

THE NATIONAL BIOLOGICAL SURVEY ACT OF 1993

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT
AND NATURAL RESOURCES

OF THE

COMMITTEE ON
MERCHANT MARINE AND FISHERIES
HOUSE OF REPRESENTATIVES

AND THE

SUBCOMMITTEE ON NATIONAL PARKS,
FORESTS, AND PUBLIC LANDS

OF THE

COMMITTEE ON
NATURAL RESOURCES
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

H.R. 1845

**A BILL TO ESTABLISH THE BIOLOGICAL SURVEY IN
THE DEPARTMENT OF THE INTERIOR**

JULY 15, 1993

ERRATA SHEET

The title page of the Joint Hearing before the Subcommittee on Environment and Natural Resources of the Committee on Merchant Marine and Fisheries and the Subcommittee on National Parks, Forests and Public Lands of the Committee on Natural Resources, held July 15, 1993, on *H.R. 1845, a Bill to Establish the Biological Survey in the Department of the Interior*, omitted the Serial Number of the Committee on Natural Resources.

The hearing of *The National Biological Survey Act of 1993* is the Committee on Natural Resources' Serial Number 103-38.

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THE NATIONAL BIOLOGICAL SURVEY ACT OF 1993

THURSDAY, JULY 15, 1993

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES, COMMITTEE ON MERCHANT MARINE AND FISHERIES, JOINT WITH SUBCOMMITTEE ON NATIONAL PARKS, FORESTS AND PUBLIC LANDS, COMMITTEE ON NATURAL RESOURCES,

Washington, DC.

The joint subcommittees met, pursuant to call, at 10:06 a.m., in room 1334, Longworth House Office Building, Hon. Gerry E. Studds [Chairman of the Subcommittee on Environment and Natural Resources] and Hon. Bruce F. Vento [Chairman of the Subcommittee on National Parks, Forests, and Public Lands], presiding.

Present: Representatives Studds, Hochbrueckner, Pallone, Unsoeld, Furse, Hamburg, Eshoo, Saxton, Young, Gilchrest, Taylor, Vento, DeFazio, LaRocco, Hansen, Smith, and Dickey.

Staff Present: Subcommittee on Environment and Natural Resources; Jeffrey Pike, Staff Director; Mary J. Fusco Kitsos, Chief Clerk, Administrator; Leigh Ann Clayton, Legislative Clerk; Thomas R. Kitsos, Senior Policy Analyst; Daniel M. Ashe, Senior Professional Staff; Gina DeFerrari, Professional Staff; Suzanne J. Waldron, Press Secretary; Lesli Gray, Research Assistant; Brita D. Otteson, Sea Grant Fellow; Harry F. Burroughs, Minority Staff Director; Cynthia M. Wilkinson, Minority Chief Counsel; Thomas O. Melius, Minority Professional Staff; Laurel Bryant, Minority Professional Staff; JayneAnne Rex, Minority Professional Staff; Rod Moore, Minority Professional Staff; Margherita Woods, Staff Assistant. Subcommittee on National Parks, Forests, and Public Lands: Amy Holley, Majority Professional Staff; Gwyn Fletcher, Staff Assistant; and Tonya Mitchem, Staff Assistant.

STATEMENT OF THE HON. GERRY E. STUDDS, A U.S. REPRESENTATIVE FROM MASSACHUSETTS, AND CHAIRMAN, SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES

Mr. STUDDS. The Committees will come to order.

This is technically a joint hearing of the Subcommittee on Environment and Natural Resources and the Subcommittee on National Parks, Forests, and Public Lands. And may I just observe that it may be the first such joint hearing on a matter that is clearly in the jurisdiction of both committees but has not yet technically been referred to both. It reflects the degree of cooperation between the committees involved. We are very, very pleased with that.

We welcome with great pride one of the genuine stars of this administration and Chairman Vento and I are going to try to encourage our colleagues to forego opening statements of any length because the Secretary does have a tight schedule.

We are here to consider H.R. 1845, a bill to implement the initiative of Secretary Babbitt to establish a National Biological Survey within his Department. It is an innovative and, I think, long overdue and highly imaginative idea and that will constitute my opening statement out of respect for the Secretary.

[The statement of Mr. Studds follows:]

**STATEMENT OF HON. GERRY E. STUDDS, A U.S. REPRESENTATIVE FROM MASSACHUSETTS,
AND CHAIRMAN, SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES**

For over 200 years, Americans have been clearing land for farms and timber, constructing huge cities, laying railroads, and building ribbons of highways all in the name of progress. We have become the most powerful nation in the world and developed the ability to transform our natural landscapes on a scale hitherto unknown. In the process, we have driven many species to extinction. Many more are on the brink.

In 1973, we established a safety net for our biological resources—the Endangered Species Act. This law has worked well to prevent the extinction of many species, but the safety net is beginning to clog. As of June 1992, 1,245 species of plants and animals had been listed as endangered or threatened. The Federal Government is under court order to list another 450 species within 4 years.

Some might say this points to the need to change the Endangered Species Act. They could be wrong. When children are not receiving an adequate education, we don't lower our standards. When we see poverty growing, we don't redefine it away. When we face epidemics, we don't invest in cemeteries. The same is true with species protection. We need to tackle this problem, not dodge it. Because if we don't, our rich biological resources will disappear before our eyes. We finally have a President and a Secretary of the Interior who realize this and bring constructive contributions to the debate. One such contribution is Secretary Babbitt's proposal to reorganize his department's biological research and survey activities into a new agency—the National Biological Survey.

Today's hearing will focus on legislation to establish the Survey. This agency will be charged with assessing and inventorying the biological resources of the United States and developing information and methods necessary to protect and manage ecosystems. It will act as an early warning system, providing crucial information that the Secretary of the Interior needs to anticipate, avoid, and resolve conflicts in the implementation of the Endangered Species Act and other fisheries and wildlife conservation laws.

I wholeheartedly support Secretary Babbitt's initiative, and I hope that today's hearing will provide the ground work we need to proceed promptly toward enactment of H.R. 1845.

Mr. STUDDS. Chairman Vento.

**STATEMENT OF THE HON. BRUCE F. VENTO, A U.S.
REPRESENTATIVE FROM MINNESOTA**

Mr. VENTO. Thank you, Mr. Chairman. Thank you for your outstanding cooperation and that of other Members.

The biological survey, the National Biological Survey concept that has been advanced with the Secretary as its catalyst is an intriguing idea. Certainly such reorganization will and should result in savings efficiency and the delivery of more timely and accurate information to the bureaus that use and need such scientific information.

Today we need a significant amount of biological science. Tomorrow we will need much more. And the biological sciences are changing from field labs to sophisticated repositories that must

properly interface with the field and indeed that is one of the concerns. One of the primary concerns is that the scientific research program, Department-wide, is that it not further disassociate with research and what the primary purpose is on the ground.

I have a number of questions and concerns, but broadly, I agree with this concept. It think it is where we are going. I think the time is ripe and we need to do it. I am concerned about especially without the Department—I don't want to add problems, you don't solve problems by expanding them—but clearly we need to accurately discuss and relate to the cooperative agreements between the many departments within the administration, including of course the Department of Agriculture, the Department of Commerce, the Department of Defense, the soon to be developed Department of EPA and in and many others that need to properly interface so we get the proper benefit from this and not get held up with overly detailed descriptions of what has to be done. I think that we need to have an accurate or a sufficient amount of flexibility and we need not to get hung up on which software program gets selected. I hope not.

So with that said, Mr. Chairman, I look forward to the Secretary's testimony and that of the witnesses. I have read it all. I may have to depart today as we have the Interior appropriation bill on the Floor and I have been very involved with it.

Thank you, Mr. Chairman.

Mr. STUDDS. The gentleman from New Jersey.

STATEMENT OF HON. H. JAMES SAXTON, A U.S. REPRESENTATIVE FROM NEW JERSEY, AND RANKING MINORITY MEMBER, SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES

Mr. SAXTON. Thank you, Mr. Chairman. I would like to welcome the Secretary here this morning for what I think is a very important issue. The mission of the NBS, as has been proposed, is critical for the future of national resource management policies all across our country and it is time, in my view, that the resource management people take a more long-term ecosystem approach to resource management.

Mr. Chairman, if I may just submit my statement for the record at this point along with Mr. Fields and just mention one other item that is not in my statement.

Two years ago, the Congress appropriated \$400,000 which went to the National Academy of Sciences to do research on how we can better use research and science in approaching the issues that we all believe are important in terms of management of our natural resources.

Just this week, I received a copy of the results of that, a publication which was published recently by the National Academy of Sciences, National Academy Press, and is entitled "Research to Protect, Restore, and Manage the Environment." It is the result of the \$400,000 which we appropriated to the Academy and was conducted under the leadership of Dr. Dale Corsin, the former president of Cornell University.

They have come out with some very interesting conclusions which I commend to everybody's consideration and reading. And so

I will certainly see, Mr. Secretary, that you get a copy of this before you leave today.

It speaks to the way that we might better organize the various departments in the administration and on the Federal level to better take into consideration research as we move forward with the National Biological Survey and other important scientific issues that relate to environmental management and protection.

I thank you, Mr. Chairman.

[The statement of Mr. Saxton follows:]

STATEMENT OF HON. H. JAMES SAXTON, A U.S. REPRESENTATIVE FROM NEW JERSEY, AND RANKING MINORITY MEMBER, SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES

Thank you, Mr. Chairman, for holding this joint hearing to examine the proposal for the National Biological Survey (NBS).

The mission of the NBS, as proposed, is proactive and critical for the future of natural resource management policies in this country. It is time that resource management take a more long-term, ecosystem approach, and that our science look more comprehensively at the status and trends of natural systems and what causes declines in their health and abundance.

For the same reasons that Secretary Babbitt has proposed the establishment of the NBS—the need to have science politically separated from the responsibilities of management and regulation—I initiated a proposal for a national institute for the environment.

The NIE is conceived to have much the same purpose as the proposed NBS by complementing the science activities of Federal agencies and providing a longer-term, problem-oriented focus. I believe the NIE would, at the very least, complement the NBS by providing funding for the necessary extramural research in order to ensure the competition and peer review so severely lacking in government science. Perhaps the Secretary and I can speak more in depth on this subject at a later time.

Although I support the mission of the NBS, I am a bit concerned about what appears to be a duplication of activities currently being performed by the States in cooperation with nonprofit organizations and the private sector—namely, natural heritage programs. I think we need to carefully deliberate what could unintentionally bureaucratize and undermine the vast resources of private sector involvement with natural resource management.

In addition, I am unclear as to how the NBS proposal relates to the already existing GAP analysis program, as well as its relationship to the cooperative research units and State research agendas.

I look forward to hearing from the witnesses today on these concerns and other aspects of the NBS proposal.

Thank you, Mr. Chairman.

[The statement of Mr. Fields follows:]

STATEMENT OF HON. JACK FIELDS, A U.S. REPRESENTATIVE FROM TEXAS, AND RANKING MINORITY MEMBER, COMMITTEE ON MERCHANT MARINE AND FISHERIES

Mr. Chairman, I appreciate the opportunity to present a statement today concerning the proposed formation of the National Biological Survey in the Department of the Interior. The Department of the Interior presently has eight bureaus and, under this proposal, each bureau's research function would be separated from management and consolidated into a new bureau. I am told that the Survey will improve the quality, productivity, and timeliness of research, reduce its cost, and better serve the public. However, I question what evidence exists to support or rebut this hypothesis.

I understand that Secretary Babbitt has asked the National Academy of Science to review this reorganization and the creation of a new National Biological Survey, but their report is not scheduled to be available until later this year.

Mr. Chairman, I have some concerns about the proposed National Biological Survey. The first involves the relationship the Survey will have with the 41 fish and wildlife research units which currently operate in cooperation with host universities and State fish and wildlife agencies. I'm uncertain what impact this change may have on these units. Second, it is unclear how the inventorying, monitoring, and in-

formation transfer activities envisioned by the National Biological Survey will relate to the activities and programs currently being conducted by State fish and wildlife agencies.

