S. HRG. 109–991

THE ENDANGERED SPECIES ACT AND THE ROLES OF STATES, TRIBES, AND LOCAL GOVERNMENTS

HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

SEPTEMBER 21, 2005

Printed for the use of the Committee on Environment and Public Works

Available via the World Wide Web: http://www.access.gpo.gov/congress.senate

U.S. GOVERNMENT PRINTING OFFICE

37–445 PDF WASHINGTON : 2007

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

JAMES M. INHOFE, Oklahoma, *Chairman*

JOHN W. WARNER, Virginia
CHRISTOPHER S. BOND, Missouri
GEORGE V. VOINOVICH, Ohio
LINCOLN CHAFEE, Rhode Island
LISA MURKOWSKI, Alaska
JOHN THUNE, South Dakota
JIM DEMINT, South Carolina
JOHNNY ISAKSON, Georgia
DAVID VITTER, Louisiana

JAMES M. JEFFORDS, Vermont
MAX BAUCUS, Montana
JOSEPH I. LIEBERMAN, Connecticut
BARBARA BOXER, California
THOMAS R. CARPER, Delaware
HILLARY RODHAM CLINTON, New York
FRANK R. LAUTENBERG, New Jersey
BARACK OBAMA, *Illinois*

ANDREW WHEELER, *Majority Staff Director*
KEN CONNOLLY, *Minority Staff Director*

SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER

LINCOLN CHAFEE, Rhode Island, *Chairman*

JOHN W. WARNER, Virginia
LISA MURKOWSKI, Alaska
JIM DEMINT, South Carolina
DAVID VITTER, Louisiana

HILLARY RODHAM CLINTON, New York
JOSEPH I. LIEBERMAN, Connecticut
FRANK R. LAUTENBERG, New Jersey
BARACK OBAMA, Illinois

C O N T E N T S

Page

SEPTEMBER 21, 2005

OPENING STATEMENTS

Chafee, Hon. Lincoln, U.S. Senator from the State of Rhode Island 1
Clinton, Hon. Hillary Rodham, U.S. Senator from the State of New York 5
Inhofe, Hon. James M., U.S. Senator from the State of Oklahoma 4
Jeffords, Hon. James M., U.S. Senator from the State of Vermont 7
Obama, Hon. Barack, U.S. Senator from the State of Illinois, prepared statement 30

WITNESSES

Baughman, John, Executive Vice President, International Association of Fish and Wildlife Agencies 25
Prepared statement 99
Responses to additional questions from:
Senator Chafee 109
Senator Inhofe 110
Senator Jeffords 111
Burnham, Bill, President, The Peregrine Fund 24
Prepared statement 83
Responses to additional questions from:
Senator Chafee 95
Senator Inhofe 98
Senator Jeffords 98
Davison, Robert P., Wildlife Management Institute 22
Prepared statement 55
Responses to additional questions from:
Senator Chafee 82
Senator Jeffords 82
Frank, Billy, Jr., Chairman, Northwest Indian Fisheries Commission 8
Prepared statement 30
Responses to additional questions from:
Senator Chafee 33
Senator Jeffords 35
Gardner, Cory, Colorado State Representative 10
Prepared statement 36
Responses to additional questions from:
Senator Chafee 39
Senator Inhofe 44
Senator Jeffords 46
Pasteris, Michael, A., Executive Director, Forest Preserve District of Will County, IL, National Association of Counties 12
Prepared statement 47
Responses to additional questions from:
Senator Chafee 49
Senator Inhofe 50
Senator Jeffords 50

Page

Shaw, Dwayne, Executive Director, Downeast Salmon Federation/Downeast Rivers Land Trust 20
Prepared statement 51
Responses to additional questions from:
Senator Chafee 53
Senator Jeffords 54

ADDITIONAL MATERIAL

Cartoon, 10-Journal-Advocate, Sterling, Colorado, September 14, 2005 39
Chart, Species Breakdown 42
Conservation Plan 117–141
Letter from Dave Freudenthal, Office of the Governor, The State of Wyoming to Senators Chafee and Clinton 147
Position Paper, International Association of Fish and Wildlife Agencies, September 30, 2004 102–109
Report, Practical Solutions to Improve the Effectiveness of the Endangered Species Act for Wildlife Conservation, The Wildlife Society, Technical Review 05–1, 2005 63–81
Statements:
Scarborough, Karen, Undersecretary, State of California Resources Agency 113
Responses to additional questions from:
Senator Chafee 142
Senator Inhofe 143
Owens, Bill, Governor of Colorado and Dave Freudenthal, Governor of Wyoming on Behalf of the Western Governors' Association 144

THE ENDANGERED SPECIES ACT AND THE ROLES OF STATES, TRIBES, AND LOCAL GOVERNMENTS

WEDNESDAY, SEPTEMBER 21, 2005

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:33 a.m. in room 406, Dirksen Senate Office Building, Hon. Lincoln Chafee (chairman of the committee) presiding.

Present: Senators Chafee, Inhofe, Clinton, and Jeffords.

OPENING STATEMENT OF HON. LINCOLN CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. Good morning. This is a meeting of the Subcommittee on Fisheries, Wildlife, and Water, and it is a hearing on the Endangered Species Act and the Role of the States, Tribes, and Local Governments. Welcome, everybody.

This morning we will be focusing on the roles of States, tribes, and local governments in implementing the Endangered Species Act. A variety of witnesses have been invited to testify before us today, all with extensive knowledge of the Act and how it works at the State, tribal, and local levels.

According to the U.S. Geological Survey, a study based on National Heritage data in all 50 States found that federally listed species, over 50 percent of these species are found on non-Federal lands, such as State, local public lands, tribal lands, or private lands; and 64 percent of all listed species, including State-listed species, are found exclusively on non-Federal lands. Meanwhile, only 12 percent of federally listed species are known to spend their lives solely on Federal lands.

This data points strongly to the importance of developing and strengthening Federal efforts for protecting species by meeting the partnerships and cooperative agreements with State and local agencies, nonprofit organizations, and private landowners.

Since the enactment of the ESA in 1973, Congress has recognized the important role that States play in protecting species within their boundaries. Section 6 of the ESA is dedicated exclusively to working with States in implementing the law.

As indeed its title, "Cooperation with the States," indicates, the law further mandates the Secretary of the Interior and Secretary of the Commerce shall cooperate to the maximum extent prac-

ticable with the States in carrying out the programs authorized by this Act.

While all 50 States currently have some type of cooperative agreements with the U.S. Fish and Wildlife Service and NOAA, many of these agreements focus exclusively on specific species and are not comprehensive enough. A lack of strong Federal funding for cooperative agreements may be one cause for this, or State budgetary downturns and program staffing reductions. Regardless, I am interested in finding out more where we can improve the relationships between the States and the Federal Government for improving the prospect of species recovery.

In a similar vein, tribal governments play an important role in protecting and conserving species across the landscape. I look forward to hearing more from Mr. Billy Frank, Jr., our tribal witness, on ways in which we can strengthen the Federal Government's trust partnership with the tribes in order to reach the shared goal of protecting threatened or endangered species.

Local governments are also integral to the ESA solution, and work closely with States and Federal agencies to implement species conservation programs, including voluntary land management initiatives such as Habitat Conservation Plans, Safe Harbor Agreements, and Candidate Conservation Agreements with Assurances.

Without willing local officials and private landowners working in partnership with the Federal agencies, States, tribes, and nongovernmental organizations, effective species conservation and recovery would come to a screeching halt. I believe we are all here with a common shared goal to locate the right formula for propelling species protection and recovery forward, while also preventing healthy species from ever reaching the status where they need to be listed as threatened or endangered.

As we have heard in the past hearings, a renewed focus on voluntary landowner incentives appear to be a critical component for successful species recovery in this country. During today's hearing, we will be looking at the second important component for species protection, enhancing the role of States, tribes, and other non-Federal entities in species conservation.

Strong Federal funding leveraged by public and private funds will be critical to any effort to encourage a greater role for States, tribes, and local governments. Federal funding opportunities for ESA section 6, State Cooperative Programs, Voluntary Landowner Incentive Programs, and Recovery Plans, to name a few, will need to be identified and significantly increased in order to encourage partnerships at all levels of government.

As we move forward with taking a hard look at ESA and its need for reauthorization, there are two main areas in which we must focus our attention: preventing species from being added to the list and recovering species currently on the list. States, tribes, and local governments have the expertise, knowledge, and relationships with private landowners to work as strong, committed partners with the Federal Government to accomplish both of these tasks.

Thank you. I will note that there is legislation in the House, and this is our third hearing, as I mentioned, and we will just be evaluating the different legislations that come forward. But this hearing

is centered, as I said, on the title of the cooperation between States, tribes, and local governments and the Federal Government.

[The prepared statement of Senator Chafee follows:]

STATEMENT OF HON. LINCOLN CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Good morning and welcome to the Subcommittee on Fisheries, Wildlife and Water's third hearing on the Endangered Species Act (ESA).

This morning, we will be focusing on the roles of States, tribes and local governments in implementing the ESA. A variety of witnesses have been invited to testify before us today, all with extensive knowledge of the Act and how it works at the State, Tribal and local levels.

According to the U.S. Geological Survey, a study based on National Heritage Data in all 50 States found that among "federally listed species," over 50 percent of these species are found on non-Federal lands such as State and local public lands, tribal lands, or private lands; and 64 percent of "all listed species", including state-listed species, are found exclusively on non-Federal lands. Meanwhile, only 12 percent of federally listed species are known to spend their lives solely on Federal lands.

This data points strongly to the importance of developing and strengthening Federal efforts for protecting species by means of partnerships and cooperative agreements with State and local agencies, non-profit conservation organizations, and private landowners.

Since enactment of the ESA in 1973, Congress has recognized the important role that States play in protecting species within their boundaries. Section 6 of the ESA is dedicated exclusively to working with States in implementing the law, as indeed it's title "Cooperation with the States" indicates. The law further mandates that the Secretary of Interior and the Secretary of Commerce "shall cooperate to the maximum extent practicable with the States" in carrying out the programs authorized by this Act.

While all 50 states currently have some type of cooperative agreements with the U.S. Fish and Wildlife Service and NOAA Fisheries, many of these agreements focus exclusively on specific species and are not comprehensive enough. A lack of strong Federal funding for cooperative agreements may be one cause for this, or State budgetary downturns and program staffing reductions. Regardless, I am interested in finding out more about where we can improve the relationships between the States and the Federal Government for improving the prospect of species recovery.

In a similar vein, Tribal governments play an important role in protecting and conserving species across the landscape. I look forward to hearing more from Mr. Billy Frank, Jr., our Tribal witness, on ways in which we can strengthen the Federal Government's trust partnership with the Tribes in order to reach the shared goal of protecting threatened and endangered species.

Local governments are also integral to the ESA solution, and work closely with States and Federal agencies to implement species conservation programs, including voluntary land management initiatives such as Habitat Conservation Plans, Safe Harbor Agreements, and Candidate Conservation Agreements with Assurances. Without willing local officials and private landowners working in partnership with Federal agencies, States, Tribes, and nongovernmental organizations, effective species conservation and recovery would come to a screeching halt.

I believe we are all here with a common, shared goal—to locate the right formula for propelling species protection and recovery forward, while also preventing healthy species from ever reaching the status where they need to be listed as threatened or endangered.

As we have heard in past hearings, a renewed focus on voluntary landowner incentives appears to be a critical component for successful species recovery in this country. During today's hearing, we will be looking at the second important component for species protection—enhancing the roles of States, Tribes and other non-Federal entities in species conservation.

Strong Federal funding, leveraged by public and private funds, will be critical to any effort to encourage a greater role for States, Tribes and local governments in species conservation and recovery programs. Federal funding opportunities for ESA Section 6 State Cooperative Programs, Voluntary Landowner Incentive Programs, and Recovery Plans, to name a few, will need to be identified and significantly increased in order to encourage partnerships at all levels of government.

As we move forward with taking a hard look at the ESA and its need for reauthorization, there are two main areas in which we must focus our attention—preventing species from being added to the list, and recovering species currently on the

list. States, Tribes and local governments have the expertise, knowledge, and relationships with private landowners to work as strong, committed partners with the Federal Government to accomplish both of these tasks.

Thank you.

Senator CHAFEE. Chairman of the committee.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. Thank you, Mr. Chairman. I regret that I am going to have to be in and out today; I have other committee commitments. I do regret that because this hearing was kind of my idea, to get the people who are affected most and closest to the problem.

As a former mayor, I can attest that dealing with the Federal Government is not easy. Many times the Federal Government believes they know the State and local problems better than the local people do, and that is not right. There is this kind of a mentality in Washington that if the decision isn't made in Washington, it is not a good decision. I have lived with this for a long time and I will share a story I don't think any of my colleagues have heard, but it goes back.

Here I chair the Environment and Public Works Committee, but many years, when a good friend of all of ours, David Boren, and I were freshmen legislators in the Oklahoma State House of Representatives, in January 1967, David Boren and I came to testify before this committee, the Environment and Public Works Committee. It was Randolph from West Virginia, the chairman at that time. I can remember this wasn't even built yet, I guess, at that time, but I remember this lofty committee and we were here protesting Lady Bird's Highway Beautification Act of 1965 on the basis of property rights.

I think all too often there is, as I say, a mentality that the decisions made here are the right decisions, and that is not true. People who live close to the problems are the ones who are most familiar with it. I have served in the State legislature, I have served as mayor of a major city, and I have served in the House and the Senate, and I can assure you that when I was mayor of Tulsa, I was much more familiar with those problems.

So there are some good things that we have been doing. We had a hearing in Oklahoma on the Partnership Act. Very good. It is something that has worked really well. It shows that the landowners are big on conservation, the environment, and the endangered species. They want to do something to help, but they want to do it in concert with us in Washington, not in spite of us in Washington.

So those things are the things that I will be looking at during the deliberation of the Endangered Species Act. I want to know, whether it is the Arkansas shiner or one of the other critters, how that is going to affect my Oklahoma farmers. So we are going to be coming to you guys and coming to the local entities for our information, and that is certainly the way that I will be performing on this subcommittee on reauthorization of the Endangered Species Act.

Thank you, Mr. Chairman.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Mr. Chairman, thank you for holding this third hearing on updating the Endangered Species Act (ESA). Today, we are examining the role of State and local roles in implementing the ESA. I look forward to hearing from the witnesses about their successes and their frustrations in working with the Federal Government on species conservation and recovery.

As a former mayor, I can attest that dealing with the Federal Government is not easy. Many times the Federal Government believes they know better than State and local entities. When I was mayor of Tulsa, I knew the characteristics, concerns, and challenges of my city and its people better than any bureaucrat in Washington.

With respect to conservation efforts, State and local government entities are the front lines. These are the individuals with the closest knowledge of the species, its habitat and local conditions. These individuals also have a responsibility to the people they serve to ensure economic viability of their state, city or county. As a mayor, you spend countless hours working with agencies, interest groups and private citizens to manage your city's resources and plan for the future. These decisions and plans are not made lightly. I have heard numerous stories where State and local officials, private landowners, local environmental and citizen groups have worked together in partnership and have agreed to a sensible, protective strategy to recover species while protecting land use rights, only to have the Federal Government come in and overrule them.

In each of the previous hearings, I have expressed concern that those closest to the problem are all too often ignored when it comes to regulatory decisionmaking under the ESA. As we look at legislative changes to the ESA this fall, it will be a priority for me that we open up the regulatory process, increase the public participation of all parties, including private stakeholders, and provide State and local government with specific authorities and responsibilities for recovery and day-to-day, on-the-ground implementation. I hope that the testimony today will help us find a clear path as to how best to do that with recommendations from the front line.

Thank you, Mr. Chairman, for holding this important hearing and I look forward to hearing the testimony.

Senator CHAFEE. Thank you, Chairman Inhofe. Senator David Boren also came to the Senate.

Senator INHOFE. Yes. I succeeded him. That is right.

Senator CHAFEE. And now he is president of the University of Oklahoma?

Senator INHOFE. That is right. Don't talk about that football for a while. We will wait for a couple of years.

Senator CHAFEE. Thank you.

I yield to Senator Clinton.

OPENING STATEMENT OF HON. HILLARY RODHAM CLINTON, U.S. SENATOR FROM THE STATE OF NEW YORK

Senator CLINTON. So far as we know, though, the Sooners are not an endangered species.

Thank you so much, Mr. Chairman, for holding this third hearing on the Endangered Species Act. I really want to commend our committee and our leadership, Chairman Inhofe and Ranking Member Jeffords, because they have initiated the keystone center dialog along with myself, Senator Chafee, Senator Crapo and Senator Lincoln, and I think that is a very ingenious and productive way of dealing with some of these quite difficult, thorny problems that are raised with this reauthorization.

I am delighted that today we are going to be talking about State, tribal, and local roles in protecting threatened and endangered species. But before I make just a few comments about that, I do want to say that I am quite concerned about the bill that Chairman

Pombo introduced on the House side earlier this week, which is scheduled for markup in the Resources Committee tomorrow.

I regret that that has sort of jumped the gun. I think that our committee has a very deliberative and thoughtful process that I think will lead to the right kind of decisions being made with respect to the reauthorization.

But the bill introduced by Chairman Pombo really, I think, would abandon our national commitment to species recovery, would diminish habitat protection, would provide very broad exemptions to Federal agencies, creates more bureaucracy, the way I read it, with more layers of decisionmaking, instead of trying to streamline and allocate responsibility. I think it turns sound science on its head and it requires taxpayers to pay companies and developers for actions that may or may not be ones that are in the public interest or the furtherance of species preservation.

So I believe, as I have said in prior hearings, that the Endangered Species Act certainly can be improved to work better for all stakeholders. I think we can do a better job at achieving recovery. Unfortunately, the House bill, as introduced, simply does not meet those goals, and, therefore, I think that what this committee, and particularly the subcommittee under Senator Chafee, is attempting to do is really try to find where true consensus exists and where progress is possible on a broadly bipartisan basis.

Now, this keystone center dialog group has already begun its work; it will meet twice later this year. It should have recommendations for us, which is what we have asked them to do, regarding critical habitat by early next year. I think that there may be additional hearings that our committee and subcommittee want to hold. So I really applaud both the chairman of the full committee and the chairman of the subcommittee for proceeding in a very careful, thoughtful way.

As for today's hearing, I am looking very much forward to the testimony of our witnesses because you do bring perspective from different governmental partners and wildlife management. States, tribes, and local governments have expertise and resources, as well as a strong interest in wildlife management. So I think it is clear that we want to explore how States, tribes, and local governments could play a greater role in implementing the Endangered Species Act.

Now, I think it is also evident, however, that the capacity of States varies widely in this regard. Some States are very well equipped right now. Even some municipalities are. Some counties are. But many others are not yet in a position to assume the kind of responsibility that we would want to pass on to them.

As I have noted earlier, I think the test for any change in the Endangered Species Act, including a change in the State, local, or tribal role, ought to be whether it can create conditions to avoid the listing of species because we have a positive, healthy habitat plan in place, and whether it can help us move species off the list. Those are the two main things.

In looking at the bill introduced by Chairman Pombo—and we haven't had a lot of time to analyze it—I don't believe that we would have saved the grizzly bear or the peregrine falcon or other species that are important to our sense of self—the bald eagle—

with the plan that he outlines. I think we can do better and make improvements without losing sight of our commitment to protecting and promoting wildlife in our country.

So I am going to have several questions. First, how effectively are States, tribes, and local governments already implementing their current authorities under the Act? Do they have the resources and legal authorities they need to be effective? If not, what do they need? How can State, tribal, and local roles in species conservation be enhanced? Are changes to the Act advisable? If so, what? Would more funding of the current section 6 be helpful or sufficient? Are there other ways in which the relationship among Federal and non-Federal partners can be improved?

So again, Mr. Chairman, I thank you for the very deliberative way you are proceeding here. It is exactly what I think needs to be done. I believe we can reach a consensus which is a win-win for everybody. None of us will get everything we want, but we will come up with some enhancements and reform to the ESA that I think will really stand the test of time.

Senator CHAFEE. Thank you, Senator Clinton.

Senator Jeffords.

OPENING STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Senator JEFFORDS. Thank you, Mr. Chairman, for holding the third in a series of hearings on the Endangered Species Act.

I want to thank all the witnesses for coming here today to share their views on the important role that States, tribes, and local governments play in preventing species extinctions.

When it passed the Endangered Species Act in 1973, Congress recognized that the successful development of an endangered species program would be dependent upon good working arrangement between Federal and State agencies.

In my State of Vermont, the Fish and Wildlife Service has worked with the State's Department of Fish and Game Outreach for Earth Stewardship and the Central Vermont Public Service to restore bald eagle population that is now thriving. The collaboration between the agencies is the reason for this success. Vermont also has a cooperative agreement with the Fish and Wildlife Service that is continuing to foster collaboration.

I am sure there are other examples of successful collaborations that we will hear today from other witnesses. I am sure you will also hear ways that the Act can be improved.

I also look forward to hearing how we can build on Federal-State partnerships and new ideas you may have to those partnerships so that they survive and thrive.

Thank you, Mr. Chairman.

[The prepared statement of Senator Jeffords follows:]

STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE VERMONT

Thank you, Mr. Chairman, for holding the third in a series of hearings on the Endangered Species Act.

I want to thank all of the witnesses for coming here today to share their views on the important role that States, tribes and local governments play in preventing species extinction.

When it passed the Endangered Species Act in 1973, Congress recognized that the successful development of an endangered species program would depend upon a good working arrangement between Federal and State agencies.

In my State of Vermont, the U.S. Fish and Wildlife Service has worked with the State Department of Fish and Wildlife, as well as the National Wildlife Federation, Outreach for Earth Stewardship, and Central Vermont Public Service to restore a bald eagle population that is now thriving. The collaboration between the agencies is a reason for this success.

Vermont also has a Cooperative Agreement with the Fish and Wildlife Service that is continuing to foster collaboration. I'm sure there are other examples of successful collaborations that we will hear about today from other witnesses. I am sure we will also hear about ways the Act can be improved.

I also look forward to hearing how we can build on Federal-State partnerships and new ideas you may have to make those partnerships thrive.

Thank you, Mr. Chairman.

Senator CHAFEE. Thank you, Senator Jeffords.

We will now proceed to the first panel. We have Mr. Billy Frank, Jr., chairman of the Northwest Indian Fisheries Commission; Mr. Cory Gardner, a Colorado State Representative; and Mr. Michael Pasteris, executive director of the Forest Preserve District of Will County, IL to represent the National Association of Counties.

Welcome, gentlemen.

You can see the electronic box which allocates the 5 minutes per witness, with a yellow light coming on and then a red light at the conclusion of the 5 minutes. Make every effort to strive to keep the comments within that timeframe to allow us adequate question time.

Thank you, Mr. Frank. Welcome.

STATEMENT OF BILLY FRANK, JR., CHAIRMAN, NORTHWEST INDIAN FISHERIES COMMISSION

Mr. FRANK. Thank you, Mr. Chairman and the Senate Committee. This is an honor to be here and listen to you. It gives us hope in the great Northwest along the Pacific Ocean. I am chairman of the Northwest Indian Fisheries Commission. I represent 20 tribes and speak with one voice when I come to the U.S. Congress, and I think today is going to be a great day.

The Endangered Species is an important law to the tribes, and everyone else. As far as our treaties in the Northwest are concerned and throughout the Nation, the Endangered Species is something we can work with and make it happen as partners with the Federal Government, as partners with the States—State of Washington in my case—and with the local governments, and the ports and all of the volunteers on the watersheds—and we have a lot of them up in the Northwest.

Treaty rights are the supreme law of the land, as everyone knows, and the ESA is the pit bull dog of the Federal law; and we understand that. It is very important that we get together and sit down and have hearings like this to move us forward.

ESA has helped return the eagle and the gray whale along the Pacific Coast and in our backyard, in Puget Sound and throughout the Pacific Coast, and I have seen them where they weren't on the beaches anymore and along the Nisqually River, where I was born and raised and lived, and still live there. All of us brought the eagles back along the Pacific Coast, the U.S. Government as well as the local and the State of Washington, U.S. Fish and Wildlife, and Commerce, and all the tribes.

We worked together to make that happen, and they are there, healthy right now, and getting healthier. The eagle stories are very important to all of us to hear, and if I had time I would tell you some.

The salmon recovery efforts in the Pacific Northwest, the Endangered Species is part of that, is part of everything that we do, with our hatchery reform, all of our things, working with our wild stock and everything, making it happen. The funding is probably the biggest part of everything that we do out there, and the funding has to continue.

There have been some failures. The Endangered Species is looking at, more or less, as part of the hatchery and the harvest of salmon, it does not look at the habitat up on the watersheds. It has to look at the habitat. The habitat is the most important thing to bring our recovery and all of our salmon back to us.

The habitat is part of everything that we are talking about; all the animals and all the critters, and everything that is alive up there; the food chain, the cycle of the food chain and all of that. We have to work with the timber industry as we do. We have agreements with the timber industry, the tribes and the State, and all of us in the Northwest.

We have agreements with the agriculture community, as we heard a little bit earlier one of our Senators talking about how important the agriculture community is, and it is very important to us. We want the agriculture community to stay where they are. We want them to be in the agriculture business, whether they are farmers or what.

We are getting overrun with people in the Northwest, more people and more people coming, and we have to work together. We can't depend upon the U.S. Congress to write laws for us. It is all right if we all go to the Congress and ask for the laws, but we have to work together to make it happen. It is up to us out on the ground to make that happen.

The timber industry, we want them to stay in business. We want them to harvest; we want them to reproduce; we want them to keep growing trees and make it happen. But that habitat is so important to all of us in the great Northwest along the Pacific Ocean.

I have to tell you this little story in my little time. We had a head-on collision when the Endangered Species, as our Senator said, in 1973, it came together. Well, it was kind of a head-on collision for the tribes, treaty rights and ESA coming together, Endangered Species. So we got together, over maybe 100 or 200 tribes got together and we said we can't have a fight over this head-on collision, so what are we going to do.

We came up with a secretarial order. It took us 2 years to negotiate that with the Interior and Commerce. We negotiated it and that is working together, not colliding with one another. So that is very important to tell that story and make that known, that we work together side by side.

The tribes in the Northwest are very important. We are co-managers with the State of Washington. We sit on the United States-Canada International Treaty; we sit on the Pacific Salmon Management Treaty, 200 miles managing out in the ocean. Along the Pacific Coast, we have comprehensive plans throughout the North-

west, working with the State and the local governments and the ports, and anybody and everyone. We are leaders in the infrastructure of the tribes, keeping them together and keeping them moving forward.

The environment and our salmon are so important in our culture and way of life is so important to us. The Indian tribes today, the majority, maybe 80 percent of our tribes are sitting on the bank now, we don't harvest salmon like we did anymore. It is very important that we work together and recover that salmon back to a harvestable number to keep the economy going in the great Northwest and all of our communities along the Pacific Coast, as well as inside.

So thank you for letting our tribes come today, and hopefully we can answer any questions that arise. Thank you, sir.

Senator CHAFEE. Thank you, Mr. Frank.

You mentioned back in 1973, building the coalition and Senator Clinton talking about the keystone coalition here these many years later, doing the same thing, hopefully, trying to get us all together instead of in conflict.

Mr. Gardner, welcome.

STATEMENT OF CORY GARDNER, COLORADO STATE REPRESENTATIVE

Mr. GARDNER. Thank you, Mr. Chairman, Senator Clinton, and Senator Jeffords. Thank you for holding this hearing and allowing me to share my perspective this morning on the States' role in the Endangered Species Act.

I am a member of the Colorado General Assembly. My constituents depend on farming and ranching for their livelihoods. Over the past 32 years, the role of the Endangered Species Act has grown dramatically in their lives, and, unfortunately, many times has instilled fear rather than trust and cooperation.

The Act may have noble intentions. Unfortunately, the actual recovery of species doesn't necessarily happen every time we put the animal on the list, or the plant. The numbers speak for themselves. Of the 1,827 listed species, only 16 have been delisted as a result of recovery.

I urge this committee to make it a top priority to update the Endangered Species Act and craft a policy that results in real recovery, while respecting property rights and the rights of those who live on the land. The following recommendations will help update the Endangered Species Act to help meet its intended purpose.

Point No. 1, the State must be made a co-equal. The research, talent, efficiencies of State resource programs should be utilized and rewarded. After all, it is the State that has to live with the Act.

Point No. 2, flexibility in the administration of section 6. Giving greater flexibility would clarify and delineate the roles of States and Federal agencies, and allow them to take over many of the programmatic responsibilities of the Endangered Species Act.

Point No. 3, the Secretary should give a presumption in favor of State information and recommendations on listing. The State has a far better understanding of its species needs than the Federal Government.

For example, in 2003, the Fish and Wildlife Service considered listing the range rodent, which would have resulted in a significant portion of eastern Colorado being designated as critical habitat. Studies by the State of Colorado found seven times the amount of habitat acreage than those same studies performed by the Fish and Wildlife Service. Yet, under the Endangered Species Act as written, this doesn't matter that much when the State comes up with that kind of finding.

Point No. 4, taxonomic and genetic uncertainties should be studied and independently peer reviewed prior to listing of a species. Because of the power of the Endangered Species Act, it should not be a matter of act now, ask questions later. Nothing illustrates this better than the Preble's Meadow Jumping Mouse in Colorado. Officials listed the mouse in 1998, based on a 1954 study, the best science that had been done up until the listing of the mouse.

Over $100 million has been spent to cope with the Preble's Meadow Jumping Mouse since then. Ranchers were prohibited from clearing weeds out of their canals, reservation was constructed in the middle of the worst drought in 300 years, a $5 million bridge was built to cover the expanse of Preble's habitat.

Finally, a Denver scientist released a modern genetic study revealing that the Preble's Meadow Jumping Mouse was actually identical to the Bear Lodge Meadow Jumping Mouse.

To avoid mistakes like the Preble's listing, the scientific bar must be raised to embrace modern scientific techniques and independent peer review.

Point No. 5, flexibility to not list a certain area or State if it is receiving adequate management within that portion of its range. Last year, the Fish and Wildlife Service entertained the listing of the Mountain Plover. Working with local farmers, ranchers, Federal agencies and nongovernmental organizations, a partnership formed to conserve the Mountain Plover.

The ultimate product included agreements between individual landowners and the Department of the Interior, wherein landowners agreed to put into place conservation measures to stave off the listing of the bird. Had the Mountain Plover been listed, though, this solution would not have been available. Section 9 taking prohibitions and section 7 consultation requirements would have imposed restrictions that would have stopped the agreement in its track.

Point No. 6, significant changes should also be made to critical habitat designation. The State and individual landowners should be equal partners with the Federal Government during the designation process. Statutory time lines should be eliminated, thereby providing State and Federal Governments with greater flexibility to enter into private contracts and other cooperative agreements.

Point No. 7, true recovery plans should be published at the time of listing. The Fish and Wildlife Service should be statutorily required to develop a quantifiable recovery plan at the time of the species listing. In Colorado, it took 14 years to establish recovery goals for the Upper Colorado Fish Recovery Program. The recovery plan should identify key benchmarks and measurable scientific data that is designed to provide a road map to the species recovery and delisting.

We have spent the last 32 years living under an Endangered Species Act that falls short of accomplishing its goals of delisting. It is time to put aside the perception that changes to the Endangered Species Act will result in a complete rollback of ESA protection. The measures offered by the Endangered Species Act should not be the status quo, but, as many have said before me, should be a tool of last resort. Earnest modernization will make this a reality.

Thank you, Mr. Chairman and the committee. I have prepared more detailed remarks and hope that they will be included in the hearing record, and would be happy to answer any questions.

Senator CHAFEE. Those remarks will be included in the record without objection. Thank you for your concrete suggestions and also the cartoon, part of your submitted testimony.

Mr. Pasteris, welcome.

STATEMENT OF MICHAEL A. PASTERIS, EXECUTIVE DIRECTOR, FOREST PRESERVE DISTRICT OF WILL COUNTY, IL, NATIONAL ASSOCIATION OF COUNTIES

Mr. PASTERIS. Good morning, Chairman Chafee, Senator Clinton, and distinguished members of the subcommittee. Thank you for holding today's hearing on the roles of States, tribes, and local governments in implementing the Endangered Species Act.

I am the executive director of the Forest Preserve District of Will County, IL. In that capacity, I represent the National Association of County, Park, and Recreation Officials on the Board of Directors of the National Association of Counties, on whose behalf I am appearing today.

Will County is located in highly urbanized northeastern Illinois, just southwest of Cook County. Forest Preserve Districts are special units of county government in Illinois. Our statutory mandate is to preserve natural and cultural resources within the county for the education and recreation of the public.

The Forest Preserve District of Will County currently owns or leases approximately 18,000 acres, 7,000 of which are actively managed to conserve natural resources. These include the habitats or known populations of 13 threatened and 7 endangered species listed under the ESA. We also provide habitat for dozens of species listed as threatened or endangered under Illinois law.

As you know, the ESA was enacted in 1973 with the promise that we can do a better job of protecting and conserving our Nation's resident species and the ecosystems that support them. Today, over 30 years later, on behalf of the Nation's 3,066 counties, I bring that same message back to this subcommittee: we can and must do better. We have learned many lessons over the past three decades about how and what can be done to protect species, and it is time to update and improve the ESA to reflect those lessons.

NACo has identified several key elements that should be considered as Congress considers legislation to update and improve the ESA.

First, counties should be full partners in all aspects of implementing the ESA. Our experience in Will County bears this out. For the last several years we have been actively engaged in efforts to preserve the habitat of the endangered Hines Emerald Drag-

onfly. County Forest Preserve Districts staff were part of the team formed to develop the Dragonfly recovery plan.

Because of our close connection to the local communities, we have been able to facilitate effective communication strategies with adjacent private landowners and municipalities about the habitat needs of the dragonfly. Our efforts have led to a number of adjacent property owners reducing groundwater use voluntarily and to adopting best management practices for stormwater management within the watershed.

Similarly, we have been invited to serve on the team developing a recovery plan for the Eastern Massasauga Rattlesnake, a species listed as threatened under the ESA and which is in decline. Even while recovery plan is in the development, the District has been acting to improve the rattlesnake's habitat using section 6 funds from the Illinois Department of Natural Resources and discretionary funds from the Fish and Wildlife Service.

This model of a cooperative conservation partnership is an important key, we believe, to setting threatened and endangered species on a path to recovery. Unfortunately, it is a model that is not always emulated. We believe that the ESA's provisions for Federal, State, and local communication, cooperation, and collaboration could be strengthened so that the positive partnerships currently benefiting the dragonfly and rattlesnake and the citizens of Will County can be reproduced around the country.

Sonoma County, CA, provides another example of how local participation in ESA decisionmaking has aided efforts to recover threatened and endangered species. While the final listing of the California tiger salamander in 2003, Sonoma County was jolted by the realization that, given the location of the salamander habitat, much of the county's entire economic future was in serious jeopardy. This is because much of the salamander habitat is within a voter-approved urban growth boundary.

Because the U.S. Fish and Wildlife Service was short of personnel, consultation on individual projects, as well as field survey requirements, were lengthy and at times inconsistent. The Service recognized that, in order to deal with Sonoma County's unique challenges relating to the salamander, a different and more collaborative approach was required. This led to the creation of the Santa Rosa Plain Conservation Strategy Team in March 2004.

In 17 months, this collaborative team has developed a cooperative conservation plan that will lead to conservation and recovery of the salamander, and at the same time a consistent process for the approval of projects that are important to the economy of Sonoma County.

The willingness of the Fish and Wildlife Service to engage in cooperative conservation plans that support the President's Executive order on cooperative conservation issued in August 2004 has resulted in a successful partnership that is directly benefiting the welfare of the salamander, while preventing serious financial detriment to Sonoma County.

Both Will and Sonoma Counties' experiences demonstrate the great potential for new collaborative locally driven approaches to the conservation of endangered species. We believe that provisions

to encourage it, and to remove barriers to it, should be built into the ESA.

Second, NACo believes that science must be used more effectively in all aspects of implementing the ESA. I recounted for you the initial success of our efforts in Will County to contact private owners and municipalities to reduce their pumping of groundwater in order to improve the Hines Emerald Dragonfly habitat.

This effort was made possible by the fact that we had in our hands the results of a unique hydrological study which mapped the aquifer which feeds the habitat. This information enabled us to persuade groundwater users to voluntarily reduce pumping in ways that will improve the habitat.

However, we were only able to afford this study because the U.S. Army Corps of Engineers happened to have money available from penalties paid by a local party in violation of section 404 of the Clean Water Act. Obviously, essential information should not be available only to communities "lucky" enough to have large Clean Water Act violations in their neighborhood.

We know by our own experience that local governments and their citizens want to do the right thing to protect species, but we need to take action based on good information. Too often actions are prescribed by the Federal Government on the basis of a scientific record that is incomplete and unpersuasive to all stakeholders. We believe that a major investment needs to be made in gathering and interpreting data in a way that is open and transparent so that it can withstand the scrutiny of both the scientific community and can command the respect of the public.

Third, and finally, NACo believes that the ESA could be strengthened and improved by creating more opportunities for State and local governments to encourage and facilitate conservation measures. Again, we believe that local people want to do the right thing, but more often than not, they lack the tools to get the work done on the ground.

There is so much more that Will County could do to protect and enhance the habitat, and thereby the populations of species and species of concern, if only we had funding. If the goals of the ESA are indeed a national priority, then the burden of meeting them rests with Congress. Counties stand ready to implement sensible strategies at the ground level, but it is simply unjust to expect all the costs to be borne by our local taxpayers.

Ultimately, NACo believes that environmental values must be balanced with socioeconomic values to achieve a policy which results in a high degree of environmental protection, while also preserving and enhancing local community sustainability. County officials and their constituents are keenly aware of the historical, economic, and aesthetic values of their local environment, as they are certain of the need to prepare for a sustainable future to assure the viability of their communities. We look forward to being your partners on the ground as we work toward these common goals. Thank you.

Senator CHAFEE. Thank you very much, Mr. Pasteris.

Picking up on that theme, in some of the previous hearings we have had, the incentives for landowners to protect critical habitat have been hailed as being successful, and you talked about pro-

viding the funding so that landowners can have some compensation for protecting habitat. I think we are hearing that refrain.

I would just ask the three members of the panel if I am correct in that assumption, that if we can generate the funding and the incentives, we are going to eliminate many of the conflicts and the criticism of the ESA that have come over the years, as the conflict comes between landowners and the desire to protect species? Am I correct in that?

Mr. PASTERIS. The simple answer is yes. The current ESA forces and mandates certain activities, but provides no resources for assistance.

Senator CHAFEE. Do you think there would be a willingness on the part of the local governments to participate in that funding if there were some Federal funding already available?

Mr. PASTERIS. I have already seen it throughout the Nation, where local communities are even probably more interested than the Federal Government in certain cases in preserving species in their own area.

Senator CHAFEE. Mr. Gardner.

Mr. GARDNER. Mr. Chairman, thank you.

Certainly funding is a concern that State governments have, as well as counties and those involved with the actual conservation practices themselves on the ground. However, it is only one part of an overall fix to the Endangered Species Act. I believe further delegation of section 6 programs for the powers under section 6 of the Endangered Species Act, allowing the States greater flexibility and a greater role could eventually lead to cost savings at the Federal level, which you could then turn around and use some of that savings and provide on the ground incentives. Not necessarily increasing funding, but finding cost savings within the Federal Government to help those incentives and pay for them.

But, again, I think that would help. It is one part of an overall solution.

Senator CHAFEE. Is there any danger in changing the section 6 requirements that the local municipal or State might weaken the requirements? Certainly you don't want the heavy hand of Federal Government everywhere, but, on the other hand, there is a fear that the local governments might not be stringent enough, just the pressure to protect the business—whether it is a timber business or a farming interest—might be greater than the species.

Mr. GARDNER. Thank you, Mr. Chairman.

Mr. Chairman, I think that the States will do—and they have done—a very good job of not only policing themselves, but enforcing the agreements that they have, and making sure that the agreements they are carrying out are fulfilled to the letter of the Endangered Species Act and the law.

The concern that I would continue to have on not giving States greater flexibility, Fish and Wildlife Service right now is overworked; they are consumed with litigation, with listing work, reviewing petitions, doing work that the biologists simply don't have time to do here in Washington, DC. Allowing States greater flexibility to control section 6 delegation under section 6 would alleviate some of the workload in the headquarter office, in the Washington,

DC office, and I believe that the States have done and will continue to do an excellent job of species recovery under section 6.

Senator CHAFEE. Thank you. Before I move to Mr. Frank, I have one more question.

Mr. FRANK. Mr. Chairman, the ESA is a good law, and as long as the treaty rights are respected, and minor changes are probably coming. But an example of the great Northwest and the Pacific Ocean from Alaska to New Mexico, we have salmon recovery going on, and we have a comprehensive plan together working on all the watersheds, and that is big time, and that includes everyone on the watershed—the agriculture, the timber industry, the hydroelectric. That is everyone, the private landowners, the volunteers, the Army and the Navy. That is everyone.

Now, when we say we have a comprehensive plan, we work with the agencies, Fish and Wildlife, Commerce, NOAA, and all the agencies, the Federal EPA and everyone. What we do is when we put a comprehensive plan together—you have heard the things here today—we stand ready to be challenged by the courts. We stand ready.

We have to put a plan together that is going to stand up. We know where we are going to be challenged. We know that the challenge will come when we put the plan together, and it will be there. We have to have our day in court to make that happen, that ESA coincides with what we are doing, and the wild stock and everything else that we take into consideration.

So we stand ready to work with everyone on all of our watersheds, including the ocean, including the Puget Sound and cleaning up. We have a lot of challenges ahead of us, not only just ESA, but a lot of the Hood Canal in the Northwest is dying. We have to be together to make that come alive. If the other part of South Puget Sound starts dying in water quality and quantity and all of that, then we are all in trouble.

So we have to work together. We have to make it happen, the people on the watershed and the partnership with the Federal Government, the partnership with the States and the local governments and all of us. We have to work together. Funding is so important that makes it whole.

Senator CHAFEE. Thank you, Mr. Frank. Yes, chilling words, a dying ecosystem or a dead ecosystem, especially when you are talking about such a vast watershed area.

Mr. FRANK. Yes, sir. It gets the attention of the people up there in the great Northwest.

Senator CHAFEE. I am sure it does.

Senator Clinton.

Senator CLINTON. Thank you, Mr. Chairman.

I want to thank the witnesses. Their testimony is very helpful and certainly provides a lot of good ideas. In Mr. Frank's written testimony he makes a very profound statement, he says,

"Wild salmon recovery in western Washington is a biologically simple, but politically difficult, task. All the fish need is clean, cool water, adequate spawning and rearing habitat, and adequate numbers of returning adult salmon to spawn, and they will take care of the rest."

So that about sums it up. But getting from where we know we need to go to where we can go is sometimes a difficult journey. So I appreciate these suggestions.

What Senator Chafee and I are attempting to understand is how better to describe this partnership. The partnership exists. I mean, if it didn't exist in Will County, if it didn't exist in Colorado, if it didn't exist in the Northwest, none of the examples you have given would be available or relevant. So we know that the partnership between different levels of government, between the public and the private sector is a fact.

Our challenge is to figure out how to make it more effective, how to put certain accountability into it that would enable us to be sure that the objectives were being achieved. I guess what I would ask first Mr. Gardner and then Mr. Pasteris is, right now, what is the capacity of your State, county, and local agencies, both in terms of staffing and budget, for the enhanced ESA role that you both have outlined in your testimony?

Mr. Gardner.

Mr. GARDNER. Thank you, Senator Clinton. Obviously, States, as well as the Federal Government, have financing issues that they have to deal with. But I do believe working together in a full partnership it would be very beneficial to both and they would indeed have the resources to accomplish the tasks set out before them in the Endangered Species Act. Whether it is working with a Federal biologist who is also partnering with a State wildlife biologist, I believe between the two governmental entities, they do have the resources to handle these types of responsibilities.

The resource work going on in Colorado has at times been a partnership, but it is a one-sided partnership often. The Federal Government, for instance, during the Preble's Meadow Jumping Mouse situation, based their determination to list on a 50-year-old study.

Senator CLINTON. I wanted to ask you about that because I was very struck by your point in your testimony that taxonomic and genetic uncertainties should be studied and independently peer reviewed prior to listing of a species, and the information threshold and listing petition should be raised.

How do you envision that happening? Is this an ad-hoc occurrence, where we are dealing with a species of mouse or a species of bird or fish, and you go out and try to find experts and put them together, or do you envision more of an organized ongoing independently peer reviewed scientific effort?

Mr. GARDNER. Thank you, Senator Clinton. There are a number of ways that you could do that. One of the problems that arose with the Preble's Meadow Jumping Mouse is indeed it was peer reviewed, unfortunately, it was not independently peer reviewed.

Senator CLINTON. Now, explain what you mean by that.

Mr. GARDNER. There were a number of members on the committee who were involved in the listing in 1998. So it is hard for anyone to go back on the work that they did previously and say I was wrong, this never should have been listed.

So when I talk about independent peer review, I mean taking the pool of national experts that we have across the country within the Government agencies and saying, let us form a panel, let us form a committee, let us form a review that, when questions do arise

and there are genetic uncertainties, or perhaps when the data is the best available and not the best possible, that we do have a way to independently peer review and get to the science that we need in order to make an effective listing, because the Endangered Species Act has tremendous impact.

Over $100 million was spent on the Preble's Meadow Jumping Mouse, and it really affected development, affected farmers and ranchers. So those are the things that we have to do and be prepared to deal with at the national level.

The other partnership issue that I would like to address with you is the Western United States and the ownership of Federal lands. In Colorado, in 2002, we lost hundreds of thousands of acres to devastating forest fires. One of the problems, of course, was the undergrowth in the forest and the need to go in, clear the undergrowth in the forest to alleviate some of the fire concerns and some of the fuel for the fires.

Unfortunately, the Snowshoe Hare was living in the undergrowth. Snowshoe Hare just happens to be food for certain endangered species. So without a partnership, the Federal Government's hands were tied to clear the undergrowth because it was habitat to the necessary species for an endangered species.

So we risked losing an entire forest from a forest fire because of the vast amounts of undergrowth, but we left it there because there was an endangered species issue that had to be dealt with. Those are the kinds of partnerships, whether it is critical habitat or other, that we need to be dealing with.

Senator CLINTON. Thank you.

Mr. Pasteris, same question to you about resources and capability.

Mr. PASTERIS. I happen to be in a rather lucky situation or a special situation. My form of county government is in fact mandated with the protection of natural and cultural resources. As a result, one of our specific goals is the protection of endangered and threatened species.

In addition to that, since I am in a highly urbanized area of the Chicago land region, we have often gone back to our citizenry and asked for their input, and they have resoundingly approved two referendum in the past 6 years providing us with $165 million to buy additional lands and preserve what remaining natural resources we have.

As far as staff goes, with all the budget cuts we have seen in the Federal Government, especially in the areas of U.S. Fish and Wildlife, and now in the State of Illinois, I probably actually have more biologists on staff than the Federal Government or the State currently has, which puts me in a unique position.

I do not have time, the citizens of Will County don't have time to wait for the Federal Government; we are doing it on our own. I do not think, however, though, that most counties outside of Illinois would be in that similar situation.

I must stress again, I am a special unit of government. In most States, my function would be part of county government, and I have a feeling that it would be somewhere lower on the list of priorities amongst roadways, health services, and other services that a county must provide. So in that case, I would think that Federal

funding is almost mandatory if we are going to get anything done on the local level.

Senator CLINTON. Well, thank you. It is extremely interesting testimony, and the points about the forest preserve districts are ones that I am interested in, because what you have done, as you have described it, is to create an entity that is largely a habitat preservation entity that can create public support for that function apart from every other county function, and people can focus their attention on what needs to be done. As I understand what you said, you even have a referendum and taxing authority to go directly to the people. That is a very unusual arrangement.

Thank you, Mr. Chairman.

Senator CHAFEE. Thank you, panelists. I think there is some justified criticism. I don't know about Preble's Jumping Mouse and what happened there in particular, but we always strive to do it right, and I think some of our testimony about the big four fishery rivers in Colorado, we did do some things right. So that is our goal in the big four fishery rivers of Colorado. Am I correct in that?

Mr. GARDNER. Yes, sir. Thank you, Mr. Chairman. They did some wonderful things. Unfortunately, in that example, it took 14 years to reach the recovery plan and to come up with a recovery plan for delisting.

But they have done a tremendous job and that is a great example of what I see as perhaps delegating section 7, section 9 authorities, maybe through a pilot program to the States, and allowing a massive project like that to move forward. So instead of having 800 individual section 7 consultations going forward based on every single water use, you did have one umbrella program that was given the authority to make the necessary decisions.

Senator CHAFEE. Well, thank you very much, panelists.

Mr. Frank, one more comment?

Mr. FRANK. Mr. Chairman, none of this is a quick fix. You know, we sit on watersheds, all of us, and your next panel will understand, but we are looking out maybe 50 or 100 years to try to find a balance, and a balance between all of us, and that is so important.

We have a lot of models. You have heard some today, models of us working together, how important it is to start, if we are in the 9th Circuit Court of Appeals, an example is to work our way back to the district and then out and get agreements settled. We have a lot of models like that, and I think with this hearing it gives hope to me. Thank you, Senator Clinton and thank you, Senator Chafee.

Senator CHAFEE. Thank you for traveling so far to be here, all of you, and also for your good testimony. Much appreciated. I hope we can make the ESA stronger and better. Thank you, gentlemen.

I will now welcome the second panel: Mr. John Baughman, Mr. Bill Burnham, Dr. Robert P. Davison, and Mr. Dwayne Shaw. Welcome. Once again, thank you for traveling here and giving us your comments on the ESA.

We will start from the other end this time. Mr. Dwayne Shaw is executive director of the Downeast Salmon Federation/Downeast Rivers Land Trust.

STATEMENT OF DWAYNE SHAW, EXECUTIVE DIRECTOR, DOWNEAST SALMON FEDERATION/DOWNEAST RIVERS LAND TRUST

Mr. SHAW. Thank you. I appreciate the opportunity to come here from Downeast, ME to talk to you about the Endangered Species Program that we are involved with and to make a few suggestions.

The tremendous bounty and the natural beauty of our environment is a gift that has been bestowed upon us and has co-evolved with us over many millennia. Stewardship of and respect for our fellow inhabitants on this planet is a responsibility which was delivered to each of us by previous generations and which we have a responsibility to pass on to the next generations. In this regard, the Endangered Species Act is perhaps one of our most enlightened of all laws and exemplifies our commitment to protect and restore the most vulnerable of all creatures in their habitats.

After 32 years, the Act remains among the most popular and effective environmental laws of our country. I believe the public support for this law exists because it is viewed as a strong response to an unacceptable and most often entirely avoidable loss of a species.

I come to you from the Northeastern most hinterlands of our country, Washington County, "The Sunrise County" of Maine. This is a hardscrabble Yankee region, most known for lobsters, lumber, and leisure—for some, tourists and others—but is also known as the home to five of the eight remaining rivers in the United States with endangered populations of wild Atlantic salmon.

Three other wild Atlantic salmons rivers in the United States designated under the ESA are also in Maine, though historically the Atlantic salmon ranged throughout most of New England in numbers plentiful enough to have been at one time a source of fertilizers for fields and even up until recently, a great recreational economic resource in our very poor region.

The wild Atlantic salmon is often referred to as "the King of Freshwater Game fish" and its loss to our region has meant the loss of millions of dollars in tourist and fisheries revenues. Salmon is a fabled species that the European settlers were pleased to find in abundance upon arriving on this continent. In fact, the earliest documented stone pictographs found throughout the British Isles are ornate carvings of Atlantic salmon.

It is clear that both Europeans and First Nation peoples of this continent possessed great reverence and placed high value upon salmon as food, and this reverence symbolizes and persists, despite the atrocities that have been dealt by our ignorance upon our fisheries and waters. The ESA and its implications for restoration of this species, and many, many other species, illustrates that current generations understand our need to protect our heritage and our interconnectedness with the environment of our ancestors and of generations yet unborn.

Is the ESA protecting salmon? From direct experience on the ground working to protect and restore Atlantic salmon in Washington County and beyond for the past 22 years, I can tell you that the positive implications under the ESA for our salmon have been the difference between night and day in Sunrise County.

In 2000, the Atlantic salmon "Distinct Population Segment," encompassing at first seven and later eight rivers in Maine, was granted emergency endangered status under the ESA. Unfortunately, this designation was granted only after a lawsuit was threatened by several conservation organizations, including Trout Unlimited and the Atlantic Salmon Federation, with whom my organization is affiliated.

The bottom line at that time was that the State of Maine, under then Independent Governor Angus King, sought to circumvent the listing via implementation of a "State Recovery Plan" that had been sanctioned and approved under the ESA itself, under the 4–D rules. This approach was widely encouraged and endorsed by industry and economic development forces in the State.

Many angler groups and other conservationists were drawn into the "State plan" because it promised a much greater level of industry cooperation and government interest and investment than the preceding decades, during which very little attention was paid to serious population enhancement efforts and habitat protection. However, when it became apparent that Governor King and his Salmon Task Force were more interested in maintaining the status quo than seriously retooling and applying needed resources to the situation, it was very fortunate that the Federal services were standing by to pick up the pieces.

Provisions under ESA allowing for States to manage species recovery under the 4–D rules should be examined very closely by your committee, particularly within the context of the Maine Atlantic salmon case study. Many believe that valuable time was lost for Atlantic salmon while the State reacted to the interests of a few influential user groups.

In the end, when the populations were listed, a number of groups were brought together through the watershed councils, and this, combined with the additional funds and resources provided under the heightened Federal salmon programs, gives new hope that a dire situation will improve. This hope and optimism is what draws the private sector into the greater effort, again, despite the fact that fishing was ended several years ago.

Federal funds directed toward salmon recovery through challenge grants issued by the National Fish and Wildlife Foundation, which are Federal funds coming to the Foundation, are particularly effective in sustaining public investment and interest. In just the past 3 years, our organization, working at the local level, has brought in an estimated $2 million worth of private investment into salmon recovery in the poorest county in our State, and one of the poorest in the Nation. These numbers are phenomenal and have been largely attributable to small Federal seed investments in our outreach efforts, which have made it possible because of the listing.

