to sweep PDs into its wide regulatory loop, the authors of the Finding are indeed grasping at straws. It is hard to imagine locating a more classic example of a non sequitur than this statement from the Finding: “The synergistic effect of various factors adversely influencing black-tailed prairie dog populations are largely unknown. Nevertheless, these influences are considered a moderate threat.”

This is, apparently, what passes for science in this Finding. Allow me to offer a semantic equivalent, but in different words: “Because we don’t know what it is, and

can't identify or describe it, it must be really bad." We object to the use of such obvious nonsense masquerading as science.

6. In the conclusion of the Finding, which justifies the "warranted" status for PDs, FWS states: "Overutilization via recreational shooting is considered a threat of low magnitude. Local populations may be impacted by shooting; however, significant rangewide population declines due to this factor are not likely."

All the other extant "threats" to PDs listed in the finding are listed as "moderate magnitude". Of all the threats, the only one listed as "low magnitude" is recreational shooting. Notwithstanding this, the ONLY regulatory effort being pushed by states, in response to the FWS finding, that is so strict that it carries potential court-imposed fines and jail time for compliance failure, is recreational shooting. So, PD hunters are the only ones who can go to jail for failure to protect PDs. We object to this effective discrimination and criminalization against a particular class of people, PD hunters, with only the most flimsy justification.

7. Finally, we object to the notion that the ESA was intended to apply to a species that numbers over ten million examples in 11 U.S. states, not to mention uncountable PDs in Canada and Mexico. We do not believe that PDs are on the brink of extinction or in need of protection forced upon the several states by the Federal Government, whether by an actual listing of PDs, or by the threat to list them if the states don't get with the program and do under state law and with state money those corrective and protective things the Federal agencies would like to see done. We believe the use of the ESA by the FWS under these circumstances constitutes an abuse of power and responsibility.

For all of these reasons, we recommend that the FWS drop its "warranted" designation of Black-tailed Prairie Dogs, and forego for the indefinite future any further consideration of listing this species as either threatened or endangered.

Sincerely yours,

Gary Marbut
President

cc: Senator Conrad Burns
Representative Dennis Rehberg
Gale Norton, Secretary of the Interior
Montana Department of Fish, Wildlife and Parks
MT FWP Commission
Mountain States Legal Foundation
Montana Shooting Sports Association members
Media