Therefore, Mr. Chairman, the bill you have introduced, H.R. 1845, is a good vehicle to allow the Administration, State fish and wildlife agencies, and outside conservation organizations to present their views and concerns and, hopefully, we will all become better educated through this process.

Thank you, Mr. Chairman.

Mr. STUDDS. The distinguished ranking member of the Subcommittee on National Parks, Forests, and Public Lands, Mr. Hansen.

**STATEMENT OF THE HON. JAMES V. HANSEN, A U.S.
REPRESENTATIVE FROM UTAH**

Mr. HANSEN. Thank you, Mr. Chairman. Thank you for holding this hearing today and I welcome Secretary Babbitt and other witnesses. Although this same legislation is currently pending on the Floor right now as part of the Interior appropriations, I look forward to exploring the National Biological Survey before this Committee where I believe it belongs.

As you might expect, I have serious concerns about the new initiatives and what the National Biological Survey holds in store for this country's property owners in States and counties.

I hope today's hearing helps to flush out some of the details which, in my mind, are very sketchy at this point. One of the stated purposes of the National Biological Survey is to inventory the Nation's biological resources. I want this Committee to remember at least 60 percent of the land in this country is owned by private landowners.

If the Secretary simply wants to inventory the biological resources of Federal lands, I think, to a great extent, this has been done. However, if the Secretary is attempting to inventory the entire Nation's biological resources, that is a very different matter.

I can guarantee you that, given the experience of my constituents with the desert tortoise, the Mexican spotted owl, and other wetlands, there is no way, save the law, that some biologist from the National Biological Survey will be allowed to snoop around their land. There are no guarantees for property owners that I can see, and that makes them very nervous and I look forward to hearing some comment regarding that.

I have other concerns as to the wisdom of removing research from management. I am not convinced that there is a need for independent biologists and I am skeptical that the Biological Survey will allow independent managers to solve site-specific problems.

I guess I could list a few more but I look forward to hearing from the witnesses and maybe answering some of these questions as to me that is a red flag at this point.

Thank you, Mr. Chairman.

Mr. STUDDS. I thank the gentleman. Are there statements on this side?

The gentlewoman from Washington.

**STATEMENT OF THE HON. JOLENE UNSOELD, A U.S.
REPRESENTATIVE FROM WASHINGTON**

Mrs. UNSOELD. Mr. Chairman, I would just welcome you, Mr. Secretary and I yield the balance of my time to you.

Mr. STUDDS. Any other opening statements of Members? If not, Mr. Secretary—the gentleman from North Carolina.

**STATEMENT OF THE HON. CHARLES H. TAYLOR, A U.S.
REPRESENTATIVE FROM NORTH CAROLINA**

Mr. TAYLOR. Mr. Chairman, thank you very much. I know when Mr. Babbitt was chairman of the League of Conservation Voters, often the information that was put out in its surveys was falsified and not entirely representative of what members were doing.

I recognize the need in many cases, for environmental organizations to be false and extreme in order to raise funds to do the things necessary, but I hope now that we are in a government position and that so much of the national interest depends upon the accuracy and candidness of the surveys that this biological survey will be sound and well thought out and represent the true facts of what is found in the area. We rely very much on the Secretary to do that.

Mr. STUDDS. Are there any other opening accolades? I was about to say you are lucky, Mr. Secretary. Anyway, you are here. Welcome, in all our diverse ways of saying that. You are on.

STATEMENT OF BRUCE BABBITT, SECRETARY OF INTERIOR

Secretary BABBITT. Mr. Studds, Mr. Vento, the Committee members. It is a pleasure to be back before you this morning. What I would like to do very briefly is make a few remarks relating to the text of the bill and share with you some thoughts that I have and some experiences I have had in the last couple of months since this concept was first advanced.

I think there are many, many purposes for expanding and coordinating our biological research in the Interior Department. It relates to migratory birds, to the regulation of waterfowl hunting seasons, to fisheries, to habitat management, wildlife refuges, parks.

And indeed this entire effort could be amply justified just simply by the management imperative of getting good science across jurisdictional boundaries so that we are not running one operation within a national park to do an inventory or study which stops at the fence of the national park only to move then to a separate operation in the Bureau of Land Management, possibly to be done inconsistently, then looking across the fence at the BLM piece of the map to a national wildlife refuge where yet another set of people are working on a problem and then looking across that fence down into a river drainage of where the Bureau of Reclamation is running a separate biological assessment for whatever purpose.

But beyond the simple management issues I think lies a very urgent issue, and that is the obligations imposed upon us by the Endangered Species Act. As I have said before, it is my impression that these train wrecks that are being created around the country

as a result of the Endangered Species Act make most dramatically the case for this biological survey.

The train wrecks in my judgment are unnecessary. They have arisen because we have been passive, awaited until the 11th hour when the species is at the brink of extinction tumbling toward oblivion in which the management options on both Federal and private land have been reduced to a lot of very unhappy alternatives, usually being administered not by the executive branch of government but by Federal judges.

Now, I suspect that you will recall what happened in the Pacific Northwest. I need not recapitulate that baleful story, but the plain fact is, for the past 10 years, Federal agencies have abrogated their responsibilities. And as the matter got worse and worse, acknowledged worse, a Federal judge finally took preemptive control of the entire cascade range from Puget Sound to the Trinity River Valley in California.

Starting in February, the administration attempted to get ahead of what was left of the possibilities up in the Pacific Northwest. And we did that with one of the more remarkable administrative experiments of recent times. In early February, I went out to Portland where we assembled in a room in a downtown building biologists, hydrologists, forestry experts from the Fish and Wildlife Service, the Bureau of Land Management, the United States Forest Service, the Environmental Protection Agency, the State of Washington, the State of the Oregon, and the State of California.

We assembled them in a room and made them check their badges at the door, and in that room on one wall, we had a map of the cascade system from Puget Sound to the Trinity River across Washington, Oregon, and California. And we stood in front of all of those agency scientists and said we have a unique mission driven by Federal law and that is where we are all together going to have to put together a plan that crosses all these jurisdictional lines. And that plan was announced by the President several weeks ago.

You can quarrel, as many do and appropriately so, about the specific bottom line results of that plan. There is one thing that comes out of that, that I think is a harbinger for the future, and that is that Federal law clearly requires that from now on, we operate across ecosystems, that we get the very best science possible, and that we do it at the earliest possible moment while there is still some flexibility, while we can still make every effort to avoid interfering with private property rights and, correspondingly, that we can, to the maximum extent possible, confine restrictions to Federal lands.

We found in the course of doing this in the Pacific Northwest that the private landowners were not resistant. They were extraordinarily cooperative because they realized that their freedom to operate, whether it is the Weyerhauser Timber Company, the Plum Creek Timber Company, any of the others right down to the owner of five acres of land, that their best bet for a workable solution lay in cooperating and in strong comprehensive science.

Now, there are lots of other examples and there are better ones. Mr. Fields I think is aware of an extraordinary example in the State of Texas which has, I think, played out to if not an entirely satisfactory conclusion, to some, quite an extraordinary effort

which culminated in the passage of legislation by the Texas legislature which effectively moves the solution of that particular endangered species problem back to the State level.

We have had an extraordinary success in the southeast United States on private lands, principally owned by the Georgia Pacific Timber Corporation and which is the result of an early inventory process. They came to the Fish and Wildlife Service and said we think we can make this law work with a cooperative agreement which is now in operation on the timber lands—some 6 million acres owned by Georgia Pacific in the southeast.

There are many other examples. What the examples stand for in this context is simply that the chances of a good, reasonable outcome are vastly enhanced by how early and how comprehensively we can inventory the contents of a biological system and form an inventory analysis and control, if you will.

I have been asked, are there any comparisons or analogs to what it is we are attempting to do within the Department of the Interior by asking you to authorize the creation of the National Biological Survey.

The answer, of course, is yes. There is an interesting historical echo behind this bill and it is simply the creation slightly over a hundred years ago within the Department of the Interior of the United States Geological Survey. That effort was put together in this Congress in 1879 as a result of a collaboration among the Smithsonian Institution the National Academy of Sciences and the Interior Department.

And remarkably enough, it was a very similar collaboration that led to this concept with the Smithsonian as the National Museum, the repository of specimens and taxonomic information, with the National Academy of Science convening a committee to look at the kinds of wishes that Congressman Saxton referred to earlier.

A few specific comments about the contents of the bill.

The Department certainly supports the concept that the Director of the National Biological Survey should be nominated by the President subject to confirmation. We support the concept of the advisory boards that are set forth in the bill and the amendment.

I think it is important that this issue be collaborative and broad. It is not our intention to spread a vast network of original research across the landscape. It is rather our intention to build a collaborative network of geographic information systems and what is known as Gap Analysis relying principally on State game and fish and land management agencies, and articulating and coordinating those efforts so that, across the landscape, they make sense.

We have had some great results in a number of States: South Carolina, Oregon, Idaho, for those of you who want to see the specific application of that.

Lastly, there is some specific language I think we need discussion in two areas. One is the national wetlands inventory. We need specific authorization to transfer that into the National Biological Survey. The second one is the Patuxent National Wildlife Refuge.

After much discussion, it is the Department's advice that the Patuxent should be left out of the bill because we believe that the wildlife refuge itself can appropriately remain in the Fish and Wildlife Service and that some of the research functions at Patux-

ent can be within the existing law contracted back to the National Biological Survey.

Chairman, Committee members, I would be happy to answer any questions.

Mr. STUDDS. Thank you very much, Mr. Secretary.

Other than rearranging the organization charts within your agency to better carry out what you need to do, to what extent is it just a question of arranging more rational and sensible procedures to carry out what we are currently doing, and to what extent do we have a lot of catch up to do?

What is the current state, broadly speaking, of our knowledge? Are we way behind or do we simply need to do what we are doing a little bit more efficiently?

Secretary BABBITT. Mr. Chairman, I think some of both. I would start with what I think at least is now obvious to me. There is an extraordinary depth of biological talent in the Department of the Interior. It is the Department of Rachel Carson and literally thousands of extraordinarily dedicated and competent field and research biologists at every level.

The work is too fragmented. We do have a research division in the Fish and Wildlife Service, and that certainly is the basis of this, but the efforts are scattered. They lack coordination and the price we are paying is the area where we are most behind, and that is the systematic field biology that will allow us to get in front of these problems.

Now, the Fish and Wildlife Service has in fact pioneered this process in cooperation with a lot of the private sector groups, notably the Nature Conservancy and a number of State game and fish agencies, this concept called Gap Analysis, which is at the very core of rational administration of the laws of this country.

Now, what Gap Analysis is about is a process which is now just coming up in many, many areas of geology, hydrology, topography of inventorying the landscape and putting that information into digital form into computer data bases which are referred to as geographical information systems and then using this analytic technique called Gap Analysis to give us a long advanced look at where the problems are coming so you can get out there and remediate and mitigate and find, if you will, methods of adjusting before the crisis arises.

In that area, we are way behind. The methodology is understood, but the coordination and the systematics of getting this information up and working through the States to make sure that we have common definition of standards, what is known as meta-data standards, interchangeability of information is lagging way behind.

[The statement of Mr. Babbitt can be found at the end of the hearing.]

Mr. STUDDS. Thank you, Mr. Secretary.

Chairman Vento, I don't know if your Committee uses the barbaric light system.

Mr. VENTO. I understand it and we will respond. Sometimes we have them, but we don't always pay attention to them.

Mr. STUDDS. We are highly disciplined here. Mr. Vento.

Mr. VENTO. Thank you.

Mr. Secretary, I think one—there are a couple of things underlying this concern. One, as you noticed in my opening statement, I said and I feel we need more science.

Do you generally agree with that?

Secretary BABBITT. Yes.

Mr. VENTO. That is one of the problems, as you have got in order to establish this, everyone says we are going to save money. If you save money, that translates into pulling some of the research officer scientific capacity out of some of other bureaus.

For my part, I think, obviously, I am pleased Fish and Wildlife Service has been able to maintain and justify, fully justify the type of scientific research folks they have. I think the Park Service, frankly, needs a lot more than BLM does.