I wanted to make just a few points because I see my time is nearing here.

Essentially, I think that the Federal investments in outreach and education are extremely important. This is something that hasn't been raised earlier this morning, I don't think, to a great degree. But getting that funding level at the local level, where peer to peer, landowner to landowner, neighbor to neighbor can be brought infor-

mation that provides them with a clear image of what is needed for a species is crucial.

Funds need to be applied at the local level. That can be through a local conservation organization such as ours, through a county, perhaps, in some cases through a municipality. But, again, it needs to be put and done through an organization that has a real interest in seeing the species recovered.

The need for additional Federal resources—this is a common theme we have heard this morning—and a more equitable and consistent funding mechanism needs to be developed for all ESA listed species. There are species receiving no funding and there are species receiving tremendous funding. If you look at the discrepancy between Atlantic salmon and Pacific salmon, you will see a vast difference, despite the fact that the regions in which these species occur are comparable in size, or the areas that they did occur.

In Maine we have a particularly interesting situation, and that is a joint listing between two Federal agencies of a single species. We have the U.S. Fish and Wildlife Service and NOAA Fisheries, both equally responsible for the recovery of this species.

Somehow we need to streamline this process. This creates a problem for everyone involved, and we do not want to lose Federal funds in any way toward the effort by reducing or making one the lead entity, but in some way I think that that is something that could be looked at more closely.

Thank you.

Senator CHAFEE. Thank you, Mr. Shaw. Good points. You say in your prepared statement, "Finally, if I am to avoid being brined for lobster bait."

Mr. SHAW. I skipped that part.

Senator CHAFEE. Certainly don't want to let that happen.

Dr. Davison is from the Wildlife Management Institute. Welcome.

STATEMENT OF ROBERT P. DAVISON, WILDLIFE MANAGEMENT INSTITUTE

Mr. DAVISON. Thank you, Mr. Chairman, Senator Clinton. I appreciate this opportunity to provide the views of the Wildlife Management Institute on the role of States, tribes, and local governments in implementation of the Endangered Species Act.

I am also pleased, as the Chair of the Wildlife Society's Technical Review Committee on the Endangered Species Act, to present the relevant portions of the committee's report titled "Practical Solutions to Improve the Effectiveness of the Endangered Species Act for Wildlife Conservation." The full report here is appended to my testimony. It presents the views of the appointed committee members and the Wildlife Management Institute, but not necessarily the views of the employers of other committee members, nor of the Wildlife Society itself.

In general, implementation of the Endangered Species Act would be improved by greater partnerships with States, tribes, and local governments. Specifically, there are four points that I will highlight from my written statement.

No. 1, State fish and wildlife agencies are not being provided adequate and stable funding from the section 6 Cooperative Endan-

gered Species Conservation Fund which is needed to fulfill State roles in the conservation of endangered and threatened species. This is not a matter of Federal assistance to States, it is a matter of effective conservation of imperiled species. I think we need to look at it that way.

Eighteen years ago, this committee expressed the concern that "Current Federal-State cooperative efforts to protect endangered species are inadequate and in danger of disintegrating altogether." Matters only have gotten worse, if anything. By the start of fiscal year 2006, there will be 1,264 listed U.S. species. That is more than six times the 194 U.S. species that were listed in 1977.

Yet, the $9.9 million appropriated in State grants under section 6 for this coming fiscal year—which is a record, by the way—has only somewhat more than one-third as much buying power as the $4.3 million that was provided 28 years ago. Six times the number of species; a third to a half the funding.

The section 6 Cooperative Endangered Species Conservation Fund should be restored to its original intended purpose of providing adequate and stable funding to State fish and wildlife agencies to make it possible for them to participate as full partners. In doing so, priority should be given to the programs that maximize leverage of non-Federal match with the available Federal dollars.

No. 2, too often State expertise, data, personnel, and their working relationships with others still are not sufficiently utilized in listing and critical habitat decisions and actions. State fish and wildlife agencies should have a clearer and more significant role in efforts to prevent species from becoming candidates and in listing decisions and critical habitat designations. Increased Federal funding should be provided to the States under the State Wildlife Grant Program to conduct monitoring and evaluation of declining species.

No. 3, although under the Endangered Species Act recovery is the responsibility of all Federal agencies in partnership with the States, in reality the States too often are not full partners in these efforts. Given the importance of non-Federal lands to the conservation of listed species, collaboration with tribes, local governments, NGO's, private landowners is essential to recovery of many listed species. However, these partnerships also currently are insufficient.

Recovery plans should be developed by teams that are of manageable size and sufficiently diverse to include the needed expertise and representation of entities responsible for management of the species and its habitats, including State fish and wildlife agencies, Federal land management agencies, tribes, local governments, private landowners, and any others needed to recover species.

The section 6 cooperative agreement provisions should be redesigned to function as a true recovery partnership agreement requiring close collaboration and coordination among States, tribes, and the U.S. Fish and Wildlife Service and NOAA Fisheries. State fish and wildlife agencies and tribes should be provided with the opportunity to take the lead in development, implementation, and monitoring of recovery plans and plan activities.

No. 4, too many private landowners continue to distrust and fear any application of the Endangered Species Act to their lands or to their activities. State and local government involvement is a key aspect of addressing successfully these issues. The States increas-

ingly have sought umbrella style section 10 permits to assume responsibility for minimizing and mitigating non-Federal incidental take activities and promoting non-Federal habitat conservation.

These are innovations that should receive far greater support both in terms of authority and funding. Through increased Federal matching funding and expanded use of section 6 agreements and other mechanisms, State fish and wildlife agencies should be allowed and encouraged to assume the lead for administration of Safe Harbor Agreements, Candidate Conservation Agreements, and Habitat Conservation Plans.

Thank you.

Senator CHAFEE. Thank you, Dr. Davison. Does your region encompass the Klamath issue at all?

Mr. DAVISON. It does, Mr. Chairman.

Senator CHAFEE. Dr. Burnham is the president of the Peregrine Fund. Welcome.

STATEMENT OF BILL BURNHAM, PRESIDENT, THE PEREGRINE FUND

Mr. BURNHAM. Thank you. I appreciate the opportunity. I am glad you are interested in hearing of our experiences and our recommendations.

The Peregrine Fund was founded in 1970 to try to prevent the predicted extension of the peregrine falcon. About 29 years later the species was delisted, so the efforts were successful. Through those almost three decades we learned a great deal. We ended up working in 29 different States with quite a large number of tribes and local communities and with thousands or people in the private sector, as well as with government.

As a matter of fact, to document this, we wrote a book, and I would like to leave a copy for your committee library, if I may, "Return of the Peregrine Falcon," as written by 69 authors that were involved importantly in peregrine falcon restoration with The Peregrine Fund and government and States and beyond that.

Another project and species we are involved with is the California condor restoration in Arizona and Utah. We are working there with local governments, tribes, and various government agencies. The condors are being released under section 10, part J of the Endangered Species Act, as a nonessential experimental population. That effort goes quite well.

We are also working with restoration of the aplomado falcon in Texas. There are 58 counties involved in this restoration effort. There are 1.8 million acres of private property enrolled in the Safe Harbor. I would assume it is the largest Safe Harbor that presently exists.

We also have experience in Hawaii working with about a dozen endangered birds there, none of which are birds of prey. We are no longer involved in that project at this point in time.

Based on these experiences, we conclude that for the Nation to be successful at endangered species restoration, the ESA must be changed because the original intent has been subverted. No change will only mean a worsening political and biological situation. Part of the change should be shifting more responsibility, authority, and funding to the States.

The U.S. Fish and Wildlife Service role should be more facilitation and, as appropriate, oversight, the State and private sector roles being coordination and implementation. The role of the tribes and communities can be fit within this framework. The ESA restoration must become a local endeavor. I emphasize that based on 30-some years of experience.

Our general recommendation is to refocus the ESA on incentives. As part of the refocusing, the ESA and the regulation should be simplified. Listing and delisting species, recovery team composition and function, recovery plan process and content, and other administrative changes should be made to enhance function and effectiveness. A stronger State and Federal partnership should be established, and greater private sector involvement incorporated.

In summary, the ESA should be made more effective at conserving species and less burdensome for those it affects, particularly natural resource users. Unless the ESA is modified, or until the Nation has a law focused on habitat and biome conservation, endangered species will continue to suffer from lack of private sector and landowner support. This will continue to produce conflict over designation of critical habitat and punitive measures; litigation will continue to consume dollars critically needed for recovery actions. Congress should consider passage of a new law dealing with habitat and biome conservation at the same time they consider modifying the Endangered Species Act.

Within the modifications, I would also emphasize that, wherever possible, flexibility should be instilled. What is being done under 10(j) of the Endangered Species Act is very important with condors and other species. Safe harbor is great. That flexibility provides a lot of opportunities.

Another thing it helps create is trust, and that is an essential component. By making this more of a local issue, moving it to States, local communities, involving the tribes and others in this process, particularly the private sector, you can help increase that trust. You need to be able to look the guy in the eye and believe what they are saying, and that is not going to happen when they are dealing with the Federal Government.

Senator CHAFEE. Thank you, Dr. Burnham.

Mr. Baughman is the executive vice president of the International Association of Fish and Wildlife Agencies. Good to have you here.

STATEMENT OF JOHN BAUGHMAN, EXECUTIVE VICE PRESIDENT, INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

Mr. BAUGHMAN. Thank you, Chairman Chafee and Senator Clinton. It is my honor to be here before you today. I am John Baughman, executive vice president of the International Association of Fish and Wildlife Agencies.

Your State wildlife agencies, in fact, all 50 State wildlife agencies and the Federal agencies charged with wildlife land management are members of our association.

I am also past director of the Wyoming Game and Fish Department, which gives me a first-hand perspective on some of these

Federal-State interactions on some of our most contentious threatened and endangered species.

Our more detailed testimony has been submitted, and we have also appended our white paper on our principles recommended for Endangered Species Act Reauthorization Enhancement, along with a Web site reference to materials on proactive conservation through State Conservation Plans.

Given our limited time, I will simply summarize our recommended principles, then offer a few personal observations.

Our five recommended principles have been worked on for over 15 years; they have broad support in the conservation community; they are the basis for much of the National Governors' Association and Western Governors' Association policy, and they are as follows:

No. 1, restore congressional intent that reflects and respects authorities, roles and responsibilities of the State fish and wildlife agencies for wildlife conservation in general, and for listed species in particular.

No. 2, make recovery plans meaningful and nondiscretionary, including both incentives and obligations for all parties to the plan.

No. 3, restore congressional intent in creating the statutory distinction between threatened and endangered status.

No. 4, a full portfolio of incentives for private landowners and also other government agencies and industry need to be statutorily institutionalized.

No. 5, congressional recognition of the need for preventive conservation.

Many of our former speakers mentioned some of those same points. We have more specific details on each of these points in the white paper.

I would like to close with a few perspectives from my days as director of a State wildlife agency.

Wyoming has relatively few listed species compared to California or Hawaii. Some of those States have hundreds. But we had some of the most expensive species: grizzly bears, grey wolf, peregrine falcon, bald eagle, black-footed ferret. The State spent literally millions of dollars—as did the surrounding States—on the restoration and management of these species, and the States continue to spend the money.

When we at least look at grey wolves, grizzly bears, bald eagles, peregrine falcons, these species reached recovery goals long ago. Grizzly bears in the greater Yellowstone area first reached their recovery goals in 1989. In 1994 Wyoming asked for the Federal Government to pursue delisting. These species, the ones I just mentioned, are the poster children for America's charismatic megafauna, and we ought to be celebrating the recovery of these species, and the progress and the good things that can be done under an Endangered Species Act.

Unfortunately, these species symbolize many of the negative aspects of the Endangered Species Act, such as a lack of progress toward legal recovery, never-ending Federal control, tens of millions of dollars wasted on years of litigation and bureaucratic process, and the source of endless acrimony between Federal, State, and private interests.

You can contrast this situation with the conservation efforts for sage grouse, where a decision not to list a species-at-risk has allowed State, Federal, corporate, and individual partners to come together in over 70 working groups in 10 States to consult and cooperate in planning and delivering on-the-ground restoration efforts for sage grouse and their habitat.

Government agencies, organizations, individuals, even our pet dogs repeat behaviors that consistently get rewarded. It is no doubt unintentional, but right now administration of the Endangered Species Act rewards litigation instead of collaboration, it rewards lack of progress instead of recovery, it rewards listing instead of restoration and proactive management of species-at-risk.

If we truly want to enhance the whole process—and really this endangered species issue is a whole process, it is not just the act; it is our Federal, State, tribal agencies, it is individuals, it is corporations, it is a lot of ancillary legislation, appropriation bills, the farm bill and so forth—if we want to improve the whole process to better serve species conservation and our citizens, we need to reward efficiency, we need to reward people who work together, we need to reward private land conservation, and we need to reward conservation of species before they become threatened and endangered.

Thank you, Mr. Chairman.

Senator CHAFEE. Thank you, Mr Baughman.

Thank you, panelists. I think the common theme is that funding is important. Probably the reality is, as you all know, that is going to be difficult. But we will do our best on that front. Also a common theme is better cooperation with the local people that are on the ground, as the hearing is titled, Cooperation Between the Federal Government, Tribes, State Government, Local Governments.

Dr. Davison, I asked about your experience in the Klamath Basin. How was that cooperation between the local municipalities and the Federal Government as that challenge was tackled?

Mr. DAVISON. Well, Mr. Chairman, I think that the cooperation certainly could have been greater. The difficulty in resolving this issue, though, had less to do with cooperation with the local government, and more to do with scientific uncertainty about effects of the action and the difficult process in the west of trying to resolve many competing demands, including conservation of endangered species, within the framework of western State water laws and a large Federal project.

I think the Klamath is a case where more open transparent decisionmaking would have helped tremendously, where more robust decisionmaking would have helped, and in that sense cooperation was lacking.

Senator CHAFEE. Thank you. Many of the panelists have talked about specific species, whether it is the Preble's Jumping Mouse or Atlantic salmon or peregrine falcon or California condor. I think everybody agrees that seeing them recovery is a positive. Maybe, Mr. Baughman, some might not agree that the recovery of grizzly bears or grey wolves is positive. In your experience, was that true, the ranchers in the area affected by loss of lands or calves? How is the conflict there?

Mr. BAUGHMAN. Well, there are certainly differences of opinion on these large predatory animals, depending on people's interests, but I would think most people take great pride in the fact that those animals are recovered in the greater Yellowstone area. The real frustration is that after reaching management objective and actually restoring these species with active on-the-ground management, which, with these large predatory species will be needed forever, there is great frustration that we never get to an end point.

Just like the upper Midwest with the grey wolves and, again the greater Yellowstone area, the Northern Continental Divide, the same with grizzly bears, where there is total uncontrolled expansion of these animals that includes a great deal of cost and conflicting problems. That worries people, that there is no end point, there is no place where the public and the State agencies get reinvolved in establishing meaningful objectives and meaningful on the ground programs, so it is just seen as a constant money pit.

Senator CHAFEE. Thank you.

Senator Clinton.

Senator CLINTON. Thank you very much, Mr. Chairman.

You know, one of the recommendations that we have heard from the prior panel, as well as some of the witnesses on this panel, is to create a co-equal role for States, and I would like to ask Mr. Shaw and Dr. Davison to comment. Do you think that delegation of ESA authority to State is advisable? I know, Mr. Shaw, you, in your testimony, talk about what you consider to be an unsatisfactory experience with the State attempting to deal with Atlantic salmon. How do you think that the Federal Government and the States could work better? Mr. Shaw and then Dr. Davison.

Mr. SHAW. Yes, thank you. I think that, again, we come back to the funding issue. In my written statement, I made the statement that better funding would float all boats, and that means that those people interested in development, have interests in logging and other interests beyond just the restoration of a species, all of those interests are limited in their ability to work with the Endangered Species Act because of the response or the lack of adequate response, sometimes, from the Federal services, as well as those of us working in the actual implementation of restoration activities. When we go for permits, there is a time delay, and that delay needs to be eliminated for everyone involved.

So an adequately funded Federal service is critically important and, again, the incentives issue is one that, of course, is a big piece of this puzzle, and I think that that is the carrot. But the stick cannot be put away. The stick has to be on the table and available when needed, and only as a last resort, of course.

But it is, I believe, critically important to have a direct, continual oversight by the Federal Government in this process. I would be very hesitant to suggest otherwise, having been through this experience where the State of Maine attempted to do it on its own and create a cooperative project that everyone was intended to buy into, but on the surface that was the case. It looked good in writing, but when you look at what should have been happening on the ground and failed to happen, ultimately the ability to file a suit, to force delisting was what has made action begin to happen.

Senator CLINTON. There has to continue to be some triggering mechanism to get action is what you are saying.

Mr. SHAW. Absolutely.

Senator CLINTON. Dr. Davison.

Mr. DAVISON. Senator Clinton, Mr. Chairman, as Mr. Frank said earlier, I think one thing to keep in mind is that recovery is a process that is going to take many decades. So for those that look at the 30-year history of the Endangered Species Act and say that it has not recovered many species, I say that we are looking at processes that took hundreds of years, in some cases, to create, and it is going to take a long time to undo that.

From my perspective, this perspective is relevant here because I think the only way we are going to get there and recover species, which is all of us have as our goal, is to have a combined Federal-State-local government-tribal effort on this, and I think that means maintaining the Federal Government involvement and increasing the ability of States, tribes, and local governments to participate in that effort.

So in that sense I don't think that this is a role that should be shifted to the States, or that it should be primarily a local government responsibility. I think it needs to be the responsibility of governments at all levels. I think the Federal Government has a role in helping make that happen, both through funding assistance, but also through providing authorities.

I think States are logical entities to be much more heavily involved in recovery activities, developing recovery plans, leading recovery efforts, monitoring the recovery plan activities and both States and local governments are really the entities best suited to carry out some of the Endangered Species Act provisions with respect to activities on private lands and non-Federal lands. They have seized the initiative there and are increasingly doing that, but they are limited by a lack of Federal matching funding to help them in that endeavor, and I think there is a great potential there.

I think the question about delegation also comes down to what does one mean when one talks about delegation. Are we talking about State implementation of Federal programs or are we talking about a delegation of the States to carry out some program that might look quite different than the current Endangered Species Act; a program that only meets some kind of fairly vague standard of consistency with the law? That is a quite different proposition, from my perspective, than State involvement and State lead in carrying out the program under the Endangered Species Act.

Senator CLINTON. Thank you.

Thank you, Mr. Chairman.

Senator CHAFEE. Thank you, Senator Clinton.

Senator CLINTON. Mr. Chairman, could I ask consent to have a report, the ESA Section 6, The Role of the States, admitted to the record?

Senator CHAFEE. Without objection.

[The referenced document was not received at time of print.]

Senator CHAFEE. Thank you for your testimony, gentlemen, our first panel and second panel, both. Many of your recommendations are in your submitted testimony, beyond what your oral testimony was.

We are very grateful and also extend the offer to please stay in touch with Senator Clinton or myself as different legislation comes forward. Criticisms or positive comments are both welcome. Thank you once again for traveling here and giving us the benefit of your thoughts.

The hearing is concluded.

[Whereupon, at 11:05 a.m., the subcommittee was adjourned.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. BARACK OBAMA, U.S. SENATOR FROM THE STATE OF ILLINOIS

Mr. Chairman, I want to thank you for holding this hearing. This is an important issue to me and the people in my State.

First, I'd like to give a special welcome to Michael Pasteris, the executive director of the Forest Preserve District of Will County, IL. For those of you not from Illinois, Will County is the fastest growing county in the State. So, I'm very interested in hearing from Mr. Pasteris as to how a developing county balances the competing demands of economic growth and protection of the environment. Mr. Pasteris, I also want to thank you for your service to the National Association of Counties. It's a great organization, and I always value the input I get from its members.

As we move towards improving the Endangered Species Act, it's important to keep in mind that we don't have all the answers here in Washington. Our local partners are our eyes and ears in the affected community. They can provide insight into the human piece of the puzzle. Over time we have learned that if people perceive their interests are being compromised in order to protect a particular species, it is a much harder and longer process.

That's when our local partners can really make a difference. Often they know who the community leaders are, both elected and nonelected, and they have a finger on the pulse of the community. As Mr. Pasteris says in his written testimony, collaboration with affected public and private stakeholders can go a long way towards developing conservation plans that protect endangered species without causing financial detriment to localities.

I apologize that I will not be able to stay long at this hearing, but I look forward to reading the transcript and written testimony. I also want to express my thanks to Chairman Chafee and Senator Clinton for their leadership on this issue here in the Senate.

STATEMENT OF BILLY FRANK JR., CHAIRMAN, NORTHWEST INDIAN FISHERIES COMMISSION

Chairman Chafee and honorable members of the Senate Subcommittee on Fisheries, Wildlife and Water, I am Billy Frank, Jr., Chairman of the Northwest Indian Fisheries Commission. The Commission has served the Treaty Indian Tribes in western Washington since 1975 in natural resource management, supporting their fisheries, hatchery management and environmental protection programs. The tribes co-manage natural resources in our region with the State pursuant to the *United States* vs. *Washington* (Boldt) Decision of 1974. We retain treaty-protected rights to harvest and the Federal Government has an ongoing trust responsibility to the tribes to support this right through the protection of indigenous fish, wildlife and plant resources, and their habitat. The resources the tribes co-manage provide far-reaching economic and cultural benefits to all who live in the Northwest. These are critical issues to us, and we appreciate being invited to speak to you regarding the Endangered Species Act.

The goals and objectives of the Endangered Species Act of 1973 are more essential today than they have ever been. Worldwide, nearly 16,000 species face extinction, including 800 species of fish. In the Pacific Northwest, 26 species of fish and wildlife have been protected by this law over the years. In our area, Puget Sound Chinook, Hood Canal/Strait of Juan de Fuca Summer Chum and Lake Ozette Sockeye were listed as "threatened" under ESA in 1999.

To some, such listings are abstract names in the Federal Register. To us, they are signs of a decaying environment and of an eco-system faltering under the pressures of an ever-growing and expanding population and short-sighted exploitation of the Earth. The rapid decline of these resources is directly related to habitat destruction, which should remind us all to conserve land and water resources, so our descendants can have the fish and wildlife abundance we have enjoyed in past generations. The ESA has been an important tool in the ongoing effort to protect and

restore species the tribes have depended on culturally and economically for thousands of years. It has helped return the mighty eagle and the grey whale from the brink of extinction. It has helped bring attention to the plight of the salmon and it has helped bring some badly needed funding to the effort to turn the tide on salmon decline. It is important for you to know that salmon are keystone species in the Northwest. If they are healthy, it is a sign that other life is healthy, including humans. If they are not healthy, it does not bode well for any of us.

Many resources in the Pacific Northwest are in trouble because of growing human populations, urban sprawl, pollution, over-allocation of water, climate change and lack of wisdom and vision by non-tribal governments. Sadly, the Federal Government has done a poor job, overall, of implementing ESA with respect to the listed salmon species in the Northwest. Emphasis placed on harvest and hatcheries in the response has been largely misdirected while the major cause of resource decline—habitat degradation—has been largely ignored. The tribes have grown hoarse trying to get Federal officials to understand these things, and yet these officials continue to hammer on harvest that has been severely curtailed for two decades, and hatcheries that are already being reformed. To them, it is low hanging fruit. To us, the approach has been shortsighted and misdirected. The reason for this is apparent. Using long-term vision and providing the leadership needed to deal with habitat challenges means taking a strong stand for modifying the way major industries such as agriculture and development, do business—something that should have been done long ago. But lobbyists for short-term economic interests are strong and well-financed, and have been highly resistant to meaningful change. When such lobbies can sway the Federal Government from the path of fair and reasonable implementation of the law it is sad to behold. And when the Federal Government fails to provide rightful leadership, it is tragic.

It is also tragic when Federal agencies fail to comprehend and respect treaty law. Treaties are the supreme law of the land, according to the U.S. Constitution. They are sacred contracts between sovereigns. Yet they have often been disregarded in the implementation of ESA. The tribes have a treaty-protected right to harvestable levels of fish. It is our culture, our tradition and our lifeblood. The Federal Government has a trust responsibility to assure that the tribes have meaningful harvest opportunities. We have voluntarily embraced the principles of government-to-government relations and co-management with the Federal and State Governments, as well as the comprehensive allocation process that was born out of the Boldt Decision of 1974 and the 1978 U.S. Supreme Court confirmation of that decision. Treaty law supercedes the ESA, and it calls for harvestable levels of fish. Yet the Federal agencies have not been able to implement ESA with any degree of adequacy—a "last resort" law actually intended to prevent species from going extinct.

The restoration of fisheries in the Northwest will benefit the overall economy. It will help spur the rejuvenation of communities on the coast, the Puget Sound and other inland waters. It will help enhance the tourism industry and inspire greater comprehension of stewardship throughout our region. It will improve the health of our rivers, marine waters and our overall eco-system. I have always spoken for the salmon, in the hearing rooms of Congress and the courtrooms of this nation, in the council chambers of the tribes and in public statements. My fellow tribal members and I have worked hard to protect the resource, and the habitat that sustains it, because we have always known that salmon are the keystone species of the Northwest. They are our miners' canary, the measuring stick of the overall physical, economic and spiritual well-being of our region. If salmon runs return to our rivers in great numbers, it means we have cool, clean waters and healthy bays, rivers and streams. That means healthy people. There is a critical need for Congress and for people throughout the nation to understand the value of stewardship and ecosystem management, the unbreakable link between vibrant natural resources and healthy people. When I talk about managing salmon, that is what I am talking about.

Tribal governments take salmon management very seriously, just as we have taken co-management with the State and Federal Governments very seriously. The path to recovery is one we must travel together, and it's one that must be traveled for the benefit of future generations. That is why it is critical for Federal investments in Northwest salmon recovery programs to continue, and increase, rather than decrease, funding levels as program needs continue to be identified.

Those who make the mistake of blaming the demise of wild stocks on harvest in our region are thinking of a different era. Today, Indian and non-Indian fisheries are governed by management principles that are truly responsive to all harvest impacts and total fishery impacts are constrained to sustainable levels for all stocks. Still, wild salmon populations continue to decline. Why? Because the primary cause for the decline of wild salmon is loss and degradation of spawning and rearing habitat. And eco-system-level habitat needs have not been adequately respected.

Those who think this issue is a matter of choosing between salmon and people are sadly mistaken. Healthy Northwest communities are connected with healthy runs of salmon. It has always been that way, and it always will. As a species that swims through both fresh and salt water throughout the region, the salmon is a living gauge of our overall quality of life. In addition to harvest and habitat, we must look at other factors affecting the health of wild salmon populations. Take salmon hatcheries, for example.

Once viewed by many simply as factories for producing salmon, now we are reforming hatchery practices to help recover and conserve wild salmon populations while providing limited fisheries for Indian and non-Indian fishermen.

Tribes have made efforts over the past decade to reduce impacts of hatcheries on wild salmon stocks—such as carefully timing releases of young hatchery salmon into rivers to avoid competition for food and habitat with young wild salmon. Funding challenges have at times hindered efforts to apply a comprehensive, systematic approach to hatchery reform, although funding has been provided in the last few years to conduct much-needed research, monitoring and evaluation of hatchery practices at the approximately 150 tribal, State and Federal hatchery facilities in western Washington. Continued funding for this effort will be critical to its overall success. Yet this Congress has chosen to zero the tribes out in funding for hatchery reform. It makes no sense for that to be the case. Tribal natural resource managers have consistently proved their metal and their ability to be cost-effective. Tribal natural resource managers are on the rivers, and they know better than anyone, anywhere, what is needed to save the salmon in their respective watersheds. Tribes need funding for hatchery reform. Cutting our natural resource funding is a giant step backward in tribal/Federal relations.

Federal legislation has created an independent Hatchery Scientific Review Group to provide scientific oversight for tribal, State and Federal hatchery practices and to provide recommendations for implementation of hatchery reform strategies. A top priority of the tribal and State co-managers under the hatchery reform initiative has been to complete Hatchery Genetic Management plans for each specie at each hatchery on Puget Sound. The plans provide a picture of how stocks and hatcheries should be managed, and will serve as a tool for implementing hatchery reform. The plans are especially important in light of efforts to respond to ESA listings of salmon species in western Washington. Already, some salmon enhancement facilities have been switched from producing hatchery fish solely for harvest to restoring wild fish through broodstocking and supplementation. Such efforts help preserve and rebuild wild salmon runs that might otherwise disappear.

Hatchery reform has just been one part of an integrated strategy for salmon recovery we have pursued. The tribal and State co-managers have also responded to declining wild salmon populations by developing highly conservative harvest management plans. The goal has been to restore the productivity and diversity of wild salmon stocks from Puget Sound and the Washington coast to levels that can support treaty and non-treaty fisheries.

As I've pointed out, the tribes conduct extremely conservative fisheries to protect weak wild salmon stocks. Tribal fishermen are literally at the end of the line when it comes to most salmon fisheries. Under treaties with the U.S. Government, tribes are required to take their share of the salmon in traditional harvest areas, mainly in bays and at river mouths. This allows tribal fishermen to target only healthy runs that can support harvest.

With all the efforts expended so far, and in spite of the ESA listings, native salmon continue to be in danger, a fact that jeopardizes the overall economy of our region as well as the cultural identity of the tribes and the health of everyone who lives in the Northwest. Why? Again, the answer is habitat. There is a desperate need for habitat protection and restoration. Healthy estuaries are needed, as well as natural riparian areas, spawning grounds and rearing habitat—if salmon are to survive. These things take care, and require long-term vision.

Habitat protection and restoration projects, hatchery reform and improved salmon management planning are just some of the ways that the treaty Indian tribes in western Washington are working to protect, enhance and restore wild salmon populations.

Wild salmon recovery in western Washington is a biologically simple, but politically difficult task. All the fish need is clean, cool water, adequate spawning and rearing habitat, and adequate numbers of returning adult salmon to spawn, and they will take care of the rest.

Providing for those needs is the hard part.

The treaty tribes and State have been working on salmon restoration efforts for decades. These efforts won't conclude until there are healthy wild salmon populations that can support harvest by both Indian and non-Indian fishermen, and until

there is real restoration of ecosystem functions with clean water, good habitat and salmon stocks capable of providing ongoing economic and cultural benefits to tribal and non-tribal communities. Any other measure of success should be unacceptable to everyone.

As an example of current efforts, tribes in the Puget Sound region have been working hard with others to develop a comprehensive recovery plan for Puget Sound Chinook. The Shared Strategy process delivered an unprecedented plan for 14 watersheds and the Sound to the Federal agencies on June 30. To create this plan, the tribes have worked with Federal, State and local governments, landowners, business interests, and environmental groups. As part of this effort, recovery goals and comprehensive recovery plans have been developed for all listed Chinook salmon stocks in the Puget Sound region. Specific recovery plans have been developed for each watershed to guide how harvest, habitat and hatcheries will be managed. It will require such collective efforts and good will to achieve recovery.

CONCLUSION

Tribes are "on the line" full time when it comes to managing salmon. Our biologists and managers don't just visit the rivers, the Puget Sound and the coast on occasion. They are there are all the time. Tribes are also the co-managers of the resource. We have managed, and depended on the salmon resource from time immemorial. For thousands upon thousands of years, our elders have taught us how to care for this great resource of the Pacific Northwest. For all of these reasons, it is critical for the Federal Government to invest more salmon restoration and management funding directly to the tribes. A strong tribal fisheries management infrastructure is by far the most productive investment the Federal Government can make in this regard, and ESA is a vital tool to help achieve this.

There is a responsibility for leadership in salmon restoration at the local level. It must include effective collaboration between tribal, local, State and Federal Governments. There is also a need for improved leadership in Congress and the Administration. Federal legislation should serve as both and carrot and a stick. On one hand it should provide effective incentives for "good behavior" and support the process of recovery administratively. On the other hand, it should provide effective mechanisms to discourage "bad behavior."

However, restoration of the Pacific Northwest salmon resource must involve more than protecting what currently exists. It must bring increases in the numbers of fish, so our harvests can be restored. Salmon is a gift we always respect, one that sustains us—in every sense of the word. If there are modifications in the Endangered Species Act, it is critical for the Federal Government to acknowledge and fulfill its trust responsibility to the tribes, and to stand up for the implementation of treaty law.

Thank you.

RESPONSES BY BILLY FRANK, JR., TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. With regard to the Pacific Northwest salmon resource, what are the Federal Government's trust responsibilities to the Tribes? What treaties govern the tribes' access to the wild salmon stocks in Puget Sound and along the Washington coast?

Response. The following treaties were established between the United States and Western Washington Tribes:

Treaty of Medicine Creek, 1854; Treaty of Neah Bay, 1855; Treaty of Olympia, 1855; Treaty of Point Elliott, 1855; Treaty of Point-No-Point, 1855.

These treaties were required for Washington to become a state. Without exception, they reserved fishing harvest and management rights to the tribes. The *U.S.* v. *Washington* Decision of 1974 in Federal District Court (confirmed by the U.S. Supreme Court in 1979) defined the tribal harvest right as 50 percent of the harvestable resource of both wild and hatchery stocks of salmon, confirmed Treaty Tribes as co-managers of the resource, and stated that the treaties are to interpreted as the tribes understood them. By entering into these treaties, the Federal Government has accepted the trust responsibility to protect the Tribes rights of access to their fisheries and the obligation to protect and restore Tribal fisheries. The Tribes believe that the harvest right goes hand-in-hand with a requirement for there to be harvestable numbers of salmon available and thus the Federal Government has a trust responsibility to protect and restore the habitat salmon need to survive and perpetuate.

Question 2. In your testimony, you note that loss of habitat is driving the continued decline of native salmon in the Northwest river systems. What efforts are underway to restore habitat and provide the necessary estuary and riparian spawning grounds that salmon require to survive?

Response. As co-managers of the resource, Tribes work with State and Federal agencies, as well as local governments, in every watershed. In harvest management, these efforts operate under international agreements, such as the U.S.-Canada Pacific Salmon Treaty. In habitat, the efforts have resulted in such processes as the Timber-Fish-Wildlife/Forests and Fish Agreement and Shared Strategy (which lays out goals and objectives linking habitat restoration to specific salmon returns). Tribes have been real leaders in habitat protection and restoration efforts, in part because they are located on the rivers and are directly dependent on salmon for cultural and economic survival. Watershed plans exist on every river. Water quality is monitored and habitat restoration projects (ranging from the placement of woody debris to replanting of riparian areas) have taken place and are taking place wherever funding is available to support them. Tribes make every effort to manage rivers holistically and to work cooperatively with the State and other entities. Such processes and projects are critical to the restoration of critical habitat. However, with the expansive population growth and development taking place in Washington, it is an uphill battle for such efforts to keep pace with habitat destruction. That is why it is very important for the Federal Government to live up to its trust responsibility to the Tribes and keep meaningful and well-enforced habitat protection regulation in place, as well as continue to fund Tribal programs.

Question 3. What are the economic benefits that would ensue from a stable population of salmon in the Northwest?

Response. Salmon are the measuring stick of the economic and cultural health of the Northwest. If they are wiped out due to habitat destruction, other natural resources upon which the economy of the entire region depends would also collapse. Communities all along the coast and Puget Sound (Tribal and non-tribal) feel the crunch of diminished runs. The economic benefits of having salmon in the rivers runs the gambit. The fishing industry itself benefits when it can harvest, of course. But so does tourism, one of the State's largest industries. People want to be able to go to the Northwest to go fishing. Also, because the needs of salmon are so connected with the needs of all other life here (e.g., clean, flowing water in the rivers and streams, as well as natural and healthy upland forests, etc.), the well-being of the salmon also equates to boating, hunting, hiking, camping and numerous other such activities. Salmon continue to be the economic as well as cultural backbone of the Tribes. With so much of the Tribal fleet in drydock, Indian people do go hungry and are unemployed at levels far surpassing other communities. Healthy runs of salmon in the rivers mean good health in so many ways. One must link good health with economic benefits for both Tribal and non-tribal communities. Salmon are our miner's canary.

Question 4. We have heard a great deal about conflicts between hatchery-raised salmon and wild salmon populations in your region. How do the inherent conflicts between hatchery and wild stocks affect Tribes in your region? How are the Tribes addressing these conflicts?

Response. There is an amazing amount of misinformation about hatcheries and their impacts on wild stocks. The Hatchery Reform Process in place over the past several years has done a great deal to mitigate the effects of hatcheries on wild stocks, but the challenges they pose have been blown way out of proportion. The State and Federal Governments introduced major hatchery facilities in an effort to mitigate the effects of dams and other development. As time has passed, and development/urban sprawl has continued to take its toll on our water and other resources, the need to supplement runs has been apparent. In earlier years, there were major impacts on fish health due to genetic hybridization, competition for feed, etc. But there was also a need for supplementation if certain runs were to survive, if there were to be a source of broodstock for outplanting and for re-establishment of natural stocks (not to mention an adequate supply of fish for harvest management), there would have to be hatcheries and other enhancement facilities and efforts.

While the Tribes have made efforts over the past decade to reduce impacts of hatcheries on wild salmon stocks—such as carefully timing releases of young hatchery salmon into rivers to avoid competition for food and habitat with young wild salmon—a lack of funding has prevented the Tribes from applying a comprehensive, systematic approach to hatchery reform. In the most recent Congressional budget, Tribes were zeroed out of hatchery reform. Yet, Tribal efforts have already been integral in switching some salmon enhancement facilities from producing hatchery

fish to restoring wild fish through broodstocking and supplementation. Through these programs, wild salmon are captured and spawned at a hatchery. Their offspring are then reared in the facility and later released in various locations within the watershed to increase their chances for survival. Such efforts help preserve and rebuild wild salmon runs that might otherwise disappear. Hatchery reform has been a major factor in the restoration of runs on some rivers. It is clearly part of an integrated strategy for salmon recovery.

RESPONSES BY BILLY FRANK, JR., TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Your testimony states the need for a strong tribal fisheries management infrastructure using the Endangered Species Act as a tool. Could you elaborate on how you see this infrastructure, the role of the Endangered Species Act would play, and the level of funding that would be required?

Response. The Treaty Indian Tribes of the Northwest are co-managers of the salmon resource. As such, they have developed natural resource management "infrastructures" or programs to work with the State and Federal Governments to manage the resource, ranging from harvest management (an international, national and state/tribal process), catch accounting, enforcement, enhancement, habitat protection and restoration, etc. The policy people, technicians and scientists, etc. comprise the "infrastructure" I spoke about. Tribes maintain their own infrastructure on the reservations, and they created the Northwest Indian Fisheries Commission, which I chair, in 1975 to help them achieve the various tasks required in natural resource management, including technical support and a forum for coordinating their efforts.

When I speak of the Endangered Species Act, I speak of the Federal Trust responsibility to the tribes to implement the terms of the treaties we have with you. One of these responsibilities is to protect and restore the habitat needed by salmon and other natural resources. There have been many problems with the Federal implementation of ESA, due largely to the pressures of the development industry, etc. Yet it is a "bottom line" law—one intended to keep species from going extinct. As described in the Secretarial Order issued by the Department of Interior, the Federal Government is responsible for assuring that there are levels of salmon sufficient to sustain Tribal harvest. That bar has not been achieved, and yet implementation of ESA as regards listed salmon in the Northwest has focused on harvest and hatcheries, and failed to adequately address the fact that most salmon are killed by habitat destruction. If a "bottom line" law, such as ESA, cannot be adequately enforced, we are left to wonder how the Federal Government intends to keep its word regarding harvest.

Tribes are on the front line in the effort to protect and restore salmon, and they have done an exceptional job. But we are overwhelmed by the continued onslaught of habitat destruction. So are the salmon.

The level of funding required? That is a question with many variables. If co-management works as it should, and if the Federal Government protects the natural heritage of this country, it would have a bearing on the response. Either way, Federal appropriations to the Tribes in Salmon Recovery Funding (currently at $80 million for Tribes in 5 states) falls short of the funding needed to sustain, and continue to develop, an adequate Tribal natural resource management infrastructure. Any increase will be helpful, but the SRF should at least be returned to the $100 million level next year, and the Federal Government should take a strong stand to support coordinated government-to-government efforts to support habitat restoration (and protection) to enable salmon to return to the rivers of the Northwest at harvestable levels. A strong statement should also be issued that Congress does not concur with efforts to deter attention from habitat-protection and restoration responsibilities by pointing at harvest, which has already been cut by 80–90 percent, if not totally.

Question 2. What role has the ESA played in helping develop the "Shared Strategy" salmon recovery plan in Puget Sound?

Response. ESA has provided an opportunity to secure some desperately needed funding to support the development and pending implementation of this process. Just as important, the listing and pending implementation of the law has helped the region focus on the problem. Salmon recovery efforts in the Northwest is being played out against the backdrop of ESA, including Shared Strategy. It should come as no surprise that those who feel threatened by the challenges associated with good stewardship are barking most loudly about the law. But the simple fact is that overexploitation of habitat must be addressed if there are to be natural resources to sustain future generations. The envelope is being pushed by developers and others who wish to keep an open path to riches and uncontrolled expansion. Shared Strategy

is a process to help restore good science and common sense to the way we do business, and ESA had a lot to do with it.

Question 3. Please describe current ESA enforcement with respect to Puget Sound salmon recovery and has it allowed for a flexible, voluntary approach to recovering these fish?

Response. There are good aspects to ESA enforcement. The law can be credited with helping return the Bald Eagle to our watersheds, and the Gray Whale to our marine waters. There are occasional instances of ESA-driven fines for incidents of mass polluting, etc. ESA has also helped protect thousands of acres of spotted owl forest habitat, on Federal lands. However, the current Administration has undone much of this protection, essentially prioritizing the needs of the timber industry over the need to protect habitat that is critical for the owls as well as thousands of other species. Implementation of ESA has been done in a manner that enhances communication between communities and provides opportunities for voluntary compliance. However, again, implementation of ESA listings of Northwest salmon has focused far too heavily on just two of the four H's (Hatcheries and Harvest) while virtually ignoring Hydro and kowtowing to the continued exploitation of Habitat. For our part, Tribes have made consistent efforts to be at the table in voluntary efforts to recover salmon, and we will continue to do so, because we see great value in voluntary stewardship. But it is absolutely essential for the Federal Government to have a well-enforced regulatory approach at the same time. There are simply too many pressures to wipe out wetlands, estuaries, riparian areas and other critical habitats to legitimize exclusive protection through voluntary means.

STATEMENT CORY GARDNER, COLORADO STATE REPRESENTATIVE

This morning's hearing is a critical part of an ongoing national discussion that, I hope, will lead to modernization of the Endangered Species Act, one of this country's most powerful and far reaching laws.

As a member of the Colorado General Assembly, I represent House District 63, which encompasses the majority of eastern Colorado—an area larger than the States of Massachusetts and Connecticut combined. My constituents depend, directly or indirectly, on farming and ranching for their livelihoods. Because of the district's agrarian nature, property rights and land use is of paramount importance, and the role of the Endangered Species Act in their lives has grown dramatically. Over the 32 years since the Act's passage, it has, more often than not, instilled fear rather than trust and cooperation. Fear about the use and value of private land. Fear over litigation and boutique lawsuits. Indeed, the fear of conservation by litigation has driven a wedge between resource users and many in the environmental community.

The goal of recovering threatened and endangered species is a noble one. Witness after witness has testified before this committee concerning the intent of the Endangered Species Act and expressed their belief that the principal goals of the Endangered Species Act are truly laudable. It is the Act's implementation that stirs debate; advocacy for complete elimination is rare. Unfortunately, the Act as currently written fails to provide the tools and means necessary to recover and delist species, and instead results in permanent listing. The numbers speak for themselves. Of the 1,827 listed species, only 16 have been delisted as a result of recovery.[1]

Perhaps nothing demonstrates this point better than a cartoon I came across last week while reading a local newspaper (attached). The cartoon shows two hippopotamus-like animals, one saying to the other, "The good news is that we've been removed from the Endangered Species list. The bad news is that we've been removed from the Endangered Species list." The cartoon illustrates the policy tug of war, pitting those who would rather see a perpetual state of listing than changes to the law of that actually result in the recovery and delisting of species. I believe that Congress has an obligation to remove the fear, to update the Endangered Species Act and begin the process of recovery. And it must do so while respecting private property rights and giving equal statutory standing to the States.

---

[1] As of March 30, 2005, a total of 1,078 species of animals and 749 species of plants had been listed as either endangered or threatened, of which the majority (518 species of animals and 746 species of plants) occur in the United States and its territories and the remainder only in other countries. Sixteen species have been delisted due to recovery, to date. Nine species have become extinct since their listing, and 15 have been delisted due to improved data. Numbers compiled using data from the Congressional Research Service.

Modernization of the Endangered Species Act must start by making the State a true partner and coequal. The State is not just another voice, but must statutorily be made an equal partner of Federal Government.

While Colorado has enjoyed some tremendous successes in working cooperatively with the U.S. Fish and Wildlife Service, we wholeheartedly support greater flexibility in the administration of section 6 of the Endangered Species Act.

Through section 6, the roles of the State and Federal agencies can be clarified and delineated. A revamped section 6 should give greater flexibility to States, allowing them, should they choose to do so, to take over pre-listing conservation, recovery planning and implementation oversight, habitat agreements and Habitat Conservation Plan administration, delisting responsibilities, and post-delisting monitoring. Even when States do not take the lead, their involvement should be co-equal with the Federal agencies. States, along with landowners, must also be given more say in the section 7 consultation process. Stronger emphasis should be placed on pilot programs that delegate section 7 and section 9 authority to the States.

Further efficiencies can be gained by coordinating joint rulemaking and decision-making processes between the wildlife agencies and Federal Government for administrative and regulatory actions. Disagreements and stalemates could be resolved by the respective Secretaries of Interior or Commerce.

Even though Colorado has had the foresight to put forward modest funding for species conservation and recovery, States should be given the financial resources to assume an expanded role in ESA administration and implementation. The cost States incur as a result of assuming greater responsibilities could be offset by passing back the Federal savings achieved as a result of ESA updates and program delegation.

With the State as a coequal, the Secretary should give a presumption in favor of State information and recommendations on listing. And, in accordance with the views of the International Association of Fish and Wildlife Agencies, the Secretary should be required to refute the State's information through independent peer review if the Secretary disagrees with the State recommendation.

The State has a far better understanding of its species' needs than the Federal Government. In-State employee expertise should be embraced by the Endangered Species Act, not rejected or downplayed. Federal biologists may not have the specific expertise that a State specialist can offer. For example, in 2003, the Fish and Wildlife Service made an effort to list the black-tailed range rodent (also known as the black-tailed prairie dog). Listing of the range rodent would have resulted in a significant portion of the eastern plains being designated as critical habitat. However, the Fish and Wildlife Service's preliminary habitat acreage estimates were refuted by the State of Colorado, which carried out its own study—based on years of work within the State by employees familiar with the issue—that showed range rodent habitat acreage was actually seven times greater than that estimated by the Fish and Wildlife Service.

Taxonomic and genetic uncertainties should be studied and independently peer reviewed prior to listing of a species, and the information threshold in listing petitions should be raised. Perhaps nothing illustrates this better than the Preble's Meadow Jumping Mouse. In 1998, Federal officials based their decision to list the mouse as threatened on a 50-year-old study. The 1950's study—based on test results from 3 mice and the skins of 11 others—was the best science that had been done up until the listing of the Preble's mouse. The Endangered Species Act only requires that species protection be based on the best available science—not the best possible science.

Businesses and governments spent over $100 million to cope with the Preble's Meadow Jumping Mouse. Nearly 31,000 acres along streams in Colorado and Wyoming were designated critical mouse habitat, triggering rigorous land use restrictions. Ranchers were prohibited from clearing weeds out of their irrigation canals. Grazing was restricted and regulated. Reservoir construction was halted in the middle of the worst drought in 300 years. Counties spent millions of dollars to build "mouse tunnels" under roads and reservoirs. A $5 million bridge was built in order to avoid Preble's habitat.

As the cost of living with the Preble's Meadow Jumping Mouse increased, a Denver scientist completed a modern genetic study revealing that the Preble's Meadow Jumping Mouse was actually identical to the Bear Lodge Meadow Jumping Mouse. In other words, the study revealed that the mouse did not exist.

To avoid mistakes like the Preble's Meadow Jumping Mouse, the scientific bar must be raised to embrace modern scientific techniques and independent peer review. While the Fish and Wildlife Service has submitted the mouse for delisting, there remains concern that the Service will try to delay the delisting. I urge the

members on this Committee to make sure the delisting process proceeds in a timely fashion.

State agency expertise should also be recognized through greater flexibility to not list a certain area or State if it is receiving adequate management within that portion of its range. Last year, the Fish and Wildlife Service entertained the listing of the Mountain Plover, a shorebird that inhabits portions of the Colorado High Plains (in fact, the Plover's habitat is primarily in the district I represent). The decision to list was being made, in part, on the mistaken assumption that agricultural practices negatively impacted the survival of the bird. Working with local farmers, ranchers, Federal agencies and nongovernmental organizations, the State has forged a new partnership to conserve the Mountain Plover. The ultimate product of this partnership included agreements between individual landowners and the Department of Interior, wherein landowners agreed to put into place conservation measures to stave off the listing of the bird. (The centerpiece of this project included the provision of an 800 number, which landowners could call to request nest flagging on their property before plowing their fields). Had the Mountain Plover been listed, this solution would not have been available—section 9 taking prohibitions and section 7 consultation requirements would have imposed restrictions that would have stopped the agreement in its tracks. The experience also enabled the State to gain a much greater scientific understanding of the plover that could guide in its recovery.

Significant changes should also be made to Critical Habitat designation. The State and individual landowners should be equal partners with the Federal Government during the designation process for Critical Habitat. Statutory timelines on Critical Habitat designations should be eliminated, thereby providing State and Federal Governments with greater flexibility to enter into private contracts and cooperative agreements. Changes to Critical Habitat mesh well with the suggested changes to section 6, section 7, and section 9.

In terms of recovery, the Fish and Wildlife Service should be statutorily required to develop a quantifiable recovery plan at the time of the species listing. In Colorado, it took fourteen years to establish recovery goals for the Upper Colorado River Fish Recovery Program. Under the Act as it stands today, recovery plans are not binding but instead act more like general guidelines, adding little to the actual recovery of the species. Delays and unclear recovery goals are not acceptable. The recovery plan should identify key bench marks and measurable scientific data points that will ultimately lead to the delisting of the species. The State should play a major role in the development of the recovery plan and should have the option of leading recovery planning.

This statement has highlighted several of the problems surrounding the Endangered Species Act, along with some important suggestions to improve it. Colorado has also had some successes in spite of the current form of the ESA.

In 1999, Governor Bill Owens created an Office of Species Conservation and Recovery within the Executive Director's Office of the State Department of Natural Resources. The Governor's motivation was simple: common sense dictated that the most efficient means of dealing with threatened and endangered species issues was through that level of government which is closet to the problem, wherein we could channel the necessary biological expertise and the dollars to effect recovery to at-risk species and species already listed. The Office is geared toward working to restore the health of at-risk species to preclude listing, and promote recovery for those already on the list with an eye toward enhancing the possibilities of expediting delisting whenever possible.

At the same time, my predecessors in the Colorado General Assembly created a funding mechanism to allow Colorado's participation in interstate species recovery efforts and to promote conservation and recovery within our own borders. This mechanism is known as the Native Species Conservation Trust Fund, and the General Assembly capitalized the Fund with $15 million over 2 years. Today the Fund is allowing Colorado to achieve it's cost-share obligations for recovery of the four "big river" fishes in the Upper Colorado and San Juan Rivers and gives the State the opportunity to put resources on the ground to enhance recovery efforts for terrestrial and bird species.

Finally, Colorado has taken advantage of those portions of the Endangered Species Act which give States the flexibility and the lead in species protection and recovery. Section 6 of the Act, which allows States to undertake State-directed conservation agreements, has given the State the ability to take up projects with our own recovery priorities and capabilities in the forefront.

So far, the results are dramatic. Colorado has taken up numerous species conservation projects with this new-found administrative and budgetary flexibility. The following examples tell the story best:

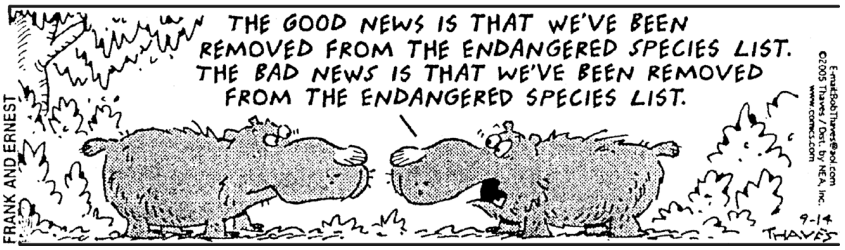
• The State has used section 6 of the Act to put together a comprehensive conservation plan directed by the State to continue the Canada Lynx reintroduction in Colorado while accommodating agricultural production interests. Furthermore, the State is taking the lead on much of the science being generated which will ultimately cause lynx to be recovered throughout the United States.

• Currently the State Division of Wildlife is working with the U.S. Fish and Wildlife Service to implement a Candidate Conservation Agreement with Assurances (CCAA) for landowners who have Gunnison Sage Grouse habitat on their properties. Once implemented, this will be the largest CCAA of its kind, including hundreds of landowners.

We have spent the last 32 years living under an Endangered Species Act that falls short of accomplishing its goals. We know what works, what does not, and what protections must be made for the people impacted by the Act and the species we are trying to recover. It is time to put aside the mistaken perception that any changes made to the Endangered Species Act will result in a complete rollback of ESA protection. It is time instead to begin the work of recovering species. The protection offered by the Endangered Species Act should not be status quo, but instead, a tool of last resort. Earnest modernization will make this a reality.

Thank you, Mr. Chairman and committee, for accepting this statement for the record. Please know that I stand ready to assist you as your work on the Endangered Species Act proceeds.

ATTACHMENT



10-Journal-Advocate, Sterling, Colorado, Wednesday, September 14, 2005

RESPONSES BY CORY GARDNER TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. The Upper Colorado Endangered Fish Recovery Program has been pointed to as a collaborative partnership where a broad range of stakeholders have come together to resolve problems associated with fish species recovery on the Colorado River. What lessons have been learned from this endeavor? Have the State of Colorado's experiences from this Recovery Program been easily translatable to other recovery programs such as the Canadian lynx or reintroduction of wolves into the state?

Response. Perhaps the greatest lesson learned from this endeavor is the extraordinary amount of time and patience which has been put forth to make these programs a success. Numerous partners, operating by consensus, spend long hours negotiating policy and management of the programs. According to program leaders, the consensus element is extremely important—they believe that it drives the parties to work together to develop solutions to problems where each party needs to ultimately give a little to reach a solution. The following provides further detail into what I believe, and some of the program leaders believe, helped the most with the success of the Upper Colorado Endangered Fish Recovery Program.

A. SCIENCE

i. The Upper Colorado Endangered Fish Recovery Program provided many valuable lessons, none more important than the realization that sounds science is an essential element of success under the act. Without reliable scientific data and analysis, we would not have been able to achieve the results that we have seen. Unfortunately, I do not believe that the same "sound science" mantra has been met across the country. Some treat sound science as an event—I believe it is just the opposite. It is a process of discovery and revelation.

ii. It is also important to highlight the essential need for peer review of most program activities. Peer review provides the scientific "footpath" necessary to provide certainty under the act. Debates over science can occur, and are healthy, but a consensus needs to be reached by scientists representing diverse interests in the Program. The issue is always, "How to move forward."

B. LEADERSHIP AND PARTNERSHIP

i. Parties to the program are partners in the program. While this seems obvious, it can often be overlooked in planning and forgotten (or trampled upon) in execution. On program issues, all of the partners in the program have an equal voice.

ii. It is important to note that no one gave up legal rights by joining the program.

iii. All Interests critical to the success of the program are at the table, including Federal agencies, states, water users, power users, environmentalists, and in the case of the San Juan River basin, the tribes. Without this type of "inclusion" programs would have a difficult time meeting with success. While there are competing interests, as is evident, all of the interests have a strong, invested interest in the success of the program. All recognize that they cannot have everything they want, and are willing to cooperate and compromise in order to ensure the success of the program. The values of all parties are respected, though not necessarily shared; no one should expect anything more or less.

iv. Inclusion and partnership also means that we had open communication on all technical, management and financial issues.

C. FINANCIAL

i. All parties contributing to the program have met their financial obligations to the program, including the Federal Government, states, power users and water users.

ii. Program cost sharing has been worked out on a mutually agreeable basis.

iii. The application of financial resources emphasizes and maximizes putting measures on-the-ground that benefit the species at the earliest possible date.

D. IMPLEMENTATION OF THE ENDANGERED SPECIES ACT

i. Section 7 consultations cannot contribute materially to the recovery of species, and therefore, fall short of the primary goal of recovering species. If recovery is to be achieved, it must be through collaborative efforts involving Federal agencies, states, tribes, and resource interests, including landowners and water users. The state's statutory role must also be expanded.

ii. Innovative methods of Endangered Species Act compliance can be achieved through collaborative programs. The Upper Basin and San Juan programs provide Endangered Species Act compliance for more than 800 water projects while pursuing recovery of the species. The Endangered Species Act compliance vehicle is a substantial incentive for states and resource users to participate in and support the program.

iii. Success depends on resolution of conflicts with State water law and State wildlife law. Conflict must be avoided. State water law and State wildlife law can be used to support recovery and provide water for endangered species and to control non-native predators, a threat to endangered fish, with the cooperation of the states. Going outside of State law and resorting to Federal supremacy thwarts the effort to draw collaborative relationships.

iv. Once threats to property rights, including water rights are removed, cooperation by a wide variety of water users is feasible to enhance conditions for endangered species.

v. Findings by the Fish and Wildlife Serve that program actions can provide Endangered Species Act compliance (reasonable and prudent alternatives and measures) for water projects must be legally defensible. No litigation has been filed on Endangered Species Act consultations on water projects in the Upper Colorado and San Juan River basins on more than 800 consultations.

vi. The program also shows that innovative approaches to Endangered Species Act compliance can work. These approaches provide far more benefits to endangered species than can be achieved under normal section 7 consultation processes.

vii. Through collaboration, program implementation is consistent with other Federal laws and State laws, avoiding litigation, and with no taking of property.

The process which can be attributed to the Upper Colorado Program is similar to ongoing meetings with stakeholders affected by the lynx reintroduction. Colorado meets often with agricultural operators in order to assure that the lynx reintroduction program does not cause undue burden on their legitimate predator control activity. Colorado also maintains close contact with the ski industry to assure appro-

priate data-sharing on lynx usage on the landscape. Finally, Colorado maintains a close working relationship with the U.S. Forest Service to assure they can use appropriate lynx data for management decisions. Colorado, in fact, was a cooperating agency with the Forest Service drafting the lynx amendments to all Federal forests in the Southern Rockies region.

The Colorado Division of Wildlife engaged the Meridian Institute to facilitate the wolf working group which met through a good portion of 2004. The group was charged with producing a wolf management plan to accommodate wolves migrating south from Wyoming. Once again, this was a group which struggled with the competing interests represented by ranchers, sportsmen, wolf advocates, and biologists to achieve a comprehensive strategy for wolf management once the species start arriving in Colorado. The working group process was comprehensive and thorough in its process, debating and fighting over some very deeply held values by members of the group. All members ultimately seemed satisfied as to the slow and deliberate process which ultimately yielded a plan which all parties could live with and abide by.

Question 2. What is the capacity of the Colorado Division of Wildlife in terms of staffing and budget for federally listed species conservation?

Response. See attached chart for breakdown by species.

[XN]	Ptychocheilus lucius	$133,825	$0	$148,000	$0
Sucker, razorback	Xyrauchen texanus	$133,825	$0	$148,000	$0
Trout, greenback cutthroat	Oncorhynchus clarki stomias	$264,500	$0	$272,000	$0
Fishes Total		$799,795	$0	$864,000	$0
Other					
Expenses from Foreign Species		$0	$0	$0	$0
Total Other ESA Expenses		$0	$0	$0	$0
Total					
All Species Total		$1,806,025	$65,500	$1,971,497	$0
Birds					
Eagle, bald	Haliaeetus leucocephalus	$20,000	$0	$50,000	$0
Flycatcher, southwestern willow	Empidonax traillii extimus	$44,110	$0	$118,500	$0
Owl, Mexican spotted	Strix occidentalis lucida	$4,100	$0	$500	$0
Plover, piping except Great Lakes watershed	Charadrius melodus	$15,510	$0	$14,500	$0
Tern, least	Sterna antillarum	$15,510	$0	$14,500	$0
Birds Total		$99,230	$0	$198,000	$0
Fishes					
Chub, bonytail	Gila elegans	$133,820	$0	$148,000	$0
Chub, humpback	Gila cypha	$133,825	$0	$148,000	$0
Pikeminnow (=squawfish), Colorado					

[XN]	**Ptychocheilus lucius**	$133,825	$0	$148,000	$0
Sucker, razorback	**Xyrauchen texanus**	$133,825	$0	$148,000	$0
Trout, greenback cutthroat	**Oncorhynchus clarki stomias**	$264,500	$0	$272,000	$0
Fishes Total		$799,795	$0	$864,000	$0
Other					
Expenses from Foreign Species		$0	$0	$0	$0
Total Other ESA Expenses		$0	$0	$0	$0
Total					
All Species Total		$1,806,025	$65,500	$1,971,497	$0

Question 3. Of the state-listed species in Colorado, how many have been recovered and withdrawn from the State threatened and endangered lists?

Response. Delisted: White Pelican (1985); Greater Prairie Chicken (late 1990's); Peregrine Falcon; Wood Frog; and Greater Sandhill Crane. (These last three species have been delisted recently, although we are not sure if the delisting occurred within the last 10 years).

Downlisted: River Otter (2004).

Question 4. What has the State of Colorado's commitment been to habitat protection efforts for fish, wildlife and plant species, particularly in as State such as your where one of the leading reasons for species decline is loss of habitat?

Response. Extensive documentation regarding habitat protection has been gathered by the Colorado Division of Wildlife, and is compiled herewith.

Specific, funded projects and associated species:

California Park: Joint venture for boreal toad conservation with the U.S. Forest Service.

Gunnison Basin: Wetland restoration to benefit the Gunnison Sage Grouse.

Carpenter Ranch: Bald eagle habitat enhancement (In conjunction with The Nature Conservancy).

Fox Ranch and Arickaree River: General habitat improvements, benefiting the brassy minnow and darters. (In conjunction with The Nature Conservancy).

Park County: Various conservation easements, benefiting the mountain plover.

San Luis Valley: Conservation easements and wetland restoration projects benefiting the southwestern willow flycatcher, the whooping crane and the long-billed curlew.

San Miguel River: Wetland restoration and tamarisk control benefiting the peregrine falcon and bald eagle. (Conducted in conjunction with The Nature Conservancy).

RESPONSES BY CORY GARDNER TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. In Colorado's experience with the ESA, what have been the most effective and the least effective parts of the Act?

Response. In terms of the focus of the committee hearing—the Endangered Species Act and the States—I believe that section 6 of the Act is far and away the most effective part of the Act inasmuch as it gives us a fair amount of latitude in directing conservation programs. Colorado has been able to obtain small amounts of incidental take authority in connection with the conservation measures we undertake through this section. In my testimony I stressed the importance of further delegation to the states through section 6. I would stress this idea once again.

It is my opinion that designation of critical habitat is not effective for Colorado because it does little to enhance the conservation value to any particular species other than serving as an additional trigger for section 7 consultation. Colorado has tried to bypass critical habitat by putting in effectively managed habitat conservation plans which really serve as a substitute to critical habitat. Of course, much more than anything else, critical habitat is a drain on the Fish and Wildlife Service because it is a section of the Act which is fraught with litigation.

States should look to some of the opportunities afforded them in the rules and regulations promulgated by the Fish and Wildlife Service. In particular, the "PECE" Policy (Policy to Evaluate Conservation Efforts) gives a State the ability to influence a listing decision simply by putting conservation projects and expenditures in place and presenting those projects to the Service in catalogue form. Having such a document in hand is an enormous help to the Service as they evaluate the health of a species and the work being done on the species' behalf.

Candidate Conservation Agreements with Assurances ("CCAA") are an effective tool, promulgated by regulation, which give landowners an opportunity to participate in self-initiated conservation efforts while being held harmless from future regulatory restriction on their land should the particular candidate species be listed. Colorado is currently putting together the largest CCAA in Western Colorado to conserve the Gunnison Sage Grouse, a Federal candidate species.

Question 2. How could more State involvement decrease the chances of repeating the "Prebles Meadow Jumping Mouse" situation?

Response. If nothing else is done to improve the Endangered Species Act, the one factor which should be statutorily reviewed because of the Preble's situation is the Endangered Species Act standard of "best available scientific and commercial data". A listing decision based on 50-year-old science is unacceptable. It is the "best" and it is also "available" and those two factors often do not lead to the best result. A

review of the listing decision renders too much latitude for non-scientific speculation (i.e.—although rapid growth and development was occurring in the range of the Preble's, we now know that there was no definitive threat to the species based on the expansion of the range due to subsequent trapping and the sheer numbers of mice trapped in new areas.)

Leaders in both government and business in Colorado had not "given in" to listing of the Preble's as an inevitability. Still, there was intense frustration that challenges based on ongoing conservation efforts and biology would go unheard due to the strictness of the ESA and the applicable case law. This frustration can best be summarized as follows: after eight years and enormous expenditure of money and labor, not one regional habitat conservation plan is yet in place. Douglas County, just south of Denver, has spent over $1 million on consultants and lawyers to write and qualify their HCP, and not one shred of conservation has been put on the ground since the mouse was listed in 1998. Imagine the good which could have been done with that $1 million if it had been left up to this very conservation-minded county commission to pay for habitat, open space, and parks, which would go a long way toward preserving and revitalizing the mouse.

One individual who has worked on a Preble's HCP for the last eight years stated the frustration clearly, "The mentality of the ESA is that it does not encourage conservation unless you get credit for it." The ESA seems to bypass a very strong conservation ethic we have in Colorado and the west, and the species suffer for it. More than anything else, those who have been involved with Preble's conservation cannot comprehend why the Service does not acknowledge work which is already happening on the ground.

The State could provide its own "peer review" of data from the Fish and Wildlife, serving as a check on that agencies information gathering and scientific processes. As I mentioned in my testimony, the state's data should be given a presumption of credibility. With the State as a coequal, the Secretary should give a presumption in favor of State information and recommendations on listing. And, in accordance with the views of the International Association of Fish and Wildlife Agencies, the Secretary should be required to refute the State's information through independent peer review if the Secretary disagrees with the State recommendation.

The State has a far better understanding of its species' needs than the Federal Government. In-State employee expertise should be embraced by the Endangered Species Act, not rejected or downplayed. Federal biologists may not have the specific expertise that a State specialist can offer. For example, in 2003, the Fish and Wildlife Service made an effort to list the black-tailed range rodent (also known as the black-tailed prairie dog). Listing of the range rodent would have resulted in a significant portion of the eastern plains being designated as critical habitat. However, the Fish and Wildlife Service's preliminary habitat acreage estimates were refuted by the State of Colorado, which carried out its own study—based on years of work within the State by employees familiar with the issue—that showed range rodent habitat acreage was actually seven times greater than that estimated by the Fish and Wildlife Service.

Question 3. What is preventing states from doing more pre-listing conservation, such as with the mountain plover; and, is there anything hindering more large scale Candidate Conservation Agreements with Assurances (CCAA) like the one Colorado is working on right now?

Response. There is some skepticism as to how much effort should be expended on pre-listing conservation efforts and/or CCAA if listing is ultimately inevitable, and perhaps a hesitation on the part of State and local governments based on the perception that the Fish and Wildlife Service will not ultimately believe in the local and State efforts or that local and State agencies can indeed do conservation "right". This also relates to the need for statutory presumption of State information.

Regarding Candidate Conservation Agreements with Assurances, Colorado's greatest hindrance is the CCAA's lack of predictability and how much faith landowners can put in those "assurances". Without sounding like we promote litigation, the problem with CCAAs is that they are not court-tested, and landowners are loath to place their faith in such a relatively new mechanism that has not been "court approved".

Colorado has acknowledged this skepticism but has also acknowledged that the Fish and Wildlife Service is daily more consumed with lawsuits which take their staff away from their mission of species conservation and recovery. The Fish and Wildlife Service regional and State offices have welcomed Colorado's participation as a full partner in conservation. Colorado has worked hard to cultivate relationships in the Department of Interior, and with the Senate and the House, to assure support for this effort. The Colorado Division of Wildlife and Department of Natural

Resources also work tirelessly with the State General Assembly to accomplish species conservation and recovery goals.

RESPONSES BY CORY GARDNER TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. With successful section 6 projects for the Canada lynx and Gunnison sage grouse, does Colorado have plans for additional cooperative agreements?

Response. Actually, the Gunnison Sage Grouse is not currently under a section 6 agreement, but conservation measures are being conducted under a rangewide plan which Colorado and Utah entered together and the master Candidate Conservation Agreement with Assurances, which is being entered into by the Colorado Division of Wildlife; landowners take part by certificates of participation.

Colorado is trying to find a way to use section 6 to accomplish defensible space projects on State forestland and adjacent private lands.

We are intrigued by Arizona's comprehensive multi-species section 6 agreement, which they have with the U.S. Fish, and Wildlife Service and we may pursue a similar model.

Question 2. Your testimony states that Colorado has established an Office of Species Conservation and Recovery. What is the relationship of this agency to other Federal, State and local stakeholders and can you elaborate on some of its successes?

Response. Governor Bill Owens by Executive Order created the Office in 1999 to do exactly what its' title suggests: conserve and recover species. The mission is simple: to marshal State resources toward recovery of candidate species so there is no need for those species to go on the Federal list, and to marshal those same resources to assist in the recovery and delisting of federally listed species. The Office is housed in the Executive Director's Office of the Department of Natural Resources and is staffed by one of the Department's Assistant Directors to focus exclusively on threatened and endangered species recovery.

The Office's Director has established strong relationships with other Federal, State and local stakeholders and joins those other stakeholders as members of various recovery teams and similar such undertakings. The Office serves as a clearinghouse for all stakeholders to gain information, influence conservation decisions and assist with recovery efforts. The Office and staff are empowered to work across agency lines in State government to assure that agencies at all levels are talking to one another and working together.

Some of the successes of the Office are as follows:

• Negotiated recovery goals with the U.S. Fish and Wildlife Service for the Upper Colorado and San Juan Endangered Fish Recovery Programs (2002). This served as a milestone for these two programs, which had functioned without recovery goals since 1988 and 1992 respectively.

• Worked with the Colorado Division of Wildlife to develop the best available scientific data to determine acreage of Black-tailed Prairie Dog species in eastern Colorado, accomplished by flying transects across the entire eastern plains of the State. New acreage figures caused the U.S. Fish and Wildlife Service to remove the species from the status of a "warranted but precluded" candidate for listing. (2004)

• Assisted in setting up peer-review panel through the Colorado Division of Wildlife to review genetic data which ultimately lead the U.S. Fish and Wildlife Service to promulgate a preliminary rule to de-list the Preble's Meadow Jumping Mouse. (2004)

• Assisted with negotiations of an ESA section 6 state-directed conservation agreement to provide for conservation measures for the Canada Lynx, which allowed Colorado to re-initiate its program to release lynx into the wild. (2002). Since this agreement went into place, almost 100 lynx kittens have been born in the wild (2003–2005).

• In cooperation with the Colorado Division of Wildlife, joined in with 10 other western States to develop a comprehensive status assessment of the Greater Sage Grouse through the Western Area Fish and Wildlife Association and the Western Governor's Association. The U.S. Fish and Wildlife Service analyzed the assessment under its "PECE" Policy (Policy to Evaluate Conservation Efforts) and determined that the Greater Sage Grouse did not warrant listing. (2004).

• Assisted with reintroduction efforts of the Black-footed Ferret in Northwestern Colorado. This species has been brought back from the brink of extinction since the last population was found in Wyoming in the late 1970's.

• Conservation efforts for the Mountain Plover were well underway when the Office was established in 1999. The Colorado Department of Natural Resources joined

in with providing funding and assisting with the collaboration between numerous parties to help effect the Service's decision not to list the species. (2003).

• The Office is taking the lead in preparing a catalogue of conservation efforts underway on the Gunnison Sage Grouse to provide to the Service as they conduct their analysis on the Grouse in a potential listing decision. (2005).

• The Office, with the direct involvement of Governor Bill Owens, assisted in urging the Service to substitute the draft Habitat Conservation Plan for the Southwestern Willow Flycatcher for critical habitat in southern Colorado's San Luis Valley. The Service determined that the draft Plan was a sufficient substitute and designated no critical habitat in the State. (2005).

STATEMENT OF MICHAEL A. PASTERIS, EXECUTIVE DIRECTOR, FOREST PRESERVE DISTRICT OF WILL COUNTY, IL, NATIONAL ASSOCIATION OF COUNTIES

Chairman Chafee, Senator Clinton and distinguished members of the Subcommittee, I thank you for holding today's hearing on the roles of states, tribes and local governments in implementing the Endangered Species Act (ESA).

I am the Executive Director of the Forest Preserve District of Will County, Illinois. In that capacity I represent the National Association of County Parks and Recreation Officials on the Board of Directors of the National Association of Counties (NACo), on whose behalf I am appearing today.

Will County is located in northeastern Illinois, south of Cook County. The county seat is in Joliet, which is located approximately 40 miles southwest of Chicago on the Des Plaines River. Forest Preserve Districts are special units of county government in Illinois. Our statutory mandate is to preserve natural and cultural resources within the county for the education and recreation of the public. The Forest Preserve District of Will County currently owns or leases approximately 18,000 acres—7,000 of which are actively managed to conserve natural resources. These include the habitats of—or known populations of—7 threatened and 13 endangered species listed under the ESA. We also provide habitat for dozens of species listed as threatened or endangered under Illinois law.

As you know, the ESA was enacted in 1973 with the promise that we can do a better job of protecting and conserving our nation's resident species and the ecosystems that support them. Today, over thirty years later, on behalf of the Nation's 3,066 counties, I bring that same message back to this subcommittee—we can, and must, do better. We have learned many lessons over the past three decades about how and what can be done to protect endangered and threatened species and it is time to update and improve the ESA to reflect those lessons.

NACo has identified several key elements that should be considered as Congress considers legislation to update and improve the ESA:

First, counties should be full partners in all aspects of implementing the ESA. Our experience in Will County bears this out. For the last several years we have been actively engaged in efforts to preserve the habitat of the endangered Hines Emerald Dragonfly which is found in only two counties nationwide—one of which is Will County. In our county its habitat is the thin soil on top of bedrock supported by groundwater seeps along the bluffs of the Des Plaines River. County Forest Preserve staff were part of the team formed to develop the Hines Emerald Dragonfly recovery plan. Because of our close connection to the local communities we have been able to facilitate effective communication strategies with adjacent private landowners and municipalities about the habitat needs of the dragonfly. Our efforts have led a number of them to reduce their groundwater use voluntarily and to adopt "best management practices" for storm water management within the watershed. Similarly, we have been invited to serve on the team developing a recovery plan for the Eastern Massasauga Rattlesnake, a species listed as threatened under the ESA and which is in decline. In Will County the rattlesnake is found in the open wet woodlands along Plum Creek, on Forest Preserve District land. Even while the recovery plan is in development the District has been acting to improve the rattlesnake's habitat using section 6 funds from Illinois Department of Natural Resources and discretionary funds from the Fish and Wildlife Service. This model of cooperative conservation partnership is an important key, we believe, to setting threatened and endangered species on the path to recovery. Unfortunately, it is a model that is not always emulated. We believe that the ESA's provisions for Federal, State and local communication, cooperation and collaboration could be strengthened so that the positive partnerships currently benefiting the Hines Emerald Dragonfly, the Eastern Massasauga Rattlesnake and the citizens of Will County can be reproduced around the country.

Sonoma County, California provides another example of how local participation in ESA decision making has aided efforts to recover threatened and endangered species. With the final listing of the California tiger salamander in March 2003, Sonoma County was jolted by the realization that, given the location of salamander habitat, much of the county's entire economic future was in serious jeopardy. This is because much of the salamander habitat is within a voter approved urban growth boundary. The listing had the potential to affect affordable housing, critical transportation infrastructure, expansion of one of the city's main sewage lines which already was approaching capacity, and the sub regional water recycling system.

Because the U.S. Fish and Wildlife Service was short of personnel, consultation on individual projects, as well as field survey requirements were lengthy and, at times, inconsistent. The Service recognized that, in order to deal with Sonoma County's unique challenges relating to the salamander, a different and more collaborative approach was required. This led to the creation of the Santa Rosa Plain Conservation Strategy Team in March 2004.

In 17 months, this collaborative team made up of affected public and private stakeholders has developed a cooperative conservation plan that will lead to conservation and recovery of the California tiger salamander and at the same time a consistent process for the approval of projects that are important to the economy of Sonoma County. It provides identified mitigation requirements that will address the biology of the species, and provides certainty for stakeholders to move forward with their projects.

The willingness of the Fish and Wildlife Service to engage in a cooperative conservation plan that supports the President's Executive Order on cooperative conservation issued in August of 2004 has resulted in a successful partnership that is directly benefiting the welfare of the salamander while preventing serious financial detriment to Sonoma County.

Both Will and Sonoma Counties' experience demonstrates the great potential for a new collaborative locally-driven approach to the conservation of endangered species. We believe that provisions for to encourage it—and to remove barriers to it—should be built into the ESA.

Second, NACo believes that science must be used more effectively in all aspects of implementing the ESA. I recounted for you the initial success of our effort to encourage Will County private property owners and municipalities to reduce their pumping of groundwater in order to improve the Hines Emerald Dragonfly's habitat along the Des Plaines River. This effort was made possible by the fact that we had in our hands the results of a unique hydrological study which traced the map of the aquifer which feeds the habitat. This information enabled us to persuade groundwater users to voluntarily reduce pumping in ways that will improve the habitat. However, we were only able to afford the study because the U.S. Army Corps of Engineers happened to have money available from penalties paid by a local party in violation of section 404 of the Clean Water Act. Obviously, essential information should not be available only to those communities "lucky" enough to have large Clean Water Act violations in the neighborhood. We know, by our own experience, that local governments and their citizens want to do the right thing to protect threatened and endangered species, but we need to take action based on good information. Too often, actions are prescribed by the Federal Government on the basis of a scientific record that is incomplete and unpersuasive to all the stakeholders. We believe that a major investment needs to be made in gathering and interpreting data in a way that is open and transparent so that it can withstand the scrutiny of both the scientific community and can command the respect of the public.

Third, NACo believes that the ESA could be strengthened and improved by creating more opportunities for states and local governments to encourage and facilitate conservation measures. Again, we believe that local people want to do the right thing, but more often than not they lack the tools to get the work done on the ground. There is so much more that Will County could do to protect and enhance the habitat, and thereby the populations, of threatened and endangered species and species of concern, if we only had funding available. If the goals of the ESA are indeed a national priority then the burden of meeting them rests with Congress. Counties stand ready to implement sensible strategies at the ground level, but it is simply unjust to expect all the costs to be borne by our local property tax payers.

Ultimately NACo believes that environmental values must be balanced with socioeconomic values to achieve a policy which results in a high degree of environmental protection while also preserving and enhancing local community sustainability. County officials and their constituents are as keenly aware of the historical, economic and aesthetic values of their local environment as they are certain of the need to prepare for a sustainable future to assure the viability of their communities. We

look forward to being your partners "on the ground" as we work toward these common goals.

RESPONSES BY MICHAEL A. PASTERIS TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. What areas of the ESA could be strengthened to improve collaboration and communication between local governments and State and Federal agencies?

Response. Recovery actions are identified as part of recovery plans. Stakeholders (public, private and not-for-profit) are identified that could have a potential role in implementing recovery actions, however, there is no formal buy-in to that implementation so key recovery actions may never be realized. Once recovery plans are completed, there is no communication or follow-up between the Fish & Wildlife Service (FWS) and local agencies or other stakeholders to determine if actions have been undertaken or if so, determine their status. Here is what can improve the ESA.

Expand section 4 of the ESA to allow stakeholders the opportunity to participate in recovery planning. Local agencies can provide good technical information about the local threats to species or habitats, and potentially could be involved in identifying critical habitat. A more open and transparent process could result in more active participation by all stakeholders in recovery actions.

A formal mechanism should be included in section 6 of the ESA that empowers the FWS to enter into formal agreements with individual stakeholders, for example cooperative conservation or management agreements, at the time of the recovery plan adoption or shortly thereafter. The agreement can identify roles and responsibilities, management actions and schedules, monitoring and reporting on the status of the listed species populations, and could be the venue through which Federal financial and/or technical assistance is made available to stakeholders. This would allow State and Federal agencies to better track and modify management actions as appropriate to benefit the listed species.

A formal mechanism should be included in section 6 of the ESA that allows the FWS to enter into agreements with local government agencies, not just with State agencies, allowing funding to become available for specific initiatives such as scientific research or land acquisition by the local agency.

Expand section 7 of the ESA to allow for more formal collaboration with local agencies in endangered species consultations, specifically in identifying mitigating actions in instances of takings or loss of critical habitat. Local agencies can provide technical input, and in our case as a conservation agency, offer opportunities for public land to be used as mitigation for recovery or restoration work.

Expand section 7 of the ESA to formalize and allow the FWS a more active role in facilitating and funding Habitat Conservation Planning. This can involve a variety of stakeholders (public, private, and not-for-profit) working collaboratively to effect conservation initiatives for listed species and their habitat.

Question 2. How have the efforts to protect and recover listed species in your Forest Preserve District been primarily funded? Have significant amounts of State and local funds gone into the effort?

Response. With some minor exceptions through the local Chicago Office of the FWS, nearly all the funding is provided by the Forest Preserve District (FPD). The FPD is a special unit of county government funded through local real estate taxes. Large capital projects such as land acquisition and land management/restoration have been funded through voter approval of special referenda. In our case, Will County voters approved a $70 million referendum in 1999, of which $50 million was for land acquisition and approximately $5 million for restoration/land management. In April 2005 Will County voters approved a $95 million referendum, of which $82 million is for land acquisition.

These funding initiatives address a wide spectrum of FPD goals and priorities, of which endangered and threatened species gain indirect not direct benefits; for example, we may protect suitable habitat or land that can be restored to suitable habitat, but very little FPD funding is going toward species specific management actions that directly relate to recovery actions.

Question 3. How do local land use decisions and planning laws come into play as your District works to recover endangered and threatened species?

Response. The FPD is not a regulatory agency with respect to land use/zoning laws or planning decisions. Some local agencies or municipalities provide the FPD an opportunity to review proposals, most do not except when the proposal is immediately adjacent to FPD land. In this case our role is reactive rather than proactive by providing information to other local agencies that do have that authority. In most

cases local economic interests take precedent over species or habitat protection but in some cases the FPD may influence local agencies or the developer to agree to redesign to minimize impacts.

The sole exception is in regard to the development and implementation of the county's Land Resource Plan. FPD assisted the County of Will in development of this plan by identifying and quantifying unique remnant natural resources with the county. The plan is used by the county to regulate growth in unincorporated parts of the county. However, even in this case the FPD is only advisory and we have no regular authority.

Question 4. What has been your experience in working with the Federal Government in cooperative conservation partnerships for species conservation and recovery in your region?

Response. The FPD has a very good working relationship with the Chicago Office of the FWS. They have been responsive, provide technical expertise and want to partner with us to affect conservation initiatives. Efforts, however, are very limited. Much more could be accomplished at the local level if more funding were made available to local agencies like the FPD.

RESPONSE BY MICHAEL A. PASTERIS TO AN ADDITIONAL QUESTION FROM SENATOR INHOFE

Question. What steps can Congress take to ensure that consideration of local conditions is paramount during the ESA process? Should Congress consider ways to encourage or require the FWS to actively solicit the input of local governments and landowners in the regulatory process? Where should this occur? In data gathering? At listing? During the critical habitat consideration?

Response. I believe the ESA process should be balanced, open and transparent. It should consider local interests and conditions on par with other regional or national interests, along with the best scientific data available. The FWS should be required to actively solicit potential stakeholders, including local governments and landowners, to participate in the recovery planning process. This participation should occur when data are gathered, at the time of listing, and in the identification of critical habitat. Local government conservation agencies like the FPD can play a key role by providing technical information about species distribution, status, critical habitat and recovery actions needed; knowledge of local threats and issues; and can identify other local stakeholders and contacts that the FWS should include in the ESA process.

RESPONSES BY MICHAEL A. PASTERIS TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Please describe the specific tools that you feel State and local governments need to encourage private individuals to protect listed species?

Response. Maintain or expand fiscal support to the Private Land Stewardship and to the Safe Harbor Agreement Programs. These provide the opportunities for the FWS to partner with landowners that want to implement listed species and habitat conservation initiatives. Additional financial support to these programs could be provided to landowners participating in formal agreements with the FWS that achieve identified recovery actions—such as tax incentives or incentives for entering into conservation easements that in turn have tax benefits. Easements can be flexible and structured to allow the landowner to continue with a variety of sustainable uses of their property.

Also formalize and expand the FWS role in habitat conservation planning (see responses to questions from Senators Chafee and Inhofe for more detail).

Question 2. What changes are needed under the ESA to improve partnerships between Federal, State and local participants?

Response. Expand sections of the ESA that allow for a more formal partnership between local governments and the FWS for recovery planning, implementation of recovery actions or assessment of reasonable prudent alternatives or mitigating actions for takings or loss of critical habitat (sections 4, 6 and 7 of the ESA, see responses to questions from Senators Chafee and Inhofe for more detail).

Partnerships can be formalized though written agreements, such as cooperative conservation or management agreements, which allow for funding to flow to local units of government to acquire land or implement other actions directly addressing species recovery efforts.

STATEMENT OF DWAYNE SHAW, EXECUTIVE DIRECTOR, DOWNEAST SALMON FEDERATION/DOWNEAST RIVERS LAND TRUST

Dear Senators and Senate Staff Members, I welcome the opportunity to stand before you this morning and I appreciate the tremendous commitment you have made to bring forth information to your colleagues in Congress regarding the status of the fisheries, wildlife and waters of the United States and beyond.

The tremendous bounty and natural beauty of our environment is a gift that has been bestowed upon us and has co-evolved with us over many millennia. Stewardship of and respect for our fellow inhabitants on this planet is a responsibility which was delivered to each of us by previous generations and which we have a responsibility to pass on to the next generations. In this regard, the Endangered Species Act is perhaps our most enlightened of all laws and exemplifies our commitment to protect and restore the most vulnerable of all creatures and their habitats.

After 32 years, the Act remains among the most popular and effective environmental laws of our country. I believe the public support for this law exists because it is viewed as a strong response to an unacceptable and most often an entirely avoidable loss of a species.

I come to you from the Northeastern most hinterlands of our country, Washington County, "The Sunrise County" of Maine. This is a hardscrabble Yankee region now, most known for lobsters, lumber and leisure (for the tourists and summer people "from away")—but is also known as the home to five of the eight remaining rivers in the United States with wild populations of Endangered Atlantic salmon.

Three other wild Atlantic salmon rivers in the United States designated under the ESA are also in Maine, though historically the Atlantic salmon ranged throughout most of New England in numbers plentiful enough to have been, at one time, a source of fertilizer for farmers fields and even up until very recently a great recreational and economic resource in our very poor region.

The wild Atlantic salmon is often referred to as "the King of Freshwater Game fish" and its loss to our region has meant the loss of millions of dollars in tourist and fisheries revenues. The Atlantic salmon is a fabled species that the European settlers were pleased to find in abundance upon arriving on this continent. In fact the earliest documented stone pictographs found throughout the British Isles are ornate carvings of Atlantic salmon. It is clear that both the Europeans and First Nation peoples of this continent possessed great reverence and placed high value upon salmon as a food source and symbol of life, vitality, abundance and perseverance. This reverence and symbolism persists, despite the atrocities dealt by our ignorance upon our fisheries and waters. The ESA and it's implications for the restoration of this species—and many, many other species—illustrates that current generations understand the need to protect our heritage and our interconnectedness with the environment of our ancestors and of generations yet unborn.

And is the ESA protecting salmon? From direct experience on the ground working to protect and restore Atlantic salmon in Washington County and beyond for the past 22 years, I can tell you that the positive implications under the ESA for our salmon have been the difference between night and day in Sunrise County.

In 2000 the Atlantic Salmon "Distinct Population Segment", encompassing at first seven and later eight rivers in Maine was granted emergency Endangered Status under the ESA. Unfortunately, this designation was granted only after a lawsuit was threatened by several conservation organizations including Trout Unlimited and the Atlantic Salmon Federation—with whom my organization is affiliated. The bottom line at that time was that the State of Maine, under then Independent Governor Angus King, sought to circumvent the listing via implementation of a "State Recovery Plan" sanctioned and approved under the ESA 4–D rules. This approach was widely encouraged and endorsed by industry and economic development forces in the state. Many angler groups and other conservationists were drawn into the "state plan" because it promised a much greater level of industry cooperation and government interest and investment than the preceding decades—during which very little attention was paid to serious population enhancement efforts and habitat protection. However, when it became apparent that Governor King and his Salmon Task Force were more interested in maintaining the status quo than seriously retooling and applying needed resources to the situation, it was very fortunate that the Federal services were standing by to pick up the pieces.

Provisions under ESA allowing for the states to manage species recovery under the 4–D rules should be examined very closely by your committee, particularly within the context of the Maine Atlantic salmon case study. Many believe that valuable time was lost for the Atlantic salmon while the State reacted to the interests of a few influential user groups.

Over two decades ago, our organization—the Downeast Salmon Federation—was formed by five separate "salmon clubs" in the eastern region now encompassed under the ESA salmon plan. In 1982 these clubs, representing several hundred members, recognized the problems facing the populations at risk and, in part, created the Federation to advocate for better management. Despite the fact that fishing for salmon is no longer allowed and to the surprise of many, our total number of supporters remains nearly the same or greater—even though it is no longer possible to buy a salmon license or to find a well stocked fly shop in our small towns.

The listing of the species and the greater attention drawn to the situation has, in the end, brought together the community and helped to build new local partnerships. This, combined with the additional funds and resources provided under the moderately heightened Federal salmon programs, gives new hope that a dire situation will improve. This hope and optimism is what draws the private sector into the greater effort—again, despite the fact that fishing was ended several years ago.

Federal funds directed toward salmon recovery through "challenge grants" issued by the National Fish and Wildlife Foundation are particularly effective in sustaining public investment and interest. In just the past three years, our organization has brought in an estimated 2 million dollars worth of private investment into salmon recovery in the poorest county in our State and one of the poorest in the nation. These numbers are phenomenal and have been largely attributable to small Federal "seed" investments in our outreach efforts and all made possible because of the listing. While the numbers themselves are impressive, what is more impressive is the impact that a well orchestrated education and outreach effort can have on the "hearts and minds" of the communities in which an endangered species lives. Again, as in most situations, prevention is the most cost effective method of dealing with environmental degradation. By working closely with landowners and communities we have, at the very least, helped to prevent many habitat impacts and in reality also restored many sites that had been neglected or remained unidentified.

So are all things rosy with the implementation of the ESA in ME? Not quite. Let's look at a few of the obstacles starting with the hearts and minds issue.

Any effort of the scale and magnitude of prevention of loss of a species—even one as widely charismatic as the salmon—requires a solid understanding on behalf of the public of the issues (preventable problems) affecting the declines of the species and a greater patience and compassion for the overall effort.

In my experience outreach to stakeholders requires a consistent message or series of messages delivered face to face, neighbor to neighbor or peer to peer at the local level. This can be best achieved by a local group, with a passion for the effort and with a true connection to the community(ies) involved. This cannot however, always be accomplished without Federal investment. In the case of Atlantic salmon, Federal dollars in the form of challenge grants or direct dedicated funding remains the single greatest source of support for our watershed councils and other local efforts. The community must be involved in a true partnership or "co-management" sense. In Maine, as in the Pacific Northwest, a local "watershed council" approach to achieving "buy in" for salmon restoration projects remains an enlightened and successful method of protecting and beginning recovery of endangered fisheries. Federal investments in local outreach initiatives must be an integral—and not an optional—part of the Act in years to come.

And finally, if I am to avoid being brined for lobster bait by my friends and colleagues back home, I will end with two points of common concern to so many involved in the Atlantic salmon restoration program:

First, of course, is the need for additional Federal resources. A more equitable and consistent funding mechanism needs to be developed for all ESA listed species. The discrepancy between funding levels between Atlantic salmon and Pacific salmon should be addressed. The delays and uncertainties that developers struggle with under the ESA are the same conditions that stall our recovery actions. A well funded program will float all boats.

Lastly, in Maine, the Atlantic salmon listing has been a "Joint Listing" with USF&WS and NOAA both equally responsible. While there may be advantages in bringing the resources of the two agencies to bear upon the situation, this dual leadership can mean that action planning moves slowly with poor coordination. An examination of the provisions under the ESA that allow for this situation should be reviewed with a mind toward streamlining the bureaucracy without creating a net loss of Federal resources.

I appreciate the time provided to me before you today and I thank you for your invitation.

RESPONSES BY DWAYNE SHAW TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. Your testimony refers to the problems associated with the initial push for a "State Recovery Plan" for listed Atlantic salmon populations in Maine. For what reason would this plan have been detrimental to salmon populations in your state.

Response. The State of Maine initiated a State conservation plan for Atlantic salmon after a citizen petition to list the species was filed. The State plan was initially accepted by the Federal services and as a result delayed the full protection of the species and it's habitat for approximately three years—until such time as a lawsuit was threatened by several environmental groups including Trout Unlimited and the Atlantic Salmon Federation. So, the provisions under which a "state plan" was allowed—even when it had been previously determined that the species deserved Federal protection—assured that industry and State government interests in maintaining status quo efforts and protections would prevail. The period of time when the "state plan" was supposedly being implemented saw threats to salmon populations actually increase. These threats included irrigation, cranberry development in wetlands with resulting siltation of spawning beds, clearing of riparian forests for expansion of blueberry irrigation, increased use of pesticides in the riparian zone and very likely an increased drift of those chemicals to the rivers in question, increased logging "liquidation harvesting" resulting in the lowest standing stock of forested areas within these watersheds in history. The bureaucratic smoke screen the State created to try to prevent the listing ultimately resulted in a State lawsuit against the Federal Government that claimed the genetic information used to support listing was flawed.

Question 2. What resources has the State of Maine invested in Atlantic salmon recovery efforts? Is there a Recovery Plan in place for Atlantic salmon in Maine?

Response. It is my estimate that the greatest single financial investment made by the State of Maine with regards to endangered salmon in recent years were paying the attorney fees and staff time associated with suing the Federal Government to prevent the listing and adequate protection of the species.

While some of this may sound pessimistic or cynical I feel that this is a fair and accurate account of the situation. I have been very close to the whole process during the past decade and it is with some regret that I feel compelled to tell it as I see it.

I do not want to leave the impression that all state/industry recovery efforts are hollow, but in the case of Atlantic salmon and the Maine experience there were—and continue to be significant problems. Currently there is a draft Federal recovery plan in place and the species is listed as endangered. As was stated many times during the pre-listing and State plan era, industry cooperation and investment did diminish, post listing. The reality however is that the industries involved in developing the State plan had little intention of actually implementing the plan and the State largely followed their lead.

Question 3. I enjoyed the line in your statement that AA well funded program will float all boats. What are the current difficulties with existing funding streams for Atlantic salmon conservation and recovery efforts?

Response. I can say the greatest difficulty with existing funding streams for salmon (and other threatened fishes/eries) is that we do not have a powerful "champion" in Congress who can assure adequate investment of Federal dollars. This is a major problem or vacuum that perhaps Senator Chafee could help to resolve. We need a champion and this is evidenced by the vast differences in investment being made in the *Pacific NW* vs. *New England*—particularly with regards to salmon.

On the State side of things, we have a State that is largely controlled by timber and business interests who are threatened by the science that supports adequate protection of water quality. As a result very, very little State money is available for protection of the last American stocks of the "King of Freshwater Gamefish". Many of our State financial problems stem from over exploitation of natural resource wealth such as in our fisheries and timber lands. The fox is often not a good "team player" when it comes to protecting the chickens.

Our State agencies and Federal fisheries agencies as so far behind in their ability to adequately manage migratory fisheries such as salmon, eel, alewives and shad, that reports and plans from the 1800's are still yet to be implemented. I say this with a straight face and with evidence in hand.

Our tiny conservation group located here in one of the poorest counties in the Eastern United States has worked for years to document fisheries declines and in doing so have unearthed a number of interesting findings. Take for instance the 1870 era State fisheries report that highlighted the technical breakthrough of fish

ladders. The first fish ladders were being demonstrated on the East Machias and Orange Rivers at the time. They were a resounding success and were supposed to have harkened in a new era. The Orange R has been dammed up without a fishway in place for the last twenty years because no State or Federal agency has had the resources to really pay attention, so a demonstrated fisheries success in the 1800's is now a major impediment to fisheries in the year 2005. This is just one example, but illustrates the backward movement that we are facing in some circumstances. This is absolutely horrible and inexcusable in this day and age.

My statement that adequate funding would float all boats is I think a truism. Whether seeking permits for development or restoration the current level of staffing and staff expertise in State and Federal fisheries and resource agencies is lacking. Likewise, funds are lacking for the implementation of a successful recovery program thereby ensuring that the salmon will remain endangered or move further toward extinction. All "boaters" would like to see the salmon moved off the list and viable populations recovered. This will cost money, but the investment made will save money (and maybe the species) in the long run.

RESPONSES BY DWAYNE SHAW TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Please describe how you would like the 4–D rules dealing with states management of species recovery to be implemented?

Response. The 4–D rules need to be strictly implemented under full ESA obligations to recovery. The experience in Maine with Atlantic salmon suggests to me that states—under pressure from industry—can abuse the "freedoms" allowed under 4–D. The State of Maine Atlantic Salmon Conservation Plan did affect a very slight incremental upward emphasis on salmon protection, but the positive effects were greatly surpassed by additive development pressures and resource exploitation during that same period.

Question 2. Your testimony states that prevention is the most cost-effective method of dealing with environmental degradation. How can the Endangered Species Act be improved to increase the incentives for prevention?

Response. I believe that the ESA can be improved to prevent species declines through very serious investments in outreach and education as soon as a species is known to be imperiled or becomes what is referred to as a "candidate species". The ESA should also not be viewed as a stand alone law. There are many other environmental laws that need to be better enforced as a means of preventing habitat and species loss. For instance, my organization monitors water quality. The storms this fall have brought the pH in the Pleasant River (one of the listed salmon rivers) down to pH 4.4! At this rate, we will end up with salmon extinction and endangered populations of other aquatic species. The Clean Air Act needs to be implemented better. We are now looking at liming our rivers—as the Nova Scotians are beginning to do at exorbitant cost—in order to prevent further declines. This is a pay now or pay even more, later scenario. Liming rivers is expensive. We must only ask the Norwegians what they expend each year to lime their rivers.

Prevention costs money, but it is the cheapest alternative. The health of our ecosystems is like the health of our bodies—everyone knows that prevention of problems is best. We are not implementing what we know will prevent problems for us in the future. Please see my response above to Senator Chafee regarding implementation of government fisheries recommendations from the 1800's that are still common and recurring problems today (i.e., dam on Orange R.).

Question 3. Please give your perspective on the cultural and historical importance of the salmon economy to your people and the region?

Response. The salmon are a cultural icon for the people of this region—representing all that is good about the vitality of our environment. The salmon embody the determination to succeed that is so much a part of the psyche of the Yankee and native spirit. The loss of the salmon erodes the heritage and the historical as well as economic ties to yet another important wild fishery. Maine, New England and America cannot afford to lose another thread from the cloth of which we are made.

From a strictly economic perspective, salmon were an important commercial species up until the mid 1940's. They have also long been an important gamefish species that attracted many thousands of tourist anglers annually to ME. In the case of our particular situation in Washington County where five of the eight ESA listed salmon rivers occur, a fishable population of salmon would bring in hundreds of thousands of dollars annually to a region that is among the poorest in the United States. Fisheries are serious business here and there is great resentment that yet

another fishery is moving closer and closer toward it's final chapter. Many of the people of this region stand ready to help in whatever way possible, but there needs to be solid leadership and support from the powers that be.

STATEMENT OF ROBERT P. DAVISON, WILDLIFE MANAGEMENT INSTITUTE

Mr. Chairman, Members of the Subcommittee, I am Robert P. Davison, Field Representative in the Northwest office of the Wildlife Management Institute (WMI), Corvallis, Oregon. WMI was established in 1911 and is staffed by professional wildlife scientists and managers. Its purpose is to promote the restoration and improved management of wildlife in North America. I appreciate this opportunity to provide the views of WMI on the role of States, Tribes, and local governments in implementation of the Endangered Species Act (ESA).

In addition, as the Chair of The Wildlife Society's Technical Review Committee on the ESA, I will present those portions of the Committee's report, "Practical Solutions To Improve The Effectiveness Of The Endangered Species Act For Wildlife Conservation," that address the issues before the Subcommittee today. The Wildlife Society is an international, non-profit scientific and educational organization serving and representing wildlife professionals in all areas of wildlife conservation and resource management. The ESA Technical Review Committee was appointed by the President of The Wildlife Society to "identify problems limiting the successful implementation of the Endangered Species Act and recommend practical solutions for improving its effectiveness for wildlife conservation." Unlike other Wildlife Society technical reviews of scientific literature, the committee was charged specifically with identifying policy problems and potential solutions for the following aspects of the ESA: (1) listing, (2) critical habitat designation, (3) conservation on private land, (4) involving State fish and wildlife agencies, (5) species recovery, (6) interagency section 7 consultation, (7) consideration of distinct population segments, and (8) ensuring sound decisions. The role of States and Tribes is addressed in each of these aspects of the ESA. The technical review paper presents the views of the appointed committee members, but not necessarily the views of their employers or The Wildlife Society. If the Society decides to develop a position statement based on the review paper, a preliminary version of that statement will be published for comment by Society members. Following the comment period, revision, and Council's approval, the statements are published as official positions of The Wildlife Society.

SECTION 6 COOPERATIVE AGREEMENTS

Under the ESA, States and the U.S. Fish and Wildlife Service and NOAA-Fisheries (Services) share jurisdictional authority for listed species. When the ESA was passed in 1973, Congress stated, "the successful development of an endangered species program will ultimately depend upon a good working arrangement between the Federal agencies, which have broad policy perspective and authority, and the State agencies, which have the physical facilities and the personnel to see that State and Federal endangered species policies are properly executed." Section 6 requires the Services to cooperate to the maximum extent practicable with the States in carrying out the program authorized by the ESA.

Cooperative agreements between the Services and the States under section 6 of the ESA are the means by which the Services certify that States have established and maintain adequate and active programs for the conservation of listed species. Currently, States and Territories have entered into 89 section 6(c) cooperative agreements with the Interior Department. Eight States and two Territories have entered into cooperative agreements with the Commerce Department that encompass 15 listed species under the jurisdiction of NOAA Fisheries. All States and six Territories have at least one cooperative agreement for some species of fish and wildlife or plants. Many States have multiple agreements. The State of Oregon, for example, has three cooperative agreements that cover vertebrate fish and wildlife, plants, and invertebrate species. For those States that have entered into cooperative agreements, the grant program established under section 6 provides funds to State fish and wildlife agencies to cooperate in efforts to maintain and recover listed species and to monitor the status of candidate species and recently recovered, delisted species.

Issues of Concern

1. Implementation of the ESA would be improved by greater partnerships with State fish and wildlife agencies in carrying out the ESA.

2. State fish and wildlife agencies are not being provided adequate and stable funding from the section 6 Cooperative Endangered Species Conservation Fund to

fulfill State roles in the conservation of endangered and threatened species. Eighteen years ago, the Senate Environment and Public Works Committee expressed the concern that "current Federal/State cooperative efforts to protect endangered species also are inadequate and are in danger of disintegrating altogether." The Committee noted that the amount of money appropriated in fiscal year 1988 for matching grants to States under section 6 was roughly the same as it was in 1977, yet there were four times as many cooperative agreements in 1987 as there were a decade earlier. Matters only have gotten worse. By the start of fiscal year 2006, there are 1,264 listed U.S. species—more than 6 times the 194 U.S. species listed in 1977—yet the $9.9 million appropriated in State grants under section 6 for this coming fiscal year has only somewhat more than one-third as much buying power as the $4.3 million provided in 1977.

3. State expertise, data, personnel, and working relationships with others still are not sufficiently utilized in ESA decisions and actions.

4. Too often, too little is done too late to make listing unnecessary. To a significant extent, a factor contributing to this problem is that there are insufficient financial incentives and regulatory assurances to facilitate actions by States that would make listing unnecessary.

5. Day-to-day cooperation between the State fish and wildlife agencies and the Services in administration of the ESA continues to be hindered by the Federal Advisory Committee Act (FACA).

Potential Solutions

Funding Options

The Administration should request and the Congress should appropriate adequate funding under section 6(i) of the ESA to assist States in building a strong partnership for conservation of candidate, threatened, and endangered species and monitoring of recovered, delisted species.

Administrative or Legislative Options

1. The States, where they have the fiscal resources, expertise, staff, and political support to do so, should play a much greater role in administration of the ESA.

2. State fish and wildlife agencies should have a clearer and more significant role in efforts to prevent species from becoming candidates and in listing decisions, critical habitat designations, development of recovery strategies, and management and recovery of listed species.

3. The section 6 cooperative agreement provisions should be redesigned to function as a true partnership agreement requiring close collaboration and coordination between and among the States and the Services. The section 6 agreement can be the vehicle to identify the respective roles of the States and the Services. It should provide the flexibility to allow States that so choose to assume the lead for prelisting conservation, recovery planning and implementation oversight, administration of safe harbor agreements (SHA) and habitat conservation plans (HCP), and post-delisting monitoring.

4. The section 6 Cooperative Endangered Species Conservation Fund should be restored to its original intended purpose of providing adequate and stable funding to State fish and wildlife agencies to fulfill State responsibilities under the ESA. Grants related to HCP planning assistance and HCP and recovery land acquisitions, which currently are inappropriately utilizing the authorization provided by the Fund, should be authorized separately under section 15 of the ESA.

5. Amounts deposited to the Cooperative Endangered Species Conservation Fund should be made available to the States without further appropriation to make it possible for State fish and wildlife agencies to assume the lead for prelisting conservation, recovery planning and implementation oversight, SHA and HCP administration, and post-delisting monitoring.

A recent agreement between the Arizona Game and Fish Department (AZGFD) and USFWS Region 2, entitled "State Wildlife Agency Participation in Implementing the Endangered Species Act: State of Arizona," is one example of a new direction for States in ESA administration that has promise if accompanied by sufficient funding support (which can be downloaded from http://www.fws.gov/arizonaes/threatened.htm). The agreement describes the roles and responsibilities of AZGFD and USFWS for candidate species assessments, prelisting recovery activities, petition management, listing (including reclassification), critical habitat designation, special rules for candidate and listed wildlife, 5-year status reviews, recovery plan development and implementation, monitoring of de-listed wildlife species, land and water acquisition and management, section 7 consultation, law enforcement, habitat conservation planning, and experimental populations. The AZGFD and USFWS mutually agree that the ESA and section 6(c) cooperative agreement language stating

that the Secretary "shall cooperate to the maximum extent practicable" with the States, "shall be taken to mean that Region 2 of the Service has offered the Department an opportunity to participate in developing and implementing each recommendation formulated and each action undertaken within this Region pursuant to the authorities of the [ESA]." As part of its section 6(c) requirement to maintain an adequate and active program for conservation of endangered and threatened wildlife, the AZGFD agrees to develop "species-specific or ecosystem-specific conservation strategies for all species of wildlife that are listed, proposed for listing, candidates for listing, or which may benefit from proactive efforts to preclude the need for listing pursuant to the Act." Thus, the agreement between the AZGFD and USFWS brings much greater specificity and sense of partnership to relative Federal and State roles and responsibilities than previously forged section 6(c) cooperative agreements or the 1994 USFWS national policy on the subject. Lack of funding to support the agreement, however, has limited its effectiveness and the likelihood that it will be replicated by other States.