One of the concerns here, as we get into land management, aren't we finding that we can't simply rely on the sort of common sense on the ground type of management without the type of in-depth, just by the fact of NEPA and other requirements that are expected of the land management decisions; isn't that correct?

Secretary BABBITT. Mr. Chairman, it is absolutely correct. I mean, the bottom line is, we need to do more efficiently with the resources we have. We certainly need more resources and the budget of the Department, which is I believe on the Floor of the House currently, has a fairly substantial dollar increase for the National Biological Survey. We have sort of scaled back in other areas and said this is a priority and we do need to transfer resources to science.

Now, I would also note that I have with me today, immediately behind me to the left, Mr. Gene Hester who will rescue me if you have lots of specifics. He is the former research director of the Fish and Wildlife Service. He is the former director of a co-op research unit working with State governments. He is the current research director of the National Park Service and the Acting Director of the National Biological Survey.

Mr. VENTO. The reason I am raising these questions, I think I know the answers to them. I just want to—I mean, we are involved here to some extent, whether you like it or not, in turf fights. Everyone wonders if they will have their folks. I would like to expand the issue, talk about the Forest Service and other agencies that were essentially doing a similar type of work, but it all of a sudden gets into a bigger argument that builds up so much opposition, we can't get it done. So I think we—obviously, the intent here is to do cooperative agreements.

Mr. Secretary, one of the concerns that becomes apparent is the relationship with the field workers and those that might not be in the field and might be sequestered away in a laboratory someplace, as I pointed out again in my opening statement.

Isn't it possible to overcome that by rotation and maintaining a greater degree of continuity between those who are in the field and those that might be sequestered in these repositories and laboratories.

Secretary BABBITT. Sure. We are not leaving the country. We are not leaving the government or the Interior Department and indeed we are staying within the gambit of Mr. Frampton's responsibility as Assistant Secretary for Fish and Wildlife Parks.

My advice to all of the field people, and I spent a lot of time with them out there, is you are going to get better science, you are going to get more responsive science. You are not going to get less. You are going to get more.

Now, there has been a little bit of anxiety. I had a wonderful letter from a young biologist out in the East Mojave a couple of weeks ago saying I am under the current reorganization plan going to be—I am going to keep my assignment to the Bureau of Land Management and I want to work for the National Biological Survey and I have a feeling that I will miss this train and never have a chance.

Well, I had done a little consultation with that employee and said, look, we encourage transfers, we are not locking you out.

Mr. VENTO. I think, Mr. Secretary, if I can interpose, I think the idea of a career path issue here in terms of what happens within these ought to be dealt with. Administratively, we obviously give a little direction to that, to what happens in terms of development.

I might say, too, that the National Forest Service has created a number of—developed a number of institutes. I am very familiar with those like the Tropical Forestry Institute, Puerto Rico, which incidentally has the most extensive library on tropical forestry in the western hemisphere, has worked very well having these institutes and they need these specialized services and their experimentation role, and I think they have done well but they could probably do better by a little more reorganization.

I am very interested in the type of cooperative agreements that are going to develop collaborative agreements between the various agencies. And as a matter of fact, they have become preeminent in this area with the establishment of this National Biological Survey.

And I think we have to look at what successful models work. I don't think, as I said, that the argument ought to break down to which software program we adopt. I think you ought to adopt none, and let the private sector and others play in those. You have to work with universities. There are a lot of things we have to bring in and integrate into there to make it work.

The committees in Congress are very familiar with this because, in searching and working for solutions or answers to the Pacific Northwest area, Chairman de la Garza, Chairman Jones, Chairman Studds and Chairman Miller went out and had to actually employ or set up survey teams in order to get, for instance, the gang of four information back so we could have the sort of scenario we worked on last year.

I am very pleased we haven't had to use that this year because, with the study that has come forth, you have been able to establish that yourself. But it is apparent to me that on an ad hoc basis, that works. It would work on—it could work and could work much better on a basis where there is greater continuum. And that is what the National Biological Survey will offer, is that type of continuum so we don't have this sort of a start and stop type of schedule in terms of information on a crisis basis.

Thank you, Mr. Chairman.

Mr. STUDDS. Thank you. I am going to recognize the two Ranking Members and then alternate among the parties in order of approximate order of appearance this morning.

The gentleman from New Jersey.

Mr. SAXTON. Thank you.

Mr. Secretary, I just want to say at the outset that I think you are on the right track. I support in concept the approach that you use in terms of the NBS and in terms of the recognition that science has a more important role to play in developing good management, environmental management than we as a society have been willing to give to science. In fact, I have spent the last several years promoting the concept that you are here to talk about this morning.

I would like to say, however, that it seems to me that while your approach is needed, and I support what you are trying to do, that it is a relatively narrow framework within which you propose to do the NBS. You are proposing to consolidate some functions of the Fish and Wildlife Service, the National Park Service, and the Bureau of Land Management in order to accomplish a very specific goal.

I would suggest that as much as we need to accomplish this goal, the goals that are broad and go throughout the area of better management of the environment cry out for similar reorganizations throughout our Federal structure and throughout private effort areas as well.

We now know that there are at least 20 Federal agencies that carry out some kind of environmental/scientific research from the Department of Agriculture to the National Science Foundation to the Department of Energy to the Department of Interior.

And we can move right on through NASA and NOAA and many other agencies, all of whom are doing what you suggest, when you talk about moving from the river valley to the mountain top to whatever other agencies are also trying to accomplish the specific goal you talk about.

And so, as much as this needs to be done, I wonder if we oughtn't to just step back and look at the entire area of environmental management, environment protection, environmental restoration. Look at how we might better reorganize our Federal resources across the board in order to carry out many specific objectives such as the one that you propose.

Secretary BABBITT. Mr. Saxton, I think that is an extraordinarily interesting suggestion and question. I would have these thoughts. I think in the past in the executive branch, this discussion has been characterized by sort of stealthy attempts to sort of raid other agencies.

The notable historical example of that has been the historic crusade by virtually every Secretary of the Interior to get the Forest Service. It has been going on for 60 years around this town. I came to town with a rather different view and that is that that is largely unproductive and never works.

And I think the answer lies, as I think maybe your question suggests, in asking rather than endlessly moving charts, how do you get people to work together and sort of coordinate their efforts. And I have just two thoughts on that.

Up in the Northwest, we have had an extraordinarily good relationship with the United States Forest Service. We set up a common geographic information system. We raise to the lines on

the map and produced the result which has in this context common forestry and management standards for both my agency and the Department of Agriculture.

Now, the question then becomes, how do you attempt to get this level of resource allocation and coordination across government. There is an organization called the Federal Geographic Data Committee which, notwithstanding that title, has real possibilities and it is operating under an OMB circular, and it is an attempt to see if we can articulate and coordinate the gathering of information across the executive branch and develop common standards and sort of manage this effort.

It has got some history. I think it has got an awful lot more potential and I think it would be a subject of real interest to both of the committees represented here as something that should be explored.

Mr. SAXTON. Well, I thank you and I just think it is of vital importance that we recognize that the way we currently organize programs is not the best way. I would suggest that each of the departments that are engaged in some type of environmental research and development of science do so as a result of a desire to accomplish good things.

But as we move, and we have got a new project in New Jersey which I won't go into, but it certainly has worldwide marine biology and management implications, and those types of things should be readily available to people all over the country and all over the world. And I think if we spend some time and effort trying to reorganize the way we do business, it will certainly be far ahead.

I thank you and commend you on your efforts here this morning.

Mr. STUDDS. The gentleman from Utah.

Mr. HANSEN. Thank you, Mr. Chairman.

Mr. Chairman, I may say that it does bother me a wee bit that this is on the Floor in the appropriations bill. I refer to comments of Chairman George Miller of the House Natural Resources Committee when he appeared before the Appropriation Committee on May 1st, 1993.

He said, Mr. Chairman, the administration has requested funds to establish the National Biological Survey. I support the request and hope that your committee will make the funds available. However, I believe that the NBS can carry out its functions only if it is authorized to do so. Therefore, I request that the appropriation be made subject to the authorization.

I know that it is reserved that points of order are protected, but that of course wouldn't take out an amendment that someone may run over to the Floor and do any minute now.

With that said, Mr. Secretary, I am very concerned about the rights of private property owners. As you are well aware, property owners have been devastated by the Endangered Species Act and the Wetlands Act.

What protections do you have in mind to ensure that private property rights will not be compromised by creating a National Biological Survey?

Secretary BABBITT. Mr. Congressman, I believe that this survey is a powerful tool in concept and in execution, precisely to protect private property rights. One reason that private property rights are

getting tangled up in the Endangered Species Act is because nothing happens as the problem arises.

The Federal agencies have traditionally lain back passively, made no attempt proactively to see if, number one, the issue can be managed on the Federal land base, therefore, not intruding on private property.

Number two, to have an answered look at whether the land and water conservation fund could be used to purchase critical lands from willing sellers before a crisis arises.

Number three, to work with State and local officials to see if, through the use of their governmental powers, there is a way to enhance the relative rights of private property owners. So the short answer is, I think the concept itself ought to enhance the position of private property owners.

Mr. HANSEN. I appreciate that answer. I especially like the part about the government buying the critical lands that some private property owner may have. I can think of very few things that would cause more problems in the west than people who feel they have private property for four or five generations and all of a sudden told by a government agency what they can or can't do with their private property. It kind of flies in the face of what some of us believe in.

Are you proposing that researchers from the National Biological Survey be allowed to inventory and do research on privately owned property?

Secretary BABBITT. Sir, it is my understanding that a private property owner in this country has the power to exclude third parties from private land. I don't challenge that. In the absence of a court order or a law enabling someone with notice and under legal authority to enter land, the answer is, my instructions to the National Biological Survey will be: You are expected to obey the law.

Mr. HANSEN. Thank you very much. Thank you Mr. Secretary.

Mr. Chairman, thank you.

Mr. STUDDS. Thank you.

The gentlewoman from Washington.

Mrs. UNSOELD. Thank you, Mr. Chairman.

I would like to ask the Secretary about another gap because I think this—what you are proposing here definitely can lead to better decisionmaking, but someone has to be able to keep the big picture in mind also, as well as what the individual scientific areas are exploring.

And for us who end up being the decisionmakers sometimes without any background that prepares us for the types of decisions we are making and that we often do not know how that science is developing, and so we don't know enough to ask the right questions.

So I guess the gap I see that you all need to help us fill is, as this is implemented, that there be sufficient communication so that we don't go wandering off in some direction that adds to the type of problem that we had in the Pacific Northwest. And as I tried to stumble through what kind of policy we ought to be developing when the owl situation first developed, it was a newspaper article that brought to my attention originally that fish spawning habitat was improved with the natural debris that occurred in streams.

And it occurred to me that what we have been doing with forestry practices was totally wrong: where we had allowed anything to be falling into the stream, run the bulldozers back and forth and then clean it out after the logging had been completed and you had a nice sterile stream. Stream biologists who were working on this area and forest biologists (and they knew at some point they needed to come together) but they didn't feel they had progressed far enough in their own line of expertise to begin working together.

So somebody has got to keep the big picture in mind and I think right now, you've "got it," but how can you see this being carried the next step so that that big picture gets shared with us as it is developing.

Secretary **BABBITT**. Well, just a couple of thoughts. I think and emphasize that the success of this effort is going to depend on our ability at the Federal level to be interactive and coordinated with the Department of Agriculture, EPA, and the National Marine Fishery Service so that there is a sense of consistency and coordination.

Equally and perhaps more importantly that we work with State game and fish agencies. Now, in some States, game and fish has a different name, but I think you all know that there is a natural resource agency that does management of game, fish, and land. We cannot do a reasonable job of serving the public without a careful, careful coordinated program with them.

Now, historically we have managed to do that pretty well with game management. Game management, because if you look at hunting and fishing regulations in most places, they are firmly in the hands of the States and there is an intense and long history with fish and wildlife in the Federal agencies. We have got to replicate that in this area.

The one example I would take from your question is the presence of the University of Washington in the person of Gerry Franklin. He is the leading advocate of what is known as new forestry and we came to him in this process relatively late. The Congress discovered him I think long before the executive branch did. His print is now all over this plan, and I think—I guess the answer is, we need to be out talking to the Congress, to State agencies, to State universities, because we don't possess all the answers. Maybe we have got some questions.