LISTING AND CRITICAL HABITAT DESIGNATION

The ESA's section 4 requires consideration of efforts by States in making listing or critical habitat determinations. Actual notice of proposals must be given to conservation agencies in affected States. If a final regulation is issued that conflicts with State agency comments, or a regulation is not adopted in response to a State-petitioned action, a written justification must be provided for "failure to adopt regulations consistent with the agency's comments or petition." These requirements generally were incorporated into regulations in 1984 (50 CFR 424). Some of the current issues concerning listing and critical habitat designation are related to this quite limited role for States under section 4.

Issues of Concern

1. Implementation of the ESA would be improved by greater partnerships with State fish and wildlife agencies in the efforts to prevent the need to list species.
2. Too often, too little is done too late to make listing unnecessary. To a significant extent, a factor contributing to this problem is that there are insufficient financial incentives and regulatory assurances to facilitate actions by States that would make listing unnecessary.
3. The ESA does not require explicitly soliciting information held by States, sharing information with States, or involving States in listing and critical habitat designation decisions. While not required explicitly by the ESA, the Services have a policy to carry out this kind of coordination. In some instances, however, information from State wildlife agencies may not be sufficiently sought, used, or considered in listing decisions.
4. State expertise, data, personnel, and working relationships with others still are not sufficiently utilized in ESA listing and critical habitat decisions and actions.

Potential Solutions

Funding Options

Federal funding should be provided to the States to conduct monitoring and evaluation of species at risk (e.g., species on the candidate list, and those on each State's heritage program list of C1 and C2 species, sensitive species list or the equivalent).

Administrative or Legislative Options

1. State fish and wildlife agencies should have a clearer and more significant role in efforts to prevent species from becoming candidates and in listing decisions, critical habitat designations, development of recovery strategies, and management and recovery of listed species.
2. State fish and wildlife agencies should be more involved early and throughout the listing process, including in down-listing decisions. This involvement will facilitate States providing necessary information and help States formulate management decisions and communicate with the public. Similar efforts should be made with Native American Tribes.
3. Encourage the Services to work with interested State fish and wildlife agencies in development of a memorandum of agreement (MOA) under section 6 of the ESA to provide greater certainty and specificity with regard to coordination and collaboration on activities under section 4 of the ESA. The AZGFD–USFWS agreement may serve as a good template.
4. Encourage the Services to utilize State fish and wildlife agency and Native American Tribal expertise in conducting population status inventories and geographic distribution surveys by contracting with the States or Native American Tribes for data collection, review, and analyses.

5. Involve State fish and wildlife agencies in development of guidance on how to identify, quantify, and map critical habitat, assess the economic and other impacts of designation, and balance the benefits of designating any specific area in comparison to the benefits of not designating.

6. Involve State fish and wildlife agencies in identifying and designating critical habitat.

7. Categorically exempt State fish and wildlife agencies from FACA restrictions so that these agencies are able to participate as equal conservation partners, not as public stakeholders, in freely sharing information and contributing expertise to the listing and critical habitat designation processes. This exemption would help ensure that the Services have the best available information; the States would not have to react to Service proposals at public hearings where it would be a greater advantage to have State and Federal agencies in agreement about resources within their authorities; and the States could help their publics know the reasons and impacts of listing decisions.

RECOVERY

The purpose of the ESA is to prevent species extinctions and then provide measures to help bring species back to the point at which the measures provided by the law are no longer necessary. Recovery of species is one metric by which the success of the ESA may be evaluated, but it must be used with care because halting or reversing declines that in some instances have developed over 200 years requires long periods of time and a strong commitment to fund and implement actions that will lead to recovery. Currently, recovery efforts are inadequate for most, if not for nearly all, listed species. More effective efforts to recover species requires not only increased spending, but also coordinated undertakings by a broad array of landowners, public agencies, and stakeholders. These efforts also require better and user-friendlier incentives to private landowners who often are willing to undertake efforts to protect and recover endangered and threatened species.

Once species have been recovered and delisted, section 4(g) requires the Secretary to "implement a system in cooperation with the States to monitor effectively for not less than five years the status" of those species. The USFWS has addressed this requirement through adoption of species-specific monitoring plans developed in cooperation with States, recovery teams, and public input.

Issues of Concern

1. Recovery is established under the ESA as the responsibility of all agencies, in partnership with the States. In reality, given the importance of non-Federal lands to conservation of listed species, partnerships with Native American Tribes, local governments, NGOs, and private parties also are essential to recovery of many listed species. However, recovery, unlike listing or consultation, has not evolved as a mandatory duty of any party. It is largely a voluntary endeavor driven by enlightened self-interest. As a result, there has been great disparity among species receiving recovery attention, and many species do not have sufficient funding or attention devoted to them to achieve significant recovery progress. (The most recent report to Congress on State and government expenditures for implementing the ESA, covering fiscal year 2002, showed that 50 percent of the funding was focused on only 17 species [1.3 percent of all those listed under the ESA]. While general [i.e., nonland acquisition-related] expenditures were ≥$1 million for 87 species, the median expenditure for all species was only $14,100.)

2. Recovery plans are needed to establish a roadmap for recovery activities, but the Services have been hard pressed to produce in timely fashion recovery plans that reflect a good understanding of species recovery needs and a reasonable consensus among species experts and affected publics. There is inherent tension between the competing demands for appropriate scientific certainty about threats and the effectiveness of conservation measures, the involvement of stakeholders in the recovery planning process, and rapid production of a recovery plan with reasonable consensus of the recovery team. As a result, recovery plans often take significant time and firnding to produce, are not revised and updated as frequently as they should be, and are not sufficiently integrated with other, regional, State, and local efforts.

3. Recovery plan implementation usually involves commitment of staff time or funding, both of which are often in short supply. Much has been accomplished in the last 30 years through altruistic action and cooperation, but the overall need for recovery action far exceeds the level of effort that has been applied to date.

4. Implementation of the ESA would be improved by greater partnerships with State fish and wildlife agencies and Tribes in efforts to recover species.

5. The Services lack comprehensive policy and procedural guidance on how to comply with the statutory requirement to monitor the status of species that have recovered and been removed from the lists of threatened or endangered species. Such guidance needs to be developed in conjunction with State fish and wildlife agencies to ensure that effective post-delisting monitoring plans are produced in timely fashion and in cooperation with the States that will be assuming management responsibility for the species post-delisting.

Potential Solutions

Administrative Options

1. Recovery plans should:

(i) assess risk and focus on amelioration of threats to species;

(ii) be developed by teams that are of manageable size and sufficiently diverse so as to include needed expertise and representation of entities responsible for management of the species or its habitats, including State fish and wildlife agencies, Federal land management agencies, and others essential to recovery implementation; and

(iii) include provisions for regular monitoring and reporting to make possible evaluation of plan effectiveness.

2. The Service should develop, in cooperation with the States, comprehensive policy, and procedural guidance on preparation of post-delisting monitoring plans.

3. State fish and wildlife agencies and Native American Tribes should be provided with the opportunity to be involved in development, implementation, and monitoring of recovery plans and plan activities.

4. Native American Tribes should participate in the recovery planning process to assist in developing measures and monitoring capable of being adopted in Tribal land-use plans.

SECTION 7 CONSULTATION

Section 7(a)(2) of the ESA reiterates the provisions of section 4 by emphasizing that critical habitat may be designated by the Secretary only "after consultation as appropriated with the affected States," but otherwise makes no reference to cooperation with States in the interagency consultation process. The section 7 regulations similarly are silent on cooperation with States (50 CFR 402.01–402.48).

Issues of Concern

1. In recent years there have been approximately 70,000 actions/year that have triggered some form of consultation. On average, >95 percent are resolved through informal consultation procedures, but even informal consultations can take time and involve substantial project modifications. Thirty years after passage of the ESA, and despite the variety of other environmental laws that require consideration of fish and wildlife conservation (e.g., Clean Water Act, FIFRA, National Environmental Policy Act, Federal Power Act, National Forest Management Act, and Federal Land Policy and Management Act), Federal agencies do not often incorporate effective measures to avoid or minimize the impacts of their actions on listed species until "forced to" by a section 7 consultation.

2. There is rarely perfect information available to establish the effects of an action on listed species. Once consultation is initiated, the Services must proceed with issuing a biological opinion based on the best available information, even when that information leaves many relevant questions unanswered. The Services do an admirable job of producing scientifically sound and defensible opinions in the face of such uncertainty. The National Research Council review of the biological opinions issued by the Services for the Klamath Irrigation Project has led some to question the adequacy of the existing consultation process in the face of a high level of uncertainty.

3. The funding and staffing of the Services to carry out their consultation responsibilities have not kept pace with the growth in consultation workload As a result, Federal agencies and affected third parties are faced with project delays and increased transaction costs. Funding for the BLM, Forest Service, and other agencies has been inadequate to complete consultation and monitoring work.

Potential Solutions

Administrative Options

1. Federal agencies should be required to work with the Services, State fish and wildlife agencies, and other experts from the scientific community to resolve areas of scientific disagreement or uncertainty, to the extent that they can be resolved, during development of the biological assessments, and then to design their action

conservatively when faced with scientific uncertainty about project impacts or the adequacy of offsetting measures.

2. In order to produce timely delivery of section 7 products and decisions and to minimise transaction costs, the Services should continue and expand their efforts to work cooperatively with State fish and wildlife agencies during consultations.

3. The Services, in cooperation with State fish and wildlife agencies and other Federal agencies, should develop methodologies to reduce the times required to comply with section 7 for actions involving incidental take that would have low impacts or produce net benefits to listed species.

4. Interagency support should be provided and interagency guidelines established to encourage greater collaborative efforts among State and Federal agency scientists and managers.

CONSERVATION ON PRIVATE LANDS UNDER SECTION 10

Section 10 of the ESA makes no mention of cooperation with States. In particular, both the provisions of the law and the associated regulations provide no explicit role for States in habitat conservation planning. There is a certain irony to this silence given the increasingly large role played by States and local governments in carrying out HCPs and other agreements for listed and candidate species under section 10.

State Involvement in Habitat Conservation Planning

During the 1990s, administration of the ESA extended its reach at a great rate into incidental take activities that previously had received relatively little attention. From 1982 when section 10 of the ESA was amended to authorize HCPs as a means of permitting, minimizing, and mitigating incidental take of listed species caused by non-Federal activities until 1992, only 14 HCPs had been approved. By the end of 2004, however, the USFWS had approved 472 HCPs covering approximately 30 million acres of non-Federal lands and protecting 200 endangered or threatened species. As the number of HCPs has grown, there also has been an increase in the complexity of the plans, the number of covered species, and the size of the areas. In the evolution of habitat conservation planning from a process adopted primarily to address single projects to broad-based, landscape-level planning, the role of States and local governments has become far more prominent. For example, the HCP approved in 2003 for western Riverside County, California resulted from an application by the County of Riverside, Riverside County Flood Control and Water Conservation District, Riverside County Transportation Commission, Riverside County Parks and Open Space District, Riverside County Waste Department, California Department of Transportation, California Department of Parks and Recreation, and 14 western Riverside County cities. It was developed as both a HCP and a sub regional plan under the State Natural Community Conservation Planning Act (NCCP), which is administered by the California Department of Fish and Game. It covers 146 species and more than 1.2 million acres. In 2002, a HCP Land Acquisition Grant provided $9 million from the section 6 Cooperative Endangered Species Conservation Fund to acquire key core habitats for the threatened coastal California gnatcatcher and endangered least Bell's vireo and Stephens' kangaroo rat.

As the USFWS greatly expanded the use of HCPs in the last decade, State and local governments increasingly drove their development. Approximately 30 percent of all approved HCPs resulted from applications by local governments or State agencies or both. The statewide HCP developed for the Karner blue butterfly by the Wisconsin Department of Natural Resources (WDNR) provides an interesting model for States to regain primary management responsibility for listed species. The WDNR is responsible for compliance with the conditions of the Federal incidental take permit and HCP implementation. The State HCP and permit serve as an umbrella that provides incidental take authority to 26 other partner entities that have developed individual conservation agreements with the WDNR. Under this arrangement, the resident ESA-listed species remain under the jurisdiction of the State fish and wildlife agency, which is most knowledgeable about the species, its status, and its existence in the State. Unfortunately, this promising approach so far has not been replicated by other States.

State Involvement in Safe Harbor and Candidate Conservation Agreements

State agencies and local governments have played a larger role in the innovative use of authority under section 10 of the ESA to enhance the survival of endangered, threatened and candidate species through use of SHAs and candidate conservation agreements. State wildlife agencies in Georgia, Alabama, Texas, Louisiana, and South Carolina all have received Federal funding through section 6 to develop statewide programmatic SHAs for red-cockaded woodpeckers. The States of Texas, South Carolina, and Georgia entered into early SHAs and received incidental take permits

under the HCP authority of section 10(a)(1)(B) to promote recovery of red-cockaded woodpeckers. More recently, States such as Louisiana have entered into these agreements under section 10(a)(1)(A) and received enhancement of survival permits. In either case, the USFWS issues an umbrella permit to the State wildlife agency, as opposed to individual permits to each participating landowner. Once overall baseline responsibilities are identified in the umbrella permits, private landowners, with assistance if necessary by State agencies, are able to fill out a relatively simple evaluation form that documents background information, the baseline, habitat maintenance and enhancement activities, expected net conservation benefits and implementation schedule. Having the State wildlife agency as the delivery system for statewide red-cockaded woodpecker safe harbor programs reportedly has worked very efficiently and has been well received by landowners. The lead State role under SHA umbrella permits is a successful model because it minimizes regulatory agency transaction costs and bureaucratic burdens to landowners. One-third of all approved SHAs are with States or local governments.

In 1999, in conjunction with establishment of SHAs, the USFWS further enlarged the role of section 10(a)(1)(A) of the ESA to enhance the survival of candidate species. Candidate Conservation Agreements with Assurances (CCAAs) offer regulatory assurances as an incentive for private and other non-Federal property owners to implement conservation measures. States more actively participate in section 10 candidate conservation agreements and CCAAs and than they do in SHAs or HCPs, which is not surprising given the primacy of State jurisdiction over most of these un-listed species. To date, eight CCAAs have been approved by the USFWS. Of these, four are agreements with State wildlife or natural resource agency partners. A similarly large State involvement exists in candidate conservation agreements approved by the USFWS without any regulatory assurances under section 10 of the ESA. More than half (61) of these 112 approved agreements are with State agencies. A recent example demonstrating the likely future role of States in candidate species conservation is the CCAA obtained by the Montana Department of Fish, Wildlife and Parks in May 2004. The CCAA is an umbrella style agreement under which voluntary conservation activities will be implemented to benefit Westslope cutthroat trout. In conjunction with the CCAA, a permit has been issued for the future take of the species in conjunction with its recovery in Montana.

Issues of Concern

1. Too many private landowners continue to distrust and fear any application of the ESA to their lands or activities. These private landowners may actively work to ensure that listed or candidate species are not attracted to their lands or that those species already present do not remain. At the very least, they may be unwilling or reluctant to undertake actions that would benefit listed or candidate species.
2. The various landowner incentive programs now available (e.g., financial, regulatory) have not been sufficient to allay fears completely, build trust, and encourage landowners to conserve listed or candidate species.
3. Conservation of listed species on private lands would be improved by greater involvement of State fish and wildlife agencies in carrying out the provisions of section 10 of the ESA concerning HCPs and enhancement of survival permits (SHAs and CCAAs).
4. Implementation of the ESA would be improved by greater partnerships with State fish and wildlife agencies and Tribes in carrying out conservation efforts on private and other non-Federal lands.

Potential Solutions

Administrative Options

1. State and Federal land-management financial and technical assistance should be expanded to assist landowners who undertake actions that contribute to recovery, and Farm bill conservation programs should be targeted to support landowner actions contributing to recovery of listed species or conservation of species that are candidates for listing.
2. State fish and wildlife agencies and the Services should establish mechanisms that make HCPs, SHAs, and CCAAs more accessible to small landowners.
3. Through expanded use of section 6 agreements and other mechanisms, State fish and wildlife agencies should be allowed and encouraged to assume the lead for administration of SHA, CCAA, and HCP administration.

CONCLUSIONS

The ESA has been successful in achieving its primary goal of preventing extinction, and the firm statutory duties and strong substantive standards imposed by the

current law to prevent extinctions and recover species should be maintained. However, the effectiveness of threatened and endangered species conservation should be increased through improvements to the statute and its funding and implementation. Greater resources and effort need to be committed to the purposes of the ESA, particularly to the recovery of listed species. Federal spending in support of State programs over the history of the ESA has been extremely low and in decline relative to spending for Federal efforts. Support and encouragement of complementary State, Tribal, and private conservation efforts through funding, policies, and statutory provisions are essential to establish and maintain the partnerships that are required to prevent extinction and recover imperiled species. Existing State and Federal resources should be utilized more efficiently by amending the ESA to lower transaction costs in listing decisions and critical habitat designations. Federal decision-makers should solicit and use the expertise of State fish and wildlife agencies and others in a consistent and open manner. Decisions under the ESA should be transparent, replicable, and based on robust scientific analyses of the best available information.

Although the ESA provides clear direction to Federal agencies to work cooperatively with the States to administer the ESA to the "maximum extent practicable," States are not included as full partners by Federal agencies. Recent attempts by the USFWS to establish management and cooperative agreements with individual States have met with some success but the great majority of States have but minimal working relationships with the USFWS with respect to threatened or endangered species.

Federal agencies should coordinate with State fish and wildlife agencies to address landscape conservation issues related to candidate, threatened, or endangered species. The increasing number of instances in which States have sought and obtained umbrella-style ESA section 10 permits to effectively assume responsibility for minimizing and mitigating non-Federal incidental take activities and promoting non-Federal habitat conservation are innovations that should receive greater support. In similar fashion, with adequate funding, the innovation of the AZGFD and USFWS agreement regarding State participation in administration of the ESA serves as a possible model for a new type of agreement. Revised, funded agreements could either augment or replace existing section 6(c) cooperative agreements with ones in which State and Federal roles are more clearly delineated and directed toward building a more effective partnership on behalf of imperiled species.

Comprehensive State wildlife conservation strategies and the State wildlife grants are an excellent starting point for cooperative efforts and promise a new era of State involvement in conservation of at-risk species that will continue to shape and enlarge the role of States in administration of the ESA. At a minimum, the resulting increased ability of States to collect, synthesize, and easily retrieve data on species and their habitats will increasingly make them key sources of information and expertise in virtually every ESA decision. Increasingly common efforts by States to work together to address rangewide conservation of at-risk species, such as the efforts in behalf of black-tailed prairie dogs and greater sage-grouse, also portend far greater State roles in this arena in the future. However, if the Federal Government expects State agencies to work cooperatively on these efforts, the Federal Government must provide substantial funding for capacity development, operations, and maintenance at the Federal and, most particularly, State agency level.

Practical Solutions to Improve the Effectiveness of the Endangered Species Act for Wildlife Conservation

THE WILDLIFE SOCIETY
Technical Review 05-1
2005

Practical Solutions to Improve the Effectiveness of the Endangered Species Act for Wildlife Conservation

Submitted to:

The Wildlife Society

Technical Review Committee on the Endangered Species Act

Robert P. Davison (Chair)
Wildlife Management Institute
26658 Sulphur Springs Road
Corvallis, OR 97330

William P. Burger
1018 East Orchid Lane
Gilbert, AZ 85296

Henry Campa, III
Department of Fish & Wildlife
Michigan State University
East Lansing, MI 48824

Paul J. Conry
1308 Akumu Street
Kailua, HI 96734

Kenneth D. Elowe
Maine Department of Inland Fish & Wildlife
284 State Street
Augusta, ME 04333

Gary Frazer
1488 Coat Ridge Road
Herndon, VA 20170

Dorothy C. Mason
P.O. Box 446
Baker City, OR 97814

Donald E. Moore, III
152 Tier Street, Apartment 112-C
City Island, NY 10464

Robert D. Nelson
24320 122nd Avenue East
Graham, WA 98338

Edited by **Krista E. M. Galley**

The Wildlife Society
5410 Grosvenor Lane, Suite 200
Bethesda, Maryland 20814

Technical Review 05-1
December 2005

Foreword

Presidents of The Wildlife Society occasionally appoint ad hoc committees to study and report on select conservation issues. The reports ordinarily appear as either a Technical Review or a Position Statement. Review papers present technical information and the views of the appointed committee members, but not necessarily the views of their employers. Position statements are based on the review papers, and the preliminary versions are published in The *Wildlifer* for comment by Society members. Following the comment period, revision, and Council's approval, the statements are published as official positions of The Wildlife Society. Both types of reports are copyrighted by the Society, but individuals are granted permission to make single copies for noncommercial purposes. Otherwise, copies may be requested from:

The Wildlife Society
5410 Grosvenor Lane, Suite 200
Bethesda, MD 20814
(301) 897-9770
Fax: (301) 530-2471

Suggested citation: Davison, R. P., W. P. Burger, H. Campa, III, P. J. Conry, K. D. Elowe, G. Frazer, D. C. Mason, D. E. Moore, III, and R. D. Nelson. 2005. Practical solutions to improve the effectiveness of the Endangered Species Act for wildlife conservation. Wildlife Society Technical Review 05-1. The Wildlife Society, Bethesda, Maryland, USA. 14 pp.

Acknowledgments

We thank The Wildlife Society Council for its decision to appoint the Technical Review Committee on the Endangered Species Act. We also thank our fellow committee members for giving so generously of their time. This technical review could not have been accomplished without their dedication and persistence. Tom Franklin, The Wildlife Society's former Wildlife Policy Director and Acting Executive Director, Acting Policy Director Laura Bies, Past President Daniel J. Decker, and President Richard Lancia were key to supporting and guiding the committee through the process.

We thank Marti Kie, Paul Krausman, and John Organ for reviewing the manuscript. Final copyediting and layout were performed by The Wildlife Society editorial staff.

Front Cover: Cover design was a collaboration of Gene Pozniak and Laura Bies using photographs from Milo Burcham (northern spotted owl), Leonard Lee Rue (Canada lynx), and the Florida Fish and Wildlife Conservation Commission (green sea turtle).

Table of Contents

FOREWORD ..... *iii*
ACKNOWLEDGMENTS ..... *iii*
SYNOPSIS 1
I. INTRODUCTION 1
II. LISTING 2
Issues of Concern 2
Potential Solutions 3
Funding Options 3
Administrative Options 3
Legislative Options 4
III. CRITICAL HABITAT DESIGNATION 4
Issues of Concern 5
Potential Solutions 5
Funding Options 6
Administrative Options 6
Legislative Options 6
Issues of Concern 7
Potential Solutions 8
Administrative Options 8
V. IMPROVED RECOVERY OF SPECIES 8
Issues of Concern 9
Potential Solutions 10
Funding Options 10
Administrative Options 10
VI. INVOLVING STATE FISH AND WILDLIFE AGENCIES 10
Issues of Concern 10
Potential Solutions 11
Funding Options 11
Administrative or Legislative Options 11
VII. CONSERVATION ON PRIVATE LANDS 11
Issues of Concern 12
Potential Solutions 12
Administrative Options 12
Legislative Options 12
VIII. ENSURING SOUND DECISIONS 13
Issues of Concern 13
Potential Solutions 14
Administrative or Legislative Options 14
CONCLUSIONS 14

SYNOPSIS

This review draws on our nation's more than 30 years of experience with the current version of the Endangered Species Act (ESA) to identify problems limiting the successful implementation of the law with respect to listing, critical habitat designation, conservation on private lands, involvement of state fish and wildlife agencies, species recovery, interagency section 7 consultation, consideration of distinct population segments, and ensuring sound decisions. Nearly 60 funding, administrative, and legislative measures are provided to address these problems and improve the effectiveness of species conservation.

Identified potential administrative solutions include changes in guidance, policies, and regulations. These changes are ones that generally may be addressed most easily and inexpensively. Identified needs for increased funding are perhaps next most easily resolved by Congress and the Executive Branch. Finally, given that efforts to amend the ESA have been unsuccessful since 1988, identified legislative solutions are likely to be the most difficult to put into place and generally must be accompanied by both funding and adoption of administrative measures. Potential legislative solutions are provided only where they are essential to address high-priority issues of concern.

Legislative changes are provided as potential solutions to significant problems identified in designation of critical habitat, listing, and conservation efforts on private lands. Among the most prominent of these are potential legislative solutions to allow the federal agencies administering the ESA to reconcile listing and critical habitat designation duties with funds available to carry out all their obligations under the law and to move designation of critical habitat to the recovery planning process. On the other hand, fewer and less significant issues of concern are identified with respect to interagency section 7 consultations and ensuring sound decisions. In these cases, only administrative changes are recommended. Increased federal funding is identified as important to support most aspects of federal, state, and private landowner efforts to conserve imperiled species.

The relatively few identified legislative changes to the ESA reflect the committee's view that the ESA is a fundamentally sound and successful mechanism to prevent species extinctions and conserve biological diversity. Its effectiveness in recovering species has been constrained largely by funding levels that have not kept pace with increased demands and by larger sociocultural and socioeconomic issues that drive species loss.

I. INTRODUCTION

When the Endangered Species Act (ESA) was enacted into law on 28 December 1973, there were 409 species listed as endangered under the precursors to that new law, and 132 were U.S. listed species. During the 32 years following enactment of this landmark legislation, many changes have occurred. The number of species listed as threatened or endangered increased >4-fold to 1,854, and the number of U.S. listed species now stands at 1,264. Spending levels authorized at $4,000,000 in 1974 for the U.S. Fish and Wildlife Service's (FWS) endangered species program grew to nearly $140,000,000 in 2004. Since 1973, the ESA was amended 7 times, and although it has not been reauthorized or amended since 1988, its implementation has continued to evolve actively, particularly in the area of conservation on private lands.

The ESA is a vital tool in this nation's efforts to conserve biological diversity. The law has been successful in achieving its primary goal of preventing species extinctions. Less than 1% of the more than 1,800 species protected by the ESA over the last 32 years have been declared extinct. Its effectiveness in recovering species has been constrained by funding levels that have not kept pace with increased demands and by larger sociocultural and socioeconomic issues that drive species loss. If the ESA is to remain effective, sufficient resources for its implementation need to be provided by the U.S. government. Funding-constraint solutions that seek to replace the firm duties and strong substantive standards imposed by the ESA to prevent species extinctions should be rejected. Constant vigilance is required to ensure that decisions under the law are based on sound scientific analysis. Within this framework, the ESA can and should be improved by adopting new approaches to conservation of imperiled species in policy, regulations, or law.

In response to the challenges and opportunities facing the ESA, The Wildlife Society (TWS) Council charged a Technical Review Committee to "identify problems limiting the successful implementation of the Endangered Species Act and recommend practical solutions for improving its effectiveness for wildlife conservation." Unlike other TWS technical reviews of scientific literature, this review was charged specifically with identifying policy problems and potential solutions for the following aspects of the ESA:

1. Listing
2. Critical habitat designation
3. Conservation on private lands
4. Involving state fish and wildlife agencies
5. Species recovery

6. Interagency section 7 consultation
7. Consideration of distinct population segments
8. Ensuring sound decisions

We identify issues of concern related to each of these subjects. Nearly 60 potential changes are recommended for consideration by Congress and the Executive Branch to address these issues of concern and improve conservation of threatened and endangered species under the ESA.

II. LISTING

Listing includes adding species to the lists of threatened or endangered species, thereby invoking the provisions of the ESA. This includes the process of determining a species to be a candidate for listing, the process by which persons may petition to have a species added to the lists, and the rulemaking process by which listing determinations are made. This section also addresses issues related to the use of distinct vertebrate population segments (DPS) in listing determinations.

Species eligible for listing are any member of the plant or animal kingdom, including "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish and wildlife that interbreeds when mature." In deciding to provide for listing of subspecies and geographically discrete fish and wildlife populations, Congress chose to protect animals that are in trouble in part of their range, but healthy in other areas. Congress also instructed the FWS and NOAA-Fisheries (hereafter Services) to exercise this authority with regard to DPS "sparingly and only when the biological evidence indicates that such action is warranted" (Senate Report 151, 96th Congress, 1st Session). Of the 338 currently listed U.S. vertebrates, 30 species are listed as distinct population segments.

The regulations promulgated by the Services in 1996 seek to provide consistent interpretation of the DPS requirements. Recognition of a DPS is based on (1) discreteness of the population segment in relation to the remainder of the species to which it belongs; (2) significance of the population segment to the species to which it belongs; and (3) conservation status of the population segment in relation to the ESA's standards for listing (i.e., whether the population segment, when treated as if it were a species, is endangered or threatened).

The Services may add species to the lists on their own initiative. The FWS has a candidate-assessment program for this purpose and maintains a list of species that are candidates for listing (i.e., species for which they have sufficient information to support a proposal to list as threatened or endangered but for which preparation and publication of a proposal is precluded by higher-priority listing actions). The FWS list is published periodically in the form of a Candidate Notice of Review. The most recent Candidate Notice identified 279 species as candidates for addition to the lists of threatened or endangered species.

Listing is the mechanism by which the protection of the ESA is conveyed to species in need, but the resulting restrictions on take of listed species and the consultation and permitting requirements make it an inherently controversial part of the law. An effective moratorium on listing by the Executive Branch in the early 1980s resulted in Congress's amending the ESA in 1982 to impose mandatory listing duties and deadlines for action. Congress also reinforced the ESA to make clear that listing decisions are to be based solely on the best available scientific information.

A congressional moratorium on listing was imposed in the mid-1990s and resulted in a major loss of funding available to FWS to implement these statutory duties. It has always been difficult for the Executive Branch to request increased funding for listing in the face of other priorities and for Congress to provide increases in funding for this controversial activity.

The ESA gives any person authority to submit petitions to list animals or plants. The listing agencies must respond, to the maximum extent practicable, within 90 days with a finding as to whether there is substantial information indicating that listing *may* be warranted. A year after the petition is filed, the agencies must decide whether listing is not warranted, is warranted (in which case a proposed listing rule is initiated), or is warranted but precluded by other higher listing priorities.

Species are added to the lists through the rulemaking process governed by the Administrative Procedure Act, which includes provisions for public notice and comment. A final listing determination must be made within 12 months of a proposal to list (unless extended by up to 6 months in the case of substantial disagreement regarding the sufficiency or accuracy of available data).

It is important to recognize that state fish and wildlife agencies often have singular or shared regulatory and management authority for species before listing, and shared authority continues after listing (as executed through ESA section 6 Cooperative Agreements).

Issues of Concern

1. Insufficient funding has been provided over the past

decade for making petition findings, listing decisions, and critical habitat designations. As a result, the Services often have failed to meet ESA deadlines, which has led to litigation and court orders. Efforts to rely upon administrative priority systems for determining what listing actions to undertake with the available appropriated funds have all ultimately failed, as litigation was used to force other priorities, and the courts concluded that the duties and deadlines in the ESA were mandatory, regardless of whether adequate funding was available to carry them out. Accordingly, the FWS listing budget for fiscal years 2003, 2004, and 2005 has been almost entirely dedicated to compliance with court orders or settlement agreements to designate critical habitat for already listed species or act on petitions to list. Work priorities are forced through responding to litigation, not through consideration of relative biological benefit or need. The result has been a third effective listing moratorium, resulting from the lack of funding available to actually add species to the lists of threatened or endangered species.

2. There is insufficient support within Congress and the Administration for the increases in funding and personnel needed by the agencies to carry out their mandatory listing duties under the ESA.

3. While ESA decisions are based on the best available information, often the information on the status of species (i.e., population dynamics and habitat requirements) is quite limited. There is little information for many plant and animal species, particularly those that are not subject to regulated hunting, trapping, and fishing, not subject to commercial harvest, or those that are not observed easily. Results can include unwarranted listing petitions and delays in initiating the listing process for species truly in need.

4. The ESA does not require explicitly soliciting information held by states, sharing information with states, or involving states in listing and critical habitat designation decisions. While not required explicitly by the ESA, the Services have a policy to carry out this kind of coordination. In some instances, however, information from state wildlife agencies and other federal agencies may not be sufficiently sought, used, or considered in listing decisions.

5. Providing greater flexibility to not impose regulatory restrictions on adequately managed DPS or geographically discrete populations offers an underutilized opportunity to reward and encourage recovery management. In cases in which a species with ≥ 2 DPS or geographically discrete populations is being listed, only those with inadequate management should be listed. Once a species is listed, the opportunity exists to down-list or delist those DPS or geographically discrete populations for which there are adequate management programs in place, while retaining ESA protection for those DPS or geographically discrete populations for which threats have not been sufficiently addressed.

Potential Solutions

To improve conservation of species that warrant the conservation measures of the ESA, consideration should be given to 1 or more options.

Funding Options

1. Provide sufficient time and resources to investigate and prepare all the documentation associated with petition findings and other listing actions.

2. Increase the funds available for listing to a level that will allow the Services to comply with the ESA. We estimate that a listing appropriation of approximately $25,000,000/year in current dollars, and continuing adjustments for inflation, should allow the FWS to work through the backlog of overdue petitions, candidates, and critical habitat designations within 5 years, and then continue to fulfill its duties under section 4 of the ESA.

3. Dedicate funding for measurement and monitoring to better ascertain the status of species at risk (e.g., species on the federal candidate list, and those on each state's heritage program list of C1 and C2 species, sensitive species list or the equivalent).

4. Federal funding should be provided to the states to conduct monitoring and evaluation efforts.

Administrative Options

1. State fish and wildlife agencies should be more involved early and throughout the listing process, including in down-listing decisions. This involvement will facilitate states providing necessary information and help states formulate management decisions and communicate with the public. Similar efforts should be made with Native American tribes and federal land-management agencies.

2. Encourage the Services to work with interested state fish and wildlife agencies in development of a memorandum of agreement (MOA) under section 6 of the ESA to provide greater certainty and specificity with regard to coordination and collaboration on activities under section 4 of the ESA. The MOA between the FWS and the Arizona Game and Fish Department, entitled "State Wildlife Agency Participation in Implementing the Endangered Species Act: State of Arizona," may serve as a good template (which can be downloaded from http://www.fws.gov/arizonaes/Threatened.htm).

3. Encourage the Services to utilize state fish and wildlife agency and Native American tribal expertise in conducting population status inventories and geographic distribution surveys by contracting with the states or Native American tribes for data collection, review, and analyses.

4. Encourage the Services to reward adequate management and proactive restorative management by making greater use of DPS designations and flexibility in decisions to not list, down-list, or delist a DPS or geographically discrete populations receiving adequate management.

Legislative Options

1. Authorize the Services to reconcile the mandatory duties for petition findings, listing determinations, and critical habitat designations with the funds that Congress provides to carry out those duties. Specifically authorize the Secretaries to develop a biologically based system to prioritize the actions to be carried out each fiscal year with the funds made available. This proposal would allow Congress to retain the means to prevent an administrative listing moratorium, such as the one that occurred in the early 1980s, while allowing the Services to defend their workplans against litigation seeking to force a different set of priorities.

2. Conserve limited resources and improve the efficiency of the listing process by clarifying that the Services need not make findings on petitions to list species in those cases in which the Services already have found such species warrant a listing proposal and already have designated them as candidates for listing.

3. Categorically exempt state fish and wildlife agencies from Federal Advisory Committee Act (FACA) restrictions so that these agencies are able to participate as equal conservation partners, not as public stakeholders, in freely sharing information and contributing expertise to the listing process. This exemption would help ensure that the Services have the best available information; the states would not have to react to Service proposals at public hearings where it would be a greater advantage to have state and federal agencies in agreement about resources within their authorities; and the states could help their publics know the reasons and impacts of listing decisions.

III. CRITICAL HABITAT DESIGNATION

The Services are required to designate "critical habitat" for species at the time of listing, "to the maximum extent prudent and determinable." If critical habitat is not determinable at the time of listing, the deadline for designation may be extended for up to 1 year.

Critical habitat is defined by section 3(5)(A) of the ESA as follows:

"The term 'critical habitat' for a threatened or endangered species means—

(i) the specific areas within the geographical areas occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and

(ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species."

Although decisions on whether to list species are shielded from economic considerations, the designation of critical habitat is not. Critical habitat designations must be based upon the best scientific data available and take into consideration the economic impact, the impact on national security, and any other relevant impact of specifying any particular area as critical habitat. Section 4(b)(2) of the ESA authorizes the Secretary of the Interior or Secretary of Commerce to exclude any area from critical habitat if the benefits of excluding the area outweigh the benefits of including the area in the designation.

Under the ESA, the only effect of designation of critical habitat is to add to the responsibilities of federal agencies under section 7(a)(2) the duty to ensure that activities they undertake, approve, or fund do not result in the destruction or adverse modification of that habitat. Consequently, activities on nonfederal lands within critical habitat are affected directly by the designation only to the extent that there is federal funding or approval of the activities. Critical habitat designation can have other indirect effects, however, such as through state or local laws or ordinances triggered by the presence of designated critical habitat, or through increased or decreased property values in or adjacent to critical habitat.

Section 7(a)(2) of the ESA prohibits federal actions that are likely to jeopardize the continued existence of a listed species or destroy or adversely modify designated critical habitat. Existing regulations (50 CFR 402.02) define destruction or adverse modification of critical habitat as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of

a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical." To jeopardize the continued existence of a species is defined as "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."

The terms "adverse modification" and "jeopardy" are thus defined as separate and independent standards, with adverse modification findings triggered by effects to the physical or biological features of a species' habitat, and jeopardy findings triggered by effects to the reproduction, numbers, and distribution of plants or animals themselves. Nevertheless, the Services have found that projects that likely destroy or adversely modify critical habitat are also likely to jeopardize the continued existence of species. Accordingly, designation of critical habitat has offered species little protection above that which already was guaranteed them by the section 7 "jeopardy" standard. Consequently, the principal benefits of critical habitat designation have been increased awareness of the importance of these habitats to species survival and recovery and a requirement for section 7 consultation in areas designated as critical habitat but not occupied by the species, where section 7 review of actions would not otherwise be triggered.

Issues of Concern

There are 7 problems associated with critical habitat designation that need to be resolved through legislative, regulatory, and budgetary means:

1. Species–habitat relationships are more complex and dynamic than reflected in the simplistic structure of "critical habitat" under the ESA. At the time of listing, the specific areas occupied by a species, and the physical and biological features that define habitats "essential to the conservation" of the species, generally are not well known. Yet the ESA requires that they form the basis of a rulemaking concurrent with or no later than 1 year from listing. Natural population dynamics, succession, disturbances, and other ecological processes often produce dynamic patterns in the occurrence and abundance of individuals and suitable habitat within landscapes. Yet the ESA requires designation of specific areas through rulemaking, a time-consuming and expensive procedure that makes frequent and timely revision impracticable.

2. Since the 1990s, the Services have not been provided sufficient resources to comply with the critical habitat designation requirements of the ESA. There is a large backlog of listed species for which critical habitat has not been designated. This backlog, in turn, has triggered litigation that has drained available resources further.

3. Critical habitat designation is expensive, controversial, and time-consuming in comparison to listing because, in addition to the biological determination, it requires a complex economic impact analysis and detailed mapping of habitats across often large geographic areas.

4. There is widespread confusion and disagreement about what constitutes critical habitat and about the consequences of its designation, particularly with respect to private lands, which results in perceptions that can make listing of species more difficult. In addition, because activities on nonfederal lands within critical habitat may be affected directly and indirectly by the designation, landowners may be adversely affected and generally perceive designation of critical habitat as a disincentive to species conservation on their lands.

5. Although positive, proactive management actions may be more effective than use of critical habitat designation in halting and reversing declines of species due to harmful human activities, insufficient incentives and rewards are provided to encourage landowners to commit voluntarily to implement habitat management and restoration measures that equal or exceed the biological protections of critical habitat.

6. Overlapping protection provided by the section 7 jeopardy standard and designation of critical habitat for areas that are occupied by the listed species results in questions regarding the overall cost/benefit of designation of critical habitat. The importance of such designation is primarily in areas beyond the currently occupied range but that are perceived as important for species recovery.

7. Decisions by the U.S. Courts of Appeals for the Fifth, Ninth, and Tenth Circuits have rejected the Services' regulatory definition of "destruction or adverse modification," and the Fifth and Ninth Circuits have invalidated the definition. The Services have not yet proposed a new definition, but clearly need to do so.

Potential Solutions

To address the problems listed above and improve conservation of habitats critical to the conservation of listed species, consideration should be given to the following. While increased funding and administrative improvements are needed, TWS believes that legislative reform is essential to effectively improve the current problems associated with critical habitat.

Funding Options

1. Increase the funds available for critical habitat designation to a level that will allow the Services to comply with the ESA.

Administrative Options

1. Establish, through notice and comment, detailed policy and procedural guidance on how to identify, quantify, and map critical habitat, assess the economic and other impacts of designation, and balance the benefits of designating any specific area in comparison to the benefits of not designating.

2. Involve state fish and wildlife agencies and federal land-management agencies more in the process of developing that guidance and subsequently identifying and designating critical habitat.

3. Lands covered by Habitat Conservation Plans (HCPs), Safe Harbor Agreements (SHAs), or other conservation agreements or mechanisms that provide net benefits to listed species through management or restoration of habitats should be excluded from critical habitat designation. Alternatively, habitat modification on such lands should be governed by the terms of the conservation agreements or mechanisms rather than the provisions pertaining to critical habitat designation. These measures would provide needed incentives and rewards for landowners to enter into conservation agreements or establish other mechanisms that provide net benefits to species through management or restoration of habitats.

4. The Services should promulgate a revised regulatory definition of "destruction or adverse modification" that corrects the defects identified by the federal courts but preserves the basic parity that has long existed with the "jeopardy" standard. While "jeopardy" and "destruction or adverse modification" are separate standards subject to independent analysis and findings, conservation of listed species would not be well served by having 1 standard defined to be more sensitive and likely to be triggered than the other. Conservation of listed species requires equal commitment to protecting the remaining individuals of the species and the habitat essential to their eventual recovery.

Legislative Options

1. Amend the ESA to allow the Services to reconcile the duty to designate critical habitat with the funds available to carry out all their obligations under section 4. This reconciliation could be achieved by providing for critical habitat designation to be determined "prudent but precluded by higher priorities," with the general priorities among the various listing categories (petition findings, listing determinations, critical habitat designations) to be established in accordance with a biologically based priority scheme developed by the Secretary through public notice and comment.

2. Amend the ESA to move the designation of critical habitat to the recovery planning process, except when there is an urgent eminent threat to a significant amount of occupied habitat that would warrant designation at the time of listing. Regulatory promulgation of critical habitat management guidelines should be considered as an alternative to designation of specifically mapped areas as a means of helping federal agencies avoid adverse modification or destruction of habitat, particularly for wide-ranging species.

3. To encourage voluntary conservation efforts within an area designated as critical habitat, any private landowner who owns land should receive priority in the disbursement of funds from any federal conservation incentive programs, such as the Landowner Incentive Program, for the conservation or restoration of such habitat and should qualify for tax breaks and/or inheritance tax waivers.

4. Encourage nonfederal landowners to provide net benefits to listed species through conservation agreements for habitat management or restoration by withholding the effects of critical habitat designation on lands covered by such agreements.

IV. INTERAGENCY SECTION 7 CONSULTATION

Once a species has been listed as either threatened or endangered, a primary means of conserving the species is found in the ESA section 7, which states, "Each Federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior or Commerce], insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical." Consequently, the federal agencies that propose actions are the responsible parties for ensuring that their actions are not likely to jeopardize listed species or destroy or adversely modify designated critical habitat.

Section 7 of the ESA and corresponding consultation regulations (50 CFR part 402, subparts A and B) require federal agencies to consult with either of the Services on any federal action that may affect a listed species or designated critical

habitat. An agency's consultation duty may be met informally if the agency determines that the federal action under consideration is not likely to adversely affect a listed species or critical habitat and one of the Services concurs in writing. Federal agencies must consult formally with one of the Services if the action is likely to adversely affect a listed species or critical habitat or if the Service does not concur with a federal agency's "not likely to adversely affect" determination. During formal consultation, the federal agency and the appropriate Service examine the effects of the proposed action and whether the proposed action is likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat and whether incidental take of listed species is anticipated. Formal consultation concludes with the appropriate Service issuing a biological opinion that describes these effects and states whether the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Findings of jeopardy or adverse modification of critical habitat must include reasonable and prudent alternatives, if any are available, that would avoid the likelihood of jeopardy or adverse modification, could be implemented in a manner consistent with the intended purpose of the action, are within the federal agency's legal authority and jurisdiction, and are technologically and economically feasible. In cases in which take of individuals of listed wildlife species is anticipated, a biological opinion must contain reasonable and prudent measures and terms and conditions to minimize incidental take. Following consultation, the federal agency is responsible for implementing the biological opinion, if necessary, through its available authority.

On balance, implementation of section 7 of the ESA has worked reasonably well, serving to limit the harmful effects of federal actions on listed species through project modifications that still allow the majority of actions to fulfill their intended purpose. The interagency section 7 consultation regulations have been in place and have provided effective direction for the conduct of consultations since 1986, although several recent appeals court decisions invalidating the definition of "destruction or adverse modification" will force the Services to revisit this very significant policy issue. A detailed procedural handbook has been issued through a public notice and comment process. Most federal and state agencies and the public understand the consultation process and have incorporated consultation into their business practices.

Funding and staffing for the Services to provide consultations have not kept pace with the growing number of federal actions requiring consultation, with resulting backlogs and delays in federal agency decision making in some circumstances. Funding for the Bureau of Land Management (BLM) and Forest Service has been inadequate to complete consultation and monitoring work.

To streamline section 7 consultations on proposed projects that support the National Fire Plan, the Services have issued joint counterpart regulations in cooperation with the Forest Service, BLM, Bureau of Indian Affairs, and National Park Service. Similar regulations have been developed with the Environmental Protection Agency for approval of pest control products under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In general, these counterpart regulations reflect the demonstrated ability of these particular federal agencies to determine whether their actions are likely to harm listed species and thus provide an alternative process for completing section 7 consultations that eliminates the need to conduct informal consultations and obtain written concurrence from the Services for actions that are not likely to adversely affect listed species or designated critical habitat.

Issues of Concern

1. In recent years there have been approximately 70,000 federal actions/year that have triggered some form of consultation. On average, >95% are resolved through informal consultation procedures, but even informal consultations can take time and involve substantial project modifications. Thirty years after passage of the ESA, and despite the variety of other environmental laws that require consideration of fish and wildlife conservation (e.g., Clean Water Act, FIFRA, National Environmental Policy Act, Federal Power Act, National Forest Management Act, and Federal Land Policy and Management Act), federal agencies do not often incorporate effective measures to avoid or minimize the impacts of their actions on listed species until "forced to" by a section 7 consultation.

2. There is rarely perfect information available to establish the effects of an action on listed species. Once consultation is initiated, the Services must proceed with issuing a biological opinion based on the best available information, even when that information leaves many relevant questions unanswered. The Services do an admirable job of producing scientifically sound and defensible opinions in the face of such uncertainty. The National Research Council review of the biological opinions issued by the Services for the Klamath Irrigation Project has led some to question the adequacy of the existing consultation process in the face of a high level of uncertainty.

3. The funding and staffing of the Services to carry out their consultation responsibilities have not kept pace with the growth in consultation workload. As a result, federal

agencies and affected third parties are faced with project delays and increased transaction costs. Funding for the BLM, Forest Service, and other agencies has been inadequate to complete consultation and monitoring work.

4. A portion of the large and increasing consultation workload involves projects that may cause small amounts of incidental take of individual members of listed species, yet have very minor impacts or provide net benefits to those species.

5. Affected third parties (e.g., applicants for federal permits, lessees of federal lands, contractors of federal waters) have criticized the section 7 consultation process as not being sufficiently transparent and open to their participation.

6. Circuit court decisions in the Fifth, Ninth, and Tenth circuits have rejected the Service's regulatory definition of "destruction or adverse modification," and the Fifth and Ninth circuits have invalidated the definition. The Services need to propose a new definition.

Potential Solutions

Administrative Options

1. Federal agencies should continue and expand upon their efforts at all levels of management to proactively consider and address endangered species conservation using their authorities, with the goal of most effectively accomplishing the conservation purposes of the ESA. Engaging fish and wildlife expertise in state and federal agencies early in project design, developing interagency guidelines through broad planning efforts, establishing explicit and proactive interagency coordination procedures at the field and regional leadership levels, and conducting programmatic-level consultations that incorporate design criteria to avoid or minimize impacts are effective means of minimizing the potential impacts of projects on listed species and their critical habitats and thus reducing the transaction costs of section 7 compliance. Such efforts should be expanded.

2. Where issues continue, require other federal agencies to work with the Services, state fish and wildlife agencies, and other experts from the scientific community to resolve areas of scientific disagreement or uncertainty, to the extent that they can be resolved, during development of the biological assessments, and then to design their action conservatively when faced with scientific uncertainty about project impacts or the adequacy of offsetting measures. In cases in which there remains substantial disagreement regarding the sufficiency or accuracy of the available data at the onset of consultation, the federal agency and Service(s) should determine whether the circumstances warrant soliciting independent analysis from other experts from within the Service(s) and from outside (i.e., U.S. Geological Survey, state wildlife agencies, universities, and appropriate nongovernmental organizations [NGOs]) prior to preparing the opinions—recognizing that that step will likely require extension of established consultation timeframes.

3. In order to produce timely delivery of section 7 products and decisions and to minimize transaction costs, the Services should continue and expand their efforts to work cooperatively with state fish and wildlife agencies during consultations.

4. The Services should expand and make uniform the use of explicit decision-making protocols in consultations so that the process and decisions are transparent and able to be replicated.

5. The Services, in cooperation with state fish and wildlife agencies and other federal agencies, should develop methodologies to reduce the times required to comply with section 7 for actions involving incidental take that would have low impacts or produce net benefits to listed species.

6. Federal agencies undertaking actions subject to section 7 should engage applicants in the consultation process when they ask for such access. The interagency consultation regulations have long provided for involvement of applicants in the consultation, with the knowledge and consent of the federal agency.

7. The Services should promulgate a revised regulatory definition of "destruction or adverse modification" that corrects the defects identified by the federal courts but preserves the basic parity that has long existed with the jeopardy standard. While "jeopardy" and "destruction or adverse modification" are separate standards subject to independent analysis and findings, conservation of listed species would not be well served by having 1 standard defined to be more sensitive and likely to be triggered than the other. Conservation of listed species requires equal commitment to protecting the remaining individuals of the species and the habitat essential to their eventual recovery.

8. It is incumbent upon the Executive Branch to request, and for Congress to appropriate, adequate funding to agencies so that staffing limitations do not delay consultations and increase transaction costs to federal agencies and the affected public.

V. IMPROVED RECOVERY OF SPECIES

The purpose of the ESA is to prevent species extinctions and

then provide measures to help bring species back to the point at which the measures provided by the law are no longer necessary. Recovery of species is 1 metric by which the success of the ESA may be evaluated, but it must be used with care because halting or reversing declines that in some instances have developed over 200 years requires long periods of time and a strong commitment to fund and implement actions that will lead to recovery. Currently, recovery efforts are inadequate for most, if not for nearly all, listed species. More effective efforts to recover species requires not only increased spending, but also coordinated undertakings by a broad array of landowners, public agencies, and stakeholders. It also requires better and user-friendlier incentives to private landowners who often are willing to undertake efforts to protect and recover endangered and threatened species. As a key first step in achieving this goal, section 4(f) of the ESA requires the Services to develop recovery plans and "give priority to those endangered species or threatened species, without regard to taxonomic classification, that are most likely to benefit from such plans, particularly those species that are, or may be, in conflict with construction or other development projects or other forms of economic activity." As of September 2002, 81% of listed species were covered by final approved recovery plans, and draft plans had been issued for another 4%. Recovery plans, however, are necessary but not sufficient to achieve recovery and delisting of species. To date, 14 listed species have been recovered and delisted under the ESA, and 7 species are proposed for delisting. Another 22 have improved sufficiently to be reclassified from endangered to threatened status.

Issues of Concern

1. Recovery is established under the ESA as the responsibility of all federal agencies, in partnership with the states. In reality, given the importance of private lands to conservation of listed species, partnerships with Native American tribes, local governments, NGOs, and private parties are also essential to recovery of many listed species. However, recovery, unlike listing or consultation, has not evolved as a mandatory duty of any party. It is largely a voluntary endeavor driven by enlightened self-interest. As a result, there has been great disparity among species receiving recovery attention, and many species do not have sufficient funding or attention devoted to them to achieve significant recovery progress. (The most recent report to Congress on state and federal government expenditures for implementing the ESA, covering fiscal year 2002, showed that 50% of the funding was focused on only 17 species [1.3% of all those listed under the ESA]. While general [i.e., non-land acquisition–related] expenditures were ≥$1 million for 87 species, the median expenditure for all species was only $14,100.)

2. Recovery plans are needed to establish a roadmap for recovery activities, but the Services have been hard pressed to produce in timely fashion recovery plans that reflect a good understanding of species recovery needs and a reasonable consensus among species experts and affected publics. There is inherent tension between the competing demands for appropriate scientific certainty about threats and the effectiveness of conservation measures, the involvement of stakeholders in the recovery planning process, and rapid production of a recovery plan with reasonable consensus of the recovery team. As a result, recovery plans often take significant time and funding to produce, are not revised and updated as frequently as they should be, and are not sufficiently integrated with other federal, regional, state, and local efforts.

3. Recovery plan implementation usually involves commitment of staff time or funding, both of which are often in short supply. Much has been accomplished in the last 30 years through altruistic action and cooperation, but the overall need for recovery action far exceeds the level of effort that has been applied to date.

4. Landowners need effective incentives that they can rely upon when making investments to endangered species conservation. The development by the Services of policies and regulations for providing assurances to landowners through SHA and Candidate Conservation Agreements with Assurances (CCAA) has been a very positive development in recent years. The "No Surprises" policy and regulations have also been a very positive incentive, giving landowners certainty that the commitments they make with the Services in conservation agreements represent all that the federal government will hold them to, even if unforeseen circumstances cause the species to decline. None of these incentive tools is codified in statute, however, and some landowners are still reluctant to rely upon incentives established solely by regulation. That reluctance is understandable, given the ongoing litigation over application of the No Surprises policy and regulation to an HCP.

5. The problems described above prevent some species from being recovered and delisted as quickly as would otherwise be possible.

6. The Services lack comprehensive policy and procedural guidance on how to comply with the statutory requirement to monitor the status of species that have recovered and been removed from the lists of threatened or endangered species. Such guidance needs to be developed in conjunction with state fish and wildlife agencies to ensure that effective post-delisting monitoring plans are produced in timely fashion and in cooperation with the states that will be assuming

management responsibility for the species post-delisting.

Potential Solutions

Funding Options

1. The Administration should request adequate appropriations to support the recovery planning, implementation of site-specific management actions identified in recovery plans, and other actions needed for meaningful progress toward recovery for all listed species. Congress should provide such appropriations, minimize earmarking to particular projects, and hold the agencies responsible for allocating funding and staffing equitably among all listed species, based on biological needs and opportunities.

Administrative Options

1. Prompt development of recovery plans subsequent to listing is key. The Services should manage the recovery planning process to ensure that final recovery plans are completed and approved within 3 years of listing and then revisited at least once every 5 years and revised as needed. A simple recovery outline, based upon what is known at the time of listing, should be completed within 1 year of listing and used to guide interim recovery actions during the period of recovery plan preparation.

2. Recovery plans should:
   (i) assess risk and focus on amelioration of threats to species;
   (ii) be developed by teams that are of manageable size and sufficiently diverse so as to include needed expertise and representation of entities responsible for management of the species or its habitats, including state fish and wildlife agencies, federal land-management agencies, and others essential to recovery implementation; and
   (iii) include provisions for regular monitoring and reporting to make possible evaluation of plan effectiveness.

3. The Services should coordinate recovery plan activities and take other steps necessary to monitor and report regularly on species status and plan implementation.

4. The Office of Management and Budget (OMB) should exercise its authority over the federal budget process to encourage all federal agencies, pursuant to ESA section 7(a)(1), to "utilize their authorities in furtherance of the purposes [of the ESA] by carrying out programs for the conservation [of listed species]." The OMB should hold agencies accountable, through the Government Performance and Results Act procedures, for contributing to meaningful progress in recovery of listed species and should develop a crosscut of agency expenditures for recovery of listed species.

5. The Service should develop, in cooperation with the states, comprehensive policy and procedural guidance on preparation of post-delisting monitoring plans.

6. Provide state fish and wildlife agencies, Native American tribes, and federal land-management agencies with the opportunity to be involved in development, implementation, and monitoring of recovery plans and plan activities.

7. The BLM, Forest Service, other federal agencies, and Native American tribes should participate in the recovery planning process to assist in developing measures and monitoring capable of being adopted in the agencies' land-use plans.

VI. INVOLVING STATE FISH AND WILDLIFE AGENCIES

Under the ESA, states and the Services share jurisdictional authority for listed species. When the ESA was passed in 1973, Congress stated, "the successful development of an endangered species program will ultimately depend upon a good working arrangement between the Federal agencies, which have broad policy perspective and authority, and the State agencies, which have the physical facilities and the personnel to see that State and Federal endangered species policies are properly executed." Section 6 requires the Services to cooperate to the maximum extent practicable with the states in carrying out the program authorized by the ESA.

Cooperative agreements between the Services and the states under section 6 of the ESA are the means by which the Services certify that states have established and maintain adequate and active programs for the conservation of listed species. For those states that have entered into cooperative agreements, the grant program established under section 6 provides funds to state fish and wildlife agencies to cooperate in efforts to maintain and recover listed species and to monitor the status of candidate species and recently recovered, delisted species.

Issues of Concern

1. Implementation of the ESA would be improved by greater partnerships with state fish and wildlife agencies in carrying out the ESA, particularly in the efforts to prevent the need to list and to recover species, and in conservation efforts on private and other nonfederal lands.

2. State fish and wildlife agencies are not being provided

adequate and stable funding from the section 6 Cooperative Endangered Species Conservation Fund to fulfill state roles in the conservation of endangered and threatened species. For instance, in fiscal year 1977, there were 194 U.S. species listed under the ESA, and $4,300,000 was appropriated for state grants under section 6. By the end of 2002, there were 1,263 listed U.S. species—more than 6 times the number in 1977, yet the $7,520,000 provided that year had only about one-third as much buying power as the funds provided in 1977.

3. State expertise, data, personnel, and working relationships with others still are not sufficiently utilized in ESA decisions and actions.

4. Too often, too little is done too late to make listing unnecessary. To a significant extent, a factor contributing to this problem is that there are insufficient financial incentives and regulatory assurances to facilitate actions by states that would make listing unnecessary.

5. Day-to-day cooperation between the state fish and wildlife agencies and the Services in administration of the ESA continues to be hindered by the FACA.

Potential Solutions

Funding Options

1. The Administration should request and the Congress should appropriate adequate funding under section 6(i) of the ESA to assist states in building a strong partnership for conservation of candidate, threatened, and endangered species and monitoring of recovered, delisted species.

Administrative or Legislative Options

1. The states, where they have the fiscal resources, expertise, staff, and political support to do so, should play a much greater role in administration of the ESA.

2. State fish and wildlife agencies should have a clearer and more significant role in efforts to prevent species from becoming candidates and in listing decisions, critical habitat designations, development of recovery strategies, and management and recovery of listed species.

3. The section 6 cooperative agreement provisions should be redesigned to function as a true partnership agreement requiring close collaboration and coordination between and among the states and the Services. The section 6 agreement can be the vehicle to identify the respective roles of the states and federal agencies. It should provide the flexibility to allow states that so choose to assume the lead for prelisting conservation, recovery planning and implementation oversight, SHA and HCP administration, and post-delisting monitoring.

4. The section 6 Cooperative Endangered Species Conservation Fund should be restored to its original intended purpose of providing adequate and stable funding to state fish and wildlife agencies to fulfill state responsibilities under the ESA. Grants related to HCP planning assistance and HCP and recovery land acquisitions, which currently are utilizing inappropriately the authorization provided by the Fund, should be authorized separately under section 15 of the ESA.

5. Amounts deposited to the Cooperative Endangered Species Conservation Fund should be made available to the states without further appropriation to make it possible for state fish and wildlife agencies to assume the lead for prelisting conservation, recovery planning and implementation oversight, SHA and HCP administration, and post-delisting monitoring.

6. Exempt state fish and wildlife agencies from FACA or limitations on predecisional coordination and consultation.

VII. CONSERVATION ON PRIVATE LANDS

One of the ESA's 2 key means of achieving its goal to bring species back to the point at which its protections are no longer necessary is by imposing duties on individuals rather than on government agencies. No individual can "take" a listed species. In the parlance of the ESA, the prohibition on "take" means that it is illegal to harm, harass, hunt, pursue, wound, capture, collect, or even attempt to do any of these things. By 1975 regulation, the term "harm" was defined to include environmental modification or degradation, and a federal court found in 1979 that the ESA barred harm caused by habitat modification. In 1982, Congress decided that federal agencies that received favorable biological opinions could "incidentally" take listed species in accordance with the terms and conditions of reasonable and prudent measures (see IV. Interagency Section 7 Consultation). Congress then was faced with the fact that the take prohibition was absolute for individuals and there was no mechanism for incidental take of species resulting from nonfederal projects. The result that same year was the development of an exemption to take under section 10 of the ESA for those who develop HCPs.

The HCPs are intended to minimize take of listed species caused incidentally by nonfederal activities and provide measures to mitigate the effects of that take and ensure that it does not appreciably reduce the likelihood of survival and recovery of these species. Private landowners, corporations, or state or local governments who clear land, cut timber, or alter habitats in some other way that might incidentally harm

a listed species must get an incidental take permit by developing an HCP. As of April 2003, 541 HCPs have been approved, covering approximately 15,400,000 hectares and protecting more than 525 endangered or threatened species. To increase use of the HCP, the Services adopted a so-called "No Surprises" rule that assures private landowners they will not incur any additional mitigation requirements beyond those they agreed to in their HCPs. In general, HCPs have been utilized by large corporate landholders, states, and municipalities to minimize and mitigate incidental take. Small private landowners with limited capabilities have made much less use of the process.

In the 1990s, 2 new approaches under the ESA section 10 were adopted by regulation to allay private landowner fears about the regulatory consequences of having listed species on their lands and to encourage the conservation of these species. The SHA and CCAA provide regulatory assurances to encourage conservation of listed and candidate species on private lands. The SHA rule encourages voluntary management by private landowners to provide a net benefit for listed species for some period, and thus promote recovery, on their lands by giving assurances to the landowners that they will be able to return their lands to a predetermined baseline condition at the conclusion of their management agreement. The CCAA rule similarly encourages landowners to conserve at-risk species before listing by providing assurance that the management measures they commit to will not be increased if listing ultimately becomes necessary.

Issues of Concern

1. Too many private landowners continue to distrust and fear any application of the ESA to their lands or activities. These private landowners may actively work to ensure that listed or candidate species are not attracted to their lands or that those species already present do not remain. At the very least, they may be unwilling or reluctant to undertake actions that would benefit listed or candidate species.

2. The various landowner incentive programs now available (e.g., financial, regulatory) have not been sufficient to allay fears completely, build trust, and encourage landowners to conserve listed or candidate species.

3. Individual HCPs can be complex, expensive, and time consuming to develop and be approved, and thus are often not well suited to small, individual private landowners. In addition, the No Surprises rule, as it applies to HCPs, has been and probably will continue to be challenged through litigation. Without the assurances provided by No Surprises, landowners may not find developing HCPs to be a sound business decision.

4. There is a lack of landscape-scale planning to coordinate application of the myriad of federal programs that address conservation on private lands.

5. The SHA and CCAA exist only in regulation and are not explicitly authorized by the ESA. Consequently, some landowners are concerned that the rules, as they presently exist, could be changed through subsequent rulemaking and are unwilling to commit to long-term conservation agreements.

6. Conservation of listed species on private lands would be improved by greater involvement of state fish and wildlife agencies in carrying out the provisions of section 10 of the ESA concerning HCPs and enhancement of survival permits (SHA and CCAA).

Potential Solutions

Administrative Options

1. Expand existing land-management financial and technical assistance to landowners who undertake actions that contribute to recovery (e.g., Department of the Interior's Private Stewardship Grants program), and target Farm Bill conservation programs to support landowner actions contributing to recovery of listed species or conservation of species that are candidates for listing.

2. Provide landscape-scale planning that private lands programs can tier off and contribute to, such that landowners and government program administrators are all aware of the major conservation needs in the landscape in question, and landowners can select the programs that best meet their needs. This would tailor programs to individual landowner needs and interests, and assure that the available programs are consistent with meeting the priority conservation needs in that landscape.

3. State fish and wildlife agencies and the Services should establish mechanisms that make HCP, SHA, and CCAA more accessible to small landowners.

4. Through expanded use of section 6 agreements and other mechanisms, state fish and wildlife agencies should be allowed and encouraged to assume the lead for administration of SHA, CCAA, and HCP administration.

Legislative Options

1. Codify the No Surprises assurances and explicitly authorize CCAA and SHA to make their assurances more secure and increase private landowner participation.

2. Qualify private lands managed for the conservation of listed species for special conservation incentives, tax breaks, or inheritance tax waivers.

3. Provide financial assistance (e.g., grants, tax credits) to landowners who enter into SHAs or CCAAs.

4. Federal conservation programs to encourage conservation on private lands, such as those in the Farm Bill, should give greater priority than currently to actions that serve to conserve listed species or species that are candidates for listing.

5. Provide a tailored Freedom of Information Act exemption along the lines of that in the federal Cave Protection Act to allow the Services to withhold information for which landowners have legitimate privacy interests.

VIII. ENSURING SOUND DECISIONS

In approving the ESA in 1973, Congress determined that "sheer self-interest impels us to be cautious" and characterized the legislation as having at its heart "the institutionalization of that caution." Consequently, the ESA requires that listing determinations, critical habitat designations, and decisions under sections 7 and 10 to be made on the basis of the "best scientific and commercial data available." This standard requires actions to be taken to address the threat of species extinctions even if it is not possible to demonstrate conclusively that such a threat exists or to demonstrate with certainty any link between causes and effects.

Since 1994, the Services have required evaluation of all scientific and other information used in ESA decisions to ensure that it is reliable, credible, and represents the best scientific and commercial data available. It is the policy of the Services "to gather and impartially evaluate biological, ecological, and other information that disputes official positions, decisions, and actions proposed or taken by the Services during their implementation of the Act." Biologists must 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 action, recovery plan or action, interagency consultation, or permitting action. These evaluations must rely on the best available, comprehensive, technical information regarding the status and habitat requirements for a species throughout its range. During the public comment period, the Services' policy incorporates independent peer review in listing and recovery activities by soliciting "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." With respect to recovery, the Services' biologists are required to "utilize the expertise of and actively solicit independent peer review to obtain all available scientific and commercial information from appropriate local, state and federal agencies; Native American tribal governments; academic and scientific groups and individuals; and any other party that may possess pertinent information during the development of draft recovery plans for listed animal and plant species."

Efforts to create a hierarchy of quality within the standard of "best scientific and commercial data available" are problematic. Sound decisions under the ESA require use of diverse types of information. Field data on a species' numbers or amounts or quality of habitat are important. However, because species listed under the ESA or under consideration for listing are by definition rare, these data are often incomplete and difficult to gather. Consequently, population viability analyses, which use mathematical models, and many statistical tools can be of great importance in understanding a species' status and the likelihood that it will become extinct.

Additional problems arise from efforts to require certain types of data. Requiring, for instance, that listing determinations be supported by "observation of species in the field" inappropriately places that type of data above all others and begs the question about what constitutes such observation. Do census methods that rely on indirect observation of species attributes or correlates of species presence constitute "observation of the species in the field"?

Peer review is an important means of assuring sound information. Nevertheless, often the best scientific and commercial data available are present in state, federal, and private reports. Publication of data in these reports often does not occur in peer-reviewed journals either because it is not appropriate to the journals or because the publication process can take years. Use of peer review also is an important means of assuring sound agency decisions. Care must be taken to ensure that such review does not result in the Services abandoning actions under ESA because they would become too costly or would delay other activities. Use of peer review, for instance, within the section 7 consultation process could substantially lengthen the timeframes for that consultation to the detriment of species conservation or federal agency actions.

Issues of Concern

1. While ESA decisions are based on the best available information, often the information on the status of a species or effect of an action is incomplete due to lack of information or inadequate efforts to monitor or measure the species' status.

2. The ESA does not require explicitly soliciting of state fish and wildlife agency information, sharing information with these agencies, or involving them in decisions under the ESA. Perhaps as a result, it appears that information from state wildlife agencies is often not sufficiently sought, used, or considered.

3. The ESA and federal rules of procedure do not encourage sharing of information on the status and processes of decisions. Consequently, it is difficult for those outside the Services, and even for many within the agencies, to determine how decisions are made, what is being considered, and how the process is proceeding.

Potential Solutions

Administrative or Legislative Options

1. Involve the state fish and wildlife agencies and other sources of expertise early and throughout the ESA decision-making processes.

2. Provide sufficient time and resources to investigate and prepare all the documentation associated with decisions under the ESA.

3. The Services and other federal agencies should set standards of expertise and training for individuals who are responsible for making ESA-related recommendations or decisions.

4. Provide interagency support and establish interagency guidelines to encourage greater collaborative efforts among state and federal agency scientists and managers.

5. The Services should expand and make uniform the use of explicit decision-making protocols in consultations so that the process and decisions are transparent and able to be replicated.

6. Require federal agencies to work with the Services, state fish and wildlife agencies, and other experts from the scientific community to resolve areas of scientific disagreement or uncertainty, to the extent that they can be resolved, during development of the biological assessments, and then to design their action conservatively when faced with scientific uncertainty about project impacts or the adequacy of offsetting measures. In cases in which there remains substantial disagreement regarding the sufficiency or accuracy of the available data at the onset of consultation, the federal agency and Service(s) should determine whether the circumstances warrant soliciting independent analysis from other experts from within the Service(s) and from outside (USGS, state wildlife agencies, universities, and appropriate NGOs) prior to preparing the opinions—recognizing that that step will likely require extension of established consultation timeframes.

7. Use adaptive management, which employs an iterative approach to managing species or ecosystems in those cases in which the methods of achieving the desired objectives are unknown or uncertain, to monitor actions to determine their effectiveness, and allow modification to address the concern about scientific uncertainty.

CONCLUSIONS

The ESA has been successful in achieving its primary goal of preventing extinctions, and the firm statutory duties and strong substantive standards imposed by the current law to prevent extinctions and recover species should be maintained. However, the effectiveness of threatened and endangered species conservation should be increased through improvements to the statute and its funding and implementation. Greater federal resources and effort need to be committed to the purposes of the ESA, particularly to the recovery of listed species. Support and encouragement of complementary state, tribal, and private conservation efforts through funding, policies, and statutory provisions are essential to establish and maintain the partnerships that are required to prevent extinctions and recover imperiled species. Existing resources should be utilized more efficiently by amending the ESA to lower transaction costs in listing decisions and critical habitat designations. Federal decision-makers should solicit and use the expertise of state fish and wildlife agencies and others in a consistent and open manner. Decisions under the ESA should be transparent, replicable, and based on robust scientific analyses of the best available information.

THE WILDLIFE SOCIETY
5410 Grosvenor Lane, Suite 200, Bethesda, Maryland 20814

The Wildlife Society is the association of wildlife professionals dedicated to excellence in wildlife stewardship through science and education. The goals of The Wildlife Society are to: develop and maintain professional standards for wildlife research and management; enhance knowledge and technical capabilities of wildlife managers; advance professional stewardship of wildlife resources and their habitats; advocate use of sound biological information for wildlife policy and management decisions; and increase public awareness and appreciation of wildlife management. The Wildlife Society, founded in 1937, is a nonprofit organization whose members include research scientists, educators, resource managers, administrators, communications specialists, conservation law enforcement officers, and students from more than 70 countries.

RESPONSES BY ROBERT P. DAVISON TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. In order to improve implementation of the ESA, you focus on the need to provide adequate and stable funding for section 6 Cooperative Agreements with the States. Do you have a recommendation for where Congress should look to provide more funding for the section 6 programs?

Response. I don't have specific recommendations on sources of funding. Additional funding to States is needed to improve implementation of the ESA. If more effective endangered and threatened species conservation is a high priority for Congress, then funding State programs to carry out the ESA must be an equally high priority. I recognize that Congress has to determine how to allocate funds among the many, many worthwhile programs competing for limited funding. Whether that funding should come from other programs within the Departments of the Interior and Commerce or from other Federal agencies, I leave to Congress to resolve. The issue is important enough, however, that consideration should be given to allocating a percentage of increased total ESA funding to State wildlife agency programs in support of the Act.

Question 2. The State of Arizona recently signed a Memorandum of Understanding with Region 2 of the U.S. Fish and Wildlife Service based on section 6 authority. Will the Arizona model be easily translatable to other states interested in developing MOU's with the Service?

Response. As I understand it, the Arizona MOU is based on a model developed by the International Association of Fish and Wildlife Agencies. It reflects the particular abilities and needs of the Arizona Game and Fish Department and Region 2 of the U.S. Fish and Wildlife Service. I believe that the MOU is easily translatable. However, to my knowledge, no other State wildlife agency has entered into such a MOU with the Service. So, it would seem that other States either have not been interested in developing such an MOU or they have not found the model to be easily translatable. My sense is that the former explanation is the correct one, and that the lack of interest is due in large part to the absence of supporting Federal matching funds.

Question 3. With regard to providing an increased role for State fish and wildlife agencies and Tribal governments in listing decisions, as well as activities that keep species from becoming candidates in the first place, how much of this could be accomplished through Administrative regulatory and policy changes rather than specifically making statutory changes to the ESA?

Response. Much, if not all, of the measures to increase the role for State fish and wildlife agencies and Tribal governments in listing decisions and in efforts to keep species from becoming candidates for listing could and should be accomplished by regulatory and policy changes.

RESPONSES BY ROBERT P. DAVISON TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. You have a long history of involvement with the Endangered Species Act, not only were you at the Department of the Interior in the Clinton administration, but also as a staff member of the Environment and Public Works Committee for Senator George Mitchell. What is your opinion of how section 6 was envisioned to be implemented? Was it expected to be funding for projects or for State programs?

Response. I believe that section 6 has been implemented more narrowly than the Congress envisioned. State agency programs with authority for listed species within a State should be allowed to assume responsibility for enforcement of take prohibitions if the Secretary of the Interior or Commerce has determined that the State authority is as restrictive and comprehensive (e.g., includes incidental take due to habitat modification) as the ESA. In my judgment, section 6 was intended to fund development and implementation of such State programs for conservation of threatened and endangered species. As it evolved, however, section 6 instead became a tool to fund specific, federally approved State projects, much like the manner in which projects are approved and funded under the Federal Aid in Wildlife and Sport Fish Restoration Acts. In addition, Federal spending in support of State projects over the history of the ESA has been extremely low and in sharp decline relative to spending for Federal efforts.

Question 2. In your discussion of Habitat Conservation Plans, you note that approximately 30 percent of all approved HCPs resulted from applications by local governments or State agencies or both, and you cite the Karner blue butterfly HCP in

Wisconsin as a model of state-led management of listed species. What factors have driven the development of HCPs from the State level and how is the Wisconsin HCP monitored to ensure that gains are made towards recovery and de-listing?

Response. It's my understanding that development of the Karner blue butterfly HCP was driven by a Wisconsin Department of Natural Resources (WDNR) desire to conserve this resident species and by an understanding that successful conservation of the species depended on the involvement of many public and private landowners. The State agency recognized, I believe, that it had the most thorough knowledge of the status of this resident species and its conservation needs. In addition, the entities supporting a conservation initiative for this species made a special point of expressing its desire to work with and through the WDNR, rather than the Fish and Wildlife Service. They expressed a lack of confidence and trust in Federal agencies in addressing endangered and threatened species issues, and wanted to work with a State agency.

Question 3. How would administration of Habitat Conservation Plans, Safe Harbor Agreements and Candidate Conservation Agreements at the State-level help to encourage land owners to cooperate in the conservation of listed or candidate species?

Response. State agency personnel often are more familiar to landowners and more trusted by them than Federal agency personnel. In addition, the State agency often is in a position to view the issues from both the perspective of the Federal agency and the landowner conservation partners. The State agency may be perceived by plan and agreement participants as more of a facilitator than regulator, which further encourages landowner cooperation. The State agency also can serve as a buffer between the Federal regulatory agency and the landowners or users engaged in the conservation plan. State-level administration of HCPs, Safe Harbor Agreements, and CCAAs can encourage landowner cooperation by minimizing transaction costs and bureaucratic burdens to the landowners. Finally, many of these plans and agreements require involvement, decisions, and actions by local governments, and State agencies have well-developed working and legal relationships with these governments that are important to successful conservation.

STATEMENT OF BILL BURNHAM, PRESIDENT, THE PEREGRINE FUND

The Peregrine Fund is among the most experienced nongovernmental organizations in hands-on restoration of endangered vertebrate species in the United States. Our group began working toward restoration of the peregrine falcon a few years before the enactment of the Endangered Species Act of 1973 (ESA) and has since played an important role in progress toward recovery of the endangered northern aplomado falcon, California condor, many endemic avian Hawaiian species, and several foreign species that are listed as endangered under the ESA, in particular the Mauritius kestrel and harpy eagle. We have also been involved in using section 10(j) experimental populations for releases of California condors in Arizona and Safe Harbor permits with the northern aplomado falcon restoration in Texas.

We have cooperated with private citizens and organizations, particularly private landowners, at all levels of government including local communities and counties, 31 State wildlife agencies, Tribes, most Federal land management agencies, and the U.S. Fish and Wildlife Service (FWS). Given the breadth of our experience, we feel that we are well situated to comment on the ESA and enhancing the roles of states, Tribes, and local governments. We believe, however, for these comments to be understood and the most useful, they need to be placed within the context of our broader recommendations for the ESA. We begin by briefly reviewing the recovery programs in which The Peregrine Fund has participated.

Peregrine Falcon.—The peregrine restoration effort was the largest species recovery program ever accomplished, extending throughout much of North America, lasting more than three decades, and even including collaboration with Europeans. The primary cause for the peregrine decline was DDT/DDE-induced eggshell thinning and reproductive failure (Cade et al. 1971). The use of DDT was banned in Canada in 1969 and in the United States in 1972 (Cade and Burnham 2003a). With the ban of DDT and the resultant decrease in environmental levels of the DDT-type compounds, where adequate populations of peregrines continued to exist numbers increased without assistance. Where the peregrine had been completely extirpated or greatly reduced (80–90 percent), release of captive-raised falcons re-established populations throughout most of its former range. The American peregrine falcon was removed from the endangered species list in 1999.

The Peregrine Fund expended an estimated $13.4 million toward peregrine restoration with about half from public and half from private sources. At the height of the restoration effort we annually expended about $800,000.

Why did Peregrine restoration succeed? First and foremost, the cause of decline of the species (DDT) was greatly reduced in the environment. Second, about 7,000 falcons were released to the wild where peregrine populations were extirpated or greatly reduced (Burnham and Cade 2003b). This was facilitated by widespread cooperation and support led by a core group of dedicated peregrine enthusiasts, mostly falconers, who possessed considerable knowledge about the species. Peregrine restoration was largely a privately led enterprise. Third, State wildlife departments and Federal land management agencies contributed importantly to the recovery program (Burnham and Cade 2003a). Species restoration became local initiatives.

Fourth, although restoration of the peregrine would have occurred even if the ESA had not existed, it is unlikely to have achieved the same level of success. The ESA provided a platform for cooperation, particularly among government agencies, and added a new source of funding, although much of it was consumed by government bureaucracy and not used for actual recovery implementation. The section 6 funding to the states may have been the most important financial aspect for overall recovery. An annual appropriation earmarked by Congress for The Peregrine Fund for a number of years was also very important and enhanced our level of participation (Cade 2003). Finally, despite the FWS having the authority for implementing the ESA, and a number of their biologists contributing importantly to the recovery program, as an agency the FWS had a limited role, and its law enforcement division, which was in charge of issuing permits as well as enforcing regulations, was regularly an obstacle to recovery actions (Burnham and Cade 2003b). Peregrine restoration could not just happen because of a Federal Government mandate.

Northern Aplomado Falcon.—The FWS listed the northern aplomado falcon as endangered in 1986. The species had been lost from the United States as a breeding species by the early 1950s. It had previously occurred in the southwestern states of Texas, New Mexico, and Arizona. Although present in portions of southern Mexico, the aplomado falcon had declined throughout much of its range in northern Mexico. The disappearance of the aplomado falcon was likely the result of changing land management practices which reduced both the quantity and quality of the favored grassland habitat. The widespread use of DDT and other persistent pesticides may have prevented re-colonization. Improved land management and re-emergence of suitable habitat created a potential opportunity for species restoration.

The Peregrine Fund began to experiment with captive breeding of this species in 1978 patterned after the successful peregrine propagation effort. In cooperation with the Mexican government, 25 nestling aplomado falcons were collected from the wild and a captive-breeding population was established. This program has produced 1,269 young, of which 1,142 have been released to the wild (Jenny et al. 2004). Following an experimental release project (1984–1989), a full-scale restoration program began in 1990. The first breeding pair resulting from these releases was discovered in 1995, and in 2005 at least 44 territorial pairs had become established. Based on observations of unbanded birds and the difficulty of locating nests, many undiscovered pairs must exist. This new population is known to have successfully fledged more than 242 young. The recovery plan suggests that the aplomado falcon be downlisted to "threatened" status when 60 breeding pairs have been established (USFWS 1990). We are also monitoring and conducting research on small extant populations in Chihuahua, Mexico (Montoya et al. 1997).

Safe Harbors have been critical to our success in Texas where more than 97 percent of the land is privately owned. This conservation tool represents the "carrot," rather than the "stick" approach to species recovery. Most landowners value wildlife but are concerned about land-use restrictions that could arise as a result of the ESA. The Safe Harbor program for this falcon now includes 57 counties in Texas and has more than 1.8 million acres of habitat enrolled. It has provided access to suitable habitat for the recovery of the aplomado falcon while protecting landowners from restrictions associated with the ESA through an incidental take permit (Jenny 2003).

The mechanics of a Safe Harbor are, however, difficult to explain to landowners, and agreements are primarily negotiated as a result of personal trust developed between the landowner and field personnel of The Peregrine Fund. Key to the success of this effort is that The Peregrine Fund, rather than the government, is the broker for these agreements.

Efforts are also underway to establish an aplomado falcon restoration program in New Mexico and Arizona. Unlike Texas, these states have large areas of public lands on which the Safe Harbor cannot be legally applied. A proposal to allow for the establishment of a "nonessential experimental population" designation (see ex-

planation below) is being processed to facilitate development of a restoration program in those states. Both State wildlife agencies and the FWS support the concept, but some environmental groups oppose the proposed designation and are threatening litigation to stop its potential use. As an ESA-listed species, the falcon is seen by some as a convenient tool to restrict activities such as grazing, energy development, and recreation on public land through a "critical habitat designation" for the falcon.

The Peregrine Fund has accomplished all aspects of this hands-on recovery, and our involvement has been 91 percent privately funded. We anticipate having raised and expended more than $9.8 million on this project through fiscal year 2005 with annual expenditures now over $1.2 million. In addition, $700,000 of privately funded facilities have been constructed.

Why is this program succeeding in Texas? First, the probable causes of the aplomado falcon's decline may no longer exist and suitable habitat is again present, e.g., a well managed cattle ranch provides excellent aplomado falcon habitat. Like the successful peregrine restoration, there has been almost universal cooperation. The program is largely a privately led endeavor implemented by a highly motivated and dedicated core group of people, the State wildlife agency is supportive, considerable private funding is being contributed, and private and public land managers are engaged. Lastly, the Safe Harbor program allows for the vital participation of private landowners by reducing concerns associated with the ESA. The recovery is a local, county by country, community by community, landowner by landowner, person to person project.

California Condor.—Only 27 condors existed in 1987 when all wild condors were brought into captivity. In November 2003, the first successful reproduction occurred in the wild when condors released by The Peregrine Fund in Arizona bred and fledged a chick, the first California condor flying in nature untouched by human hands in over two decades.

The probable causes for the condor decline were a reduced food base (loss of the large mammals during the Pleistocene compressing their range to the Pacific Coast from southern Canada to Baja California, Mexico), human persecution, probable DDT/DDE-caused eggshell thinning during the 1950s and 1960s, and lead poisoning (Kiff et al. 1979; Pattee et al. 1990). Lead poisoning remains an unresolved problem (Cade et al. 2004).

At the request of the FWS and California Condor Recovery Team, The Peregrine Fund agreed in 1993 to develop a captive-breeding facility and a release program in northern Arizona. In August 2005, we hold 60 condors (20 nestlings and 40 adults and subadults) in the captive flock and manage 65 condors in Arizona, of which 50 are free flying; two wild-hatched nestlings have not yet fledged and the remaining 13 are in holding facilities awaiting release. These birds represented 45 percent of the total world population.

The release of condors in Arizona was made possible through use of section 10(j) of the ESA as a "nonessential experimental population." This allows for the establishment of a population of a listed species with fewer ESA restrictions than would otherwise be imposed on land use and other human activities in the area. By using this exemption, and after the FWS signed an agreement saying the condors would be removed if the special status was changed, many of the fears expressed by the local communities and landowners were reduced. Meetings with The Peregrine Fund (see below) provided further assurances to the point communities agreed to support, or at least not to oppose, condor releases. Since then we have enjoyed excellent local government and private sector support and cooperation. Federal land management agencies, Tribes, State agencies, and other cooperators have developed a further agreement to further enhance cooperation.

The Peregrine Fund's participation in the condor program is funded by a mixture of public and private funding. We anticipate expending $9.4 million (55 percent private donations) from fiscal year 1993 through fiscal year 2005 with annual expenditures now exceeding $1.3 million. There has also been $1.75 million in facility construction costs.

Why is the program succeeding in Arizona? With the exception of mortality from ingesting animals shot with lead pellets and bullets, the natural environment in northern Arizona and southern Utah is well suited for condors (Cade et al. 2004). By using the 10(j) exemption within the ESA, the local people and communities are supportive, as are the Arizona and Utah State wildlife departments. The Arizona Game and Fish Department has even implemented a program where sportsmen drawing deer hunting permits for northern Arizona are offered, free of charge, nonlead ammunition by the department, which hunters are overwhelmingly accepting. Condor recovery is a local, highly cooperative project.

Endangered Hawaiian Birds.—Hawaii has more threatened and endangered species than the total of the other states. The causes of decline of avian species and extinctions are attributed primarily to three factors—loss of habitat, introduced disease (malaria and pox) and their vectors, and introduced predators (rats, cats, and mongoose). At the request of the FWS, in 1993 The Peregrine Fund agreed to establish a release program for the endangered 'alala or Hawaiian crow on the island of Hawaii. This followed litigation by environmental groups against the FWS and the landowner upon whose land the last wild crows persisted. The landowner kept people out, believing proposed government actions would result in the extinction of the crow. The legal settlement resulted in (1) the landowner allowing access to the property and (2) the implementation of a FWS-managed restoration program for the crow.

Following the initial successful release in the wild of captive-raised crows (Kuehler et al. 1994, 1995), FWS requested The Peregrine Fund assume a larger role in the recovery effort for endangered Hawaiian birds. Working with FWS, the State of Hawaii, the Hawaiian Congressional delegation, and others, Federal funding was secured, and we constructed a captive-breeding facility near Hawaii Volcanoes National Park on the Big Island, assumed management of and renovated a state-owned facility on Maui (Olinda), and began working with the other endangered Hawaiian birds. From 1993 to 2003, the program hatched and raised 518 chicks of 14 endemic taxa, eight of which are listed as endangered (Kuehler et al. 1996, 2001). Three endangered species have been released to the wild, totaling 97 individuals—60 puaiohi (Kuehler et al. 2000), 27 'alala (Kuehler et al. 1995), and 10 palila (Lieberman and Hayes 2004). Released individuals of the puaiohi are confirmed breeding in the wild (Tweed et al. 2003). We transferred the entire program (facilities, staff, etc.) to the Zoological Society of San Diego (ZSSD) after completing the construction and renovation of the propagation facilities, developing technology for management, breeding, and release of a host of species, and having developed a competent staff.

The Peregrine Fund expended approximately $3.5 million for construction during its involvement, of which most were public funds. Annual operating expenses are now approximately $920,000 less overhead costs which are not charged by the ZSSD (pers. comm. Alan Lieberman).

Despite continued successes at the captive-breeding facilities, many of the released Hawaiian crows have died. All of the released crows that survived have been brought back into captivity to protect the remaining genetic diversity. The continued survival of the last two known wild crows remains in doubt, and as a species the Hawaiian crow is possibly extinct in the wild. In 2004 the last known individual died of the po'ouli, a short-tailed, stocky "creeper." That was the only known living individual of the entire genus of *Melamprosops*.

Why has avian species restoration in Hawaii not experienced the success of the other programs? First and foremost, the reasons for decline and extinction of species have not been successfully reduced or eliminated. Captive flocks and breeding may prolong the existence of these species but do nothing for their preservation in nature. Although there has been some progress on several fronts (Division of Forestry and Wildlife 2004), not enough progress has been made in Hawaii to change significantly the long-term prognosis for most native Hawaiian avifauna. There must be a serious commitment to landscape-wide habitat management measures if success is to be achieved (Scott et al. 2002). Species can be saved and success is possible, but only with a commitment of effective action commensurate in scope and effort to the reasons for the declines and extinctions.

Although there is interest in Hawaii to save species, cooperation and agreement among individuals and organizations as to what and how this should be done is generally insufficient to result in meaningful effective population-level actions. Litigation through the ESA, or at least its threat, is prevalent, and private landowners are reluctant to participate or even allow biologists access to their properties on the off-chance they may discover a threatened or endangered species. During our involvement certain FWS staff were combative to the point of discouraging participation and cooperation of others. The Federal Government, much more than the state, is responsible for species recovery projects, to include implementation.

DISCUSSION

Most people agree with the importance of saving species from extinction. Problems arise in defining what that means and how to achieve that objective. This is particularly true when legal requirements for preserving threatened and endangered species are in conflict or competition with human needs and desires for resources. We have been fortunate in our ability to limit the conflict associated with our recovery

efforts. An important reason is we work cooperatively, collaboratively, and locally to prevent extinction and restore viable wild populations for those species on which we are focused (Burnham 1997).

Most endangered species depend significantly on habitats found on private lands; and some only occur on such lands (Bean and Wilcove 1997). Hawaii (225 listed species) and Texas (70 listed species) have only 16 percent and 1 percent, respectively, of Federal land (Wilcove et al. 1996). Use of Safe Harbor and experimental non-essential population status reduce concerns of private landowners and users of Federal lands, thus making it easier to work on ESA-listed species. Creating private landowner incentives is critical to endangered species recovery in many cases (Brook et al. 2003). Although this can be implemented at State and local levels, the authority and funding must come from the Congress and Federal Government.

The designation of critical habitat may be most useful and justified when it is applied to special, localized habitats that are critical to species survival, such as nest sites that limit the number of breeders (e.g., peregrine falcons) or springs that serve as the entire distribution area for a species (e.g., Bruneau hot springs snail). However, when it is applied to major habitat units on a wide scale encompassing millions of acres (e.g., old growth forest for the spotted owl or the proposed designation of major reaches of the Chihuahuan Desert in southern New Mexico for the largely non-existent aplomado falcon), then its use becomes questionable, even though protection of such large areas may be justified in a broader, more inclusive environmental context. Critical habitat conveys little additional protection to a listed species that is not covered under other provisions of the ESA. Considering the high costs involved in designating critical habitat and defending against lawsuits associated with it, the benefits of designating critical habitat for the conservation of listed species appear to be problematic, even unjustified.

LESSONS

What can be learned from our experience about species restoration and the ESA? Of primary importance is that successful species restoration cannot occur unless the initial reasons for population declines and extinctions are significantly reduced or mitigated. For those species with which we have had experience, conservation actions under the ESA have NOT importantly affected the causes of population declines. Use of DDT was banned prior to the ESA of 1973 and the peregrine was otherwise already protected by State and Federal law. Before passage of the ESA, the California condor was protected against human persecution by the State of California and the Migratory Bird Treaty Act (MBTA); habitat protection was never an important issue, but no actions to reduce the presence of lead have been taken. Changes in ranching and land management practices allowing for possible aplomado falcon restoration in Texas occurred before the falcon was listed under the ESA. There have yet to be any measurable effects on the causes for declines and extinctions of endemic Hawaiian species resulting from the ESA. Therefore, the additional direct and indirect (habitat) protection provided by the ESA has not enhanced recovery of those species with which we have worked, although in Hawaii it may yet have a positive effect if the right corrective actions are taken to improve habitats at biologically significant scales (removal of exotic herbivores and predators).

Has listing a species as endangered benefited restoration? For the peregrine it probably did by attracting attention, accelerating and enhancing its restoration, although the eventual recovery was likely to have occurred irrespective of the ESA (Burnham and Cade 2003a). Having the peregrine falcon listed as an endangered species increased support.

The role of the ESA in the recovery of other species with which we have worked is less certain. Restoration actions for the California condor in Arizona and aplomado falcon in Texas are being accomplished using tools that essentially remove most protective restrictions imposed by the ESA. Without these tools it is unlikely that either program would have been possible—certainly not at the current level. The successful expansion of the aplomado falcon restoration program into New Mexico and Arizona will also be aided by the nonessential experimental population designation being applied there.

In species restoration efforts in Hawaii, the ESA has facilitated the expansion of funding from the FWS to build facilities for the captive propagation, as well as transferring funds to the State via section 6 allocation, but it has done little to correct the root causes of species endangerment.

Just the threat of listing can cause both benefits and problems for a species. Prior to the anticipated passage of the ESA in 1973, several private individuals took peregrines from the wild; they later became the foundation for the captive population

and restoration program. People knew such taking would become impossible after the ESA was passed and the peregrine became listed (Burnham 2003). The threat of listing has caused State wildlife departments and Federal land management agencies to develop plans to address concerns and benefit species such as the greater sage-grouse. Even without the ESA and listing, however, people concerned about the peregrine and grouse would have worked for their conservation. On the negative side, it is common knowledge that the petition for listing the black-tailed prairie dog resulted in large-scale poisoning of their colonies by landowners who feared intrusion on their property by the FWS. Other examples included the Preble's meadow jumping mouse and red-cockaded woodpecker (Brook et al. 2003, Pickrell 2003). Brook et al. (2003) found that listing did not enhance the prospect of survival for listed species on private property.

Once a species is listed, its delisting from the ESA is far more difficult, even when it no longer meets the criteria for "threatened" or "endangered." So few species have been delisted as a result of the ESA that procedures are largely unfamiliar. To delist the Arctic peregrine from threatened status took about 3½ years from the publication of the delisting proposal to the final Federal Register notice. The American peregrine falcon delisting process required 4 years and 3 months. First was a Federal Register notice considering delisting, then 3 years later a notice of the proposed delisting, and a year later the actual delisting (Burnham and Cade 2003b). Opposition to delisting of the American peregrine falcon occurred largely from organizations that commonly use litigation to further their environmental agenda and individuals who had made a career working on peregrine restoration. Still to be delisted is the bald eagle which has not met the ESA criteria for "threatened" or "endangered" for many years. Originally proposed by FWS for delisting over 10 years ago, action has been held up by those who are concerned about the adequacy of habitat protection after the eagle is removed from the list—a misapplied application of the "precautionary principle." The Hawaiian Hawk is another example. In 1997 a FWS established panel of raptor experts reviewed the species' status and recommending delisting, but nothing has happened. The review was accomplished because of hawk predation on the truly endangered Hawaiian crow.

Do recovery teams contribute to species restoration? Following enactment of the ESA four regional recovery teams were established for the peregrine falcon to write (and update) recovery plans and to advise the FWS. Although there were multiple recovery teams for the peregrine, they were of manageable size and were largely made up of peregrine experts and others appointed to expedite recovery within agencies. They advised only on strategic programmatic issues as requested by the FWS. In large part they did the jobs requested of them and their contributions facilitated restoration. They functioned under the 1974 guidelines developed by the head of the FWS Office of Endangered Species, Keith Schreiner, "What a recovery team is and is not—What a recovery team does and does not."

The FWS contracted to have a recovery plan written for the aplomado falcon (USFWS 1990) but no recovery team was created, nor was one needed. Effective coordination has been accomplished through regular communication among municipal, State, Federal, and private cooperators and most aplomado falcon experts are actively involved in recovery actions. Also, the recovery program is fairly straightforward.

The function and composition of the California condor recovery team has changed over time from a small group of experts focusing on strategic issues to a large group of stakeholders attempting to micro manage restoration actions. The value of the team to implementation of restoration program diminished with those changes. In Hawaii, where the conservation issues are nearly overwhelming, recovery teams required over 10 years of discussion just to update and draft two recovery plan revisions ('alala and Hawaiian forest birds) that are still not finalized.

A secondary, and many times more important level of organization than recovery teams, are what have come to be called "working groups." Largely through the leadership of State wildlife departments, working groups were formed in many states to coordinate and expedite peregrine recovery actions (Burnham and Cade 2003b). These were largely informal groups of cooperators, usually within a single state, that gathered as needed to make plans to facilitate and help fund recovery actions. Participants were from State wildlife departments, who usually helped organize the meetings with The Peregrine Fund or other leading private organizations, Federal land agencies, and private property owners where peregrines were to be or were being released. These were congenial gatherings frequently followed by everyone adjourning to a local bar to have a few beers together. This arrangement still largely applies to the aplomado falcon. In the case of the California condor in Arizona, the working group was formalized by the FWS and went from a small group of cooperators to a large, formal, growing body of mostly agency people led by the FWS. As

with the condor recovery team its function then transformed from program facilitation to micro-management. Fortunately, recognizing the problem the FWS transferred leadership to the State wildlife agencies and a functional balance was restored.

Recovery plans written for the peregrine by the teams comprised four different original documents and later a couple of updated revisions, one of which was never finalized before the falcon was delisted. The four documents varied in length and detail, as did their ultimate value to the recovery efforts (for more detail see Cade and Burnham 2003b). The recovery plan for the aplomado falcon, written by a single author, provides a good review of the falcon's biology and explicit suggestions for recovery along with criteria for downlisting. A recovery plan for the California condor program was first approved in 1975 and revised, then re-approved in 1996. The revised California condor plan provides a list of potential recovery actions but was written prior to when condor releases began and is now outdated. There is no apparent value for revision.

Who has been involved in species restoration programs? A currently popular term is "stakeholder." We interpret this term to mean those individuals and organizations that have a stake in, or could be affected by, restoration actions. Although national and even international cooperation and coordination have been needed to implement restoration programs, working with stakeholders, including local people, landowners, and communities where actions are to occur, has been critical to the successful projects in which we have been involved. Species restoration programs require trust to succeed. Having the buy-in and trust of those people and communities was critical to implementation and the long-term success of the program. People often do not trust governments; they do tend to trust other people. Trust cannot be legislated; it only develops over time and through experiences with others.

In Arizona, early opposition to California condor releases resulted largely from restrictions imposed on timber harvest and resultant job losses after petitions for listing the northern goshawk were filed, even though the goshawk was never listed. An early public hearing on the proposed condor release had uniformed, armed law enforcement officers present. After a private meeting between the Arizona governor and The Peregrine Fund, arranged by a supportive local rancher, and a final public meeting in which we stated we would not participate in this project without the support of the local communities, public trust developed, agreements were prepared and endorsed, and the project moved forward.

Involvement of State wildlife agencies in species restoration has been important. Even if the states did not have hands-on roles, their involvement was important to facilitate and support recovery efforts. With the peregrine program the roles of states varied greatly, but, where a successful program existed, the State wildlife department was supportive and involved (Oakleaf and Craig 2003). This remains true for the current efforts with the aplomado falcon in Texas, the California condor in Arizona and California, and the forest birds in Hawaii.

Successful restoration programs with which we have been involved have also enjoyed extensive participation by the private sector. The private sector had the leadership role in peregrine restoration, but State wildlife departments and Federal land management agencies were also integral. A similar situation exists for the aplomado falcon in Texas and California condor in Arizona. In Hawaii, in addition to the participation by ZSSD, leaders in restoration programs within the private sector have been The Nature Conservancy, Kamehameha Schools, the Silversword Foundation, and public-private partnerships such as the Olaa-Kilauea Partnership (pers. comm. Alan Lieberman).

What biological knowledge and type of science is needed for recovery? Knowledge of species in jeopardy is very important, including information on basic biology and ecology and, in particular, knowing why populations have declined and what are the primary limiting factors (e.g., winter habitat, food during breeding, etc.). Fortunately for the peregrine falcon, before populations declined considerable knowledge existed about the species from research and publication and through centuries of its use in falconry. Further research was then accomplished documenting the level of population declines and trends and to determine the cause (Newton 2003). All of this information ultimately benefited recovery. Also accomplished, but at considerable expense and of no useful value for recovery, were habitat evaluations and other "research," mostly funded by Federal land management agencies and many times accomplished by individuals with limited knowledge and experience about raptors in general and peregrines in particular. Resulting reports were rarely used or even opened by biologists accomplishing actual recovery actions. Much of this work consisted of due-diligence studies agencies believed necessary to comply with requirements of the ESA and the National Environmental Policy Act. Agencies also expended funds to accomplish surveys of peregrines in areas where they were known

not to exist and in some cases never had existed. A similar situation has developed with aplomado falcon restoration in New Mexico. Prioritizing expenditure of the limited ESA funds for information gathering is very important but has often been done without careful consideration.

Use of "the best available science" to guide species recovery is touted, but although the scientific method is pure, scientists, lawyers, other professionals are subjective humans. Common sense and honesty cannot be legislated, and one cannot remove personal opinions, bias, conflicts of interest, and agendas from endangered species issues. Particularly for scientists, the public values and appreciates honesty (including admitting errors), accuracy (stating clearly what is known and not known), and integrity (not allowing results to be misrepresented or used in an unprofessional manner) (Burnham and Cade 1995). The need to keep objective, unbiased science, however relevant to societal problems, free from political alliances is critical (Brussard et al. 1994). Unfortunately many times this is not the case (White and Kiff 1998).

How much funding is needed for species recovery? We provide approximate dollar amounts expended for U.S. restoration projects in which we have been involved. The amounts reflect only those aspects of a restoration program which we accomplished and not the total amount expended by all involved. For hands-on restoration in the United States, The Peregrine Fund probably expended over half of all moneys for the peregrine and nearly all spent so far for the aplomado falcon. Hands-on restoration programs are expensive and every effort should be made to prevent species from declining to a level requiring such action to cause recovery or to prevent extinction. Expense for recovery increases 10,000-fold when one moves from management where the species exists as part of functional ecosystem maintenance to highly focused hands-on restoration (Conway 1986).

Hands-on restoration can also require long-term actions. Restoration of the peregrine took about three decades, aplomado falcon restoration will likely require two decades, California condor restoration may extend a half century or more, and Hawaiian bird restoration many not have an end point. Obtaining sufficiently long-term funding for such projects is very difficult as the private sector and government both tire in their support of such projects.

Annually the FWS expresses a need for additional dollars for endangered species, and most years the Congress responds favorably, although they are criticized by many environmental organizations for not doing enough. Annual appropriations have never approached the limits authorized by Congress, in particular endangered species funding has to compete with other overall budgets set by the Office of Management and Budget. Increases provided to the FWS do not necessarily mean more dollars for actual recovery actions, as developing and maintaining the bureaucracy for implementing the complex regulations associated with the ESA are expensive. Although public funds are critical and appropriate for species recovery programs, we believe that programs in which individuals and private organizations are willing to assist financially, demonstrating their support, are more likely to succeed than if they are supported only by government funding. Dollars contributed in support of restoration actions for a species reflect the buy-in and commitment of the public, and even the nation. Obviously, some species are more appealing than others and less difficult for which to find support, but it should be possible to develop a constituency for most species with enhanced private sector goodwill and involvement.

How does permitting action affect species recovery? The ESA and its implementing regulations are extensive and complex, especially in regard to ESA permits (Burnham and Cade 1995). Permits and the permitting process have discouraged species conservation actions and hindered research and recovery actions. Although the FWS is trying to simplify the permitting process, the existing regulations and other related acts (MBTA, Wild Bird Conservation Act, etc.) limit what can be accomplished without legislative changes.

RECOMMENDATION

Although the actual changes to the ESA over the years have been few, through litigation, regulation, and the attitude of some FWS staff, it has evolved from having the appearance of an incentive-based to a punitive-based law. In recent years, there has been an attempt to change the appearance to one of incentive by development of the 10(j) and Safe Harbor programs, although their effectiveness is diminished through increased bureaucratic complexities being imposed by FWS staff (Bean et al. 2001). Reversing this trend through simplification and modification of associated regulations, if not changing the ESA itself, is necessary. The attitude and approach of FWS staff, by and large, must also change.

We provide the following specific recommendations relative to the ESA. With each, as appropriate, we provide specific reference to applicability for involvement of state, Tribes, and local governments. Our general overriding recommendation is refocusing the act on incentives versus punitive actions related to endangered species conservation and restoration. This should be emphasized in relation to private property, State authority, and to greatly reduced litigation.

Listing and Delisting Species Under the ESA.—Petitions for listing should only be accepted from established experts on the species under consideration. The emphasis by the FWS has been on listing species under the ESA. Although we understand the importance of listing species that are truly in jeopardy, delisting should also be a priority, even if for no other reason than proof of results and success; but delistings are often held up for a variety of reasons. The bald eagle and Hawaiian hawk are examples (see above). It would be better to transfer all ESA decision making about species status, listing, and delisting to an independent panel of experts on each species, appointed by the National Research Council of the National Academy of Sciences (see Cade 1998). This is not an authority that should be transferred to states, Tribes, or local communities although their comment and recommendations would be appropriate based on individual and collective factual knowledge and information.

Recovery Teams.—Recovery teams should NOT be implementing bodies for species recovery, and members should understand they serve at the pleasure of the FWS and are only advisory. Teams should be comprised of a small group of biologists, no more than seven to nine individuals selected on the basis of their scientific understanding of the species and its threats. State, tribal, and community biologists should be included only if they are experts. When individuals are included to represent agencies, etc., all organizations (particularly governmental) wish representation on the team, resulting in very large teams that become inefficient, expensive, and difficult to manage. Teams should not be led by or have FWS participation unless a FWS staff person happens to be a leading expert on the species. When FWS staff are placed in leadership roles with recovery teams they can attempt to dictate policy and make unilateral decisions, circumventing the team's value and purpose. FWS staff affiliation with teams should be only for facilitation of team activities.

Recovery team membership should be carefully screened to avoid conflicts of interest. This precaution is especially important when recovery team recommendations could result in the awarding of contracts to recovery team members or their organizations. Also, teams should have the choice to meet privately (without FWS) or to invite others, including the general public, to meetings. If all meetings are public, however, meaningful discussion by team members can be impaired. The primary function of a recovery team is to write a recovery plan and submit it to the FWS for approval. After that it may be disbanded, or at the discretion of FWS it may continue to serve in an advisory capacity, annually reviewing overall strategic issues.

Recovery Plans.—The recovery planning process has the greatest value when there has been limited consideration for a species' recovery. The process tends to help organize thoughts and actions and set goals. The actual plan, we believe, should be brief—only a few pages stating the problem and providing general recommendations and direction to reach stated recovery goals for downlisting and delisting. Long detailed documents requiring years to write with a long approval process usually result in plans that are outdated even before they are finished and of limited value (Burnham and Cade 2003b). Shorter plans help simplify revision and updating based on new and better information as recovery programs progress. They are also easier to understand. Plans should not be detailed budgetary documents with dollar amounts, as their projections may be unrealistic, and no one active in the recovery pays any attention to them.