Mrs. **UNSOELD**. Thank you very much, Mr. Chairman.

Mr. **STUDDS**. The gentleman from Arkansas?

Mr. **DICKEY**. Good morning Mr. Secretary. In your mind, what is an ecosystem, how will one be defined, and how will you differentiate one from another?

Secretary **BABBITT**. Mr. Congressman, to some degree, an ecosystem is in the eye of the beholder.

Mr. **DICKEY**. Is that your answer? Would you like to elaborate?

Secretary **BABBITT**. I think—I would be willing to elaborate, sir. I can put it in specific context. The timber problem and the salmon problem in the Pacific Northwest drives you to an ecosystem which essentially runs from the crest of the cascades to the Pacific Ocean from approximately Puget Sound down to the beginning of the Sierra, Nevada in California. It is characterized by a lot of the commonalities. Stream drainage is certainly a big one.

Climate. The weather from the Pacific creates a lot of precipitation until it hits the tops of the cascades and then you are off into the desert. So that is an ecosystem. River basins are a pretty good starting point.

In the case of the Edwards Aquifer in Texas, we were looking at an ecosystem defined by groundwater recharge in the limestone hill country of west Texas. In other cases, the dominant thing will be the vegetation communities. Some would say that the Colorado Plateau is an ecosystem. Others would vigorously dissent.

I think the essential thing you are looking for is common natural and geographic features that generate a particular set of resources or a particular set of problems or opportunities.

Mr. DICKEY. Let me ask you this one last question, if I may: If we have property rights that we are trying to protect and an ecosystem is established, will you go according to property lines or how will the geographical boundaries be determined?

Secretary BABBITT. For purposes of managing water resources or biological issues relating to the Endangered Species Act or whatever, I think the better approach is to define the geographic ecosystem.

Now, when I talk about another ecosystem raising jurisdictional lines, I am talking about those Federal blocks on the map, because when it comes to private property, there is a long and important constitutional tradition in this country that we are bound to respect and which I certainly not only respect, but believe deeply in.

Mr. DICKEY. Thank you.

Mr. STUDDS. The gentleman from Oregon Mr. DeFazio.

Mr. DEFazio. Mr. Hamburg was here before I was.

Mr. STUDDS. Such unbelievable distinction. The gentleman from California.

Mr. HAMBURG. Thank you, Mr. Chairman.

It is good to see you here, Mr. Secretary, and I really appreciate the focus that you are placing on the Pacific Northwest. And I don't think there is anywhere in the country where we have faced this issue of, as you call it so well, train wrecks more than in our area of the country.

And one of the real controversies seems to be whether those train wrecks are caused by government and government regulation and the government stepping in and saying there is a problem here where that may or may not be perceived by the locals, and whether those train wrecks are indeed caused by ecosystem breakdown.

And I have seen that both in the timber industry and in the fishing industry where there are still a substantial number of people who feel that there really is no great problem with depletion. We see that with respect to the salmon industry on the north coast. Chairman Studds came out and helped me with a hearing recently in Fort Bragg, an area that I know you realize there is not just a Fort Bragg in North Carolina, but there is one in California as well, and one of the pleas we heard there from the salmon fisherman was just let us fish, there are fish out there.

So we need to clear up this issue of whether the train wreck is the fault of the government, State or Federal, or whether it is really ecosystem breakdown and that is where I see this biological survey being invaluable.

I would just like to ask you to project 10 years or so into the future and look back at where we are today and we have had this biological system in place, and could you just reflect on what you think the pitfalls were that made this not work as you today envision it?

I mean, just reflect for me, if you could, on where you think this—why you think this might not work. Is it the on account of private property issues that were raised by Mr. Hansen. Is it the possibilities of the Endangered Species Act being amended in ways that would not fit in well with this kind of an approach? What do you think the problems might be?

Secretary BABBITT. Well, if I were looking ahead 10 or 20 years, I think the large issue that we all grapple with in our different ways is how we find a suitable equilibrium in the way we use land, water, and natural resources that maintains the resource in sustainable fashion, that maintains an agreed-upon or generally acceptable level of biological diversity and accommodates the rights and economic expectations of private landowners.

All of these issues in some way are colored by this basic issue of land use planning, which is, and I believe always will be, principally a State and local function. And if you accept that, then you see I think the importance of having this working relationship with Federal, State, and local.

Now, obviously, on the Federal land base, the relationships are less complex. There are going to be some important upcoming examples of the way this plays out. I think the Coastal Sage System in Southern California is something that anyone who is interested in the answer to this question should have a look at, that the way we manage estuaries and stream systems are other examples coming up. We have seen that most recently in the Everglades.

What would I hope 10 years from now? I would hope that the Endangered Species Act has been virtually forgotten, not abolished, forgotten. And what I mean by that is that there has been—that there is so little controversy, that it is just sitting there routinely being worked upon and that we have reached a sort of biological balance, if you will, and a consensus about the management of the landscapes so that there aren't any species endangered anymore.

We have recovered ones, there aren't any more in trouble, but we are moving along in kind of a new consensus now. With that answer, I think you can see what my style is in dealing with these problems.

Mr. HAMBURG. Mr. Secretary, I think you have already done some very significant work in enhancing the trust and faith that people have that the Federal Government can take an important role in coordinating all the various laws, achieving some interagency works that will avoid some of these train wrecks in the future, but it is a huge job.

I often say that we not only have a resource deficit, we also have a tremendous trust deficit. And I think Mr. Hansen's question comes from that lack of trust of the private property owner, that the Federal Government really is going to do a responsible job in making decisions about endangered species and about all the other ways that the entities of government interact with private property ownership.

So I guess my time is up. I just want to wish you continued success and I hope you will take a look at the L.A. Times yesterday, if you haven't, with respect to the coastal sage issue. These problems are controversial and you know we are not going to get around that entirely but if we can create a little more trust, we will have gone a long way toward realizing something closer to your vision.

Thank you.

Mr. STUDDS. The gentleman from North Carolina.

Mr. TAYLOR. Mr. Secretary, I hope we share a common goal in the area of conservation and concern about the environment. I believe myself to be seriously concerned in that area. I have three small children and I think anyone with small children would have to be concerned about the future of our country's environment.

But the thing that distinguishes America and our founding fathers in the Constitution is protection of private property. I think anyone who takes a candid look at things would have to say that private property has been trampled by Government to a large extent in the name of the environment.

Now, back down where I come from, people recognize that the depth of dumb cannot be fathomed in Washington. That is why they don't have a lot of confidence in programs that come out of this body, because we do things like closing down dry land and calling it wetlands and other things that I won't go into.

People are concerned for a variety of reasons and I would like to sincerely ask that you make a special effort that you will not continue along in the same direction and that you will give people assurance that you will change that direction.

I am not worried about Georgia Pacific. If you start running over them, they will be on you like a chicken on a June bug. It is the hundred-acre farmer, the small individual that can't come up with the resources and the lobbying power of a Georgia Pacific, that concerns me.

In your past profession you gave me a lot of concern with your letter to your Members—most of whom have been included in this administration—when you stated, and I am quoting, "we must identify our enemies and drive them into oblivion."

Now, that is hardly the kind of reconciliation that our folks were looking for because they may feel that they are one of your enemies and they don't want to be on the end of oblivion driving.

Look at the National Natural Landmarks Program that the Interior Department carried out. In an audit in 1991, the Inspector General found that property owners rights were violated; some 2,800 landowners had been infringed upon including trespass. Now, some of the same people that were involved in that Natural Landmarks Program are part of the National Biological Survey.

Perhaps you have brought them to the altar and have gotten conversions and new thoughts from them; I hope so. I would like to see your Department perhaps establish an ombudsman or someone to act in that position—heavens, don't create another position—whom small owners could contact and who could list complaints about the property abuses in this area.

I would also like to ask you about your request that the Freedom of Information Act provisions be waived regarding the National Bi-

ological Survey. Could you tell me what you were thinking and the need for that?

Secretary BABBITT. Yes, Mr. Taylor. The problem is there have been some examples where—fortunately not too many, but they have been quite devastating where the Fish and Wildlife Service will do a survey of an endangered species and the habitat prior to figuring out the appropriate action.

An FOIA request is made and the species or its habitat suddenly disappears. And it is just designed to see if we can find a reasonable balance to prevent that from happening.

Mr. TAYLOR. In other words, you don't trust the people that you are working with out in the community not to destroy the wildlife that you are surveying?

Secretary BABBITT. Well, it has happened on some occasions. It is unfortunate, but it has.

Mr. TAYLOR. Chairman Studts, Chairman Vento, here is where we are in this country. The people out in the country have been so abused by governmental agencies that they don't trust them anymore, and our Secretary of the Interior says that the people will abuse the process and that he doesn't trust *them*.

We live in a free country with a Constitution distinguishing us from the old Soviet Union by the protection of private property rights. We are going to be in a hard place to carry on a National Biological Survey, or other policies of this country in this area.

Mr. VENTO. Would the gentleman yield?

Mr. TAYLOR. Let me finish my statement and then I would be glad to. Secretary Babbitt, you answered Congressman Hansen a moment ago stating that you hoped to obtain the areas sought by the Federal Government by using Land and Water Conservation funds to purchase from willing sellers, and that you hoped to use local Governments to apply the zonings or taking them. If none of that works, then what is the next thing we do if we find in this survey there is a need to take private property?

Secretary BABBITT. Well, the bottom line, I suppose you could conjure up a historical case where there are no alternatives. Well, at that point, the private property owner stands on his or her private property rights, that is the law of the land.

Mr. TAYLOR. And you would envision that the only taking of that right could be through appropriate condemnation or through a willing sale?

Secretary BABBITT. Right.

Mr. TAYLOR. What about the current Department policy that if they find an endangered species, that there is approximately 60 areas of land or thereabouts set aside around it or zoned or in effect taken? Would that policy continue under this survey, do you think?

Secretary BABBITT. Well, the National Biological Survey is a scientific organization. It doesn't make any of these kinds of decisions and I think, indeed, one of the arguments for this survey is that science really ought to be separated by a step or two from the regulators and, in a sense, that is to take care of some of your concerns that I have heard frequently expressed, that science somehow isn't sufficiently objective. The National Biological Survey won't be making these kinds of regulatory decisions.

Mr. TAYLOR. I understand that—

Mr. STUDDS. If the gentleman—

Mr. TAYLOR. I will. The public concern is that this is a prelude. Folks are very much interested and would be more cooperative if they knew what you would be doing with the survey.

Mr. STUDDS. It would be nice of the gentleman to yield. I am just pointing out the color of the light.

Mr. TAYLOR. Yes.

Mr. STUDDS. I thank the gentleman.

Will the gentleman from Oregon accept recognition now? Thank you.

Mr. DEFazio. I wanted to be certain we were in the appropriate order of things here.

I certainly support the objectives and the intent of what we are about. I think that representing a district that is pretty much at the epicenter of the current train wreck, you know, I recognize if we get ahead of these problems, things don't need to get so bad.

But I guess there is one concern I have about this. How is it that we are going to translate the information gathered into action? Take, for example, the transfer of the wetlands inventory. Sitting on Public Works and Natural Resources, I have followed the wetlands issue with great interest, and as far as I know, we are still in the morass of not exactly knowing what the Federal rules are, what wetlands are, and what ones we are going to protect, et cetera.

So I am curious what the transfer of the jurisdiction of the wetlands inventory might do to begin to cross those jurisdictional lines between the Corps of Engineers, Fish and Wildlife, the various other Federal agencies involved and the concerns and relations with private property and the State agencies?

Secretary BABBITT. Mr. DeFazio, the honest answer to your question, whether it helps or disillusions, I don't know, is that the transfer of the National Wetlands Inventory will do very little, probably nothing to affect one way or the other your underlying concerns about the administration of the 404 wetlands program.

And the reason for that simply is that this really is a scientific effort, and it is deliberately designed to draw some separation. And, therefore, we don't get to what are admittedly the difficult and hard questions and that is regulatory policy. Now in the case of wetlands, thankfully, that burden does not rest upon my jurisdictional shoulders. You may go to the Environmental Protection Agency and the Corps of Engineers.

In the case of the Endangered Species Act it manifestly is my responsibility to define a regulatory policy and you have heard me.

Mr. DEFazio. But if we were going to inventory wetlands, then we have to know what it is so at some point, the Federal Government has to determine what a wetland is, define actively so we can have an inventory. Otherwise, we have sort of an inventory which looks like the maps Columbus used which has that "terra incognita" out here, which may or may not be wetlands depending on which definition we are currently using.

It seems to me there has to be some sort of enterprise between the biological scientific assessment and the practicality of the laws

and what the Federal Government is doing. Not to belabor the point.

Secretary BABBITT. My employees, when it comes to this issue, are merely scribes who read something called a manual.

Mr. DEFAZIO. But which manual are we using these days, do we know?

Secretary BABBITT. That manual is in the hands of other agencies.

Mr. DEFAZIO. So the other agencies, your people will go to the mount, and upon the mount, they will be handed the scriben document and they will then descend from the mount and assess how we apply those scriptures to the real world. And then from there, we will somehow achieve a result.

Secretary BABBITT. That is correct.

Mr. DEFAZIO. It is totally clear to me. And I will take that message back to the Public Works Committee and we will work with that.

Thank you, Mr. Secretary.

Mr. STUDDS. The gentleman from Maryland.

Mr. GILCHREST. Thank you, Mr. Chairman.

Mr. DeFazio, I think we are working on the 1987 manual now.

Mr. DEFAZIO. There was an 1989.

Mr. GILCHREST. We are now presently on the 1987 manual, and there is presently an ongoing study and I assume in a good year or so, the National Academy of Sciences is studying those other previous manuals to determine once and for all, perhaps a fundamental understanding for delineating nontitled wetlands for Section 404.

I think then we can grow as a legislative body to develop some type of legislation to meet that, but I just wanted to throw that out.

Mr. DEFAZIO. If the gentleman would yield for just a moment. I appreciate it. It sounds like we are about to establish what the tablets may be composed of, and I am really pleased to hear that we will know within a year, so that is great. The prophet will arrive in a year.

Mr. GILCHREST. Or less. I also want to take a second to compliment the gentleman from North Carolina on his reference upon the genius of the founding fathers, and I would agree with him a hundred percent.

I would also say that in 1776, the shad were so populous in Chesapeake Bay that many people said you could walk from the Eastern Shore to the Western Shore on the shad. And they are almost extinct now—overpopulation and not properly managing. I suppose, the resources and the land and the water. The other thing in 1776, clams filtered out the Chesapeake Bay in four days. Now, 99 percent of the clams are gone.

So I think what we need to do is to have some vision for our children's future and understand what we can do as people to adequately manage the resources so that all of us can be free and independent and not be overburdened by redundant legislation but regulations and legislations are based on sound science.

Mr. Secretary, I just wanted to throw a few questions at you because my time will probably be gone if I just ask one at a time, and then you give me an answer.

The first one is a broad question, and I know that anytime you pass a law in this body, it transcends the present body, the present administration and moves on down the road. And very often personalities happen to interpret certain regulations differently. So I am just wondering, Mr. Secretary, what is in your mind, is the purpose like Mrs. Unsoeld talked about "the big picture".

So what in your mind is the big picture or the goal for the National Biological Survey Act and how might this particular act in your mind evolve? Mr. Hamburg made reference to something like this. How might this particular act in your mind or how should this particular act impact development or overdevelopment or unbridled development throughout the various towns and counties and communities in this country.

How might this particular act impact managed growth for towns and communities?

As Mr. DeFazio mentioned something about a wetlands and a wetlands inventory and what might happen with this wetlands inventory. I think if your average planning commission, if your average town or county had a wetlands inventory on a computer so he could see what the inventory was he thinks this would really help him understand the concept of an ecosystem or watershed management to leave open space in his community.

I have a few more. I am going to stop with just the last one.

Mr. VENTO. [Presiding] Let me interrupt. Congressman Studds is going to come back. Some of the members have not be recognized. I will go to Mr. Abercrombie if you go vote. Members that have not asked questions would go over now and vote, we probably could accommodate them when they come back.

Mr. Secretary, in response to Mr. Gilcrest's question, please proceed.

Mr. GILCREST. The last one, there was a concept that used to be kicked around here a couple of years ago called no net loss of wetlands. Is that a concept that is still alive? Is it a viable thing to even say.

Is it possible to have no net loss of wetlands, and with a biological survey, how would that concept of no net loss of wetlands, if it is possible, fit in?

Secretary BABBITT. OK. With respect to your first question, I think I would phrase it, what are the chances of this National Biological Survey turning into a devouring regulatory monster after my enlightened reign is over somewhere down the road.

The answer I think is none. This National Biological Survey will be just about as controversial as the U.S. Geological Survey has been in the last 100 years which is not at all, because what we are looking at is information. And I think in this society, whatever our differences about regulatory policy, we all concur that facts and good science are the absolute essential to having a meaningful policy debate about how we regulate.

With respect to local governments, I think the strongest constituency for this approach is going to be State and local governments because, ultimately, the work that we do within the Department—and that is done through the Federal Geographic Data Coordinating Committee—is going to progressively become available to State and local governments as a result of their efforts, as a result of

data bases that are built in a coordinated fashion at all levels which enable a local planning and zoning committee to simply and quickly get all of the land use special data that they need in a format that is agreed upon.

And that, I think, is going to make decisionmaking a lot easier in this country, whether you want to locate an airport or build sewer lines or do open space planning, all that kind of thing. So we have begun discussions with State and local governments on this, and I think it will intensify our efforts in that direction.

No net loss of wetlands, I think, is a manageable—it is conceptually correct. Now, I say conceptually correct because this is something that really depends upon the execution. Obviously we have to have some selective development that does impact some wetlands, and the question then becomes, what is the mitigation that offsets that?

That has been controversial, but we have learned a lot. We haven't learned enough. We have had some successes and some failures and I won't pontificate any further, because I just told you that I was an innocent bystander in the wetlands debate. I am not entirely innocent, but I am to some degree a bystander.

Mr. STUDDS. Mr. Abercrombie.

Mr. ABERCROMBIE. Welcome, Mr. Secretary. Thank you for being here.

I will submit a detailed memo to you on what I am about to ask and I will just do this very briefly. I think the last time we had an occasion to actually meet was at the IMAX presentation at the Air and Space Museum on Hawaii and endangered species. I think that was a very impressive demonstration.

My question has—by the way, I support you entirely, completely, before I ask you my question, right. I want you to know that you have my full support and vote on this.

But that is the good news and I think there is some better news here. Within your current U.S. Wildlife Service jurisdiction, the Pacific Islands office covers 2,300 islands in eight political jurisdictions. It stretches 5,000 miles from east to west and encompasses 3,000 miles from north to south. Greater than the continental United States, obviously.

And I think you know from the IMAX presentation, as well as your own research and knowledge, that the native resources in the Pacific Islands are unique and distinct and that, right now, we have been traditionally included in the western region. Some of the problems you are having, and opportunity, as you put them, I agree with that, in the Pacific Northwest, we are kind of lost in all of that and it is a gigantic logistical enterprise that we are talking about.

All I would ask of you is that you consider a separate regional office for the Pacific, and I will be happy to submit everything that I think bolsters and justifies that within the context of your remarks, which I hope you will let me summarize as follows or that you will agree is a good summary of your statement. I saw three things: Coordination, systemization, and interchangeability. That is how I would do that if I had to extract three concepts from your testimony, and all within a common foundation of a definition of standards.

And if I took a phrase from your statement, I would say it would be "let science come first." So that is my proposal. I guess it is more an observation than a question to you at this point, but I hope that you would consider a Pacific regional office in the context and under the jurisdiction of a Bureau for the Pacific, for the reasons that I have outlined.

Secretary BABBITT. Mr. Abercrombie, I think the Fish and Wildlife Service is really an extraordinary operation. I think it is the most—the least appreciated, most underrated body in this town with the obvious exception of the United States Congress.

And I agree with the thrust of your remarks, which is that we have not really appreciated the Pacific issues, starting with Hawaii, because what we have is really an extraordinary product of geological and historic evolution and a remarkably distinct and productive and different ecological system now under it there, not only from development, but from the brown tree snake attempting to get in from Guam, and a whole variety of exotic sort of intruder species. And I take your remarks to be an invitation to up the level of our attention and effort.

Now, I can't—

Mr. ABERCROMBIE. May I interject just a moment? This would be modest in terms of expenditures. It would be expansive, yes, in terms of distance and logistics, but the expenditures, I think, would be modest and I think the cooperation you would get across these eight political jurisdictions would be virtually instantaneous and most welcome. People would be very enthusiastic.

This is—believe me, my comments have nothing to do with the efforts of the western region which have been heroic. It is strictly a question of stretching the resources so thinly that the extraordinarily competent people have just been stretched too far.

Secretary BABBITT. Thank you.

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

Mr. STUDDS. Mr. Secretary, I will give you a choice. If you are in a hurry and if you can move fast, you may be able to get out of here before anybody returns from voting.

If, on the other hand, you would like to rhapsodize about some philosophy or sing a verse of Home on the Range or have an inspired articulation, it is your choice. No, it is not.

Secretary BABBITT. I didn't leave the room.

Mr. STUDDS. You almost made it. The gentlewoman from California.

Ms. ESHOO. Thank you, Mr. Chairman. They say timing is everything.

It is wonderful to see you here again, Mr. Secretary, and we talk about surveys, biological surveys, and biological diversity. I did my own surveys as Members were speaking this morning. We have quite an inventory here and we certainly have biological diversity, so I just wanted to get that into the record. I couldn't help but notice that.

Mr. Secretary, first of all, I want to commend you for your bold thinking. I think if there is anything that people in this country are looking for are not those people that are the hedge trimmers, so to speak, but people that are going to step up and really reshape things.

And this is a bold plan, it is a necessary plan. We see where the mistakes of the past are haunting us and I salute and commend you for bringing the thinking that you do to this area where it is so needed.

I understand the questions I was going to ask this morning were asked before I arrived, and since the bill is up today, I would just like to ask you about the funding. I understand that it is a \$164 million appropriation for fiscal year 1994. Are there savings that are going to be accrued, since what I have read, there is a combination of staffs that are going to come together to accomplish this worthy undertaking and if there are savings, over what period of time? What is the money for?

Secretary BABBITT. It is a difficult calculation, because 80 percent of the figure in the appropriation bill in its current form is a continuation of existing levels of appropriation simply brought together.

Now, I think that the efficiency and the synergy from that combination of resources will be considerable. I am not certain that I can lay out a dollar figure to you.

Now, in addition to that we have requested, approximately \$38 million additional, and that reflects restraints in other parts of my budget, and the purpose of that increase is to make certain that we have the resources to cover—not only cover existing commitments, but to begin moving toward this comprehensive survey concept.

Ms. ESHOO. OK. I am sure you are going to be reporting back here on the progress and how the money is used and the joining of these staffs and the cooperation. I hope what will be built into it as well, is that we aren't reinventing everything, but rather make use of what our States and local jurisdictions have already put together. Because I think that if we start from scratch on everything, that this \$164 million appropriation is going to be birdseed, most frankly.

So I look forward to your coming back and telling us more about it and I salute you. You are a great source of pride to all of us and a bright star in this new administration.

Thank you.

Secretary BABBITT. Thank you.

Mr. STUDDS. Now, undoubtedly for some balance, the gentleman from Oregon.

Ms. ESHOO. More biological diversity.

Mr. SMITH. Mr. Bright Star. Good day, Mr. Secretary.

Secretary BABBITT. Mr. Smith, good morning.

Mr. SMITH. Mr. Secretary, you have heard expressed here and in Arizona and in the west high suspicion of government which tends to overburden particularly the west with governance, simply because most of our States have a very large composite of Federal lands, so much so that private landownership is fiercely protected and I know you understand that exactly.