Implementation Agreement.—We recommend that after the above-described species recovery plan is developed by the biological experts of the recovery team, stakeholders should meet and discuss the implementation for a species' recovery. This provides an excellent opportunity to include and engage states, Tribes, and local communities. Public meetings should occur much as they do for implementation of a "nonessential experimental population" and Safe Harbor. It should be at this level that input, needs, recommendations, and involvement of stakeholders occur. From these discussions an implementation agreement can be developed between the FWS, local communities, and other interested parties, much as habitat conservation plans are accomplished. These meetings and the agreement should result in stakeholder buy-in. Although total agreement among all involved may not be possible, if people know where they stand and what is to happen the potential for collaboration is much more likely. For both the California condor releases in Arizona and aplomado falcon restoration in Texas, agreements were developed for implementation of recov-

ery actions as part of the 10(j) and Safe Harbor. By allowing the biological experts (recovery team) and the recovery plan to focus on what is necessary for species recovery and not to become entangled in the desires, political interests, etc., of stakeholders, a better plan would result and a more functional recovery team would exist to advise on strategic biological recovery issues. Working groups should then help facilitate recovery implementation, to be accomplished by the most qualified and appropriate individuals and organizations.

Working Groups.—The working group is a useful organization to facilitate recovery if participants are limited to those actually contributing to the restoration effort. Working groups function best when led by the organizations/individuals actually accomplishing most of the recovery action and in cooperation with appropriate State wildlife agencies. FWS leadership is unnecessary unless its staff are actually involved in the restoration project. For many projects, tribal and local community participation may also be appropriate.

Federal Agencies.—The role of the FWS should strictly be oversight and facilitation, not implementation of restoration projects/programs. The attitude of FWS administrators should change from that of ESA enforcers to endangered species recovery facilitators. They should try to find ways to make species recovery possible rather than using the ESA as a vehicle to control actions of other agencies and the private sector. Land-holding agencies should be primarily engaged in support of recovery implementation. The ESA states that all departments and agencies should use their authorization in furtherance of the ESA.

States.—State governments and wildlife agencies should be given an increased responsibility for ESA species recovery implementation. In the long term, much of what the FWS is attempting to accomplish should be transferred to qualified State agencies, along with related funding. Conservation of endangered species needs to become a local desire and project. Local people are more likely to trust State wildlife agencies and governments which are usually more readily accessible and sensitive to their concerns than the Federal Government. States better understand local situations and are more likely to work locally and to cooperate with the private sector.

Restoration Implementation.—Actual implementation of recovery actions should be accomplished by those best qualified in the private sector, State wildlife agencies, and Federal agencies. Depending upon the needed actions, Tribes and even local community participation may be appropriate. As much as possible, private landowners should also be included and compensated for their participation in actual recovery efforts.

Research and Recovery.—Having the best possible information is important to guide recovery actions for species, but research should not usurp or be perceived as recovery action. The primary value of research is to (1) define the reason(s) for the species' decline, (2) determine the factors limiting populations, and (3) help support and guide restoration, as appropriate. A part of recovery should be to monitor recovering populations to help evaluate the success or failure of restoration actions. Monitoring should primarily be focused on the actual species, not habitat or other factors. Federal land management agencies should carefully evaluate use of ESA funding and support actual recovery actions first and research secondarily. Research should be left to those whose function is research.

Regulations and Permitting.—Regulations related to the ESA are extensive and complex and overlap with those for other laws and treaties. This is especially true for permitting (Burnham and Cade 1995). Regulations should be reduced, streamlined, and simplified. Included in this should be removal of all extra-limital species from the ESA. A comprehensive permit (inclusive of all applicable laws) for qualified organizations should be developed eliminating the need for multiple permits, applications, and reports. Individuals outside of government should be engaged to help find solutions and promote change. Every effort should be made to increase the flexibility, efficiency, and effectiveness of the ESA.

Funding.—Future increases in ESA funding appropriated for the FWS and other Federal agencies should be focused primarily on implementation of recovery actions and be designated to qualified State wildlife agencies and for private sector initiatives. An audit of how current funding has been and is being used by the FWS and other Federal Government agencies should be accomplished as a first step to find ways to reduce bureaucracy and move more dollars to accomplish effective action for species restoration.

Biome Conservation.—Unless the ESA is modified or until the nation has a law focused on habitat and biome conservation, endangered species will continue to suffer from lack of private sector, land owner support, resulting from conflicts over designation of "critical habitat," "take," and other punitive measures, and litigation will continue to stymie recovery and consume dollars critically needed for recovery actions. The Administration and Congress should consider passage of a new law deal-

ing with habitat and biome conservation. A first step would be to inventory all public lands, non-profit conservation holdings, and private land with conservation easements to determine the potential to conserve the various ecoregions and associated species. Key to this inventory would be use of Gap Analysis where habitats and the known and potential distribution of species are mapped (Scott et al. 1988).

To achieve ecoregion conservation and management we must realize that although sustainable multiple use of public lands is possible, it is frequently not practical in situations where economic uses conflict with non-consumptive uses. Identifying a priority use or uses is important. It is unrealistic to think that one area of land can be managed to benefit equally every potential use or user. Some land is better suited for livestock grazing or more important for mineral development, while other areas may be most important for the winter range of deer or elk. Activities do not necessarily have to be mutually exclusive, but prioritization is needed most of the time. A law focused on ecoregion conservation and management where habitat debate and resolution could occur would make it possible to re-focus the ESA on endangered species, which was its original intent.

ESA.—Consideration should be given to altering and to creating objective definitions for "endangered" species to emphasize their level of jeopardy and urgency (Cade 1998). Many species listed as endangered or threatened have different levels of threat and need for immediate action to prevent extinctions. The "threatened" category is too vaguely defined and should be eliminated.

The Safe Harbor is not specifically permitted by the ESA now; it is a concept of policy largely based on the 10(j). The Safe Harbor should be included as an integral part of the ESA and the 10(j) should be amplified and clarified by including the "open-minded" Safe Harbor concept for application in a mixed land status of Federal, State, tribal, and private properties. Section 10(j) rules may be too rigid to really engender cooperation by private, tribal, community, and even some Federal (Department of Defense) landowners for restoration projects.

The overlapping meanings and functions of "harm" and "critical habitat" need to be reexamined. Presently the definition for "take" varies among FWS offices. At one office an endangered species permit is required to conduct even a "hands off" survey for aplomado falcons. We recommend that the definition and provision of "critical habitat" established by the 1978 Congressional amendment be rescinded and that the definition of "take" and "harm" be suitably modified to encompass all needs for protection of essential habitat of listed species. Where essential habitat needs protection on private lands, owners should be compensated through a system of purchase, leasing, easements, or other economic incentives.

The ESA addresses cooperation between the Federal Government and the states. It would be a better law if it included local communities, conservation and research organizations, universities, and private landowners as cooperators. We believe the ultimate success or failure for conservation of all species will not be dictated or accomplished by government alone. The participation of State governments and local communities are critical. Opportunities for Tribes may exist depending upon species range. Private sector involvement, commitment, cooperation, and leadership are crucial and will ultimately determine the success or failure of saving many endangered species (Burnham and Cade 2003b).

LITERATURE CITED

Bean, M.J., J.P. Jenny, and B. van Eerden. 2001. Safe Harbor agreements: carving out a new role for NGOs. Conser. Biol. in Prac. 2(2):9–16.

Bean, M.J. and D.S. Wilcove. 1997. The private-land problem. Cons. Biol. 11:1–2.

Brook, A., M. Zint, and R.D. Young. 2003. Landowners' responses to an Endangered Species Act listing and implications for encouraging conservation. Cons. Biol. 17:1638–1649.

Brussard, P.F., D.D. Murphy, and C.R. Tracy. 1994. Cattle and conservation biology—another view. Conserv. Biol. 8:919–921.

Burnham, W.A. 1997. A fascination with falcons. Hancock House, Blaine, WA.

Burnham, W. 2003. Peregrine falcon restoration in the Rocky Mountains/Northwest. Pages 127–154 in Return of the peregrine, a North American saga of tenacity and teamwork (T. J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Burnham, W.A. and T.J. Cade. 1995. Raptor populations: the basis for their management. Transactions of the 60th North American Wildlife and Natural Resources Conference. 60:115–130.

Burnham, W. and T.J. Cade. 2003a. Conclusions. Pages 261–278 in Return of the peregrine, a North American saga of tenacity and teamwork. (T.J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Burnham, W. and T.J. Cade. 2003b. The Endangered Species Act, the U.S. Fish and Wildlife Service, and peregrine falcon restoration. Pages 261–278 in Return of the peregrine, a North American saga of tenacity and teamwork (T.J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Cade, T.J. 1998. Delisting the peregrine falcon: management and mismanagement under the Endangered Species Act. Trans. 63rd North Amer. Wildl. And Natur. Resourc. Conf. 63:475–485.

Cade, T.J. 2003. Starting The Peregrine Fund at Cornell University and eastern reintroduction. Pages 73–104 in Return of the peregrine, a North American saga of tenacity and teamwork (T.J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Cade, T.J. and W. Burnham. 2003a. Introduction: the Madison Peregrine Conference and the struggle to ban DDT. Pages 13–22 in Return of the peregrine, a North American saga of tenacity and teamwork. (T.J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Cade, T.J. and W. Burnham, eds. 2003b. Return of the peregrine, a North American saga of tenacity and teamwork. The Peregrine Fund, Boise, ID.

Cade, T.J., J.L. Lincer, C.M. White, D.G. Roseneau, and L.G. Swartz. 1971. DDE residues and eggshell changes in Alaska falcons and hawks. Science. 172:955–957.

Cade, T.J., S.A.H. Osborn, W.R. Hunt, and C.P. Woods. 2004. Commentary on released California condors in Arizona. Pp—in Worldwide Raptors edited by R.D. Chancellor & B.U. Meyburg (eds.), Proceedings Conference VI of the World Working Group on Birds of Prey and Owls, Budapest, Hungary, May 2003.

Conway, W. 1986. The practical difficulties and financial implications of endangered species breeding programs. Intl. Zoo Yearbook. 24/25:210–219.

Division of Forestry and Wildlife, 2004. Draft implementation plans for 'akiapola'au, puaiohi, poouli, Oahu 'elepaio, Maui parrotbill. http://www.dofaw.net/fbrp/projects.php?id=00060.

Jenny, J.P. 2003. Turning away from extinction. Privatization Watch. 319:4–5.

Jenny, J.P., W. Heinrich, A. Montoya, B. Mutch, C. Sandfort, and G. Hunt. 2004. Progress in restoring the aplomado falcon to southern Texas. Wildl. Soc. Bull. 32(1):276–285.

Kiff, L.F., D.B. Peakall, and S.R. Wilbur. 1979. Recent changes in California condor eggshells. Condor. 81:166–172.

Kuehler, C., M. Kuhn, B. McIlraith, and G. Campbell. 1994. Artificial incubation and hand-rearing of 'alala (Corvus hawaiiensis) eggs removed from the wild. Zoo Biology. 13:3.

Kuehler, C., P. Harrity, A. Lieberman, and M. Kuhn. 1995 Reintroduction of hand-reared 'alala (Corvus hawaiiensis) in Hawaii. Oryx. 29(4):261–255.

Kuehler, C., M. Kuhn, J. Kuhn, A. Lieberman, N. Harvey, and B. Rideout. 1996. Artificial incubation, hand-rearing, behavior and release of common amakihi (Hemignathus virens virens): Surrogate research for restoration of endangered Hawaiian forest birds. Zoo Biology. 15:541–553.

Kuehler, C., A. Lieberman, P. Oesterle, T. Powers, M. Kuhn, J. Kuhn, J.Y. Nelson, T. Snetsinger, C. Herrman, P. Harrity, E. Tweed, S. Fancy, B. Woodworth, and T. Telfer. 2000. Development of restoration techniques for Hawaiian thrushes: collection of wild eggs, artificial incubation, hand-rearing, captive-breeding and reintroduction to the wild. Zoo Biology. 19:263–277.

Kuehler, C., A. Lieberman, P. Harrity, M. Kuhn, J. Kuhn, B. McIlraith, and J. Turner. 2001. Restoration techniques for Hawaiian forest birds: collection of eggs, artificial incubation and hand-rearing of chicks, and release to the wild. Studies in Avian Biology. 22:354–358.

Lieberman, A. and B. Hayes. 2004. The palila: honeycreeper of Hawaiian highlands. Zoonooz. 77(6):16–19.

Montoya, A.B., P.J. Zwank, and M. Cardenas. 1997. Breeding biology of aplomado falcons in desert grasslands of Chihuahua, Mexico. J. Field Ornith. 68:135–143.

Newton, I. 2003. The contribution of Peregrine research and restoration to a better understanding of peregrines and other raptors. Pages 335–348 in Return of the peregrine, a North American saga of tenacity and teamwork (T.J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Oakleaf, R. and G.R. Craig. 2003. Peregrine falcon restoration from a State biologist's perspective. Pages 297–312 in Return of the peregrine, a North American saga of tenacity and teamwork (T.J. Cade and W. Burnham, Eds). The Peregrine Fund, Boise, ID.

Pattee, O.H., P.H. Bloom, J.M. Scott, and M.R. Smith. 1990. Lead hazards within the range of the California condor. Condor. 1990. 92:931–937.

Pickrell, J. 2003. Are U.S. landowners killing rare species to avoid regulation? Natl. Geo. News. http://news.nationalgeopgraphic.com/news/2003/12/1224—031229—jumpingmouse.html.

Scott, J.M., B. Csuti, J.D. Jacobi, and J.E. Estes. 1988. Species richness: a geographic approach to protecting future biological diversity. Bioscience 37:782–788.

Scott, J.M., S. Conant, and C. van Riper. 2002. Evolutions, ecology, conservation, and management of Hawaiian birds: a vanishing avifauna. Studies in Avian Biology No. 22. Cooper Ornithological Society.

Tweed, E.J., J.T. Foster, B.L. Woodworth, P. Oesterle, C. Kuehler, A.A. Lieberman, A.T. Powers, K. Whitaker, W.B. Monacan, J. Kellerman, and T. Telfer. 2003. Survival, dispersal and home-range establishment of reintroduced captive-bred puaiohi, Myadestes palmeri. Biol. Cons. 111: 1–9.

U.S. Fish and Wildlife Service. 1990. Northern aplomado falcon recovery plan. U.S. Fish and Wildlife Service. Albuquerque, New Mexico.

White, C.M. and L.F. Kiff. 1998. Language use and misapplied, selective science; their roles in swaying public opinion and policy as shown with two North American raptors. Pages 547–560 in Holarctic birds of prey (R.D. Chancellor, B.U. Meyburg, and J.J. Ferreo, Eds), World Working Group on Birds of Prey and Owls, Berlin.

Wilcove, D.S., M.J. Bean, R. Bonnie, and M. McMillan. 1996. Rebuilding the ark: toward a more effective Endangered Species Act for private land. Environmental Defense Fund, Washington, D.C.

RESPONSES BY BILL BURNHAM TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. What are the benefits of establishing a nonessential experimental population for species such as the aplomado falcon and the peregrine?

Response. The benefit of establishing a nonessential experimental (NEP) population designation for a species as allowed by section 10(j) of the ESA is species recovery can occur where otherwise it would be extremely difficult. Most of the ESA is designed to prevent harm; 10(j) is one of the few provisions intended to promote benefits. With a 10(j) the restrictions imposed by the ESA are removed, such as designating critical habitat, section 7 consultations, etc. By removing the restrictions the private sector (including landowners), local communities, State governments, and even Federal land management agencies are far more supportive of species recovery actions. In short, by removing the additional protection offered by the ESA for a species, recovery actions can occur. A further benefit from an NEP designation is added flexibility for recovery actions and species management. The 10(j) authorizes custom regulations composed specifically to restore the population.

California Condor.—The Peregrine Fund worked with the USFWS and State of Arizona to establish an NEP designation for the California condor releases/recovery in northern Arizona. Without this special status the support would not have existed to allow for introduction of condors. The restoration program is by far the most successful for this species and offers the best chance of establishing a large self-sustaining wild condor population.

Aplomado Falcon.—The Peregrine Fund is working with the USFWS and the states of New Mexico and Arizona to establish an NEP designation for this species throughout New Mexico and Arizona. Public hearings occurred last week and a decision should be reached by the USFWS in the next few weeks. Supporting the designation are States, Federal land management agencies, the Department of Defense, agro-business organizations, private landowners, and many more. Against the designation are those groups who wish to use the endangered aplomado falcon to stop energy development, grazing, and other activities, particularly on public land. Without the NEP designation it is very unlikely recovery and delisting of the aplomado falcon will occur in our lifetime or our even that of our children.

Peregrine Falcon.—Although the peregrine falcon would have been a suitable species to have been designated an NEP throughout much of its range, particularly the Eastern United States, it was unnecessary for restoration to occur because it was largely accomplished prior to the spotted owl/old growth forest controversy and litigation. Peregrine recovery was a highly cooperative endeavor where all involved worked toward a mutually agreed upon objective—recovery and delisting.

Question 2a. In order to recover the peregrine falcon, four regional recovery teams were established to develop and update a recovery plan and advise the U.S. Fish and Wildlife Service. In your opinion, are recovery teams an integral part of restoring species?

Response. The value of a recovery team to species recovery depends upon (1) the cause for jeopardy of the species, (2) the species' biological needs, (3) needed actions/guidance, if any, to cause a recovery, (4) the team's direction from USFWS, composi-

tion, size, and leadership, and (5) whether the USFWS pays any attention to the team's recommendations and if there is follow-up.

For the peregrine, the recovery teams were formed to write recovery plans and otherwise advise the USFWS as requested and each functioned somewhat differently and only once met as a group. The team for the Eastern United States annually met until the species was delisted, while the Rocky Mountain Northwestern team wrote a long, detailed plan (which was outdated before it was approved), then seldom met again.

Every endangered species does not need a recovery team to write a plan or advise the USFWS. For example, the USFWS contracted with a single individual to write a recovery plan for the aplomado falcon. The plan was then reviewed by others and eventually approved. No recovery team was ever formed or has one been needed. The species' recovery is progressing well without a team.

Toward the other extreme, and as presented in my written testimony, in Hawaii, to merely update the recovery plans for the Hawaiian crow and endangered Hawaiian forest birds it has taken the two different recovery teams over 10 years and as far as I know the plans are still not approved and under review. In the meantime, the Hawaiian crow has become extinct in the wild (although a captive population remains) and the last known individual of one species/genus of forest birds, the Po'ouli, has died and most likely the species/genus is now extinct. What value have the teams or plans so far provided?

A further example is the endangered 'Io or Hawaiian hawk. In 1997 the USFWS appointed an 'Io Working Group to review the status of that species. In their report they recommended the USFWS immediately delist the species. A year later, out of frustration one of the team members wrote, "The leadership in FWS should read the report and act to delist the bird without delay. More studies and more meetings will not change things—someone will have to take the responsibility to see the hawk gets delisted." Still today the Hawaiian hawk remains on the list of endangered species. Of what value was this team if their recommendations were ignored?

Question 2b. What would an ideal recovery team look like?

Response. A recovery team should be comprised of fewer than ten biologists and selected on their scientific understanding of the species and its threats. They should NOT be implementing bodies for recovery and the members should clearly understand their role. Unless a USFWS employee happens to be an expert he or she should not be a team member and should function only to facilitate the team's activities and may be excluded from meetings, depending upon the team's desires. The recovery team is NOT the body or place for input and representation of stakeholders. Stakeholders' participation should occur as part of a separate implementation agreement process I recommended in my written testimony (Implementation Agreement). Such agreements are already being developed in association with Safe Harbors and nonessential experimental populations. The recovery team should develop a brief, few-page long plan stating the problem and providing general recommendations and direction to reach stated recovery goals for downlisting and delisting. Long detailed recovery plans benefit no one or the species about which they are written.

Question 3a. We have heard a great deal about the importance of a robust scientific process and peer review for threatened and endangered species conservation. What has the role of science been in the recovery efforts for the peregrine falcon and other bird species of focus for your organization?

Response. It is difficult to know what people mean when they speak of science related to species recovery, and the definitions may considerably vary. As someone trained in the use of the scientific method, research, scientific writing and publishing, etc., my interpretation may be much different from other people who have a different background. Equally, when peer review is mentioned I think of scientists at similar levels of education, accomplishment, and knowledge commenting on a subject as might occur when a legal question is referred to several judges of equal rank. In other words, not all individuals with a background in science are equal when it comes to providing review and comment. Also, opinions of scientists, like other professionals and non-professionals, can vary greatly. Only the scientific method is pure. The best chance of obtaining a non-biased scientific opinion is if an organization like the National Research Council of the National Academy of Science appoints an independent panel of experts to provide a review and offer an opinion. I have witnessed the USFWS staff choose a panel of peer reviewers with known uniform biases toward a particular issue/question. I cannot say whether it was by chance or intentional.

The use of the scientific method and comment and discussion among scientific peers was employed throughout the peregrine falcon recovery program. Prior to the

existence of the ESA of 1973 scientific research was accomplished to determine the cause for the species' decline in North America and Europe. A National Science Foundation grant then helped begin the research to determine how to propagate peregrines. Various issues related to the recovery, e.g., subspecies use for restoration in the Eastern United States, were debated among and commented on by scientists (see Return of the Peregrine, a North American Saga of Tenacity and Teamwork, 2003). Throughout the life of the recovery program many advanced degrees were obtained focusing on different aspects of the recovery, and probably hundreds of technical papers were published. Still today, even after delisting of the species has occurred, review and comment by scientists help guide decisions being made by the USFWS related to peregrines.

Scientific research is also integral to both the aplomado falcon and California condor restoration projects in which we are involved. We use a scientific approach to monitor the established wild population and to help guide recovery actions. Certainly some recovery processes and procedures are based on trial and error but even for those the information gained is evaluated using a scientific approach and most results are regularly published in peer-reviewed journals.

Question 3b. Have models and other non-empirical data been used to determine future ranges and appropriate habitat types for these species?

Response. During the peregrine recovery probably millions of dollars were spent, by land management agencies in particular, to study habitat in the absence of peregrines. Similar studies have been conducted associated with the aplomado falcon recovery. Based on our experience, the information from these studies were seldom, if ever, used and provided no obvious value and certainly nowhere near what they cost to accomplish. On the other hand, research on habitat (precipitation, vegetation, and prey) occupied by aplomado falcons in Mexico has provided insight for aplomado falcon recovery in the United States (see Auk 121:1081–1093). In summary, research and monitoring should primarily focus on the actual species, not habitat or other factors.

Question 3c. What scientific research is needed for recovery? (I added this question here.)

Response. Research should not usurp or be perceived as recovery action. The primary value of research is to (1) define the reason(s) for the species' decline, (2) determine the factors limiting populations, and (3) help support and guide restoration. A part of research should be to monitor the recovering populations to help evaluate success or failure of restoration actions.

Question 4a. You recommend that the definition and provision of a "critical habitat" established by the 1978 Amendments to the Endangered Species Act be rescinded, and the definitions of a take and a harm appropriately modified to account for all essential habitat needs of listed species.

Response. The 1978 provision for designating critical habitat has been one of the more contentious aspects of administering the ESA. Both the USFWS administrators and outside environmental groups have often interpreted this provision in ways that lead to disruptive and costly litigation against the USFWS by those who support and those who oppose specific critical habitat designations.

The definition of "take" in the ESA includes the word "harm." Harm has been defined by USFWS rule-making to "include significant habitat modification or degradation when it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." Thus, upon listing a species its entire habitat effectively becomes protected whether it has been officially designated as "critical habitat" or not. As long as the definition of "harm" remains operative, the designation of critical habitat is largely duplicative and unnecessary.

Further, designation of critical habitat has fundamental flaws associated with long-term habitat preservation. Once a species is delisted, any critical habitat associated with it is declassified and no longer protected under the ESA. Thus, for those activist groups that choose to use endangered species as pawns for protecting habitat from deleterious human activities, there is a strong disincentive to support actions that would recover species and lead to their removal from the list of endangered species. Some commentators have concluded that recovery of species will never be the primary function of the ESA; instead, its main utility is to prevent the extinction of species by holding them in a state of perpetual endangerment and thereby preserving critical habitat.

An alternative to critical habitat is the "Integrated Natural Resource Management Plan" that is being fostered on military reservations. It is an attempt to manage the resources of an installation in a manner that conserves all the species present as a functional ecosystem while allowing for necessary military operations,

some of which are quite obtrusive on the landscape. It is too soon to know how successful this concept will be for nature preservation. There is more experience with Habitat Conservation Plans. Expansion of this approach should also be considered.

Certainly a more holistic approach to habitat conservation is needed. Something like an Endangered Habitat and Ecoregion Act indicates the needed scale of attention to this problem. Such an act should provide for a system of protection and restoration for habitat units ranging up to and including ecoregions and biomes that have been critically reduced in size or severely degraded as a result of human actions. The ESA could then focus more on the specific needs of survival and recovery of critically endangered species.

Question 4b. Further, you recommend that owners should be compensated through a system of purchase, leasing, easements, or other economic activities for habitat protection on private lands. What types of funding streams should be utilized for providing incentives for private landowners for restoration projects?

Response. Although the ESA asserts that one of its purposes is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, it is poorly designed to accomplish that purpose. Section 5 of the Act does address land acquisition for endangered species, directing the Secretary of the Interior to utilize authorizations under other statutes for that purpose, but this potentially important provision has not been used to any significant extent to preserve habitat for listed species. This may be one opportunity for funding.

It is impossible to determine the cost to the Federal Government for litigation associated with the ESA (cost of litigation, attorney's fees to litigants, and cost of compliance with settlement agreements and court orders). Direct inquires to the Department of the Interior's Office of the Solicitor, the USFWS, and the General Accounting Office revealed that this cost has never been calculated by these agencies. However, the current litigation load requires the time of three attorneys for section 4 litigation, two for section 7 cases, another for Habitat Conservation issues, and the assistance of several others wherever needed. Across the county, perhaps another 100 people in regional offices of the Solicitor of the Department of the Interior work on ESA-related litigation. In the USFWS, three full-time coordinators do nothing but litigation focused on listing of species, and many other USFWS staff in the national and regional offices do ESA litigation support work. Over the past few years, the litigation focus has shifted from mostly species listing cases to Critical Habitat designation. Legal defense cost associated with the ESA litigation continues to grow (Ellen Paul, pers. comm. following personal interviews/survey I requested). Substantially reducing ESA-associated litigation should provide funds to support actual recovery, including funding incentives to private landowners.

RESPONSE BY BILL BURNHAM TO AN ADDITIONAL QUESTION FROM SENATOR INHOFE

Question. You suggest that State input would be beneficial to the section 7 consultation process and you note that the statute does not specifically require solicitation of State input. Do you have specific recommendations for how to formally incorporate the states into the section 7 process and generally across the ESA regulatory structure?

Response. As stated in my testimony, I do not believe endangered species recovery will be successful just because of a Congressional or Federal Agency mandate to make it so. We have found that accomplishment of successful recovery actions must be at local levels and be based on trust. That can be very difficult to achieve at the Federal Government level. Many Federal employees involved with the ESA seem to see themselves as ESA enforcers, not recovery facilitators. Incorporating State government and the private sector more is very important. I would recommend the Congress try to incorporate the participation of State governments wherever possible in future potential revisions to the ESA.

RESPONSES BY BILL BURNHAM TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Your testimony states that recovery plans should be brief to help simplify revision and updating. Is there an example of such an existing plan?

Response. Unfortunately, that I am aware, there are no existing recovery plans as per my recommendation. Existing plans are long documents taking many months and years to prepare which are outdated before they are approved. The Northern Rockies Wolf Recovery Plan comes closer than most to being concise. Species recovery is not a static, but rather a dynamic process with continually changing needs based on new information and results or lack of them. The long detailed recovery

plans do not meaningfully contribute, but hinder species recovery by usurping ESA money, wasting time, and potentially slowing or even preventing needed recovery actions. Plans should state the problem(s) facing the species and provide general recommendations and direction to reach stated recovery goals for downlisting and delisting. The details for recovery actions can then be resolved and modified as necessary in working groups.

Question 2. Your testimony states that restoration actions for the California condor in Arizona and the aplomado falcon in Texas are being accomplished using tools that essentially remove most protective restrictions imposed by the ESA and that without these tools it is unlikely that either program would have been possible. Yet, you are using the nonessential experimental population designation of the Endangered Species Act in these programs. Can you please explain the statement?'

Response. Section 10(j) of the ESA allows species recovery to occur where otherwise it would be extremely difficult. Most of the ESA is designed to prevent harm; 10(j) is one of the few provisions intended to promote benefits. For establishment of experimental populations of endangered species as authorized under section 10(j) they must be within a defined geographic area. For this to occur a naturally occurring population cannot already exist there and the establishment of the experimental population must benefit the listed species. The experimental populations can be designated as essential or nonessential. The nonessential experimental population (NEP) designation means the population to be established is not essential for the survival of the listed species. Except on National Parks and Recreation Areas where the NEP is managed as a threatened species, elsewhere within the defined geographic area section 7 consultation is not required or other ESA-related constraints placed on government and the private sector. Punitive measures under the ESA would only be applied if individuals of the NEP are intentionally injured or killed. The California condor is being released/recovered in northern Arizona and southern Utah as an NEP. As I stated in my testimony, it is my opinion, and that of many others, that the release of condors would have been impossible there without this special status authorizing custom regulations composed specifically to restore the population. We are recommending, as are the states of New Mexico and Arizona, the same NEP status be given to the aplomado falcons we hope to establish as breeding populations in those states.

In Texas, for recovery of the aplomado falcon we are using a Safe Harbor permit. The Safe Harbor is not specifically permitted by the ESA now; it is a concept in policy largely based on section 10(j) of the ESA. The Safe Harbor is only useful on private property and does not apply to public lands, nor is it useful where a mixture of private and public property exists. Texas has very little public property and is therefore a suitable geographic area for use of Safe Harbor. A total of 58 counties in Texas have been designated for use of Safe Harbor for aplomado falcon recovery. Within that geographic area The Peregrine Fund, which has a 99-year permit, can enroll private property owners as subpermittees.

Before we began release of aplomado falcons there, no naturally occurring wild population existed. Therefore, when we surveyed the private property for aplomado falcons prior to recovery actions we established the number of existing pairs (base) for which the landowners have responsibility. Since there were no aplomado falcons the property owners' responsibility for aplomado falcons is zero. Because of recovery actions/releases all aplomado falcons established represent a net gain to the species. By the private landowners participating they gave up no legal rights nor gained added restrictions from government by cooperating in establishment of an ESA-listed species on their property. Participating landowners, and their neighbors who are protected even if they are not a permittee, continue to manage their property as if the species did not exist. We presently have almost 1.9 million acres enrolled in Texas for aplomado falcon recovery.

STATEMENT OF JOHN BAUGHMAN, EXECUTIVE VICE PRESIDENT, INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

Thank you, Mr. Chairman, for the opportunity to appear before you today to share the perspectives of the International Association of Fish and Wildlife Agencies (IAFWA) on the Endangered Species Act, particularly the role of the State fish and wildlife agencies in implementing the Act. I am John Baughman, Executive Vice President of the Association and a former Director of the Wyoming Game and Fish Department, which gives me a personal perspective on ESA issues in the Western United States.

The International Association of Fish and Wildlife Agencies was founded in 1902 as a quasi-governmental organization of public agencies charged with the protection

and management of North America's fish and wildlife resources. The Association's governmental members include the fish and wildlife agencies of the states, provinces, and the Federal Governments of the United States, Canada, and Mexico. All 50 States are members. The Association has been a key organization in promoting sound resource management and strengthening Federal, State, and private cooperation in protecting and managing fish and wildlife and their habitat in the public interest. Implementation and improvement of the ESA has been a priority issue of ours for the past 15 years.

The Association affirms that the Endangered Species Act has been and must continue to be a vital conservation tool for protecting and restoring threatened and endangered species and their habitats. However, the Association recognizes that improvements are needed in the design and statutory basis of the Act, in its implementation and administration. Since passage of the ESA, the State Fish and Wildlife agencies have identified what works and what does not work in meeting the goals of the Act, and have through extensive discussion and dialogue, arrived at a set of recommendations for necessary statutory amendment or reform through policy or regulation. These recommendations ("IAFWA Reauthorization and Reform of the Endangered Species Act: General Principles September 30, 2004") are included as an appendix to my testimony. Simply stated, the ESA must be streamlined for efficiency, amended to ensure increased authority and responsibility for States, and reformed to provide increased certainty and technical assistance for landowners and water users.

The State fish and wildlife agencies' objectives are very straightforward: (1) to successfully carry out our public trust responsibilities to ensure the vitality of our fish and wildlife resources for present and future generations; and (2) to encourage, facilitate and enhance the opportunities, means and methods available to all citizens and especially landowners in our states to contribute to meeting this conservation objective in cooperation with our agencies and our Federal counterparts. Much of this involves solving problems and reconciling differences, and we believe that any ESA bill should provide new and useful tools, opportunities and direction to achieve both of these objectives.

Before I share with you a summary of our ESA reauthorization principles, let me describe for you our engagement in this issue over the last 15 years. Starting in the early 1990s, IAFWA worked closely with the Western Governors Association (WGA) to coordinate a dialogue with interests on all sides of the endangered species issue that we hoped would result in a set of broad principles for reauthorization that could engender wide support. The dialogue was the basis for both our principles (first adopted in 1993) and WGA policy, both of which have been appropriately revised over time. The IAFWA general principles and WGA policy always were and continue to be very consistent and compatible.

From the IAFWA General Principles and WGA policy, our respective staffs over the next 2–3 years worked with interest groups, the Administration, and bipartisan staff of Congress to arrive at a set of WGA legislative recommendations which were sent to the Hill in 1996. Many of these recommendations became the foundation for S. 1180, a comprehensive reauthorization bill in the 105th Congress from Senator Chafee (RI), Senator Kempthorne (ID), Senator Baucus (MT) and Senator Reid (NV). IAFWA strongly supported this bill, which was successfully reported out of the Environmental and Public Works Committee in 1997 but never brought up on the Senate floor for consideration. This was the last major ESA reauthorization effort by Congress and even bills subsequently introduced that treated incremental changes and/or a discrete part of ESA, such as designation of critical habitat, failed to make significant legislative progress.

Let me now briefly summarize our five specific recommendations that we believe any ESA bill should embrace:

1. *Restore Congressional intent that reflects and respects the authorities, role and responsibilities of the State fish and wildlife agencies in fish and wildlife conservation in general, and listed species in particular*, through the section 6 language which says that "In carrying out the program authorized by this Act, the Secretary shall cooperate to the maximum extent practicable with the States". We firmly believe that reaffirming the role of the State fish and wildlife agencies in all aspects of the ESA reflecting our concurrent jurisdiction over listed species sets the stage for more efficient and effective administration of endangered species programs. The State fish and wildlife agencies have broad statutory responsibility for the conservation of fish and wildlife resources within their border, including on most Federal public lands. The states are thus legal trustees of these public resources with a responsibility to ensure their vitality and sustainability for present and future citizens of their States. State authority for fish and resident wildlife remains the comprehensive backdrop applicable in the absence of specific, overriding Federal law. State fish

and wildlife agencies must be given the opportunities to be fully involved in every aspect of the Act, from consideration of listing petitions to de-listing through meaningful recovery plans. With appropriate and adequate funding, states are in the best position, exercising their expertise and relationships with landowners, other governments, etc., to more fully engage in implementation of the Act.

2. *Make Recovery Plans meaningful and non-discretionary, with both incentives and obligations for all parties to the plan.* Meaningful recovery plans that are appropriately funded and implemented should be the blueprint for conservation of listed species, i.e., delivering on the ground what is necessary to bring those species to a point where the provisions under the ESA are no longer necessary. The quid pro quo for the commitment to conservation by government agencies, the regulated community and private landowners should be certainty regarding the fate and future of their management actions and minimization of ESA process allowing those actions as long as they are consistent with the approved recovery plan. We strongly believe recovery plans must have a trigger to initiate the down or de-listing process once population/habitat recovery objective are met, and further, the process to down or de-list needs to be expedited, which requires a statutory change. The post de-listing monitoring obligations/process also needs revision—it is too onerous and subject to too much Federal agency discretion. The states believe that biological recovery objectives for grizzly bear have long been satisfied but the USFWS has never settled on a post de-listing monitoring plan and thus until very recently, held up a delisting proposal for this species. That is simply unacceptable and needs to be changed.

Creating and implementing meaningful recovery plans will require both Congressional action in amending the ESA and as importantly, in appropriating adequate funding. We also recognize that it will require a significant shift in the program focus and workload of the USFWS and NOAA Fisheries in implementing the recovery plans, and changing their budget focus from listing species and designating critical habitat to recovery emphasis. State Fish and Wildlife agencies are expected to play a significant role in drafting and implementing recovery plans, and adequate funds will need to be made available for that purpose to the States.

3. *Restore Congressional intent in creating the statutory distinction between "threatened" and "endangered" status.* The Executive branch agencies have blurred this distinction to a point where there is de facto no difference. Congress intended the distinction, prescribed different statutory obligations and liberties, and the flexibility of this distinction needs to be restored as a tool for appropriate use by the resource agencies. A careful reading of section 6 of the ESA and its legislative history will conclude, we believe, that Congress originally intended the states to be the lead in threatened species recovery, as long as they qualified under an approved section 6 cooperative agreement. However, an ill advised USDI Solicitor's opinion regarding section 6, combined with a blanket rule (50 CFR17.31) promulgated by the FWS that presumptively extends the take prohibition to threatened species unless a less restrictive specific 4(d) rule is developed, minimizes the utility of the threatened status and the potential for State lead in threatened species conservation. The originally intended distinction between endangered and threatened status needs to be restored.

4. *A full portfolio of incentives for private landowners and also other government agencies and industry needs to be statutorily institutionalized.* Monetary incentives, technical assistance, and regulatory certainty all need to be included. Actions contributing to conservation of the fish and wildlife species is the quid pro quo for the incentives. Since the subcommittee has already held a hearing on the issue of landowners incentives, I won't address this in detail. However, I would refer you to both our treatment of incentives in the General Principles appended to this statement, and "State Conservation Agreements: Creating Effective Partnerships for Proactive Conservation" available on our website at (*www.iafwa.org*). This latter document is a product of a 2-year national dialogue with interested parties on this issue.

5. *Congressional recognition of the need for preventative conservation,* including assured and dedicated funding, to preclude the need to list species through conservation actions that protect and restore declining species and their habitats before they reach a point where listing is compelled. The State fish and wildlife agencies are in the best position to lead in the implementation of these efforts when funding is made available. The effort initiated in 1995 by our western State fish and wildlife agencies to address the decline of the sage grouse and sage brush habitat is a great illustration of what can be accomplished. This effort brought Federal agencies, private landowners, industry and others together at the local level in every sage grouse range State to discuss and conclude actions that were necessary to sustain this species. Although on the ground efforts in implementing action plans need to be intensified, the USFWS earlier this year concluded that a petition to list the sage grouse

was "not warranted". Proactive conservation, we believe, is better for both the species and for our citizens.

Finally, the Association reemphasizes that it is vitally important to secure funding (separate from ESA) for the States to provide conservation for all species and their habitats in order to prevent species from becoming threatened or endangered. This preventive management makes good biological and economic sense.

The Association's Teaming With Wildlife initiative, and other wildlife diversity funding programs that build on the tremendously successful Pittman-Robertson and Wallop-Breaux user pay-user benefit program for wildlife and sportfish, would provide new reliable sources of funding for State programs. These funds should be allocated to the States for conservation, recreation and education programs relating to fish and wildlife and their habitats. If we can address the limiting factors causing a species decline before they reach a stage where the ESA is the only protection against extinction, we can employ a series of voluntary, non-regulatory approaches that provide more flexibility and creativity for conservation programs with private landowners and other jurisdictional entities.

We continue to urge Congress to look favorably on the dedication of funds from various potential sources (Outer Continental Shelf gas and oil royalties and leases; gas and oil royalties and leases from exploration and development on Federal public lands; or other sources) to fund these state-based preventative conservation programs.

It is only through dedicated and assured Federal funding combined with State and private dollars that we can get out ahead of the curve of endangered species listing.

Thank you for the opportunity to share our perspectives and I would be pleased to answer any questions.

INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

REAUTHORIZATION AND REFORM OF THE ENDANGERED SPECIES ACT: GENERAL PRINCIPLES

SEPTEMBER 30, 2004[1]

INTRODUCTION

The Association affirms that the Endangered Species Act (ESA or Act) has been and must continue to be a vital conservation tool for protecting threatened and endangered species and their habitats. However, the Association recognizes that improvements are needed in the design and statutory basis of the Act, and in implementation and administration of the ESA.

In 30 plus years of experience with the ESA, the State Fish and Wildlife agencies have identified what works and what does not work in meeting the goals of the Act, and herein provide recommendations for necessary amendment or other reform through policy or regulation. Significant reform could free up human and financial resources to serve more species, put more money on the ground, and allow more people to interact positively with rare or declining species. The ESA must be streamlined for efficiency, amended to ensure increased authority and responsibility for the States, and reformed to provide increased certainty and technical assistance for landowners and water users, for example:

a. The Association concludes, from member agency involvement in the application of the Act, that the Act provides some degree of discretionary flexibility. However, administration of the Act often results in regulatory approaches and judicial challenges that are forced upon the Federal agencies by special interest groups and which alienate local communities and result in the courts deciding how the Act is applied.

b. The Association opines that this era of "conservation through conflict" has been beneficial to neither the health of the species and habitats the Act seeks to protect, nor the Act itself. In fact, it erodes rather than builds public support essential to achieving the admirable goals of the Act. Recent Federal agency movement toward

---

[1] Adopted by the Association at the March 1993 meeting in Washington, D.C.; revised, modernized and approved at the September 1995 meeting in Branson, MO; and updated and adopted at the September 2004 meeting in Atlantic City, New Jersey. This position paper is an evolving work, reflecting the best information available at the time of adoption, but subject to change as new issues and information arise. Although adopted by the International Association of Fish and Wildlife Agencies, and endorsed by Regional Associations, each State reserves the prerogative to take its own position on issues of concern.

increased State and public participation in recovery planning should be enhanced, but must recognize and respect State authorities and responsibilities for planning on-the-ground delivery of collaborative conservation programs. The States are not just another voice to be heard in the public process; they have a primary responsibility for wildlife conservation.

c. The Association opines that Federal agencies have not recognized or applied the statutory distinction provided for between the classifications of "threatened" and "endangered" or fully embraced the role of the states in threatened and endangered species recovery. This has compromised effectiveness of the Act.

d. Similarly, the lack of consistent definitions of recovery (e.g. in terms of population size and distribution), "significant portion" of a species range, and what constitutes historical range and constituent elements of critical habitat has lead also to compromised effectiveness of the Act, and unnecessarily prolonged debate as to which conservation actions will be given priority for funding and implementation.

e. The Association advocates and supports efforts to take ecosystem and broader (e.g. regional) approaches to management and recovery, and to apply the Act to "clusters" or "guilds" of species, as already allowed for under the Act. These approaches greatly enhance the utility of the Act, and improve both the efficiency and efficacy of the listing, critical habitat designation, and recovery processes. Listed and imperiled species sharing a common habitat often require compatible protection and recovery actions. Therefore, the agencies should, where appropriate, more frequently employ this means of conservation.

f. The Association appreciates recent changes by the Administration to provide incentives to State and private landowners through new funding programs; to provide regulatory protections for landowners that voluntarily do good deeds to aid endangered species under safe harbor, candidate conservation and State conservation agreements; and to provide certainty of protections under the "no surprises" and "PECE" policies and enhancement of survival permits. These changes improve the effectiveness of the Act, and the Association advocates that, along with the changes recommended in this document, these policies be established in law.

GUIDING PRINCIPLES AND RECOMMENDATIONS FOR REFORM

I. Preventive and Restorative Management

The Association reaffirms its commitment to prudent, proactive conservation of fish, wildlife, and the natural communities on which they depend, so the need to impose the rigors of the ESA for common species is minimized and to ensure that species in greatest conservation need are restored. We do not advocate avoiding application of the Act; rather, we advocate addressing species and habitat declines by cooperative prevention strategies before a crisis situation is reached, and benefiting multiple species by taking a coordinated, comprehensive, management approach once species are listed. Federal and State agencies and their partners must, where possible, anticipate impacts on species and habitats, and address those factors comprehensively (where feasible) and proactively, rather than by reacting to them. We must design remedies that restore the few, and benefit the many.

The ESA should and does play a crucial role as the necessary tool of last resort for protecting against extinction, but it also must work in concert with, and not against, other management actions. In concert with preventive management actions, the ESA could not only restore species undergoing precipitous declines, but also ensure that they persist and never need the protections of the Act again.

Federal and State conservation agencies must cooperate fully in coordinating application of the many existing Federal statutes relating to public lands management (NFMA, FLPMA, etc.), habitat conservation (HCPs, SHAs, CCAAs, SCAs, Critical Habitat), and project impact review (ESA section 7, NEPA, etc.); comparable State laws (nongame and endangered species laws; habitat protection laws; and environmental review statutes and programs); and county and local land-use planning ordinances and programs. A more comprehensive integration of the relevant statutes at all levels would enhance their utility for conservation of fish and wildlife and their habitats, ensure sustainability of ecological communities, restoration of species at risk, and preclude the need to list other species.

Further, there needs to be a major thrust to adequately fund endangered species recovery efforts and (distinct from ESA reauthorization) to fund broader State/Federal programs for conservation of the vast majority of non-game fish and wildlife species that are currently receiving far less than adequate attention, and thereby providing the means to prevent species from becoming endangered. Based programmatically on the highly successful Sportfish and Wildlife Restoration Programs under the Wallop-Breaux and Pittman-Robertson Acts, the fish and wildlife diversity funding initiatives of the past several years, which have been supported by

IAFWA, all 56 fish and wildlife agencies among the States, and by a large and still-growing grass-roots coalition across the country, are intended to secure permanent, dedicated funding to provide among other things, for prevention of species imperilment, through development of comprehensive wildlife conservation strategies and provision of routine fish and wildlife management practices by the States and their conservation partners.

Finally, the Association encourages use of both legally binding State Conservation Agreements and inter- and intra-governmental agreements for candidate species and species of concern in lieu of listing them as candidate, threatened or endangered, where management actions specified under such Agreements can remove the threat(s) to the species. Broad, non-regulatory, landscape scale, comprehensive habitat-based agreements must also be encouraged. Clarification of the Endangered Species Act to recognize and support such cooperative agreements is required. Affirmation of State authority for non-listed species must be legislatively assured and the role of the State fish and wildlife agencies in this process must be institutionalized. By requiring the Secretary to concur with State-led conservation agreements involving affected jurisdictional entities and private landowners (where appropriate) that are determined by the Secretary to be adequate to address the needs of and recovery of declining or at-risk species, the Secretary will be legally shielded from a requirement to impose certain regulatory implications through suspension of the consequences of listing. Private landowners should be given legal assurances that, once they commit to certain responsibilities under such agreements, no additional liabilities will be imposed on them, unless by mutual agreement. The incentive for Federal agencies to participate is that they would incur no liability under section 7 if actions to recover declining species were taken prior to listing.

II. The Role of State Fish and Wildlife Agencies

The Association advocates legislative assurance of the co-equal role of the State fish and wildlife agencies under the Act. Under the ESA, States share jurisdictional authority for listed species, which is executed through a cooperative agreement (ESA section 6) with the U.S. Fish and Wildlife Service (USFWS) or the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries). And yet, the State fish and wildlife agencies are often not adequately included in the implementation of the Act. The States, where they have the fiscal resources, expertise, staff, and political support to do so, should play a much greater role in administration of the Act with the USFWS and NOAA Fisheries. The section 6 Cooperative Agreement should be redesigned to function as a true partnership agreement between and among the States, USFWS, and NOAA Fisheries, requiring close collaboration, coordination, and mutual agreement on implementation of all aspects of the Act. The section 6 agreement can be the vehicle to identify the respective roles of the States and Federal agencies. It should provide the flexibility to allow States that so chose to assume the lead for, or total assumption of, aspects such as pre-listing conservation, recovery planning and implementation oversight, SHA and HCP administration, delisting responsibilities, and post-delisting monitoring. Even when States do not take the lead, their involvement should be co-equal with the Federal agencies. States should also be given the financial resources to assume an expanded role in ESA administration and implementation.

There should be coordinated joint rulemaking and decisionmaking processes between and among the USFWS, NOAA Fisheries, and the State fish and wildlife agencies for administrative and regulatory actions. In the rare cases where the States, USFWS, and NOAA Fisheries cannot reach agreement on administrative, regulatory, and implementation actions, the respective Secretaries of Interior or Commerce should have the final decision to resolve disagreements.

The role of the State fish and wildlife agencies in coordination/co-administration of the Act with the Federal agencies must not be subject to the Federal Advisory Committee Act (FACA), since the States share jurisdictional authority with USFWS and NOAA Fisheries for listed species. It is simply not appropriate for the day-to-day cooperation between the States and Federal agencies to be subject to FACA. Thus, the ESA must be amended to ensure that FACA does not apply to any aspect of State participation in all aspects of the ESA.

III. Listing

The Association contends that other features of the Act, such as the recovery plan process, should provide sufficient latitude for balancing or harmonizing the needs (socio-economic) of mankind, without changing the listing process itself to embrace those issues. Listing should be decided based solely on biology, and States should be equal partners with the Federal agencies in petition evaluation, data review, rule-making and decisionmaking for all listing, downlisting and delisting actions.

The State fish and wildlife agencies can and should be fully empowered and authorized to facilitate the listing process. Areas of reform include:

a. *Prelisting Data Collection and Reviews:* State agencies have expertise in conducting population status inventories and geographic distribution surveys to facilitate review of which species should be advanced to the official proposed stage for listing consideration. The USFWS and NOAA Fisheries can and should avail themselves of this expertise by contracting with (or by use of other means) the States to provide these data and analyses.

b. *Reliance on Sound Science*: The threshold of what constitutes substantial information provided in a listing petition to warrant further consideration must be raised. The petitioner should be required to provide the data on which they are relying in the petition. The Services need broad flexibility to reject petitions lacking scientific basis.

c. *Adequate Time Frames for Listing Decisions:* The statutory time frames allowed for listing decisions are too short to provide for adequate information to be collected and analyzed. This causes a flawed decision making process precipitated by legal action. The Services should have flexibility to delay decisions, especially on species where there is little information with which to make a decision or in cases where major scientific studies are underway that will provide information for decision making.

d. *Presumption for State Information:* If a determination is made that substantial information is submitted with a listing petition, the Secretary should be required to provide all listing petitions to the appropriate State fish and wildlife agency or agencies for review. There should be a rebuttable presumption in favor of State information and recommendations on listing, which the Secretary should be required to refute through peer review if the Secretary disagreed with the State recommendation.

e. *Exclusions of a State or Geographic Area in the Listing Process:* The Act should provide greater flexibility to not list a distinct geographic area or State within the range of a species if it is receiving adequate management within that portion of its range. Providing geographic exclusions will ensure that States that have adequate management programs for rare species are not penalized for lack of effort or result elsewhere, and would provide an incentive for States to provide adequate management. Similarly, there should be greater flexibility to delist a distinct geographic area or State within the range of a species where ESA protections are no longer needed.

f. *Joint Rule-Making and Decision Making Between the USFWS, NOAA Fisheries and the State Fish and Wildlife Agencies:* State agencies have jurisdictional authority for species prior to listing, and share jurisdiction for species when listed and during post-delisting monitoring stage. Because of this co-equal role with the Federal agencies, State agencies should be given the choice to participate fully in petition evaluation, data review and rule-making processes, and be given an equal say in listing decisions. Decisions should be made on a consensus basis, whenever possible, by the State agencies, USFWS, and NOAA Fisheries. If the partners cannot agree on a listing decision, the respective Secretary of Interior and Commerce should make the final decision.

IV. De-Listing

Efforts to recover listed species must receive enhanced attention, at least concomitant with the attention given to listing. The Association suggests that additional focus and attention on recovery planning and achievement will lead to species population status commensurate with down- or de-listing. Legislative criteria linking the process to initiate down- or de-listing action to meeting objectives in approved recovery plans should be mandated. Incremental down- or de-listing by State or geographic population should proceed with much greater priority than it now receives. De-listing must be maintained and activated based solely on biology. To emphasize the importance of the de-listing process, funding for de-listing actions should be increased and receive a specific-line item within the appropriations provided for listing actions. Until the USFWS catches up with the backlog of listing proposals, delisting actions too often get relegated to a low priority because of the process pressures and legal challenges with many listing petitions. This approach does not recognize the importance of acknowledging and rewarding accomplishments under the Act to building public support for the Act and the conservation programs carried out under it.

The Association advocates that the States be authorized to design and develop monitoring programs on de-listed species, with recognized (by the Federal agencies) full legal responsibility for species conservation, and report annually to the Sec-

retary during the 5-year period on the status of the monitored species. Funds must also be provided to the States to conduct these monitoring and evaluation efforts.

V. Critical Habitat Designation

The Association advocates that critical habitat designation should occur concurrently with recovery planning, except when there is an urgent eminent threat to a significant amount of occupied habitat that would warrant designation at the time of listing. The Secretary should retain discretionary authority over when and whether or not to designate critical habitat, and not be under a statutory mandate to always designate critical habitat. State agencies should be equal partners with the Federal agencies in evaluating the need, planning, identifying areas, rule-making, and decision making processes for all critical habitat designations.

State fish and wildlife agencies have expertise, knowledge and data regarding a species extant and historic ranges, where it may now be extirpated, and which habitats might have the potential to facilitate species recovery. Habitats for recovery may include those that were historically occupied, if they are still capable of supporting the species; in the absence of such areas, non-occupied but potential habitat should be identified for recovery. Whether either or both kinds should be identified as "critical habitat" must be decided on a species-by-species basis. The Association recommends clarifying the regulatory implications of what constitutes "adverse modification of critical habitat" (discussed in the section on Prohibited Acts).