The Constitution protects the taking of private property by way of the Fifth Amendment and yet the courts have held consistently interpreting that amendment that its taking only is acceptable to the court if it is roughly more than 60 percent of the product.

A person has to go to Federal court and sue under the Constitution. The government must accept the suit or it is not even heard,

but most of them are accepted. The problem is that the costs are normally around \$250,000 to bring suit. That means that if the person who has a small amount of land that may be imperiled by the Endangered Species Act or the biological survey registration has really nothing which raises again the suspicion of people for their government.

My question is simply, would you support a legislative act which would allow anyone who was injured economically by an act of government which took away a portion of his production, be it timber or be it agriculture or whatever, so that a person who was injured by the Federal Government could reasonably—as we do with highways in the west and other kinds of condemnations—could reasonably have some return on his land taken for a public purpose?

Secretary BABBITT. Mr. Smith, I am not sure that I am prepared to sign off your legislation.

Mr. SMITH. Don't do that right yet, Mr. Secretary, please.

Secretary BABBITT. Let me illustrate what I think the difficulty is and then suggest what my answer would be.

I conducted one of these grazing hearings last week out in Arizona, and they are interesting to say the least. And a number of participants got up and said, we would like the United States to compensate for the economic loss that results from permit reductions in the number of livestock that are being grazed on public land under a permit which has been held in our family for 100 years. The response to that, it seems to me, is that is not a legally compensable change.

Mr. SMITH. I agree with you totally.

Secretary BABBITT. OK. You are probably going to drive me now to private land.

Mr. SMITH. Yes.

Secretary BABBITT. Your landowner in your district in Oregon has 500 acres of timber.

Mr. SMITH. 100 acres.

Secretary BABBITT. Good. Inhabited by, among other possibilities, an owl.

Mr. SMITH. One pair of owls.

Secretary BABBITT. One pair of owls, excellent.

Mr. SMITH. That is a double superlative, whatever.

Secretary BABBITT. But it seems to me that rather than legislation, what you have the right to demand is a response from me which says we are going to figure out a reasonable course of action for that landowner. We are not going to freeze his ability to produce. We will issue a 4(d) rule which provides some alternatives and, ultimately, if that owl insists on staying there in perpetuity, we will be driven to buying the land, trading the land, or doing something.

Now, I am not making an offer to your constituents to buy every owl site of this year, but I am willing to say we have got to have a course of action which says we have not deprived you in perpetuity of your use of land.

Mr. SMITH. One follow-up question, Mr. Chairman, and I see my time is about up.

I thank you for that response. I must say, however, that that is not occurring today, that indeed there are private lands being re-

stricted as we talk about the act of the endangered species, the spotted owl, and there will be more with the marble murrelet and salmon, so I appreciate your comment. I will be visiting with you about that. If your program doesn't work, I am sure you will subscribe to mine.

Thank you, Mr. Secretary.

Secretary BABBITT. I have enjoyed our dialog down in Oregon and I am ready and willing to come back for more of it.

Mr. SMITH. Thank you.

Mr. STUDDS. The gentleman from New York.

Mr. HOCHBRUECKNER. Thank you, Mr. Chairman. Mr. Secretary, on pages 5 and 6 of your testimony, you make several recommendations of things that should be in the Biological Survey Act. One is for a director appointed by the President and to be confirmed by the Senate. As you know, it is in there and also for an ongoing survey and my reading of the language also shows that that is in there. But you also request the transfer of the national wetlands inventory so that you can use that as a base for the survey, and we can certainly work to put that in.

Are there any other recommendations that you would like to see in H.R. 1845 to improve it from your point of view?

Secretary BABBITT. Mr. Hochbrueckner, I think that the other questions that have come up today and indirectly through staff discussions are the disposition of the Patuxent issue and the creation, the statutory creation of the two advisory boards. I think those are the only issues.

What we did send in the recommendation about this confidentiality of data issue which was raised earlier in the discussion, that is not in the bill. I think it would be useful for you to have a look at it. It may be something that should be deferred until the Endangered Species Act reauthorization. It would be helpful for us from our perspective to have it in this bill.

Mr. HOCHBRUECKNER. Thank you, Mr. Secretary.

Thank you, Mr. Chairman.

Mr. STUDDS. The gentleman from Delaware.

Mr. CASTLE. Thank you very much, Mr. Chairman. Mr. Secretary, I hope you were a more conscientious student than I was. I am reminded of the times when I hadn't been to class or studied and was called upon to say something. I haven't had a chance to read your testimony or hear the questions.

Secretary BABBITT. Honorable Mr. Castle, I don't believe a word of that.

Mr. CASTLE. I will answer some questions anyhow, just like I tried to do in class when I didn't know anything. My view of all this is that you have perhaps, with the possible exception of solving the problems of health care, the most unsolvable problems of all. The Endangered Species Act.

Endangered species, in general, is just tremendously difficult. You buy up all kinds of land that sort of disappears. When you buy all of the land, you spend all of your money on one particular breed of something or a plant or whatever it may be with the wetlands issue all the way from development and farmers who want to use the wetlands and those who want to protect everything that has ever had water on it whatsoever.

The whole issue of private property comes into this and, from your experience, because of your vast experience in running a State and then working in government, it seems to me that maybe we don't have the solutions and some of the surveys and manuals and your Department, in all fairness, has never been known for its great flexibility in the past. And we in Congress, certainly just because of the nature of 435 people in the House and under the Senate, perhaps lack flexibility in this area.

And it occurs to me that you may end up with solutions which are different than anything that we have today, and I would hope that you would not feel fettered by what is before us now and would be willing to either come to us or on your own try to strike out in ways that can make a difference because the goals are the same, the people want to protect endangered species.

I don't know anyone in Congress who is going out and campaigning about getting rid of endangered species or whatever it may be. I think you want to be as good and fair on wetlands property, and we want to protect private property owners, but not at the sacrifice at whatever natural environment we may need also to protect.

I am not too sure, it is just so—such a haze now in terms of how we approach this that I worry about it, that I would hope that you would have the initiative to perhaps be able to look at goals and ways of getting there and cutting through all of that.

This may or may not invite comment from you, but I would just encourage you to, as a Member that has never sponsored anything, that I have to protect here in this Congress, I would just encourage you to take those initiatives and to inspire others in your Department and those in the agencies that are going to testify after you and deal with the environment to also get involved and do that.

Secretary **BABBITT**. Congressman, I appreciate that. It seems to me, my sense of this debate about the Endangered Species Act, and to a large degree wetlands as well, has been characterized by a sort of abstract kind of theological Talmudic, if you will, debate about what can be read into the abstract languages of these acts and sort of a "well, what if?" And an endless sort of doomsday scenarios on both sides.

And there are lots of issues, it seems to me, that aren't susceptible to this kind of abstraction. If we are going to bargain and try to find the solution and adjust for resource and land use disputes, these situations are uniquely susceptible to getting your hands dirty. We need to get everybody together and knock heads and say, look, we can't find a perfect advanced abstract answer, but we have to get on the ground and be as reasonable and proactive as we can.

And if that is the essence of your suggestion, I subscribe to it wholeheartedly. Thank you.

Mr. **CASTLE**. Thank you.

Mr. **STUDDS**. I didn't know that governors communicated at that level of abstraction. I will attend the next conference.

Mr. Secretary, you have been a trouper. We appreciate it. We hope to move this legislation as rapidly as our Byzantine ways will allow and get you on your way.

Secretary **BABBITT**. Mr. Chairman, Committee members, thank you.

Mr. STUDDS. Thank you. As rapidly as politely possible, the second panel can wend its way forward, all of you.

If we can rearrange ourselves with dispatch, I would appreciate it.

I want to welcome the panel, express my thanks for your patience and confess to you that we are under more than the usual time constraints at the moment because of additional demands for use of this room and the likelihood of our being interrupted once again by a vote on the Floor.

We are going to treat you as a panel and take you in the order in which you appear on the witness list, and ask you to confine your oral testimony to no more than five minutes, lest it is humanly and ethically possible. Your written statements will appear in their entirety in the record.

We apologize for the pressures of time.

First Mr. John Sawhill, President of the Nature Conservancy.

Mr. Sawhill, welcome back.

STATEMENT OF JOHN C. SAWHILL, PRESIDENT, THE NATURE CONSERVANCY

Mr. SAWHILL. Mr. Chairman, thank you very much. I am delighted to have this opportunity, and I particularly appreciate the fact that you have scheduled these hearings.

I would like to say at the outset that the Nature Conservancy strongly supports the creation of the National Biological Survey. This country has been too long without a national agency to inventory and monitor species.

Now, the Nature Conservancy faced the same issue that we are talking about today 20 years ago. We are a large international conservation organization and we had to develop a scientific methodology in order to establish our priorities for land acquisition and protection.

And so we created a unique public-private partnership, the Natural Heritage Network, and this has grown in scope and sophistication over the last 20 years. And as I think you said in a previous hearing, it represents the only "National Biological Survey" that we have today. And so my testimony is based on our experience over 20 years in trying to do what we are talking about this morning.

Now, the proposed National Biological Survey has two functions, a research function and an inventorying and monitoring function. And I am going to confine my remarks to the inventorying and monitoring function. In my testimony, I talk a little bit about the need for a National Biological Survey for this inventory function, but I think Secretary Babbitt has expressed that so well that there is little that I can add to what he said.

Instead, I would like to make a few suggestions that I think could serve as criteria for what a National Biological Survey should look like.

First, it seems to me that it should draw on existing data and inventories. Congressman Vento and Saxton and others in their discussions this morning have talked about the need to reach out and make sure that we are not reinventing the wheel, and that we

should build on existing data bases and work within existing Federal structure. In addition, they said that the survey, as it is created, should be compatible with other systems. I would certainly strongly support that.

Second, it seems to me that we need an inventory that enables us to be proactive land managers—to do as Secretary Babbitt has suggested and anticipate problems rather than to react to problems.

Third, we need data that is timely, and that we need an adequate quality-control function to make sure that the data we are getting has credibility and really does reflect the true state of affairs on the ground.

Fourth, it seems to me that the inventory should be capable of mapping biodiversity at a scale sufficient so that we can use it for land-use decisions. Congressman Gilchrest talked about the National Biological Survey and its use in local land-use decisions, and I can tell you that the Nature Conservancy's experience is that State and local governments and private corporations turn to the Natural Heritage Network frequently. As a matter of fact, last year, we had 200,000 requests for information. Many of these came from State and local governments and private corporations in connection with land-use decisions.

The final criterion I would suggest is that we ought to have data that can be looked at on a national basis so that the Interior Department and other government agencies can give the Congress and the American people an assessment of what is happening to biodiversity on a national scale, as well as a regional and a local scale.

I also want to stress that I think the Natural Heritage Network of the Nature Conservancy can serve as an important building block for the National Biological Survey. Now, admittedly, it doesn't contain all the information that we need for the NBS, but it contains a lot of this information. Today it is housed in State governments, for the most part, so that we can build on an existing system using existing resources and not have to reinvent the wheel.

And in my testimony, I point out that the Heritage Network also satisfies the other criteria that I have just outlined.

And finally, I would like to make three other recommendations. First, a national-level heritage center should be established within NBS. In other words, we ought to have a heritage center right in the NBS to draw on this wealth of information already existing in State governments.

Second, there ought to be some kind of grants-in-aid program to support the State heritage program so they can all be brought up to the quality level needed for the Federal NBS. And finally, there should be some kind of cost sharing arrangement established for a joint Conservancy—NBS technical assistance program so that we can continue to develop new generations of software to support the NBS.

I see the yellow light is on, so I will close by just stating again our strong support and our appreciation for your interest in holding these hearings.

Mr. Strubbs. Thank you very much, sir, and we apologize for the light.

[The statement of Mr. Sawhill can be found at the end of the hearing.]

Mr. STUDDS. Mr. Mark Shaffer of the Wilderness Society.
Mr. Shaffer.