The Association recognizes the value of voluntary non-regulatory efforts of many landowners to protect, manage and restore habitats needed for recovery. Many landowners have implemented or are willing to commit to implement management programs that equal the biological protections of critical habitat. Providing these conscientious landowners with protections from the regulatory implications of critical habitat designations rewards their good acts and provides incentive for other landowners to do likewise. The Act provides that the Secretary has discretion to exclude areas for critical habitat designation, if the benefits of exclusion outweigh the benefits of designation. The Association recommends expanding the types and use of exclusions and institutionalizing them in policy and statute, including:

a. exclusion of all lands covered by a HCP, SCA, SHA, or other approved conservation plan from critical habitat designations;

b. exclusion of State lands that have protection equivalent to that provided by designation of critical habitat; which provide a net benefit to the species through protection and management of the land; and which have an effective management program;

c. exclusion of county and private lands under a cooperative management agreement between the State and the Service, another Federal agency, or private conservation organization or partnership that has protection equivalent to that provided by designation of critical habitat; provides a net benefit to the species through protection and management of the land; and which provides an effective management program;

d. exclusion for important Military training areas that have adequate Integrated Natural Resource Management Plans;

e. provide a stewardship incentive exclusion for state, county and private lands that would be voluntarily entered into conservation partnerships or some other form of management agreement;

f. automatic removal of critical habitat designations for all future HCPs, SCAs, and SHAs when approved by the Service according to standards that the plans or agreements achieve a net conservation benefit and have undergone public review.

VI. Recovery Plans/Recovery Teams

Once a species is listed, States must make every effort to address the factors that will result in recovery of the species and its ultimate delisting. The intent of the Act is to recover species, not just list them. The States can and must play a major role in recovery planning and implementation. State fish and wildlife agencies should always be given the opportunity to take the lead on recovery planning, or in the absence of an appointed recovery team or appropriate surrogate, to provide professional review of draft recovery plans prepared by a FWS or NOAA Fisheries staff or contractor. The utility of a team approach not only provides for application of a broad base of knowledge and perspectives, but also better intergovernmental coordination regarding biological, social, economic and environmental factors. State fish and wildlife agency participation brings management expertise, practicality, and experience in working with both private landowners and local land use regulatory agencies (county Planning & Zoning agencies, for example), both of which are vital to success of recovery programs.

Recovery plans should present a number of recovery options that are technically feasible and will lead to species recovery and delisting. Different recovery options may have significantly different social, economic and environmental consequences. Statutory deadlines should be imposed on the agencies to produce a draft recovery plan no later than 2 years after listing, a final recovery plan not later than 3 years after listing, and a revision every 10 years. Recovery plans should:

a. identify jurisdictional responsibilities through implementation agreements;

b. provide multiple recovery approaches that are technically feasible, as options for agencies to use to best meet social, economic, and environmental needs;

c. have the flexibility to provide short-term interim management strategies for those species for which there is little information with which to develop a full recovery plan or when interim recovery strategies are the best approach to stabilize populations;

d. identify specific (i.e. quantified, measurable) population and habitat objectives that, when attained, trigger down or delisting;

e. include appropriately documented and credible justification for all goals, objectives, and implementation approaches;

f. identify habitat important for recovery of the species, designate (if appropriate) critical habitat for regulatory purposes; and provide an indication of important habitat factors necessary for the species—i.e., simple protection may not be the best course of action—recovery and maintenance may require habitat changes such as openings, diversity, early successional stages, etc.;

g. provide pro forma section 7 approval for Federal agency and State agency actions that are consistent with recovery plans;

h. provide "short form" HCPs for private landowners for certain activities, and (where appropriate) exemption from section 9 and 10 restrictions for others;

i. provide certainty to cooperating landowners regarding their fate under the ESA;

j. be exempt from NEPA, if comparable State process is satisfied; and

k. satisfy plan amendment requirements for ESA under NFMA, FLMPA and other Federal land management acts, if the proposed actions are consistent with the appropriate recovery plan.

VII. Distinction between Threatened and Endangered

The ESA distinguishes between "threatened" and "endangered" species, with the status of "endangered" being subject to more protective regimes than "threatened". Clearly, two separate categories were legislatively provided for in the Act for very definite and distinct purposes. Although threatened species are imperiled and at risk of becoming endangered, there is greater leeway for management flexibility and protections provided. The USFWS and NOAA Fisheries apply rules for protecting endangered species to threatened species as well, regardless of whether additional protections are warranted. The agencies or Congress must reassert the distinction between these classifications in the Act, including greater application and involvement by the States in development of section 4(d) rules allowing for management flexibility.

VIII. State Conservation Agreements, Candidate Conservation Agreements, Safe Harbor Agreements and Habitat Conservation Plans

The Association supports the use of State conservation agreements, candidate conservation agreements, safe harbor agreements, and habitat conservation plans. The State fish and wildlife agencies can provide contacts, expertise, and knowledge to contribute toward successful use of these tools in conserving listed species and their habitats. The use and applications of these tools should be more fully clarified and understood by all agencies. State Conservation Agreements, Candidate Conservation Agreements, and Safe Harbor Agreements provide incentives to states and private landowners to invest in conserving rare species and in recovering species that are listed. They can remove the threat of future regulatory restrictions that are too often associated with listed species. Habitat Conservation Plans, in their limited application thus far, have already been used effectively to bring together affected and interested parties, to examine and agree on short-term objectives and long-term goals, and provide certainty to the recovery process while minimizing impacts on private lands and meeting the recovery needs of affected species. The Act should be amended to specifically include these as recovery tools.

IX. Certainty and Incentives for Private Landowners

Private landowners can play a major positive role in species recovery, if they are involved in the process early, given appropriate information on what they can and cannot do, and have certainty about the fate of their own land management practices under ESA. Most landowners want to be good stewards of their land. Most will work with fish and wildlife resources agencies, if they are approached with courtesy

and respect, and sensitivity to their interests and plans. Federal agencies and States must do a better job of matching existing incentives (under several programs at all government levels, such as Farm bill programs, the Landowner Incentives Program, and Private Lands Stewardship Program, etc.) with landowners who are interested in conservation. In return, Federal and State agencies need to assure landowners that, if they agree to certain habitat conservation measures, we will not require any more of them. This certainty must be assured for prelisting State Conservation Agreements, Safe Harbor Agreements, and Habitat Conservation Plans.

Several areas are ripe for providing additional monetary conservation incentives for private landowners including changes to inheritance tax law to remove the disincentive that forces the breaking up of large tracts of land to pay taxes; and establishment of a permanent statutory basis for the Landowner Incentive Program for fish and wildlife habitat conservation on private lands.

X. Prohibited Acts

The Association advocates that the USFWS and NOAA Fisheries clarify the standards they will apply in making a determination if alteration to habitat constitutes harm, and thus a "take" under section 9 of the Act. Not all habitat actions lead to species decline; some disturbance, in fact, may be vital to recovery of species dependent on early successional stages.

The Act should be amended to affirm the current regulatory standard for prohibiting "destruction or adverse modification of critical habitat" for Federal actions under the section 7 process. The prohibition now applies if the "destruction or adverse modification of critical habitat" would jeopardize the continued existence of a listed or proposed species. The Association is concerned that a more restrictive standard, i.e. one that would prohibit any minor loss or adverse modification of critical habitat, would establish quasi-sanctuaries on State and private land and create regulatory grid-lock for many Federal actions including those funding State programs. The Act needs to provide both adequate protection and flexibility to manage the quantity, quality and location of critical habitat for species recovery. The Association believes that as long as adequate mitigation is required in the section 7 process to offset any minor loss or adverse modification of critical habitat, than the current "jeopardy" regulatory standard is appropriate.

XI. Funding

The Association supports enhanced appropriated funding for all aspects of the ESA. We realize the challenges faced by Congress in meeting all national needs. However, we strongly urge a re-focus of appropriated dollars so that section 6 funding can be significantly increased, if necessary by reallocating non-traditional section 6 granting funds. The amount available in recent fiscal years to States is both grossly inadequate, and not at all proportionate to the responsibility of the State fish and wildlife agencies for listed species. The amount of funding provided under the program has not grown in relation to increases in the number of listed species. In 1977, Congress provided $4.2 million for assistance to states to deal with 194 listed species. In 2002, the number of listed species (1,263) was more than six times as large, yet Congress provided just $7.52 million for assistance to States. This represents a decline in real support for this program, when adjusted for inflation. We also suggest that as States assume a greater lead in administering the ESA, Congress should redirect other Federal appropriations now going to USFWS and NOAA Fisheries to the States for funding implementation of the Act.

At the same time, we believe that existing funding must be more effectively spent, and alternative-funding sources should be fully explored. The Association suggests that continuing to spend substantial money on species that are essentially recovered, at least in part of their range (such as the bald eagle), should be from sources other than those available under the ESA. The USFWS, NOAA Fisheries, and State fish and wildlife agencies all need to explore processes for assigning funding to listed species to ensure that those in the most significant need of recovery attention (and not just those that are the most charismatic) are addressed first.

Finally, the Association reemphasizes that it is vitally important to secure funding (separate from ESA) for the States to provide support for conservation programs for nongame fish, wildlife and their habitats in order to facilitate a conservation safety net *before it is necessary to impose the ESA to prevent species extinction.* This preventive management makes good biological and economic sense.

The Association's Teaming With Wildlife initiative, and other wildlife diversity funding programs that build on the tremendously successful Pittman-Robertson and Wallop-Breaux user pay-user benefit programs for wildlife and sportfish, would provide new reliable sources of funding for State programs. These funds should be allocated to the States for conservation, recreation and education programs relating to

fish and wildlife and their habitats. If we can address the limiting factors causing a species decline before they reach a stage where the ESA is the only protection against extinction, we can employ a series of voluntary, non-regulatory approaches that provide more flexibility and creativity for conservation programs with private landowners and other jurisdictional entities.

RESPONSES BY JOHN BAUGHMAN TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. In order to receive Federal funds through the State Wildlife Grants program, Congress charged each State and territory with developing a State Comprehensive Wildlife Conservation Strategy due by October 2005. How will these State strategies be used to better coordinate species protection at the State level?

Response. Under the State Wildlife Grants (SWG) program and Wildlife Conservation and Restoration Program (WCRP), every State and territory has prepared a Comprehensive Wildlife Conservation Strategy. These strategies are built to address the needs of those fish and wildlife species in each State that are in decline and need conservation attention. At the direction of Congress, the strategies identify declining fish and wildlife species, evaluate their habitat needs, assess the problems they face, and outline the actions that need to be taken to conserve them over the long term.

The focus of the State Comprehensive Wildlife Conservation Strategies is on preventing wildlife from becoming endangered. The strategies identify conservation actions that need to be taken to help the hundreds of species of fish and wildlife that are in decline but are not yet subject to the Endangered Species Act. This preventive approach to conservation makes better sense from a biological standpoint, because it is much easier to take action to conserve and manage fish and wildlife before they reach critically imperiled populations. Early intervention also saves taxpayer dollars, gives managers greater flexibility to pursue innovative approaches, and reduces conflict over endangered species conservation and land use.

Although the Comprehensive Wildlife Conservation Strategies were written in order to fulfill the requirements of SWG and WCRP, their full scope goes well beyond the use of funding from these programs. Early in the planning process, the State fish and wildlife agencies decided that the strategies would outline what needed to be done for all of the state's wildlife and not just what the agency intended to do with SWG or WCRP dollars. The strategies encompass a broad range of conservation actions, and they are already being integrated into broader conservation activities by State wildlife agencies and their conservation partners. The strategies were developed through extensive consultation with other agencies, conservation groups, and the public, in a process designed to draw together all the best thinking on wildlife conservation. As a result, the Comprehensive Wildlife Conservation Strategies provide, in many cases for the first time, a sweeping platform for comprehensive wildlife conservation in every state.

While the Comprehensive Wildlife Conservation Strategies are focused on preventing wildlife from becoming endangered, they integrate the actions that need to be taken to address the needs of threatened and endangered species. Because the strategies include endangered species in the larger context of all declining wildlife species, they identify many opportunities for achieving conservation success for endangered species along with other fish and wildlife through habitat conservation and other broad-based approaches. This integrated, landscape scale approach to conservation ultimately means better outcomes for wildlife and taxpayers.

Question 2a. To what extent have states shown the initiative and desire to take on the burden of recovering species?

Response. Once a species is listed, States must make every effort to address the factors that will result in recovery of the species and its ultimate delisting. States can and must play a major role in recovery planning and implementation. States agencies should always be given the opportunity to take the lead on recovery planning. State agency participation brings management expertise, practicality, and experience in working with both private landowners and local land use regulatory agencies, which are vital to the success of any recovery programs.

States have already played a significant role in the recovery of endangered species, such as bald eagles and peregrine falcons. The States ability to do so is limited largely to funding.

Question 2b. Do states have the resources necessary to implement recovery plans for federally listed species?

Response. States do not have the resources necessary to implement recovery plans for federally listed species. If State wildlife agency responsibilities for ESA imple-

mentation were increased as a result of reauthorization, whether on the regulatory side or on the proactive conservation side, the resultant financial burden would cause even worse regulatory gridlock than occurs now due to USFWS inability to move compliance and recovery issues forward at the pace they require. Additional State funding for implementing ESA is critical.

Furthermore, there needs to be a major thrust to adequately fund endangered species recovery efforts (distinct from ESA reauthorization) and to fund broader State/Federal programs for conservation of the vast majority of non-game fish and wildlife species that are currently receiving far less than adequate attention, and thereby providing the means to prevent species from becoming endangered.

Question 3. In your testimony, you focus on the original intent of Congress for states to be the lead in threatened species recovery, as long as an approved section 6 cooperative agreement exists. How should Congress go about restoring this original intent to pass authority on to the States? At what point, if a State threatened species recovery plan is failing, should the Federal agencies step in to address the situation?

Response. The USFWS has effectively precluded a greater role for the states in threatened species conservation by passing a regulation which preemptively applies the same section 9 take prohibitions to threatened species as the law applies to endangered species, unless FWS promulgates a less restrictive 4(d) rule for that species. Congress could express further its intent that those are decisions to be left to those states that have an approved section 6 "full authorities" cooperative agreement by adding at the end of section 4(d) the following language: "When such a cooperative agreement exists, the State may issue regulations for regulated takings of threatened species within their borders."

The FWS is mandated to annually review section 6 cooperative agreements for sufficiency and compliance with the law's standards. If the state's conservation program for a threatened species is insufficient or out of compliance, the FWS can direct corrective action or take over the program.

Question 4. The Sage Grouse Conservation Plan in the 11 Western States with sage grouse populations has been a testament to the important role of partnerships between the Federal Government, the State and local governments, private landowners, businesses and non-profit organizations. How can the Sage Grouse plan be used as a model for other species conservation efforts across the country?

Response. Now that all 50 State Comprehensive Wildlife Conservation Strategies have been completed and submitted to the FWS, the next step is for the states to look collectively at species of greatest conservation need across the several states and identify those of the highest regional or ecosystem priority so that a concerted effort can be directed to conservation of those species. Then, using collaboration affected between State-Federal-local governments on information regarding species, habitat and land use, engage private landowners, industry and public land managers in solutions to conserve the habitats necessary to support the species. The Sage Grouse effort success is predicated on collegial information sharing, and engendering conservation action from the ground up.

Question 5. The State of Arizona has signed a Memorandum of Understanding with the U.S. Fish and Wildlife Service to spell out more clearly the duties and responsibilities of the State and the Federal Government with regard to protection and recovery of listed species within Arizona. What lessons can be learned from the successes of the MOU?

Response. The "success" of the Arizona MOU with USFWS is restricted to Arizona. No other State has chosen to enter into a similar MOU even though they are all aware of the model. Arizona through the MOU is assuming a great deal of the Secretary of the Interior's responsibilities for ESA implementation without receiving Federal funds to carry out those responsibilities. Arizona has done that because they believe it advances species conservation on the ground. The lesson here is that Federal funding will be absolutely necessary to facilitate greater State engagement in ESA implementation.

RESPONSES BY JOHN BAUGHMAN TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. You provided an example, the grizzly bear, about how the lack of a Federal de-listing monitoring plan has held up the species' removal from the endangered species list. Is the monitoring plan something that the states could develop and implement and would that delegation of responsibility speed up the de-listing process? What are other ways to speed up this process?

Response. The ESA envisioned cooperation and collaboration between the states and the Federal Government in recovery and management of threatened and endangered species. While the Secretary cannot legally delegate "responsibility" for many facets of ESA administration, she can delegate "authority" to the states for review of listing decisions, recovery planning, development of management and monitoring protocols, and on-the-ground management and monitoring of threatened and endangered species. The Secretary would still retain oversight and approval without the need for duplication of effort and redundancy of resources. The states already have scientific expertise, dedicated personnel and resources, and, and in many cases, established programs to accomplish these functions. ESA administration would be well served to examine and build upon the successful model of state-Federal cooperation found between the EPA and State departments of environmental quality in administration of water quality discharge permits. Another way to speed up the process would be to automatically de-list when recovery goals are met, rather than having to wait for an under-funded, bureaucratic process to be completed.

Question 2. In your testimony, you state that "State fish and wildlife agencies must be given the opportunities to be fully involved in every aspect of the Act, from consideration of listing petitions to de-listing through meaningful recovery plans." Could you provide us some specifics about where in the regulatory process you think the State should play a role and how strong a role they should play?

Response. As agencies sharing jurisdictional authority over listed species, the State fish and wildlife agencies should have a meaningful role in the construct of regulatory application of the ESA. However, we acknowledge that the final decision making authority should, under Federal law, remain with the Secretary. We suggest some sort of a "collaborative rule making" role for the states with the Secretary where the Secretary would give great weight to the states' recommendations but the Secretary would retain final decision-making authority.

Question 3. You mentioned the State agencies expertise in both pre-listing conservation and ability to gather data on listing petitions, what makes the states more efficient than the feds at this process and how could states be more effective at pre-listing conservation, in hopes of preventing listing.

Response. The efficiency of using the states on species that are being considered for listing, or that have been petitioned for listing, lies in the fact that states often possess the best, and sometimes only, information on the species. Thus, the states are in the best position to assess the merits of listing considerations based on the data they have collected and interpreted.

States can be more effective in conservation efforts to preclude the need to list species by having the funds necessary to address the life needs and habitat requirements of those species before they decline to a point where listing is compelled under ESA.

RESPONSES BY JOHN BAUGHMAN TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Your testimony states that your association would support using funding outside of the Endangered Species Act, such as Outer Continental Shelf gas and oil royalties, to support State endangered Species efforts. Could you elaborate on how you think those funds could be used and suggest other innovative funding ideas?

Response. A dedicated funding source for State endangered species efforts and preventative conservation efforts, such as from Outer Continental Shelf (OCS) gas and oil royalties, is critical to the success of any national recovery program for wildlife. State fish and wildlife agencies strongly believe the single most important thing you can do for endangered species is prevent them from becoming endangered. A preventive approach to wildlife conservation makes sense biologically, economically, and politically.

Current annual appropriations for the State Wildlife Grants program have had substantial benefits for fish and wildlife. However, the variable nature of these funds impairs the ability of wildlife managers to implement the long-term, on-the-ground conservation programs that are truly needed to achieve large-scale results for wildlife. Unlike the infrastructure or equipment needs that characterize transportation, defense, or other policy areas, the restoration and management of degraded habitats and critically low wildlife populations requires sustained attention over time. The uncertainty inherent in the annual appropriations process limits the ability of wildlife agencies to take effective action.

Congress recognized the need for dedicated funding for preventive conservation with the passage of the Fish and Wildlife Conservation Act in 1980, under the leadership of Senator John Chafee. Since that time, the State fish and wildlife agencies have worked steadily with Congress and the Administration to build support for wildlife conservation funding, especially in the 1990's with the efforts under the Conservation and Reinvestment Act. Title III of that bill proposed the creation of the Wildlife and Conservation Restoration Program (WCRP) as an account under the Pittman-Robertson Wildlife Restoration Act, aimed specifically at declining and nongame wildlife species. Although CARA did not pass, the WCRP was created through a separate measure in 2000. However, the WCRP is currently not funded. Securing a dedicated funding source for the WCRP would realize Congress' long deferred intent to fund preventive action to advance the national interest in keeping species from endangered.

The Comprehensive Wildlife Conservation Strategies recently completed by every State and territory outline how additional Federal wildlife conservation funds could be used in partnership with State funds to conserve endangered species along with hundreds of other declining fish and wildlife species. This landscape-scale approach to conservation represents the most effective way to conserve fish and wildlife nationwide, and continues the very successful model of Federal-State partnership in wildlife conservation.

Funds from OCS oil and gas receipts are appropriate sources of funding for wildlife conservation for several reasons. We have reviewed and considered many other sources of funds such as adding additional user fees through excise taxes on outdoor gear beyond hunting and fishing gear, cap and fence appropriations, damage fees from other extractive industries, or dedicating a portion of the existing coal reclamation fund. The dedication of a percent of off-shore receipts from oil and gas production is most appropriate due to the impact that these activities have on wildlife and habitat. These dollars can act in essence as "mitigation funds" for oil and gas development activities. As revenue to the Federal Treasury, it makes sense to dedicate these dollars to the pressing national interest in conserving fish and wildlife resources. Additionally, there is a precedent with the use of the off-shore oil receipts since it is used for the Land and Water Conservation Fund.

In addition to off-shore oil and gas receipts, we believe that the royalties from on-shore receipts are a promising source of funds for preventive wildlife conservation. On-shore drilling royalties are now deposited into the general Treasury without any dedication to "mitigation" purposes as is the case with off-shore royalties. Production in these areas is increasing dramatically and with it increased revenues coming into the Treasury. In addition to the value of using a portion of this revenue to advance the pressing national interest in wildlife conservation, on-shore production causes direct impacts to wildlife and habitat on the ground in each State that call for appropriate conservation actions. Our nation should have a "reinvestment" fund based on on-shore production just as the off-shore oil and gas does.

State fish and wildlife agencies are strongly in favor of dedicating Federal funding for proactive State efforts to address the national interest in preventing wildlife from becoming endangered. We urge the Senate to consider such a program by including in any ESA or related legislation a dedicated funding source to fund the Wildlife and Conservation Restoration Program. This program outlines that the funds should be used for conservation, recreation and education. The State wildlife conservation strategies, now done for each State and territory in the nation, will guide this funding for the species and habitats in greatest conservation need ensuring the funds are directed towards preventing wildlife from becoming endangered.

Question 2. Your testimony states that the distinction between threatened and endangered status for species needs to be restored. How do you think that can be done?

Response. The USFWS has effectively precluded a greater role for the states in threatened species conservation by passing a regulation which preemptively applies the same section 9 take prohibitions to threatened species as the law applies to endangered species, unless FWS promulgates a less restrictive 4(d) rule for that species. Congress could express further its intent that those are decisions to be left to those states that have an approved section 6 "full authorities" cooperative agreement by adding at the end section 4(d) the following language: "When such a cooperative agreement exists, the State may issue regulations for regulated takings of threatened species within their borders."

Question 3. Your testimony states that in the 1990s your association worked with the Western Governors' Association on Endangered Species Act legislative recommendations. Are you familiar with the goals the Western Governors have proposed this year? Does your association support these goals?

Response. Yes, we are very familiar with WGA's proposed goals and are very supportive of those goals.

Question 4. Do most State Fish and Wildlife Agencies have access to qualified personnel needed if states were to take on increased responsibility to carry out the Endangered Species Act?

Response. Yes, but most states would need enhanced funding to support the staff necessary to more actively engage in ESA implementation.

STATEMENT OF KAREN SCARBOROUGH, UNDERSECRETARY, STATE OF CALIFORNIA RESOURCES AGENCY

Good morning, Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to testify today regarding the Endangered Species Act (ESA). Since January 2004, I've had the honor of serving as Undersecretary of the California Resources Agency. Under the leadership of Governor Arnold Schwarzenegger, the State has made great progress to protect the environment and California's natural resources.

California has a strong tradition of environmental protection. We have led the nation in adopting strict standards for air and water quality, supporting zero-emission technologies, and promoting renewable sources of energy.

Governor Schwarzenegger is continuing this tradition through his bold Hydrogen Highway Initiative which calls for 250 hydrogen fueling stations and 20-thousand hydrogen vehicles on California's highways, his One-Million Solar Roof Initiative, and recently signing an executive order launching the Green Building Initiative to make State office buildings more energy efficient.

In June, the Governor set new greenhouse gas emission targets that by 2050 will reduce emissions by 80 percent below 1990 levels. Already, many major California companies are voluntarily joining this effort.

The Governor's natural resource management achievements are equally as bold. The preservation of more than 80,000 acres of open space and 13 miles of the majestic central California coastline at the famed the Hearst Ranch is a new model of public-private cooperation. The creation of the 25-million-acre Sierra Nevada Conservancy also sets a new standard for multi-faceted resource stewardship planned and to be carried out cooperatively by more than a dozen Federal and State agencies, 22 counties and several hundred local government entities and districts. The Conservancy boundary encompasses an area approximately 35–80 miles wide that if super-imposed on a map starting from the Dome of the U.S. Capitol would reach beyond Atlanta to the South, beyond Chicago to the West or beyond Boston to the North.

At the Resources Agency, we work to find methods to simultaneously conserve California's unique natural resources and foster thoughtful/sustainable development and economic growth. The Natural Community's Conservation Program and planning process accomplishes this efficiently and effectively. Implementation of the NCCP, which began in 1991, has been an unprecedented effort by the State of California to collaborate with numerous public agencies, utilities and private groups to craft a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity in the state, while accommodating compatible growth and appropriate economic development. This balance is the NCCPs greatest benefit as well as its greatest challenge.

The NCCP was modeled after the Habitat Conservation Plan (HCP) process within section 10 of the Endangered Species Act (ESA). However, the NCCP was intended to promote more comprehensive actions to overcome perceived shortcomings of the Federal HCP program. In fact, the conservation standard in the NCCP Act goes beyond the mitigation standard of ESA. Each NCCP comprises a bundle of recovery actions. Notwithstanding the different standards, the NCCP Act and ESA can be blended together almost seamlessly. They complement each other so well that every NCCP permitted to date has also been an HCP. As a result, California's combined NCCP/HCP's have the highest standards for regional conservation plans in the nation.

The NCCP initially targeted some of the highest-priced real estate in the world in southern California and its coastal sage scrub community, an area with more listed species than anywhere but Hawaii. California's Floristic Province, a zone of Mediterranean-type climate with a high amount of endemic plants, has been identified by several organizations as one of the world's top "biological hot spots". The first plan was completed in 1995, and since then, seven regional plans have been approved, protecting hundreds of thousands of acres of wildlife habitat in southern California counties alone. Statewide, 11 counties and numerous cities are currently

participating in NCCP planning and implementation, as well as electric, gas and water utilities and a private timber company. There are 31 active NCCP's of varying scope and complexity.

San Diego's Multiple Species Conservation Plan (MSCP), is a recognized NCCP and HCP through a signed planning agreement. The MSCP started at the same time as the NCCP but from a different angle. A large scale mitigation plan was required by the U.S. Fish & Wildlife Service (USF&WS) to resolve a Federal lawsuit on San Diego's sewage treatment system. San Diego's plan was focused on 93 species and its' study area encompassed 585,000 acres in the southwest corner of the county.

Political leadership was instrumental to the success of San Diego's MSCP. Then Mayor of San Diego, Susan Golding, championed the MSCP on behalf of the participating local governments and affected stakeholders. Her involvement in the process was essential to gaining broad-based support for the program and the engagement of other local governments and stakeholder groups. She also provided the foresight and strength to continue with the plan even after the Federal lawsuit that instigated the plan was settled.

My involvement with this program started in 1991 as the appointed Chair of the MSCP Working Group, a 32-member group that met every third Wednesday for almost 7 years. I later joined Mayor Golding's staff, and helped move the plan to its ultimate passage at the City Council in 1997. Setting a table at which all interested stakeholders are invited, at the outset of the process, is critical. Working Group discussions were predicated on "win-win" scenarios for all who sat around the table and participated in the plan development. Consensus was the principle used at all meetings. It enabled moving through the process to arrive at outcomes, from disputes to certainty.

The MSCP was predicated on a partnership between Federal, State, local and private representatives. It linked Federal policy to local government (where most land use authority resides), to local needs (e.g., for open space, quality of life, and balanced development), and to local stakeholders (who could help with implementation and build political support). More was accomplished through these links than the ESA could have accomplished on its own. The MSCP shifted local planning from dysfunctional, piecemeal project-by-project mitigation and a single species focus to large scale, comprehensive, ecosystem plans.

The main attributes/elements of the MSCP (and NCCP's in general) are that it:

- Sets up a partnership with the State and Federal wildlife agencies
- Requires the participation of affected stakeholders
- Provides a legitimate biological basis for assurances through the use of sound science from the outset and adaptive management throughout
- Approaches species planning at an ecosystem level
- Covers future as well as currently listed species
- Meets the conservation standard
- Provides a vehicle for eliminating critical habitat where the plan is in place
- Provides a one-stop-shop for local developments and is an off-the-shelf framework for mitigation required by State or local laws, e.g., CEQA
- Provided a template for other, even larger efforts, such as the Western Riverside County Multiple Species Habitat Conservation Plan
- Requires an ongoing funding stream
- Needs leadership by an elected official

The MSCP planning process was an experience of trust building I will never forget. The lessons learned are now integral to the foundation upon which I have continued to pursue the same balance for the State and Governor. Many of the Working Group members remain my closest and dearest professional colleagues.

Utility rights-of-way can be important backbone linkages in a preserve plan. The special needs of utilities are recognized in the state's NCCP legislation, thus encouraging their participation. Infrastructure providers face the same challenges raised by potentially severe endangered species listings constraints as do developers yet 85 percent of their work is for maintenance and operations. Endangered species listings affect essential maintenance and operation activities as well as making planning for new facilities and transmission even more difficult. To maintain safe and reliable energy supply, as well as ensuring needed water for agriculture, homes and businesses, a new way of managing rare species is required. The NCCP program offers a solution. SDG&E, a large energy services company, saw the potential and crafted the first NCCP/HCP that has allowed for both new construction and operations and maintenance to proceed. Since 1995, SDG&E has used its permit over 2,500 times.

Statewide, plan implementation has been underway for almost 10 years. Local, state, and Federal Government have cooperated with environmental interests and landowners to ensure the plans are implemented as approved. In San Diego County

alone, voters in 2004 approved almost $900 million for wildlife protection and habitat acquisition. Since 1991, more than $24 million in Federal funds has been provided for NCCP planning in the five southern California counties. Those funds, plus matching investments from the state, have leveraged private preserve dedications valued in the billions of dollars. From 2001–2004, the Resources Agency's Department of Fish and Game (DFG) successfully competed for $5.6 million for regional conservation planning in the northern areas of the state. Even with these successes, funding remains a serious challenge to successful implementation, but with matching or assistance from USFWS/DFG, local government has been able to persuade voters to help pay for the costs of assembling and running the preserve.

The original NCCP legislation has been updated and strengthened to increase public participation and improve the scientific underpinnings for future plans. The quality of the plans is uniformly high, but we continue to be vigilant to improve upon them.

A large part of the success of the NCCP approach in California is our having had a strong Federal counterpart interested in similar conservation outcomes. The ESA and NCCP Act complement each other such that blending them together into a single conservation planning process makes an excellent case for robust conservation. Even so, we believe we can improve. Achieving ESA/NCCP consistency at the Federal level and policy consistency between Federal and State endangered species regulation and law is a worthy goal.

After our nearly 10 years of experience working in this arena, we have a several observations and continuing challenges for your consideration:

Assurances/Certainty.—The main reason we have been able to attract local jurisdictions, landowners, and utilities to participate in the NCCP process is the assurance that in the event steps need to be taken to correct a problem with a covered species, for whatever the reason, that those costs will not be passed on to the participating landowners. Utilizing the Congressional intent expressed in the Endangered Species legislative record of 25 years ago, a strong No Surprises policy is critical this need. This No Surprises policy has been a resounding success. To my knowledge, it has not been invoked to date and we continue to interest local government in habitat conservation. NCCP/HCP's have contingency plans built into them, and adaptive management over time has always been a hallmark of a successful landscape level habitat conservation plan. Given the amount of confusion about what the policy means, a discussion about codifying No Surprises seems in order, and could possibly lead to changes that could remove a cloud of uncertainty over the long-term viability of NCCP/HCP's.

Critical Habitat.—We have found that the designation of critical habitat remains controversial. It is not clear, especially given recent court decisions in different parts of the country, what the regulatory implications of critical habitat designation are. Litigation has increased the confusion. Our plans already meet a recovery standard because the NCCP Act requires a conservation standard, which entails recovery, and all NCCP/HCP's meet both State and Federal standards. Arguably, the time and money spent on critical habitat matters, including responding to litigation, might better be spent working on the actual species recovery effort. Looking at solutions which would reconcile sections 7 and 10 of the Act might be helpful. All the parties would benefit from this clarification.

Off-Site Mitigation.—Since NCCP/HCP's cover vast swaths of natural lands, the ability for plan participants to offset impacts elsewhere within the planned preserve has been very useful in assembling the preserve. In some ways, these plans are like puzzles, with pieces being placed as they become available and according to the plan. In San Diego, some local governments have assembled almost their entire preserves, way ahead of schedule; offsite mitigation has been a crucial part of the success of the approach. Many of the participating landowners are also limited by factors such as topography, utility availability and cost when attempting to preserve essential habitat. Providing legislative clarity on the use of offsite mitigation land in HCP planning seems to be an important objective.

Clarification of Public Utility Uses.—There is inadequate consideration in Federal law of the differences between their operations and traditional development. Any review of the law should consider policy differentiating between the very small impacts associated with repeated maintenance and operations activities and those of traditional land consumptive activities.

Funding for Planning.—Local governments do not typically have the significant amounts of money necessary to complete an NCCP plan, estimated from $3-6 million depending on complexity and the length of time it takes. This problem is exacerbated in difficult State budget times, when State funds to local governments are often reduced. Grants for conservation planning are essential to maintaining mo-

mentum in NCCPs. The FWS' HCP Assistance grant program has enabled many jurisdictions to initiate and make significant progress on their plans.

Implementation Commitments: Land Acquisition.—The higher conservation standard of NCCP includes the concept and Legislative intent that the public shares in the responsibility to pay for a portion of the conservation. In all NCCPs approved to date, the State and Federal Governments have agreed to contribute acres to the reserve system and assist with management and monitoring. For example, the State and Federal agencies agreed to contribute 13,500 acres to the San Diego MSCP reserve system, and 50,000 acres to the Western Riverside MSHCP reserve system. The demand for Federal HCP land acquisition grants is rising, yet the Federal funding has declined significantly [over the past 2 years (2002–$61.3M, 2004–$49.4M)]. It is hoped that the State and Federal funding streams for land acquisition (typically State bonds and Federal grants) will continue at levels sufficient to meet the needs of these and future plans to be approved in [northern] California.

Implementation Commitments: Institutional Capacity.—Inherent in commitments, are the wildlife agency staff positions that will be needed for ongoing planning and implementation. Wildlife agency staff need to support the concept as well as continue to be involved in the land use planning process, coordination with local partners on plan implementation, monitoring program compliance, assessing land acquisition priorities, applying for grant funds, and participating in biological monitoring and adaptive management and do so constructively. There are currently no State bond funds or Federal grants that can provide the necessary monitoring and management funding for the wildlife agencies to carry out their commitments. New funding sources must be found that will allow the wildlife agencies to uphold their public trust responsibilities to these plans.

In conclusion, proactive planning of our natural resources from a landscape level has been the way California has found to deal with the fact that we are both a "biological hot spot" and a great place to live. The technical products of this labor are only part of the reward. The relationships and trust that is generated through the process transcends the plans and is invaluable.

Mr. Chairman, I thank you for the opportunity to share our experience with habitat planning. I would be pleased to respond to any questions you might have.

Attachment

Planning for Conservation under the NCCP Act

Background

In 1991, the California Natural Community Conservation Planning Act (NCCP Act) was enacted into law. Implementation of the NCCP Act (California Fish and Game Code Section 2800 et. seq.) is an unprecedented effort by the State of California, and numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. A Natural Community Conservation Plan (NCCP) identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Creating an NCCP is equivalent to creating a land use plan that goes well beyond the scope of biological conservation. The NCCP Act focuses on protection of sensitive species, biological diversity, ecosystem function, etc., but the process and final plan define what land uses will be allowed in the plan area and where they can specifically be located. In many cases, the NCCP process defines the full spatial extent of development that will be allowed in the plan area.

Conservation planning focuses on the future of the both public and privately owned portion of the landscape. Although existing public conservation lands are typically part of the conservation strategy, the main task of the planning process is to define where future development and other consumptive uses of private land will be allowed. Private land in California comprises approximately 51 percent (52 million acres) of the total state spatial extent. Of that private land, 67 percent (35 million acres) is covered by natural or semi-natural vegetation communities. Many listed or sensitive species are dependent on habitat on private lands for their survival. To effect conservation at the scale necessary to ensure the continued survival of these species, the NCCP approach to regional conservation planning is essential. In an NCCP, public and private lands with important habitat value are identified through the planning process, and "become part of a scientifically validated system of reserves, including corridors and linkages with other natural lands, that will be managed for long-term protection of multiple species and other ecological values." (Murphy, D., *Bioregional Assessments*, Island Press, 1999)

A conservation plan crosses into the realm of delimiting private property rights through the legal exercise of land use planning, therefore, by necessity and statute, it is a public process. Creation of a conservation plan is a voluntary process and involves a diverse array of stakeholders who represent their interests in a negotiated process. The process also provides opportunities for participation by the general public. In a typical conservation plan, a local lead agency with land use authority (city or county) or a large land owner coordinates a collaborative planning process. Working with landowners, development interests, environmental organizations, and other interested parties, the local agency oversees the numerous activities that constitute the development of a conservation plan. These activities include biological data collection, designing a reserve system, identifying proposed development, creating monitoring and adaptive management programs for the reserve lands, and determining funding for implementation. The state and federal wildlife agencies (California Department of Fish and Game (DFG), the U.S. Fish and Wildlife Service (FWS), and NOAA

Fisheries, where appropriate) provide the necessary support, direction, and guidance to conservation planning participants during all of these activities.

The desired result of this process is a comprehensive plan that provides for the species' conservation and management, and that allows the wildlife agencies to issue permits to authorize the take of species under the federal Endangered Species Act (ESA) and NCCP Act. Species whose conservation and management are provided by the plan are called covered species. The NCCP Act provides DFG the authority to permit take of any covered species (whether or not it is listed as threatened or endangered under the California Endangered Species Act). This authority provides an incentive to local applicants to cover certain species not currently listed so they won't have to come back for additional permits should those species become listed in the future. Covering non-listed species requires that they be treated as if they were listed, and can mean the protection of additional habitats, core areas, linkages, ecological processes, and improved reserve configurations that bolster the overall conservation strategy.

The Coastal Sage Scrub Ecosystem Pilot Program

Initially, the California Legislature agreed to a pilot program for protecting the coastal sage scrub ecosystem which occurs across the coastal portions of five Southern California coastal counties – Los Angeles, Orange, Riverside, San Bernardino, and San Diego. This area is identified as a national and arguably international "biodiversity hotspot" due to the total number of species and the number of endemic species found nowhere else. This ecological significance and the increasing rate of urban development made the area an ideal candidate for NCCP.

DFG, FWS, and city and county governments started working closely together on a series of NCCPs for the coastal sage scrub ecosystem. This ecosystem consists of significantly fragmented habitat (less than 340,000 acres, 531 square miles) scattered over more than 6,000 square miles, and is home to approximately 100 potentially threatened and endangered species.

One of the first steps in the planning process was to provide a sound scientific foundation for conservation. A team of independent, widely respected conservation biologists was convened to provide scientific guidance. The guidance they developed (*Southern California Coastal Sage Scrub NCCP Conservation Guidelines*, 1993) led to the identification of biologically based planning subregions. Knowing that a plan of this magnitude would take several years to complete, they recommended interim measures to be applied to new development during the planning phase that would protect sufficient habitat to assure that a robust reserve network could be designed. The team also identified conservation goals, providing a scientific foundation that could guide the participants through the rest of the planning process.

The listing process under ESA provides an option to establish (in certain situations) special rules to adjust the general protective measures available for threatened species. These special rules, established by FWS under Section 4(d), may define conditions under which "take" may be authorized. FWS designated the California gnatcatcher as a threatened species in 1993, meaning that it was likely to become endangered in the foreseeable future. FWS also adopted

a special rule under Section 4(d) that allowed the NCCP program to provide the approach for conservation and recovery of the gnatcatcher.

FWS defined the conditions associated with certain land use activities under which take of gnatcatcher would not be a violation of section 9 of ESA. Under this special rule, the FWS permitted take of gnatcatcher associated with land use activities during the preparation of a plan covered under the NCCP Act as long as the cumulative loss of coastal sage scrub was less than five percent in any individual subregion. This condition followed the coastal sage scrub (CSS) science advisors' recommendation that habitat loss be limited to five percent during the planning phase to maintain the best options for reserve design.

The most important aspect of the use of the 4(d) special rule was that the FWS essentially endorsed the NCCP approach to conservation planning for federally listed and sensitive species. It sent a clear message to local stakeholders that planning for conservation under the state NCCP program would also satisfy the federal standards. This position also gave the necessary feedback to the State that the NCCP approach was worthwhile, and therefore new staff positions and funding could be authorized for DFG to implement the program.

To formally launch the planning efforts, DFG and FWS entered into agreements with individual local jurisdictions and landowners. Approximately 25 subregional or subarea NCCPs were needed to cover the activities of all the local jurisdictions, water districts, and utility providers. Fifty-nine (59) local government jurisdictions, scores of landowners from across these counties, federal wildlife authorities, business and community groups, and environmental advocates are actively participating in the program.

DFG, the Resources Agency, and FWS collaborated to develop the *Southern California Coastal Sage Scrub NCCP Process Guidelines* (1993). The CSS Process Guidelines explain the roles of local, state, and federal governments, and describe how the planning process should proceed, including key features, public involvement, and environmental review. These guidelines were later modified into a set of NCCP guidelines that could be applied statewide.

Nine plans in Southern California have been approved and permits issued, with several others nearing completion. The partnerships that form during the planning phase have proved crucial in moving plans into the implementation phase. These plans do not just go on the shelf: DFG, FWS, and local plan participants make a commitment to an ongoing partnership that will last at least the life of the permits (up to 75 years).

Program Accomplishments

- The first three NCCPs were approved in 1995, 1996 and 1997: these were the San Diego Gas & Electric Sub-Regional Plan, the Central/Coastal Orange County Natural Community Conservation Plan and the San Diego Multiple Species Conservation Program (covering southwestern San Diego County).
- By the end of the 1990s, nine NCCPs were under way in San Diego, Orange, Riverside, Los Angeles, and San Bernardino Counties.
- In August 2000, a programmatic NCCP was approved for the massive CALFED Bay–Delta Program covering water infrastructure and habitat restoration projects throughout the Sacramento-San Joaquin Delta, San Francisco Bay, and Central Valley.

- In July 2004, the Western Riverside Multiple Species Habitat Conservation Plan, covering 1.2 million acres and 146 species, was approved.
- By mid 2004, four northern California regional conservation planning efforts signed NCCP planning agreements, and four others are in early discussion.
- The first "working landscape" NCCP is being developed by the Mendocino Redwood Company to address timber harvest.
- NCCP will be the approach used to resolve Colorado River water transfer issues for the Salton Sea Ecosystem Restoration Project.
- There are 31 active NCCPs of varying scope and complexity.
- Eleven counties are participating in NCCP planning.
- The number of species covered by NCCPs ranges from 12 (Palos Verdes Peninsula) to 146 (Western Riverside MSHCP).
- NCCPs range in size from 8,861 acres (Palos Verdes Peninsula) to 1.2 million acres (Coachella Valley MSHCP).

California Case Study
Natural Community Conservation Planning Act
Western Governors Association Meeting

Background

In 1991, the California Natural Community Conservation Planning Act (NCCP Act) was enacted into law. Implementation of the NCCP Act (California Fish and Game Code Section 2800 et. seq.) is an unprecedented effort by the State of California, and numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. A Natural Community Conservation Plan (NCCP) identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

The desired result of this process is a comprehensive plan that provides for species' conservation and management, and that allows the U.S. Fish and Wildlife Service and California Department of Fish and Game (DFG) to issue permits to authorize the take of species under the federal Endangered Species Act and NCCP Act. The NCCP Act provides DFG the authority to permit take of any species conserved by the plan (whether or not it is listed as threatened or endangered under the California Endangered Species Act).

Benefits of NCCP

The NCCP program is able to provide distinct benefits to the environment, local governments, developers, and other stakeholders. NCCP is a clear departure from "business as usual" practices and offers these advantages over the traditional species-by-species approach:

Local control
- Designed by locals to meet local area needs/issues
- Implementation by local government – reduces state and federal involvement in project planning and approval

Reduced costs
- A single programmatic solution greatly reduces the complexity of meeting both state and federal regulatory requirements.
- Fewer project delays for endangered species permitting

Effective conservation
- Ecosystem approach addresses all sensitive species and habitats in one planning effort rather than species-by-species
- Planning for ecosystem-based conservation may eliminate the need for additional species listings

Assurances
- Project mitigation and species conservation is confirmed in the plan
- Long permit life – 50 years

Multiple Species Conservation Program (MSCP)

Plan Summary

Introduction

The Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program for southwestern San Diego County. The MSCP will preserve a network of habitat and open space, protecting biodiversity and enhancing the region's quality of life. The MSCP will also provide an economic benefit by reducing constraints on future development and decreasing the costs of compliance with federal and state laws protecting biological resources. The MSCP Plan has been developed cooperatively by participating jurisdictions and special districts in partnership with the wildlife agencies, property owners, and representatives of the development industry and environmental groups. The plan is designed to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. By identifying priority areas for conservation and other areas for future development, the MSCP will streamline existing permit procedures for development projects which impact habitat.

Many native vegetation communities in the region are considered sensitive because they have been greatly reduced in distribution by development. San Diego County contains over 200 plant and animal species that are federally and/or state listed as endangered, threatened, or rare; proposed or candidates for listing; or otherwise are considered sensitive. Over half of these species occur in the MSCP study area. The MSCP will protect habitat for over 1000 native and nonnative plant species and more than 380 species of fish, amphibians, reptiles, birds and mammals.

The proposed assembly of the MSCP preserve is based on the policies that public lands be incorporated to the greatest extent possible and that private property rights be fully respected and upheld. Private lands acquired with public funds for the preserve will only be acquired from willing sellers. The MSCP is also based on the equitable distribution of costs.

Local jurisdictions and special districts will implement their portions of the MSCP Plan through subarea plans, which describe specific implementing mechanisms. The MSCP Plan, with its attached subarea plans, will serve as: 1) a multiple species Habitat Conservation Plan pursuant to Section 10(a) of the federal Endangered Species Act; and, 2) a Natural Community Conservation Program (NCCP) Plan pursuant to the California NCCP Act of 1991 and the state Endangered Species Act. Once approved, the MSCP and subarea plans will replace interim restrictions on impacts to coastal sage scrub, as a result of the federal listing of the California gnatcatcher as threatened, and will allow the incidental take of other Covered Species as specified in the plan.

Description of the MSCP Study Area

The MSCP study area covers approximately 900 square miles (582,243 acres) in southwestern San Diego County and includes the City of San Diego, portions of the unincorporated County of San Diego, ten additional city jurisdictions, and several independent special districts (Figure 1-2). The study area is bordered by Mexico to the south, National Forest lands to the east, the Pacific Ocean

to the west and the San Dieguito River Valley to the north. Naval Air Station Miramar, the Point Loma Naval Complex, and other military lands are within the MSCP study area but are being planned separately.

Vegetation Communities and Evaluated Species

Approximately 54% (315,940 acres) of the MSCP study area supports several distinct vegetation communities or habitat types, most of which are considered sensitive or rare, with the remainder developed (41%) or in agriculture (5%). The MSCP preserve was designed using an evaluation of 93 species as indicators of the range of habitats and biological diversity in the study area. Included within the 93 species were 41 species that are federally or state listed, candidates for listing, or proposed for listing. The plan attempts to maximize the presence of these species and their habitats in the preserve.

Biological Core and Linkage Areas

Biological core and linkage areas were identified to assist local jurisdictions and special districts as one element to be considered in identifying their portion of the MSCP preserve and/or preserve design criteria. The most critical biological resources were prioritized for preservation to maximize the conservation value of the preserve, to efficiently use acquisition funds and to identify less important habitat areas that could be developed. Sixteen core biological resource areas and associated habitat linkages, totaling approximately 202,757 acres of habitat, were identified. Subarea plans with specific preserve boundaries maximize inclusion of unfragmented core areas and linkages in their preserve design to the extent possible.

Ownership

The study area contains 315,940 acres of habitat with almost two-thirds (about 194,563 acres) being privately owned. Over one-third of the habitat is in military (20,082 acres) or other public ownership (101,295 acres).

Gap Analysis of Habitat Protection and Planned Land Uses

A gap analysis was performed to identify where existing protection of key biological resources was already in place (such as planned open space lands, public lands and lands unlikely to be developed because of steep slopes and floodplains) and where "gaps" in habitat protection may occur. The gap analysis showed that only 17% of the biological core and linkage areas was already preserved for biological open space as of 1994, and these protected areas were widely distributed without linkages between them. According to adopted general and community plans, most of the remaining habitat areas in the MSCP study area are planned to be developed with low density residential uses (39%) or used as parks, preserves or open space (29%). The local jurisdictions considered these planned land uses in designing or establishing criteria for the MSCP preserve and will amend land use plans, as needed, to implement the MSCP (see Section 5).

Figure 1-2, Jurisdictions Within MSCP Study Area

Future Growth

In allocating future forecast growth in the region, the local jurisdictions and SANDAG found that, without the MSCP, the existing general and community plans would accommodate residential growth up to around 3.3 million people, which is forecast to be reached in 2005. It is projected that after 2005, there will not be sufficient vacant land designated by the general and community plans for residential use at urban densities (more than one dwelling unit per acre). In response to this issue, local jurisdictions have been working with SANDAG to formulate a Regional Growth Management Strategy to accommodate residential growth beyond 2005 by focusing growth around major transit services, providing mixed uses at community centers and locating residences within major employment centers. Although a lack of sufficient residentially designated lands in land use plans would occur with or without a habitat preserve system, habitat conservation and a new growth management strategy can be mutually supportive of quality of life objectives and the need for economic growth.

Conservation Plan

Multi-Habitat Planning Area (MHPA)

The process of designing the MSCP preserve incorporated the goals of preserving as much of the core biological resource areas and linkages as possible, maximizing the inclusion of public lands and lands already conserved as open space, and creating an affordable preserve with the equitable sharing of costs. The participating jurisdictions and special districts cooperatively designed a Multi-Habitat Planning Area (MHPA), in partnership with the wildlife agencies (USFWS and CDFG), property owners, and representatives of the development interests and environmental groups. The MHPA is the area within which the permanent MSCP preserve will be assembled and managed for its biological resources. Public acquisition of private lands from willing sellers will be focused within the MHPA.

The MHPA is defined in some areas by mapped boundaries and in others by quantitative targets for conservation of vegetation communities and by goals and criteria for preserve design. The jurisdictions and special districts prepared subarea plans and defined boundaries of their portions of the MHPA based on common objectives and criteria, but using different methods of implementation. The resulting conservation of the subarea plans is summarized in Figure 3-2. The MHPA includes property set aside as mitigation for major development projects as a result of negotiations, habitat designated as open space in general plans, and areas already preserved for

their biological resources. The remainder are areas within which the ultimate preserve will be sited.

Habitats Conserved

The MSCP Plan targets 171,917 acres of vacant land within the MHPA for conservation, including over half of all natural lands in the MSCP study area (167,667 acres) and 4,250 acres of other vacant lands that contribute to preserve design. The MHPA conserves 62% of all coastal sage scrub and important portions of all vegetation communities in the study area. This conservation is focused in the most biologically important areas, with nearly three-fourths (73%) of the core biological resource areas and linkages conserved in the MHPA. Table 3-3 and Figure 3-6 summarize the amount of each vegetation community targeted for conservation within the MHPA. Each subarea plan contributing to the total describes a process for allowing development outside the preserve to be mitigated by conservation inside the preserve.

Figure 3-6, Vegetation Communities Targeted for Conservation in MHPA

This plan targets 7,591 more acres for conservation than the Draft MSCP Plan, which targeted 164,326 acres. The difference is attributed to several factors: the acreage of public lands targeted for conservation in the MHPA increased by about 10,000 acres; the City of San Diego now targets 4,250 acres of disturbed and agricultural lands to meet preserve configuration needs (however, agriculture is not precluded in the preserve); and the study area has expanded by about 1,050 acres. The acreage of private lands targeted for conservation decreased by about 2,400 acres.

Covered Species

Based on the MHPA preserve configuration, vegetation community conservation targets, and implementation of habitat management plans, 85 species will be adequately conserved and "covered" by this plan. The County of San Diego and cities of San Diego, Poway, and Chula Vista must have approved subarea plans and implementing agreements before take of all 85 species is authorized for all participants. The participating local agencies will receive take authorizations from the federal and state agencies to directly impact or "take" these 85 species, in accordance with approved subarea plans and implementing agreements. The covered species include species listed as endangered or threatened as well as currently unlisted species:

Protection Status	Plants	Animals	Total
Federally listed[1]	5	12	17
State listed[2]	13	2	15
Federally proposed	3	1	4
Federal candidates (C1 and former C2)	24	12	36
Other[3]	1	12	13

Total	46	39	85

[1] May also be state listed.
[2] Includes 8 plants proposed for federal listing.
[3] State species of special concern, habitat indicator species, and species important to preserve design.

If, in the future, a covered but unlisted species becomes listed as endangered or threatened, the take authorization will become effective concurrent with its listing.

Narrow Endemic Species. Some native species, primarily plants with restricted geographic distributions, soil affinities, and/or habitats, are referred to as "narrow endemic species." For vernal pools and identified narrow endemic species, the jurisdictions will specify measures in their subarea plans to ensure that impacts to these resources are avoided to the maximum extent practicable.