STATEMENT OF MARK L. SHAFFER, VICE PRESIDENT FOR RESOURCE PLANNING AND ECONOMICS, THE WILDERNESS SOCIETY

Mr. SHAFFER. Good morning, Mr. Chairman. Thank you for the opportunity to be here. I would like to point out that our written testimony and my oral comments this morning represent not only The Wilderness Society but several other environmental groups including the Natural Resources Defense Council, Sierra Club, Environmental Defense Fund, and Greenpeace.

First of all, we would like to congratulate Secretary Babbitt for his leadership and vision in bringing forth the concept of the National Biological Survey, an institution long overdue. We would also like to commend you, Chairman Studds, for bringing forth this legislation to authorize the survey and to try to make it a reality by October 1.

We have submitted a written statement. I am not going to attempt to go through it in great detail. I will highlight a few points in the interest of time.

One is that I used to work for the U.S. Fish and Wildlife Service and actually spent about three years in the research division. Therefore, I have been very interested in how the plan for the survey has unfolded and have many informal conversations with various people around town.

I know there are a lot of concerns when you create a new institution principally out of existing parts of other institutions. It is never a completely clean fit. It is always a little bit of an awkward ugly duckling to begin with, but our point is that we think that follows function and we think that Mr. Babbitt has the right idea and the right concept.

We think if Congress gives this new institution a solid mandate and a clear mission, that the form of the survey will quickly evolve into a very efficient operation. To this end, we have provided some comments in our testimony to help clarify the mission in ways we think might be useful for incorporation into H.R. 1845.

Our other major concerns and points are that we think some of the concerns that you have heard, or will hear, about the dangers of taking research out of various separate management agencies can be addressed through some of the structures that have been proposed for the survey, including the internal policy board.

We also recognize, as a member of the Committee mentioned earlier, potential difficulties in coordination across Federal agencies and between levels of government. We think that is a legitimate concern and we think that the proposed science council or science board that is being talked about for this survey can address and solve that problem.

We think these two features of the survey are so important, in fact, that we would suggest that H.R. 1845 be amended to specify what the composition of these bodies will be and exactly what role

they will play. I think both of them can make the survey a much better institution.

We would also like to applaud Mr. Vento's good efforts over the past few years in trying to strengthen the role of science in the National Park Service. We have shared many of his concerns and we have supported many of his initiatives. And we, too, want to make sure that the science needs of the National Park Service are met.

Frankly, it is our view that if we define well the policy board and its role in coordinating within the Department of the Interior, making sure that the research needs of the various bureaus are addressed, we can alleviate any concerns and assure that the parks receive the scientific research and facts that they need.

Finally, although we did not include this point in our written statement—an oversight I apologize for—we also believe that a National Biological Survey without a national wetlands inventory just doesn't quite make sense so we would be very supportive of amending H.R. 1845 to transfer the national wetlands inventory.

The environmental community wants to see this effort succeed. We think it is the right initiative to take and we would be happy to work with the committees and with the administration in any way that we can to see that it does succeed.

Thank you.

Mr. STUDDS. Thank you very much, sir.

[The statement of Mr. Shaffer can be found at the end of the hearing.]

Mr. STUDDS. Mr. Max Peterson of the International Association of Fish and Wildlife Agencies.

Mr. Peterson.

STATEMENT OF R. MAX PETERSON, EXECUTIVE VICE PRESIDENT, INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

Mr. PETERSON. Thank you, Mr. Chairman. You have my statement, so I will brief it for you. Let me first say that the International Association of Fish and Wildlife Agencies, as you remember, represents the 50 State Fish and Wildlife agencies who have the major responsibility in this country for Fish and Wildlife and strong cooperation with the U.S. Fish and Wildlife Service.

So we have had long-standing interest and cooperation in research that is conducted by the Fish and Wildlife Service and inventorying and monitoring. Let me first associate myself with Mr. Sawhill's remarks on how this process might best unfold, by, at least, looking first at the inventories that already exist.

There have been a couple of mentions of the Manual of Federal Geographic Data products. I would like to give you a couple of copies of this manual if you don't have it readily available. There are some 16 agencies that collect inventory information. The Department of Interior is a relatively minor collector of inventory data at the present time.

I believe the number one agency collecting inventory information is NASA because of the space satellites. A major problem in inventories is—as has been mentioned here today is lack of definitions. Agreed-on definitions are essential before you can inventory.

For example, it is pretty difficult to inventory "wetlands" if there is a fundamental difference of opinion on what is a "wetland". It is very difficult to inventory "old growth" forests if there is a fundamental scientific difference of opinion as to what "old growth" is. What needs to be decided early on, whether there is an NBS created or not, is to arrive at common definitions that will be used by private, State, and Federal people who are engaged in inventory activities. I believe that it might be a good idea to think about spending some time doing that rather than establishing a new bureau and give it operational responsibility for inventorying and monitoring. You could probably make the case today that there is maybe too much inventorying and monitoring.

For example, NASA has lots of films in storage that they can't afford to develop that contain all kinds of information. The information may not be to the quality standards that are needed to manage land or make other kinds of decisions. There are some significant gaps we believe and in my testimony, I mention some of those gaps.

We would agree with Secretary Babbitt that we know precious little about the species that are not threatened or endangered or hunted or fished. The 80 to 90 percent of the species that fall in that so-called nongame category, such as the common song birds that fly around here all the time and the frogs, butterflies, and other species that are out there. We don't really have a good inventory of those species that migrate. They are exceptionally difficult to inventory. We don't even know how to go about some of the inventorying and monitoring of those species.

The Fish and Wildlife Service has given important leadership in breeding birds surveys to try to start getting a handle on birds. This was done within the existing fish and wildlife organization.

Let me lay out a couple of dilemmas that I think this Committee is faced with. On the one hand, we are told that this proposed organization will be fundamentally the current research organizations. Eighty-five percent of the people that would make up this new organization are existing Fish and Wildlife research people, and the balance are research people scattered between the National Park Service and several other agencies. We are also told that they will merely change uniforms and add a new logo. But we are also told that this new organization is going to do all these new great survey and monitoring things.

Now, which is really true? Is it really going to be a major new effort in some areas with lots of additional resources while research people continue to do important fish and wildlife research? Or are we going to see a great diversion of fish and wildlife research people into new program areas?

You can make the claim that the NBS will increase efficiency but I would submit that we don't know if that is true or not. Creating a new agency, in itself, costs money to create a new bureaucracy to run it. It costs a lot of money to run a new bureau and it costs people to do it.

So, Mr. Chairman, as far as our organization is concerned, we are still in the stage of saying we believe in the goals that the Secretary outlined of getting ahead of the curve in terms of knowing more earlier about species. We also believe there is a need to both

coordinate the Federal Government, State, and local inventoring and monitoring.

The question is, is creating a new agency the way to do it? History is replete in the last 30 years with examples of every time a new problem came up in this town, we created a new agency. We are now going back and disestablishing some agencies. The question is, is this new agency going to contribute to a solution to the problem or just be another costly proposition where the same resources could have been used better if they were simply given to the Fish and Wildlife Service research people to do the job. That is our basic question.

Mr. STUDDS. Thank you very much, sir.

[The statement of Mr. Peterson can be found at the end of the hearing.]

Mr. STUDDS. Next, Mr. Rollin Sparrowe of the Wildlife Management Institute.

Mr. Sparrowe.

**STATEMENT OF ROLLIN D. SPARROWE, PRESIDENT, WILDLIFE
MANAGEMENT INSTITUTE**

Mr. SPARROWE. Thank you, Mr. Chairman. We at the Institute support the concept of a biological survey of the United States, especially an expansion of monitoring, evaluation and research on the biological resources. Our concern is mainly how to develop the biological survey, not whether to do that.

I have to preface some of my comments by pointing out that I had more than 20 years with the Fish and Wildlife Service and very recently supervised a number of the programs that are to be affected. I also point out that I am currently serving on a National Research Council Committee reviewing the formation of the National Biological Surveys, and I am not here representing them but representing my own experience with the agency.

The main purpose of my comment is to make certain that some attention is given to the unanswered questions about effects on the agencies involved in these transfers. We have been interested in the future of the Bureau of Land Management and the Park Service and their scientific capabilities and particularly the Fish and Wildlife Service.

It appears that decisions are being made within the Department and by the Congress, perhaps, without adequate analysis to the potential impacts on programs that these committees and authorizing committees have paid an awful lot of detailed attention to in building in the past and many of us have supported the building of those programs.

Overall, a major program change and major change in the complexion of a very important agency, the Fish and Wildlife Service, particularly appears to be occurring by appropriation rather than by detailed analysis and planning.

We know that most staff and dollars, for instance, will come from the Fish and Wildlife Service. Assurances are made, as Max Peterson pointed out, that many things will not change, at least immediately, but since we began this dialog months ago, we have no new information on exactly what is going to happen, just con-

tinuing speculation. And clearly this move would remove some of the best and brightest and most active people trained in contemporary science from the Fish and Wildlife Service and, to a lesser extent, from the other agencies.

The question is: What does that do to them? You take away the best, you take away specialists involved directly in management, you take away all of the mathematicians who are providing support for design of studies in management and research, and you have a powerful impact that needs to be looked at.

We helped establish the original cooperative research units. The Secretary has made welcome overtures that he intends to consult with all of the cooperators. We think that consultation needs to get on if there is to be meaningful change. And if units are to be a major part of this biological survey as it develops, we need to have a specific dialog about how that might come about and how it would affect the programs as they exist.

H.R. 1845 is mainly a basic statement, a welcome statement to engender discussion of a biological survey. It has only generic statements in it, such as we have heard about the National Biological Survey from Interior, and provides few details about how the survey should work.

Perhaps we are all operating under the same lack of hard information. Clearly the Fish and Wildlife Service, for example, is targeted to take the largest hit in the loss of capabilities. With their multiple responsibilities for treaties well beyond the Endangered Species Act, which is the only specific statute mentioned in the bill, it would seem appropriate to take a look at how they are going to carry out all of these responsibilities for treaties that relate to fisheries, Great Lakes, migratory birds, and the Endangered Species Act.

We would advocate some sort of leadership role for the Fish and Wildlife Service because of the strong role they will have to play in carrying out much of the intent of the regulation and management under the Endangered Species Act and other targets of this bill.

So whatever bodies are set up to oversee the biological survey, we recommend that the Fish and Wildlife Service be given consideration for some kind of prominent leadership role. We would hate to see them lose all of their research capability and become one of 18 members of a big coordinating committee.

Conspicuously missing is reference to how other Federal agencies will coordinate State and private entities and, as I mentioned, legislative mandates other than the Endangered Species Act.

The management of national forests and a bunch of other difficult things need to be grappled with if a true look at the biological resources of this country are to come about. Once again, we think that prior to action on budgets and to legislation such as this, there ought to be a close, in-depth analysis based on information from Interior about exactly how many of these programs and institutions are going to be changed.

Thank you, Mr. Chairman.

Mr. STUBBS. Thank you, sir.

[The statement of Mr. Sparrowe can be found at the end of the hearing.]

Mr. STUBBS. Next, Mr. Bill Horn of the Wildlife Legislative Fund.

Mr. Horn.

**STATEMENT OF BILL HORN, DIRECTOR OF NATIONAL AFFAIRS,
WILDLIFE LEGISLATIVE FUND OF AMERICA**

Mr. HORN. Thank you, Mr. Chairman. On behalf of the Wildlife Legislative Fund of America (WLFA), we appreciate the opportunity to appear today. WLFA opposes H.R. 1845 and the creation of the National Biological Survey. And we strongly suggest that as the Committee considers this measure, the focus should be on what should be supported and what should be opposed.

We strongly support and urge the Congress and the Committee to strongly support taking actions and measures to improve the scientific bases that underlay wildlife and land management decisions. But we oppose this proposed new bureaucratic structure as we are persuaded it will adversely impact the ability to enhance good science underlying critical land and wildlife management issues.

There has got to be a separation here between the concept of better science and this particular proposed bureaucratic structure. We are convinced that the compelling case for this bureaucratic structure remains to be made. Very simply, the creation of NBS is reinventing a wheel that was found to be broken earlier this century.

A similar agency existed at the turn of the century, the Division of Biological Survey in the United States Department of Agriculture which was created in that era to examine "the geographic distribution of animals and plants," within the United States.