Uncovered Species

The plan also includes provisions for adding uncovered species to the covered species list. If a species not on the covered species list is proposed for listing, the wildlife agencies will determine if additional conservation measures are needed to adequately protect the species. If additional measures are needed, management practices and enhancement opportunities and reallocation of public acquisition funds will be used provided that covered species are not adversely affected. If these options are not adequate, preference will be given by the wildlife agencies to additional measures that do not require additional mitigation or dedication of land. The wildlife agencies have also agreed to provide additional habitat-based assurances for uncovered species by classifying certain vegetation communities as "significantly" and/or "sufficiently conserved" by the MSCP, as described in the MSCP Plan and Model Implementing Agreement.

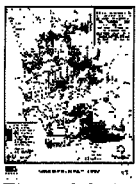


Figure 3-2, Average Habitat Conservation in MHPA

Assembling the MSCP Preserve

The MSCP preserve will be assembled through a combination of the following methods:

1. conservation of lands already in public ownership;
2. public acquisition of private lands with regional habitat value from willing sellers; and
3. private development contributions through development regulations and mitigation of impacts.

The relative contributions of these three methods and the equitable distribution of costs have been addressed in policies established by elected officials of several jurisdictions. These policies have served as the basis for plan proposals on assembling, implementing and financing the preserve.

Sources of Preserve Assembly

Of the total 171,920 acres targeted for preservation, public sources will contribute 81,750 acres of public lands and acquire approximately 27,000 acres of private lands. Approximately 63,170 acres of private lands will be conserved through the development process, including mitigation for impacts to biological resources outside the preserve. In total, the public sector will contribute 63.3% of the MSCP preserve, and private sector development will contribute 36.7% (Figure 4-1 and Table 4-1).

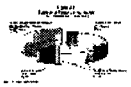


Figure 4-1, Sources of Targeted Conservation

The federal and state governments have acknowledged their role in habitat conservation and agreed to assist the local jurisdictions and property owners in creating a preserve that reduces or avoids the need to list additional species. The federal and state governments will contribute 36,510 acres of existing federal and state lands, excluding military lands, to permanent habitat conservation and management. This includes 24,510 acres managed by the Bureau of Land Management, three existing wildlife refuges that are part of the National Wildlife Refuge System and several state administered parks and reserves.

Local governments collectively own approximately 47,850 acres of habitat in the MHPA, of which 45,240 (94.5%) are targeted for permanent conservation and habitat management. Most of these lands are already protected in existing passive recreation parks and open space preserves. Approximately 10,400 acres, referred to as cornerstone lands, are owned by the City of San Diego Water Utilities Department and will be committed to habitat conservation through a conservation bank agreement with the wildlife agencies.

Over a period of 30 years, the federal and state governments, collectively, and the local jurisdictions in the MSCP study area, collectively, will each contribute half of the approximately 27,000 acres to be acquired by public means. Lands acquired as mitigation for public or private projects or through land use regulation will not be included as part of the acquisition obligation of the local jurisdictions. Funding of the local share of the preserve (acquisition, management, monitoring and administration) will be carried out on a regional basis.

In 1996, 43.8% (85,190 acres) of lands in the MHPA were owned by federal, state and local governments and 56.2% (109,130 acres) were privately owned. Of the MHPA lands in private ownership, 57.9% (63,170 acres) will be conserved in conjunction with private development, according to local land use regulations and through off-site mitigation; 24.7% (27,000 acres) will be publicly acquired; and 17.4% (18,900 acres) will potentially be developed (Figure 4-3).

Figure 4-3, Conservation and Development in MHPA

Estimated Acquisition Need. The estimated need for acquisition of 27,000 acres was based on estimates provided by the five jurisdictions with most of the privately owned habitat lands within the MHPA: the cities of Chula Vista, Poway, San Diego and Santee and the County of San Diego. The estimates were based on detailed, site specific reviews of such factors as ownership patterns and parcel sizes, presence of biological resources, approved and negotiated projects, and the potential for future development given the application of land use regulations and environmental review.

Implementation Strategy and Structure

Implementation of the MSCP requires coordinated actions among the participating local jurisdictions, other take authorization holders, the wildlife agencies, and the private sector. The MSCP Plan establishes the framework, while allowing the flexibility for each jurisdiction to implement the MSCP through their own subarea plans and implementing agreements. The MSCP provides for sequential adoption of subarea plans by the jurisdictions or other take authorization holders. Subarea plans and implementing agreements are also severable so that future actions or inactions of any one jurisdiction will not affect other take authorizations, except for the effects on the list of covered species and federal and state assurances that are specified in the subarea plans or implementing agreements.

The jurisdictions and other entities receiving federal and state take authorizations for covered species will receive assurances that increase predictability for the development process. Proponents of projects approved consistent with the MSCP will become "third party beneficiaries" to the locally received take authorizations, receiving assurances that mitigation obligations will not be subsequently altered for covered species and receiving the benefits of a streamlined process for federal and state permitting and environmental review.

Subarea Plans

Subarea plans to implement the MSCP are prepared by local jurisdictions, special purpose agencies, regional public facility providers or utilities and, together with an implementing agreement, serve as the basis for issuance of federal and state take authorizations for covered species. The subarea plan specifies how the take authorization holder will conserve habitat and build the MSCP preserve using, in part, its existing land use planning and project approval process. Jurisdictions will incorporate the MSCP Plan and subarea plan into their policies, land use plans, and regulations and will approve public and private projects, or the siting of facilities, consistent with the subarea plan.

Subarea plans contain criteria, such as conservation targets, mitigation standards and/or development encroachment limits, to ensure that habitat preservation proceeds in step with development, and mechanisms to avoid or minimize project impacts to the preserve. A preserve management plan, or a schedule for its preparation, is also contained in the subarea plan. Subarea plans for the cities of San Diego, Chula Vista, Santee, Del Mar, and Coronado, the County of San Diego and Otay Water District are included in the MSCP Plan (Volume II). Subarea plan boundaries differ from jurisdictional boundaries because some jurisdictions own, otherwise control or may annex lands beyond their current jurisdiction boundaries. Other participants provided draft Multi-Habitat Planning Area maps for inclusion in the MSCP Plan, but have prepared or are preparing subarea plans separate from the MSCP Plan.

Implementing Agreements

An implementing agreement is a binding contract signed by the local jurisdiction (or other take authorization holder) and the wildlife agencies which identifies the roles and responsibilities of the parties to implement the MSCP and subarea plan. The agreement also specifies assurances and remedies if parties fail to perform their obligations. A Model Implementing Agreement, generally acceptable to the wildlife agencies, has been developed for use in preparing more specific implementing agreements and is contained as Attachment A to the plan. Many assurances are provided by the wildlife agencies including the provision for long-term (50 year) take authorizations for covered species, how a change in circumstances will be addressed for covered species, the effects on development and sharing of costs for uncovered species should they become listed, and the ability of take authorizations to be severable from those granted to other entities implementing the MSCP.

Local Jurisdiction Actions to Implement the MSCP

Local jurisdictions will implement the MSCP through their approved subarea plans and will amend land use plans, development regulations, codes and guidelines, as needed, to assure that development projects are consistent with the subarea plan and that conservation targets are reached. Some flexibility in plan implementation is provided in that adjustments to the MHPA and/or preserve boundaries can be made, without the need to amend the MSCP Plan or subarea plan, if the same or higher biological value of the preserve is achieved and the wildlife agencies concur. The jurisdictions will ensure that habitat management occurs on contributed public lands and on habitat lands acquired with regional funds or dedicated through the development process. The jurisdictions will also participate in establishing a regional funding source, coordinate conservation actions with adjoining jurisdictions, and prepare reports as described in Section 6.

Wildlife Agency Actions to Implement the MSCP

The wildlife agencies, as partners in MSCP implementation, will issue take authorizations for covered species based on the subarea plans and implementing agreements; contribute and manage identified existing federal and state lands and those acquired with federal and state funds; coordinate the biological monitoring program; meet annually with take authorization holders; ensure that other wildlife agency permits/consultations are coordinated and consistent with the

MSCP; provide technical assistance; include MSCP funding in annual budget proposals; and assist jurisdictions and other agencies in developing a regional funding source and in public outreach or education programs.

Institutional Structure for MSCP Implementation

The MSCP Plan does not create a new regional structure or authority. However, the jurisdictions will identify a new or existing structure for establishing a regional funding source and for allocating funds. The participating jurisdictions will also create two coordination committees:

- a Habitat Management Technical Committee to coordinate on technical issues of preserve management and maintenance; and,
- an Implementation Coordinating Committee to coordinate subarea plan implementation and the annual accounting of conservation and take, and to provide a forum for discussing regional funding, public outreach and implementation issues. This committee's meetings will be noticed and open to the public.

Preserve Management and Reporting

The MSCP Plan provides a framework for evaluating land uses for compatibility with the preserve and presents guidelines for preserve management and reporting. Existing legal land uses within and adjacent to the preserve will be allowed to continue.

Guidelines for Land Uses Within the Preserve

The MSCP provides for public recreation and education within the preserve, while conserving biological resources and ensuring that private property rights are respected. Riding and hiking trails and other passive uses are allowed in portions of the preserve as specified in subarea plans. Guidelines are provided for agriculture, urban development, public facilities, mineral extraction, and other uses; however, subarea plans define permitted uses and methods for review and permitting of public and private development within and adjacent to the preserve.

Guidelines for Preserve Management Activities

Each take authorization holder will prepare a habitat management plan (or plans) as part of its subarea plan, or as part of implementing its subarea plan, and will be responsible for management and biological monitoring of its identified public lands, lands obtained as mitigation through fee title or easements, and land acquired for habitat conservation with regional or local funds. Likewise, the federal and state agencies will manage and monitor their present land holdings, as well as those they acquire on behalf of the MSCP. The wildlife agencies will also assume primary responsibility for coordinating the biological monitoring program, described in a separate Biological Monitoring Plan. Private landowners who are third party beneficiaries will be responsible for habitat management of preserve lands they choose to retain in private ownership consistent with the subarea plan and conditions of development permits. No additional fees will be charged to landowners for biological monitoring. General guidelines are provided for fire

management, restoration, predator and exotic species control and other management activities.

Reporting on MSCP Plan Implementation

Tracking MSCP implementation involves two independent process:

- annual accounting of the acreage, type and location of habitat conserved and destroyed (taken) by permitted land uses and other activities; and,
- biological monitoring to determine if the preserve system is meeting conservation goals for covered species.

Each take authorization holder will provide an annual accounting report for the calendar year and submit it to the wildlife agencies and public by February 15. Annual meetings will be held with the wildlife agencies to review subarea plan implementation and to coordinate activities. Every three years, the following will be prepared: 1) an MSCP status report, prepared by the jurisdictions, and accompanied by public hearings; 2) a biological monitoring report prepared by the wildlife agencies; and 3) a report on management activities and priorities prepared by preserve managers.

Financing Habitat Acquisition and Management

The analysis of MSCP costs and alternative funding programs is based on the splitting of acquisition costs between the federal and state governments and local jurisdictions, and the sharing of costs and responsibilities for preserve management and biological monitoring. Funding of the local costs will be carried out on a regional basis, and local elected officials have established the policy that any regional funding for the MSCP will be submitted to the voters for approval.

MSCP Costs

If the MSCP is implemented using a 30-year benefit assessment program, the total cost to the local jurisdictions, residents, and businesses to implement the MSCP is estimated to range from $339 to $411 million in 1996 dollars, based on a range in estimated value of habitat lands to be acquired.

Land Acquisition Costs. The jurisdictions that estimated land acquisition needs also estimated land acquisition costs in their respective jurisdictions, and determined collectively that the cost of purchasing 27,000 acres would range from $262 to $360 million (Table 7-5). One half of the acquisition need will be met by the local jurisdictions, funded through a regional funding source. Based on the jurisdictions' estimates, the average acquisition cost ranges from $9,700 to $13,300 per acre. In comparing these estimates to recent sales prices, about 89% of lands recently sold had prices below the average estimated acquisition cost of the jurisdictions' low estimates ($9,700/acre).

Costs for Preserve Management, Monitoring and Administration. The total costs to the local jurisdictions for preserve management, biological monitoring and program administration over the first 30 years is estimated to be approximately $120 million, with an annual projected cost beyond that time of $4.6 million per year ($3.4 million more than current funding). An endowment could

be created during the 30-year financing program to permanently cover recurring costs, or, as an alternative, a new funding program could be established before the end of the 30-year program.

The participating local jurisdictions will manage, using funds from the regional funding source, approximately 106,120 acres of habitat lands in the preserve at preserve build out, at a cost of $4.2 million per year. Preserve management costs are estimated to range from $37 per acre per year for areas isolated from urban development to $47 per acre per year for areas near urban development. The federal and state governments would manage 50,010 acres at preserve build out, at an estimated cost of $2 million per year.

Biological monitoring costs will vary each year as a result of the type and frequency of monitoring required, with the average annual costs over a 10-year cycle estimated to be $230,400. Annual administration costs (e.g. land acquisition activities, subarea plan implementation, legal support, financial management, reporting and database management, and facilities and equipment) will also vary, reaching a peak of $1.3 million in 2004 during the period of land acquisition, and declining to $255,000 per year at preserve build out.

Financing Plan for Local Jurisdictions

Options for Regional Funding. Local elected officials directed that the MSCP evaluate several options for a regional funding source, including:

- a benefit assessment by a regional park or open space district;
- a habitat maintenance assessment;
- a Mello-Roos community facilities district special tax;
- an ad valorem property tax; and,
- an increase in sales tax.

State law provides different allowable uses for the revenues raised, so more than one source may be needed to fund both acquisition and recurring annual costs.

Timing of Regional Funding. The jurisdictions will begin a process to procure regional funding within 18 months of federal and state approval of the first subarea plan and will place a measure on the ballot and have one or more funding sources in place within an additional 18 months. This schedule may be adjusted if the jurisdictions demonstrate that their good faith efforts require additional time. The MSCP Plan includes a chronology of actions needed to place a measure on the ballot to finance the regional share.

Regional Financing Plan. The MSCP must provide information on the funding that will be made available to implement the plan as proposed. A financing plan has been prepared to illustrate one option available to the local jurisdictions. The jurisdictions will select one or more funding sources and develop a final financing plan to be submitted to the voters for approval.

The example financing plan for local jurisdictions(Table 7-1) is based on a 30-year program of benefit assessments similar to that authorized by AB2007. The analysis of the regional financing

plan assumes that the first 33 years of MSCP implementation is divided into three periods: an initial 3-year period of interim funding; a 20-year period of land acquisition and debt financing under the regional funding program, and; a final phase in which outstanding bonds are repaid and an endowment is completed. The plan assumes that acquisition will be accelerated so that 50% of the target is acquired within 4 years after the start of regional funding, 75% within 10 years, and 90% within 15 years. Under the example plan, the local share of the 30-year program is estimated to be $339 million and $411 million, for the low and high estimates of acquisition cost. The recurring costs of preserve management, monitoring and program administration between 1997 and 2029 are approximately $120 million. The analysis assumes that annual recurring costs after 2029 will be funded from a permanent endowment. Interest and financing costs total $29 million to $48 million (using the low and high acquisition cost estimates).

Financial Impacts on Households and Businesses. The example financing plan would result in average annual assessments, over 30 years, of $20 to $25 per household and $71 to $88 per acre of commercial and industrial property, with the range reflecting the low and high estimates of acquisition costs. In the example financing plan, benefit assessments are assumed to remain constant during the 30-year program. The other funding options in the form of assessments or taxes are assumed to escalate over time. The fiscal impact of a regional funding program on households and businesses can vary substantially, depending on the funding sources selected (see Section 7.2.3).

Federal and State Funding Programs

The federal and state governments will acquire lands using funds from existing and future programs. Between 1989 and 1994, federal programs have funded an average of $30 million per year for habitat conservation in California. Between 1980 and 1994, an average of $270 million per year has been appropriated nationwide to four federal agencies using the federal Land and Water Conservation Fund. Other sources of funding include the National Fish and Wildlife Challenge Grants (with average grants to California of $1.9 million per year from 1989-1994), the Cooperative Endangered Species Conservation Fund (a new initiative, which included $6 million for FY97 citing the NCCP in southern California), USFWS annual appropriations, and state acquisition funds through the Wildlife Conservation Board (averaging $30 million per year from 1989-1994).

Table 3-3

VEGETATION COMMUNITY ACRES TARGETED FOR CONSERVATION WITHIN MULTI-HABITAT PLANNING AREA

Vegetation Communities	Total MSCP Study Area[1] (acres)	Total MHPA (acres)	MHPA Conserved[3] (acres)	% of MSCP Veg. Comm. Conserved
Beach	1202 (*)	491	443	37%

Saltpan	235 (*)	212	212	90%
Southern Foredunes	188 (*)	132	123	65%
Southern Coastal Bluff Scrub	198 (*)	146	137	69%
Coastal Sage Scrub	115,504 (*)	80,596	71,274	62%
Maritime Succulent Scrub	1,803 (*)	899	855	47%
Chaparral	111,335 (*)	60,933	54,945	49%
Southern Maritime Chaparral	1,782 (*)	1,240	1,111	62%
Coastal Sage/Chaparral	3,877 (*)	1,749	1,490	38%
Grassland	28,373 (*)	10,926	9,770	34%
Southern Coastal Saltmarsh	1,870 (*)	1,719	1,719	92%
Freshwater Marsh	815 (*)	497	497	61%
Riparian Forest	1,328 (*)	1,078	1,078	81%
Oak Riparian Forest	5,361 (*)	3,054	3,054	57%
Riparian Woodland	731 (*)	588	588	80%
Riparian Scrub	5,374 (*)	4,286	4,286	80%
Oak Woodland	5,600 (*)	3,150	2,651	47%
Torrey Pine Forest	169 (*)	153	144	85%
Tecate Cypress Forest	5,712 (*)	5,641	5,591	98%
Eucalyptus Woodland	1,633 (*)	364	326	20%
Open Water	5,726 (*)	5,220	5,220	91%
Disturbed Wetlands	928 (*)	738	738	80%
Natural Flood Channel	862 (*)	746	746	87%
Shallow Bay	9,581 (*)	369	369	4%
Deep Bay	4,891 (*)	3	0	0%
Other Habitat[2]	864 (*)	339	300	35%
Subtotal Habitat	***315,940(*)***	***185,266***	***167,667***	53%
Disturbed	23,244 (*)	5,037	2,447	11%
Agriculture	28,547 (*)	4,015	1,803	6%
Subtotal Vacant Land	***367,731***	***194,318***	***171,917***	***47%***
Developed	214,511	0	0	0%
TOTAL	582,243	194,318	171,917	30%

[1] Percent of total MSCP habitats (315,940 acres) is given in parentheses. Asterisk (*) indicates <1%.

[2] Disturbed, Agriculture, and Developed areas with habitat value according to the habitat evaluation map.

[3] MHPA conserved acres have been estimated based on average conservation factors (e.g., 70%, 80%, 90%, etc.) applied to Total MHPA acres, with the following exceptions: (a) all wetland communities are assumed 100% conserved within the MHPA boundary; (b) all Disturbed and Agriculture are assumed 0% conserved within the MHPA boundary for all subareas except City of San Diego; and (c) Developed areas are not conserved in MHPA. Numbers

represent both existing conserved acres and acres targeted for conservation.

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is included in this total. Military lands are included in total study area acreage but are not included in MHPA.

Source: 1996 MSCP GIS database.

Table 4-1

SUMMARY OF PRESERVE ASSEMBLY

	Acres Targeted for Conservation in MHPA
1. Federal and State Governments	
• Manage existing federal and state lands located in MHPA according to MSCP guidelines.	36,510 ac
• Contribute half of 27,000 acres of lands to be acquired by public means (subject to no more than 10% adjustment, upward or downward) through purchase or non-cash transactions, such as land exchanges.[1] Manage and monitor those lands with federal and state funds.	13,500 ac
Total targeted for conservation by federal and state governments.....	50,010 ac
2. Local Jurisdictions	
• Manage currently owned lands located in MHPA according to MSCP guidelines.	45,240 ac
• Acquire privately owned habitat lands in MHPA by purchase or by non-financial methods. Manage and monitor lands acquired under the local program.[1]	13,500 ac
• Assure conservation of natural habitat on privately owned lands and appropriate mitigation in accordance with local land use regulations and environmental review.	See below.
Total targeted for conservation by local jurisdictions....	58,740 ac
3. Private Development	
• Conserve through the development process habitat lands currently in private ownership, and provide offsite mitigation through purchase of privately owned	63,170 ac

habitat lands inside MHPA, in accordance with local land use regulations and environmental review.

Total targeted for conservation by private development	63,170 ac
Total Targeted for Conservation in MHPA.....	**171,920 ac**

Numbers have been rounded.

[1] Public projects also will conserve habitat through offsite mitigation, in addition to acquisition solely for conservation purposes.

Table 4-3

ACQUISITION AND CONSERVATION OF PRIVATE VACANT LANDS BY SUBAREA

Subarea/Segment	**Estimated Acquisition Need[1] (acres)**	**Land Conserved Through the Development Process (acres)**	**Total Private Land Conserved (acres)**
Chula Vista	360[2]	340	700
Poway	3,200[3]	3,170	6,370
San Diego	2,400[4]	12,910	15,310
Santee	350[3]	1,460	1,810
County of San Diego			
Lake Hodges	1,150	3,410	4,560
Metro-Lakeside-	13,000	11,570[5]	35,540
Jamul		10,970[6]	
South County	***4,700***	***20,620***	***25,320***
Total County	18,850	46,570	65,420
Other Subareas	***0***	***560***	***560***
Total All Subareas			
Estimated Total	25,160	65,010	90,170
With Contingency	**27,000**	**63,170**	**90,170**

Source: Cities of Chula Vista, Poway, San Diego, and Santee, and County of San Diego; Onaka Planning & Economics.

Numbers have been rounded.

[1] To be acquired by the federal and state governments and the regional funding program.

[2] Target conservation (75%) of Minor Amendment Areas; an undetermined portion of this amount may be conserved through application of criteria and goals for linkages and corridors.

[3] According to the subarea plans of Poway and Santee, all of these needs may be met through offsite mitigation of public or private projects.

[4] According to the City of San Diego Subarea Plan, an estimated 1,000 acres of this need may be met through offsite mitigation for public or private projects.

[5] Currently conserved in approved or negotiated projects.

[6] To be protected.

Table 7-1

AN EXAMPLE FINANCING PLAN FOR LOCAL JURISDICTIONS USING BENEFIT ASSESSMENT: 30-YEAR PROGRAM COSTS AND REVENUES[1]

	Low Acquisition Cost		High Acquisition Cost	
	1996 $ Million	Percent	1996 $ Million	Percent
Program Costs				
Habitat Acquisition	$131.0	38.7%	$180.0	43.8%
Preserve Management[2]	96.5	28.5%	96.5	23.5%
Biological Monitoring[2]	3.7	1.1%	3.7	0.9%
Program Administration[2]	19.3	5.7%	19.3	4.7%
Deposits to Endowment[3]	59.2	17.5%	64.0	15.6%
Interest and Financing Costs[4]	29.1	8.6%	47.8	11.6%
Total	$338.8	100.0%	$411.3	100.0%
Program Revenues				
Regional Funding Source[1]	$296.6	87.5%	$366.2	89.0%
Continuation of Pre-1996	34.4	10.2%	34.4	8.4%

Open Space Budget[5]				
Local Funding of Interest	5.2	1.5%	7.1	1.7%
Costs on Initial Acquisition[6]				
Interest Revenue	2.6	0.8%	3.6	0.9%
Total	$338.8	100.0%	$411.3	100.0%

Source: Onaka Planning & Economics; Douglas Ford and Associates.

All costs and revenues in millions of 1996 dollars; future values have been discounted.

[1] Costs and revenues shown in this table reflect a 30-year regional funding program based on benefit assessments levied by a regional parks and open space district. Costs assume establishment of an endowment for perpetual maintenance. Costs and revenues differ for other funding sources.

[2] Discounted sum of costs from 1997 to 2029.

[3] Discounted sum of deposits into an assumed endowment fund. The *undiscounted* amount of endowment in 2029, including accumulated interest, is $235 million.

[4] Interest and bond issuance costs.

[5] Discounted sum of continued expenditures by local jurisdictions for the management of open space preserves established prior to 1996.

[6] Discounted sum of interest payments made by local jurisdictions for an assumed interim financing to acquire land prior to the start of a regional funding program.

Table 7-5

ESTIMATED COST OF HABITAT ACQUISITION BY FEDERAL AND STATE GOVERNMENTS AND THE REGIONAL FUNDING PROGRAM[1]

	Estimated Acquisition Need (acres)	**Estimated Cost to the Federal and State Governments and the Regional Funding Program ($ million)**
Chula Vista	360	$3 - $7 million
Poway	3,200	$48 million

San Diego	2,400	$40 - $70 million
Santee	350	$3 million
County of San Diego (unincorporated)	18,850	$149 - $206 million
Total to Be Acquired by the Federal, State, and Local Governments[1]	25,160	$243 - $334 million
With Contingency	**27,000**	**$262 - $360 million**

Source: Cities of Chula Vista, Poway, San Diego, and Santee and the County of San Diego. See also Table 4-3.

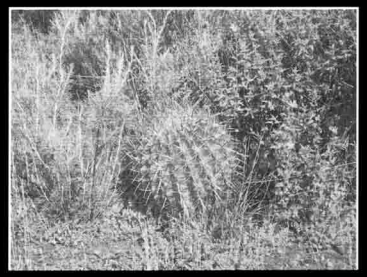
[1] The information contained in this table is intended only to estimate the total cost of lands potentially acquired for the MSCP preserve by the federal, state, and local governments, with local governments using a regional funding program. The amounts and costs for individual jurisdictions are shown for information only. The amounts do not indicate the financing responsibilities of individual jurisdictions, nor do they indicate how regional funds may be allocated to individual local jurisdictions.

Coastal California Gnatcatcher
Polioptila californica californica
Habitat: Coastal sage scrub.

Mariposa Lily
Calochortus weedii var. Weedii
Habitat: Beautiful spring flowering lily, found in coastal sage scrub and chaparral, sometimes found in heavy or rocky soils.

Quino Checkerspot Butterfly
Euphydryas editha quino
Habitat: Grassland and open areas in sage scrub, chaparral, and sparse native woodlands.

Coyote
Canis latrans
Habitat: Coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas provided there is at least some cover present. Found almost anywhere there is a food source.



San Diego Barrel Cactus
Ferocactus viridescens
Habitat: Chaparral, coastal sage scrub, maritime succulent scrub, coastal bluff scrub and valley and foothills grasslands.

Coastal Cactus Wren
Campylorhynchus brunneicapillus
Habitat: Coastal sage scrub and maritime succulent scrub.

San Diego Horned Lizard
Phrynosoma coronatum blainville
Habitat: Coastal sage scrub, chaparral, open oak woodlands and open coniferous forest in mountains.

Western Spadefoot Toad
Scaphiopus hammondi
Habitat: Occurs primarily in grassland situations, but occasional populations

San Diego Black-Tailed Jackrabbit
Lepus californicus bennettii
Habitat: Coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas provided there is at least some scrub cover present.

Hermes Copper Butterfly
Lycaena hermes
Habitat: Coastal sage scrub and chaparral. Favors Redberry, *Rhamnus crocea*, for larval food source.

Northern Red Diamond Rattlesnake
Crotalus ruber ruber
Habitat: Chaparral, woodland, and arid habitats in rocky areas and dense vegetation.

RESPONSES BY KAREN SCARBOROUGH TO ADDITIONAL QUESTIONS FROM SENATOR CHAFEE

Question 1. What ESA changes could help provide State and local governments with the tools necessary for assisting in species recovery?

Response. For California to meet ESA's objectives without severe economic hardships, our best hope is to expand NCCP planning, which would benefit from the continuation of the local assistance grants that have helped fund the NCCP planning efforts over the last 10 years. These grants are a very efficient use of public money, based on the statistics provided by local government plan participants. State and Federal funding has been matched many times over by local government exactions and private land dedications. For example, in San Diego County, the Federal Government contributed $35 million to the NCCP from 1997–2004. In the same period, that funding leveraged dedications of private land valued at $486 million, and the expenditure of $36 million in County general funds. State investment in the same period totaled $80 million. These grants have been administered under strict oversight, generally at the multi-jurisdictional level. All grants are requested yearly and progress reports required.

We applaud the performance analysis the Office of Management and Budget has been preparing, because it will show that these large plans provide economies of scale. Cooperative planning agreements were signed between the United States Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG) and local governments that spell out responsibilities and provide for funding assistance through the Cooperative Endangered Species Fund (Section 6) and other local assistance sources.

Some additional suggested ways for ESA to better support NCCPs are provided in the answer to Senator Chafee's next question.

Question 2. Are there aspects of the NCCP that could be incorporated into legislation to encourage HCP focus on both mitigation and recovery?

Response. Acting under the assumption that the NCCP concept is the best path, there are several congressional actions that could be taken to improve the plans.

First is to codify the "No Surprises" assurances policy. No Surprises was developed for the southern California NCCP pilot program, to motivate landowners and local jurisdictions to participate, and has been very effective. Many landowners have told us that without these assurances, they would not participate in the NCCP process and would pursue other remedies which frankly would not promote the large-scale solutions of the NCCPs.

The second NCCP-based action would be to employ the California ESA's conservation standard for covered species, to ensure that recovery actions become integral to carrying out NCCPs.

A third essential element of NCCP success is the ability to employ offsite mitigation for impacts to species. Since NCCPs are done at a landscape level, mitigation is often the only way to "complete the puzzle" of a preserve plan. We understand that for some regulated industries, offsite mitigation may be detrimental, so its use should be voluntary.

Fourth, the State NCCP program provides a mechanism for utilities to obtain take authorizations for the rare instances when their operations and maintenance activities may lead to impacts to protected species. The Federal Government has an opportunity to improve on the way infrastructure providers can assure safe and reliable service by expanding and codifying a safe harbor policy for water, electric, and natural gas providers. It is likely this change could benefit Southern States recovering from recent hurricanes, and California's efforts to achieve levee stabilization.

Fifth, the use of the low impact HCP approach should be expanded. These special HCPs provide a way for applicants such as local governments, water districts, flood control districts, utilities and Indian tribes to undertake necessary, ongoing maintenance activities. No one should have to mitigate for impacts more than once.

Sixth, we support the elimination of the critical habitat provisions of the ESA in favor of a more useful approach The designation of critical habitat appears to provide no benefit to the NCCP process; in practice, the process diverts scarce USFWS staff and funding away from the much more productive NCCP conservation effort, and can be a disincentive to voluntary participation in NCCPs by private landowners. Since NCCPs inherently address recovery actions, critical habitat and the associated obligatory recovery plans become redundant in NCCP planning areas.

Question 3. With "No Surprises" staying intact, would you support creating a fund to pay for monitoring and adaptive management?

Response. Yes, but should the Senate consider such a fund, its members should realize that the fund could be matched by local or State funds and could apply only

to NCCP-type HCPs. Many confuse the meaning of "No Surprises." It is simply a tool that allows participants to bracket their financial exposure before committing to NCCPs long-term stewardship obligations. Even public utilities with low impact activities benefit from the business planning stability that the "No Surprises" policy provides. The "Changed Circumstances" provisions in today's NCCPs and HCPs protect the CDFG and USFWS from the costs associated with such predictable events like drought, fire, floods and even pestilence.

RESPONSES BY KAREN SCARBOROUGH TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. What steps can be taken to ensure HCPs are meaningful and binding management documents for both State and Federal entities?

Response. Since NCCPs are prepared jointly by State and Federal Governments, they have the same Covered Species list, thereby eliminating the problem cited in the question. The plans are binding under the existing State and Federal legal frameworks and compliance and enforcement have not been an issue. California has a provision in its Fish and Game code that provides that a permit obtained from the U.S. Fish and Wildlife Service to take species also applies to the state. Each State should have a similar reciprocity provision in its regulations.

Question 2. What additional steps can states take to ensure that the State or local entities are adequately involved in the process where any new listing, recovery or delisting decisions are made by the Federal Government? Should the Federal Government be required to seek local input when considering listing, recovery and delisting actions?

Response. Because local governments are usually the holders of the take permits from the California Department of Fish and Game, their involvement is essential to the success of NCCPs. Landowners get their permits to take State or federally listed species as part of their local land use approvals: in effect, "one-stop shopping" is created.

Federal listing, recovery and delisting decisions should always be made in the context of local and State actions that support, are neutral, or jeopardize rare species. The public review process for such actions can be a venue for input. As a result of our NCCPs, California has been able to prevent the listing of species that are already being treated and protected as if they were listed. These species benefit from the recovery actions that are inherent in the NCCPs.

Your question did not specifically address public involvement, but it may be helpful to point out that California's NCCP Act mandates a public involvement process to allow all interested parties to provide input. Public input is also solicited for NCCP-mandated planning agreements, that bind the parties to a defined process. The public process and providing the basis for collaboration is the real secret of NCCP success—the parties start working together early in the planning process, so major issues can be addressed before they can threaten successful completion. For example, in San Diego, it became clear well before the mapping and preserve design process was finalized that an assurances policy was going to be needed to buttress landowner and local government cooperation. From that collaboration, a strong consensus of support emerged and helped lead to the formulation of "No Surprises" assurances.

Question 3. What incentives are needed and how can the ESA be amended to engage small landowners in habitat protection?

Response. This question should be expanded to include all parties affected by habitat protection issues. A number of incentives that lead to beneficial effects for species are available to improve landowner participation, including safe harbors and working landscape policies and, of course, NCCPs. The existing safe harbor policy and nascent working landscape policies should be expanded and better codified to provide assurances that ongoing activities, if conducted according to agreed-upon protocols, are not deleterious to rare species.

As an example of how partnering with landowners can work, we have discovered that modest changes to work practices frequently can have significant beneficial results. For example, rice farmers in the Sacramento Delta, instead of burning chaff yearly, can leave the stubble in the fields, flood them, and thereby provide critical forage and stopover territory for migratory waterfowl. The waterfowl eat the chaff and their waste fertilizes the soil for next year's crop. Air pollution is cut and also water for the rice crop is put to wildlife use.

We also have found that utility rights of way and access roads can serve as important linkages for wildlife preserve planning. By coordinating road grading, tree trim-

ming and other maintenance practices, utilities can eliminate most of the potential negative effects on rare species: in fact, intermittent scheduled maintenance activities, such as on levees and other types of infrastructure, can have the effect of enhancing habitat for rare species like the Quino checkerspot butterfly that require periodic habitat disturbance.

As a way to build support for regional habitat conservation planning, special treatment for low effect, albeit frequent, impacts from infrastructure providers should be included in the tools available to State and local governments. Not only can rights of way be valuable as preserve connections, many times, large capital projects provide opportunities for mitigation packages which can help establish a regional wildlife preserve. For example, the expansion of a water reservoir can lead to the set aside of compensatory habitat in large blocks elsewhere, while allowing jurisdictions to meet their obligations to provide a safe and reliable water supply.

In NCCPs, a public participation process is required and can be used to engage small property owners. Many public meetings and mailers to landowners preceded the adoption of southern California's NCCPs. In those meetings, the benefits of the CDFG and USFWS delegation of permitting authorities were explained and the economies of scale demonstrated. In essence, by combining forces, local governments are able to leverage their land use authority to simplify the Federal and State permitting processes and incorporate the needs of species in local general plans.

Question 4. What role do/should State and local governments have in the decisionmaking process for endangered species protection? Would it produce a better result if the Federal Government worked with local and State interests on a plan that benefits the species and the community while staying consistent with project goals? Should the ESA decisionmaking process be open to the public?

Response. The Federal Government's expertise clearly is needed in ESA decisionmaking, but the NCCP program shows the benefits of Federal, State and local jurisdictions working together to achieve successful large-scale habitat conservation planning. To the extent ESA can be reformed to encourage this sort of cooperative effort, other states may benefit as California has.

Using the best available scientific information should always be the standard. Unfortunately, it doesn't always happen, as the Klamath and other cases of abuse of discretion or scientific method have demonstrated. A more transparent scientific process that draws on State and local expertise can help improve the scientific process, as could the establishment by the Secretary of Interior of clear and enforceable standards for the scientific decisionmaking process to be used with ESA.

The Federal Government can also assist State and local jurisdictions by supporting peer review efforts. When decisions are made without peer review, costly mistakes can occur. However, for the approved plans in southern California, a paid, locally-established scientific advisory panel provided a forum for careful scrutiny of the conservation planning principles under consideration. The scientists on the panel were drawn from regional universities and were known for their expertise. Having a panel of professional equals minimized the ability of anyone agenda to sway a discussion. The scientific bases of the NCCP in southern California have not been challenged.

The scientific underpinning of NCCPs is ongoing. Monitoring programs are carried out under strict protocols that monitor habitat health, species populations and other factors, so management practices can be adjusted to improve outcomes. Local governments and arguably, State governments, do not have funding available for such rigorous scientific oversight. The Federal Government may wish to consider supporting a locally-generated scientific review process in return for a jurisdictions, participation in NCCP-type landscape level habitat conservation plans.

Qualified local participants should have a say in listing decisions and all information used in making such decisions needs to be available for review by any and all interested parties. One reason the NCCPs are successful is the transparency of the program.

STATEMENT OF BILL OWENS, GOVERNOR OF COLORADO AND DAVE FREUDENTHAL, GOVERNOR OF WYOMING ON BEHALF OF THE WESTERN GOVERNORS' ASSOCIATION

Chairman Chafee, Senator Clinton, Members of the Subcommittee. We present this written testimony today on behalf of the Western Governors' Association (WGA). The Western Governors' Association is a bipartisan, independent, nonprofit organization representing the governors of 18 states and three U.S. Flag islands in the Pacific. Through our Association, the Western Governors identify and address key policy and governance issues in natural resources, the environment, human services, economic development, international relations and public management. We

appreciate the opportunity to share with you the Western Governors' perspectives on the Endangered Species Act (ESA).

Western Governors commend you for taking up this very important, but admittedly difficult issue. Our states and communities must deal with the impacts of proposals to list species and management decisions made under the ESA on a daily basis. That is why the Western Governors have long advocated that Congress review and update the Act as well as provide sustained levels of funding for the program. We strongly believe in the principles and goals of the ESA. The intent of the ESA remains a laudable goal. Yet the tools authorized by the current Act have become outdated and are incomplete. We, therefore, appreciate the opportunity to work with the Committee to help you build a bipartisan consensus for a few targeted, commonsense enhancements to the Act.

Let us reiterate that last point—we strongly believe that the ESA can only be reauthorized through legislation developed in a consensus fashion that results in broad bipartisan support. Our predecessors, and in some cases our predecessors' predecessors recognized this simple fact in the early 1990s when the Western Governor's Association (WGA) and others embarked on a collaborative process to find common ground on this issue among a diverse set of stakeholders. The debate was so acrimonious in the beginning that it had to be temporarily called off. Soon however the parties were back at the table and negotiations began to bear fruit. Senators Dirk Kempthorne and John Chafee embraced this process and introduced comprehensive reauthorization legislation (S. 1180) based upon these proposals. At the time, WGA strongly supported S. 1180 and actively sought its passage.

Reauthorization of the ESA continues to be a high priority of the Western Governors. In continuation of the collaborative efforts of the past the WGA hosted an Endangered Species Act Summit in December 2004 at which we brought together a very diverse set of stakeholders to discuss ways in which the Act could be improved. We quickly realized that finding common ground on a comprehensive reauthorization of the Act would be difficult and elusive. However, it also became fairly obvious that we had the beginnings of a consensus around four broad principles which, with some further discussion and effort, might form the basis of a deal to improve species conservation. We submitted these proposals in a letter to the Committee this past February. The four proposals were:

• *Require recovery goals for listed species.*—Western Governors believe that recovery and, ultimately delisting of species covered by the ESA should be the highest priority of the Act. Federal funding for ESA activities should be prioritized to reflect this priority. We believe that the best way to accomplish this goal is to require the Fish and Wildlife Service and NOAA-Fisheries to publish quantifiable recovery goals, in consultation with the affected state(s), for threatened or endangered species at the time of the listing decision to provide for objective recovery criteria that both State and Federal agencies may work toward in the recovery process. In cases where quantification of recovery goals is not initially feasible, the services should be required to publish a plan, including a timeline, describing the steps the Federal agencies will take in identifying measurable goals.

• *Enhance the role of State governments in recovering species.*—The Endangered Species Act can effectively be implemented only through a full partnership between the states and the Federal Government. One way to accomplish this partnership would be to authorize the delegation of authority for the development of conservation plans on a voluntary basis to states that choose to accept such delegation, and agree with the appropriate Secretary(s) to perform them in accordance with specified standards. Authority should also be given to the appropriate Secretary to provide grants for the additional administrative costs to the state.

• *Ensure the use of good science in ESA decisions.*—Given the broad implications that may arise when ESA actions are taken, significant decisions must be made using objective, peer-reviewed science. Peer review of listing, recovery and de-listing decisions by acknowledged independent experts is important to ensure the public that decisions are well-reasoned and scientifically based. Peer review committees should be agreed upon by the Fish and Wildlife Service, NOAA-Fisheries and the state. State agencies also have expertise and other institutional resources such. as mapping capabilities, biological inventories and other important data that should be employed in developing endangered species listing and recovery decisions.

• *Incentives for conservation are essential.*—Western Governors believe that providing economic incentives for landowners to participate in conservation efforts is likely to achieve more efficient and cost-effective results and may lead to more rapid conservation.

These are, admittedly, limited and modest goals. Certainly, there are other potential improvements to the Act that Congress could and should consider. However, the Western Governors not only believe these four to be the most critical, but we also

strongly believe them to be achievable. As a nation, we need to change the paradigm we are currently under and we need to do it soon. The Act has become too contentious; the parties too litigious; there is too little collaboration and trust between stakeholders; and conservation efforts have suffered as a result. Public confidence can be restored only through successful, constructive actions that result in the recovery of species. In other words we believe that, if adopted, these four principles could be the proverbial mustard seed that paves the way for possible future enhancements to the Act that build upon that success.

ENHANCING THE STATE ROLE IN SPECIES CONSERVATION

Preventative conservation is at the heart of our recommendations and that is why our states are actively engaged in developing State and multiple State conservation plans to restore declining species like the sage grouse before they need the protections of the Act. States have broad trustee and police powers over fish and wildlife, including those species found on Federal lands within their borders. States also have significant scientific expertise and resources at our disposal that could be better utilized to meet our common species conservation goals.

The ESA is premised on a strong Federal-State partnership, but Congress and the agencies need to provide expanded and more meaningful opportunities for states to comment, participate, or take the lead on many of the decisions required under the Act. In addition, the Federal agencies responsible for enforcing the ESA are straining under the weight of an ever increasing number of listed species, and they are failing to recover species to the point at which they can be de-listed. Unless massive new resources are allocated to them, soon the Federal agencies will be so overwhelmed as to be completely ineffective (some might argue that we have already reached that point). Reaching out to states and other stakeholders in a collaborative and cooperative manner is possibly the only alternative to dramatically expanding the size and resources available to those agencies. It follows, therefore, that the Act can be effectively implemented only through a full partnership between the states and the Federal Government. We stand ready, willing and able to take on a greater role and responsibility for this effort. We are committed to success and expect to be held accountable, but we must be given the proper tools and resources to do the job.

FOCUS ON THE RECOVERY OF SPECIES

We acknowledge that the Act has been relatively successful in keeping species from going extinct. That in itself is a laudable achievement. However, staving off total disaster is simply not enough. It may be, as Winston Churchill once remarked "the end of the beginning" but it is not nearly "the beginning of the end." The central focus of the Act must be the recovery of species. We believe that the best way to achieve this goal is to require the Fish and Wildlife Service and NOAA-Fisheries to publish quantifiable recovery goals at the time of the listing decision. This would give the Federal agencies, states and other stakeholders objective recovery criteria that all may work towards during the recovery process. We fully appreciate the fact that our understanding of a particular species and its recovery needs may change over time. However, it is unrealistic to expect states and private entities to engage in good faith collaborative conservation efforts if the Federal agencies are continually and unexpectedly raising the bar on them. A trusting and mutually beneficial relationship must be established before collaborative conservation efforts can truly bear fruit. Therefore, we must give Federal agencies, states and private landowners a relatively hard recovery target in order to ensure their active participation and to focus their efforts.

USE OF SCIENCE

Bad decisions undermine public confidence in, and support for the Act. They also direct resources away from other more urgent conservation efforts. That is why we support peer review of the most critical decisions required by the Act. Peer review is standard practice in academia, even before publication of a scholarly article in the most obscure journal. We fail to see why some oppose even a cursory attempt to seek peer review before major Federal decisions, which often have profound effects on land use and other economic activities, are made. We believe that peer review, undertaken in an expeditious and transparent manner, would help enhance public confidence in the process and will better ensure that resources are directed to those species that have the greatest need. However, we also understand that it may not be necessary to pass legislation requiring a formal peer review process. If this process can be enhanced through rulemaking or another administrative means we would be supportive of that effort.

LANDOWNER INCENTIVES AND FUNDING

Lastly, we cannot overlook the importance of private landowners in the cause of species conservation and protection. The good news is that numerous private landowners across the country are already engaged in voluntary conservation activities. In exchange for their trust and commitment we must ensure that they receive the economic assistance and incentives they need to continue these important efforts. Congress can play an enormous role in this matter by properly funding the various conservation programs, like those contained in the Farm bill, for instance; and ensuring that these programs are administered smoothly and reliably. Other incentives Congress may want to address further is to encourage the use of conservation easements. Or, perhaps Congress may choose to examine ways to provide regulatory certainty to landowners who engage in voluntary conservation activities. While economic assistance is needed and greatly appreciated, the most important incentive that private landowners desire in exchange for willingly participating in conservation efforts is the removal of, or prevention of land use restrictions.

CONCLUSION

In closing, Mr. Chairman and Ranking Member, the Western Governors appreciate having the opportunity to present this testimony. We firmly believe in the goals of the ESA, and appreciate the opportunity to work with the Committee to help you build a bipartisan consensus for a few targeted, common-sense enhancements to the Act.

THE STATE OF WYOMING, OFFICE OF THE GOVERNOR, STATE CAPITOL,
Cheyenne, WY, September 20, 2005.

Senator LINCOLN CHAFEE, Chairman,
Senator HILLARY RODHAM CLINTON,
Senate Fisheries, Wildlife and Water Subcommittee,
Senate Environment and Public Works Committee,
Washington, DC.

DEAR HON. SUBCOMMITTEE: In addition to the support the State of Wyoming lends to the perspectives presented today by the Western Governor's Association regarding potential reform of the Endangered Species Act (ESA), I would like to take this opportunity to propose a separate and distinct approach to ESA reform.

While I am generally supportive of the statutory reform efforts currently underway in Congress, together with those outlined in the Western Governor's Association testimony, I believe that there may be a solution that would not require Congress to tread on the very controversial ground of amending the ESA. To this end, I believe that the door is open to make some relatively simple regulatory and budgetary changes that could have a significant and immediate impact on the administration of the ESA.

Following please find a descriptive list of what I feel are a few very attainable and practical regulatory and budgetary reforms. These reforms are focused on species security, local conservation, habitat preservation and rehabilitation, the need for adequate funding, impartial peer review and better cooperation between the parties in interest.

LISTINGS MUST BE DRAWN IN SUCH A WAY SO AS TO ACCOUNT FOR LOCAL CONSERVATION

Currently an endangered or threatened species listing can apply to a species, subspecies or a Distinct Population Segment (DPS). While species and subspecies are defined rather narrowly through science, the DPS is a regulatorily defined designation. To make the ESA operate more effectively, the DPS policy should be re-crafted to consider geopolitical lines in listing and de-listing decisions. Simply put, if a species is eligible for listing in most of its range, but Oregon for example, can show that the species is doing well and is secure in Oregon because of regulations, habitat conditions or otherwise, Oregon should not be looped into the listing. Similarly, and by way of another example, if Florida can show, through the de-listing process, that the species no longer qualifies as an endangered or threatened species in Florida, at a minimum, the Florida population should no longer be subject to ESA constraints, while the larger population might remain listed. Tautologically, if the entire population does not warrant ESA protection, the entire population should not receive Federal protection.

As a possible procedural consideration during the comment period on listing and de-listing decisions, the states could be given the opportunity to request that the

ESA listing factors be evaluated within each "requesting state" to determine the applicability of each factor to that population of the species residing within that state's boundaries (no smaller subdivision of land or government should be considered). If the listing factors are not met within a state's geopolitical border, the ESA's intent of preserving species is already being met in that state, and a listing in that State would be precluded or discontinued (in the case of an already listed population). Regardless, incentives should be built in to encourage states not part of the listing to conserve the species and its habitat.

By finally recognizing that the "species" within each State are "distinct" as a function of where they happen to be located on a map (different states have differing degrees of habitat functionality, regulatory protections, etc.), science, and for that matter reality, is ultimately served. In the end, the states are the laboratories of species management and they should be given every benefit, opportunity and incentive to demonstrate the effectiveness of their individual efforts—as it is their individual effort that will protect the species.

HABITAT AND HABITAT FUNCTION ARE CRITICAL IN THE PROTECTION OF ANY SPECIES, NO LESS ENDANGERED SPECIES

Habitat degradation is currently recognized as the leading cause of species loss in the world. With the importance of the vast expanses of Federal land to species viability, particularly in the West, and the current state of Federal lands and the notion that we could do more to bolster the quality of such lands, habitat improvement is a necessary consideration. Thus, a minute portion of Federal mineral royalties, collected from Federal lands within each state, should be set aside to conserve and improve habitats on Federal lands. In my view, the funds should be allocated roughly as follows: Thirty percent to the State where the royalty was generated, 40 percent to be divided—pro rata—based on total Federal land ownership and 30 percent to be divided among all States evenly. While not purely regulatory, this effort would not require ESA statutory reform and would have a lasting impact on the landscape for all species.

WITHOUT FUNDING, WE ESSENTIALLY ASK THE SERVICE TO DO MORE WITH LESS

As states, we remain frustrated by the lack of action on petitions, the lack of science, the lack of response to our inquiries and the lack of true recovery efforts. We also rail against the lack of Federal dollars to help recover those species that the Federal Government lists within our boundaries. One simple catalyst to move the process along is money, as money is the main lever available to control the power of the agencies charged with enforcing the ESA.

President Bush separated the Services' funding into particular streams. This separation has given some control to those that appropriate funds to define the course and priorities of the Services. In short, Congress can allocate different funds to each account to effectuate a particular end. Wyoming's view is that the bulk of funds should be allocated to the recovery and de-listing budgets. Certainly, the listing of truly endangered and threatened species should not be ignored. However, pressure must be brought to finally and effectively recover and de-list our existing listed species. The three decade history of grizzly bears and bald eagles indicates as much.

Additionally, as our effort with sage grouse illustrated, states can help deal with species of concern prior to invoking the full authority of ESA. Truly, State involvement is the most efficient way of achieving the stated intent of ESA. The old wives tale of: "an ounce of prevention is worth a pound of cure" is instructive. Prevention is much cheaper, more effective, and an easier conservation path than the route of listing/delisting, as is evidenced by the difference between sage grouse and grizzlies in Wyoming. A mechanism for providing prevention funding is available under section 10 of ESA, and simply awaits proper funding and administration. Funding incentives can be used to entice private landowners (who own a great deal of the habitat) to affect proactive conservation, instead of the current method of listing and then trying to force them, through regulation, to do something beneficial, which only leads to backlash and distrust.

PEER REVIEW

A very recent and stinging reminder of ESA difficulties is associated with scientific peer review. The problem with the Preble's meadow jumping mouse was not that the peer review was done, but that it was done by interested parties with a vested interest in the listing process. Current guidance strongly discourages interested persons from participating in peer review. Regardless, in the case of the Preble's, the Colorado Division of Wildlife, in conjunction with the Service, ap-

pointed a peer review panel that was by no means impartial to review the science that was ultimately relied upon to arrive at a decision to de-list the mouse.

Peer review in the ESA is functionally a tiered system. There is the first line of Service-selected review and a second line which consists of a very expensive and time consuming National Academy of Sciences review. The problem with the first tier is that there is no sure way to safeguard it from conflicts of interest, bias, etc. The problem with the second is cost and time. Wyoming's view is that the initial peer review group be selected, two each, by (1) the FWS director; and (2) the Game and Fish Director(s) from the states affected by the decision. Regardless, the selection of peer reviewers should neither be absolutely discretionary nor, as is the case now, subject to a singular point of discretion.

I would further suggest this peer review system be used for all major decisions for ESA (listings, delistings, 4(d) rules, recovery planning). This is only reasonable, as states and particularly State wildlife agencies have more management expertise and are relied on to implement the action items resulting from these decisions. It only makes sense that State managers should lend their expertise in planning those action items that they are expected to implement.

PERSONNEL CONCERNS

A real ESA problem lies with the mid-level bureaucrat that, for all intents and purposes, can derail the process of listing or de-listing of a species. While this may be a necessary outcrop of specialization, the Services must ensure that careers are not perpetuated by a lack of action or movement that, in the end, has a negative effect on true species recovery. In a related area of concern, the Services must also guard against what essentially rises to the level of doctoring a record to meet individual missions, as opposed to that of the ESA—species recovery and preservation. To remedy this concern, the States should be given the opportunity to directly participate in and oversee the day-to-day operations of the Services in achieving recovery, listings and de-listings, in a system akin to Cooperating Agency Status. Such could be accomplished with a Director's Order at this juncture. By opening the doors and files of the Services to the truth-checking of states, the record can be protected from undue insertions and the bureaucrat's motives can be checked.

In my view, true movement and true reform of an issue occur in the margins. While certain laws are intrinsically flawed, I do not believe the ESA to be one of them. Each of us can honestly agree today, as Congress did in 1973, that protecting endangered and threatened plants and animals is a salutary public purpose. The ESA, in and of itself, does little to detract from this point of commonality, Unfortunately, the ESA has taken the singular form of a hammer, with only nails in sight. For sure, the ESA has become a hammer to control land use patterns, attract funding and propel egos. While harsh, reality must find our current discussion at some point. By recognizing that land use control, funding and egos motivate many ESA processes, we can start to get to the true heart of reform.

Thank you for considering my thoughts. Please accept my best wishes in your endeavors to bring a reasoned dialogue, and hopefully reform, to a very important issue to the people of Wyoming and the United States.

Best regards,

DAVE FREUDENTHAL,
Governor.

○