This arrangement was found to be wanting and eventually evolved into today's U.S. Fish and Wildlife Service which integrates research and management functions, an arrangement deemed superior over 50 years ago and clearly superior to the proposed NBS.

The objective of focusing research resources on biological issues can be readily achieved within the Department's existing organization without creating the management problems and additional costs associated with creating a new bureaucracy.

Specifically, WLFA is persuaded that separating research from management may result in a host of problems. Let me just detail a couple of them. From some personal experience, I am strongly persuaded that management will become less effective. Rather than being able to direct research efforts toward specific management problems, managers will find themselves ensnared in a new bureaucracy where a request for a research must go to separate entities at the National Biological Survey.

The NBS researcher may or may not respond favorably, depending on the directives he or she is receiving from supervisors. The concept of establishing "client service personnel" within NBS does little to solve this fundamental management flaw. It simply adds another level of personnel to complicate the interface between research and management and also may impose more cost on the taxpayer.

Dividing research from management is also likely to expose U.S. Fish and Wildlife Service hunting and fishing programs to renewed

legal attacks by animal rights zealots. Previous assaults against migratory bird hunting and hunting on public lands at the Federal level have focused on the scientific data available that support hunting and related management programs. The Fish and Wildlife Service has had to demonstrate that its research arm provides sufficient information to the managers to support continuation of these traditional programs.

And fortunately, at least from our organization's perspective, this has been done to the satisfaction of Federal courts, and blunted anti-hunting lawsuits. Without adequate data, hunting programs would have been and will be enjoined by U.S. courts. The stated purpose behind NBS is to charge off after endangered species matters and items such as biological diversity.

The Department's NBS rhetoric and H.R. 1845 are both noticeably short on expressions of concern or understanding regarding traditional fish and wildlife programs such as migratory waterfowl or interjurisdictional fisheries.

NBS resource allocation that redirects funds and personnel and gives short shrift to research involving these traditional programs will simply invite the animal rights radicals to mount new legal challenges to hunting and fishing activities in the provision by NBS of inadequate information to FWS on such issues will eventually lead to the loss of these hunting and fishing opportunities on public lands.

If the solution—one that has been bandied about—is to give the FWS director some measure of direct control over allocation of NBS resources, we ask a simple question: Why are we creating a new bureau in the first place?

Mr. Chairman, we are of the opinion that research and management are irrevocably linked and that WLFA is opposed to reinventing a previously broken wheel and dividing critical research functions from management. Until a more compelling case is made for this separation, we urge the Committee and Congress to oppose the creation of NBS and not enact H.R.1845.

Thank you.

Mr. HOCHBRUECKNER. [Presiding] Thank you, Mr. Horn.

[The statement of Mr. Horn can be found at the end of the hearing.]

Mr. HOCHBRUECKNER. At this point, Mr. Jim Little, Chairman of the Endangered Species and Wildlife Subcommittee with the National Cattlemen's Association from Idaho.

Mr. Little.

STATEMENT OF JIM LITTLE, CHAIRMAN, ENDANGERED SPECIES AND WILDLIFE SUBCOMMITTEE, NATIONAL CATTLEMEN'S ASSOCIATION

Mr. LITTLE. Thank you, Congressman. Cattlemen are vitally interested in H.R. 1845, as we graze cattle on pastures and rangelands which occupy over half the surface of this country.

The National Cattlemen's Association (NCA) certainly appreciates the need for more solid, timely, objective science as recognized by this legislation. More and more natural resource issues which acutely impact the viability of our ranches depend on government

decisions made on the basis of allegedly scientific information. I have had direct experience with this as I have a forest grazing allotment which has two listed species.

However, NCA has several questions about this specific legislation and the lengthier proposals for the National Biological Survey now circulated by the Department of the Interior. We think it would be highly premature and inappropriate to pass H.R. 1845 in its present form. I will now briefly review the areas of our greatest concern.

An overriding mission of this legislation is a national inventory of the populations, abundance, health, status, and trends of all this Nation's biological resources. Although frequently described as a biological counterpart to the U.S. Geological Survey, the proposed biological survey has a different mission and an unavoidable different function than the U.S. Geological Survey. Theirs (U.S.G.S.s) is a noncontroversial mission of physical measurement. To inventory and monitor the health, status, and trends of resources and to identify critical national resources are to make qualitative judgments about which there is neither scientific nor political consensus.

The Endangered Species Act defines in law many key terms and procedure. Legislation which authorizes the government to assess the condition, quality, and national value of resources. H.R. 1845 should also define key terms and the standards by which they should be applied.

The Department of Interior's current proposal states that the proposed NBS will be an independent, objective, scientific bureau without advocating positions on management issues or carrying regulatory authority. On the other hand, the same proposal states that the NBS will serve managers and policymakers' need for scientific information on biological resources.

Notwithstanding this contradiction, current statutes like the Endangered Species Act plainly preclude any distance between authoritative government science and management regulatory decisions.

Almost all government actions dictated by the Endangered Species Act are to be made on science and science alone. The accessibility of more comprehensive science as envisioned by this NBS could very likely accelerate regulatory enforcement of the Endangered Species Act. Identification of so-called critical national resources would more than likely expedite increased government land acquisition as proposed methodologies like gap analysis imply.

The social forces advocating more land acquisition, more regulatory enforcement of the ESA through elaborate planning requirement would be unavoidably promoted by the NBS as it is now proposed. This could increase, not decrease, the number of train wrecks about government's control of productive natural resources.

It would be impossible to accurately inventory and monitor biological populations, distributions, and to assess condition without field studies. H.R. 1845 does not specify by what methods the inventory would be conducted.

Although satellite imagery and aerial photography are now used for similar functions, those methods yield fairly nebulous, general information. Any practically useful information and certainly any

information used to make a judgment decision would necessitate on-the-ground work.

At least six out of 10 acres in this country are private property. The NBS's basic mission would involve trespass on a vast scale. Further, landowners must have a right to access any of this information about their deeded lands, just as they have access to IRS records and other government data. Above all else, we insist the freedom of information right not be waived.

The Department of the Interior proposals for the NBS imply that preserving, restoring, and in all manner studying biological diversity is national policy. Although there have been bills in the House to make this explicit, they have not been passed. NCA believes it is important for Congress to consider this basic policy issue before creating an entirely new agency whose mission assumes the affirmation of this policy.

NCA wholeheartedly supports the need for more timely, objective, scientific information relevant to national resource use and national resource protection. However, we believe the information needs to be genuinely empirical, field tested, peer reviewed, addressed to practical issues and challengeable by affected parties.

Thank you.

Mr. STUDDS. Thank you very much.

[The statement of Mr. Little can be found at the end of the hearing.]

Mr. STUDDS. I want to thank all six of you and I reiterate my apology for the pressing nature of the time constraints we are under. It is impossible for me to ask the questions I wanted to ask because of obligations to be elsewhere an hour ago. And I profoundly apologize. I appreciate it.

We have your written testimony and we look forward to working with you as we hopefully proceed very quickly.

Mr. STUDDS. The Subcommittee stands adjourned.

[Whereupon, at 12:16 p.m., the Subcommittee was adjourned, and the following was submitted for the record:

**STATEMENT OF SECRETARY OF THE INTERIOR BRUCE BABBITT
BEFORE THE HOUSE MERCHANT MARINE AND FISHERIES SUBCOMMITTEE ON
ENVIRONMENT AND NATURAL RESOURCES AND THE HOUSE NATURAL RESOURCES
SUBCOMMITTEE ON NATIONAL PARKS, FORESTS AND PUBLIC LANDS
ON H.R. 1845, THE NATIONAL BIOLOGICAL SURVEY ACT OF 1993**

July 15, 1993

Mr. Vento and Mr. Studds, I'm delighted to be here today to testify on the National Biological Survey and on H.R. 1845, the NBS authorizing bill that Chairman Studds has introduced.

I am often asked why I see the need for a National Biological Survey, and what led me to develop the idea of an NBS. First, you may be aware that the NBS is an historical echo of the U.S. Geological Survey. In the late 1870's, the extractive industries had no baseline data on which to depend for drilling and mining on the West's public lands. The conservationists at the time also deplored the lack of basic geologic information - they couldn't discern the appropriate land holdings to protect. Both sides, industry and conservationists, prevailed upon the government to correct this fundamental lack of information. In addition, the National Academy of Sciences and the Smithsonian Institution recognized and called for an independent geological survey. The result was that in 1879, Congress established the U.S. Geological Survey at the Interior Department. The Survey's mission was to examine and record the geological structure and mineral resources and products in the national domain. I see the same need for

biological information as we approach the 21st century that John Wesley Powell saw in geology over a century ago.

Two other events have reiterated to me sharply our need for an independent fount of biological information: litigation over the Endangered Species Act, which has created unnecessary "trainwrecks" such as the forest crisis in the Pacific Northwest, and the scattered, disparate nature of research at the Department of the Interior, which results in ad hoc science. Both of these situations have shown me that independent, credible scientific information is essential to improve our capacity to protect and manage our natural resources.

In a world marked by growing demands for natural resources and increasing complexity and competition, we have to have sound and comprehensive science to make informed and timely decisions. The purpose of the NBS is to provide a road map to enable us to get ahead of the endangered species listing process and constructively solve environmental and economic conflicts.

The Endangered Species Act is an extraordinary piece of legislation because it allows the Federal Government to preserve, maintain, and foster the recovery of endangered species wherever they occur, without regard to geography, location, or land ownership. Here is a law of great reach and power, and yet we do not have the scientific capability to get ahead of it. The National Biological Survey will give us the tools to avoid many of

the conflicts of the Endangered Species Act, and to know the health and abundance of our living resources.

Let me just add that the Endangered Species Act is a good law, but we've done less than a stellar job of enforcing it, and in doing so, we've let the courts take over. What we need is a systematic biological inventory of the entire nation at an appropriate scale and feasible level of detail. We need to undertake such a biological survey cooperatively with other Federal agencies, states, local governments, and private and nonprofit organizations. An example of this is the Gap Analysis Program, which maps the "gaps" in species protection. I proposed the National Biological Survey to address this enormous data void so we can correct the course of our compliance with the Endangered Species Act.

With stand alone, credible science at Interior, science which is out of the management and policy chain, we won't get stuck in situations as we've just seen in the Pacific Northwest. There's an example of where the players waited until the crisis was white hot and everyone was backed into a corner. Let the science come first, keep it separate from regulatory, mission and policy functions, and we'll have the cornerstone for more responsible natural resources public policy.

Further, there is a tremendous need in the Department of the Interior to cut across jurisdictional boundaries. When I assumed

the position of Secretary six months ago, I knew that without an independent, biological science capability, I would spend too much time untangling bureaucratic wars. Sometimes the Bureau of Land Management scientists don't talk to the Fish and Wildlife Service scientists. This is in no way meant to criticize the fine work of our biologists and scientists at the Department. Rather, what has happened is that myopic, mission-specific research has made it so we can't see the big biological picture.

I'm proposing to create the NBS so that the science and the biological data upon which Interior managers make decisions can be strengthened, integrated and improved. We have ten bureaus at Interior, most of which conduct some sort of biological research or scientific functions. I see the NBS as a great remedy to shape, expand and redeploy our scientific assets to create the kind of capacity we need to solve some of these problems. Simply, the irreducible beginning point of responsible resource protection is good science.

Two things I'd like to stress here. One is the importance of integrating and knitting the geographic information systems we already have in place. This includes data collected by states, local governments, private and nonprofit organizations and other Federal agencies. It is absolutely essential that the NBS work cooperatively with the many entities that are collecting biological data, and that these systems are knit into a comprehensive system. Interior has already initiated many of these contacts. State

Heritage programs, the State fish and game agencies, and numerous Federal agencies all have important contributions to make to fill in the biological picture.

We have structured the NBS to make sure that we operate in a cooperative, interactive way. One important element to the NBS is the Science Council. The Science Council will advise the Director of the NBS, providing a badly needed forum to allow for interaction among Federal scientists, state biologists, and non governmental and private sector organizations. Through the Science Council, we hope to improve the efficiency and effectiveness with which we transfer information and collect biological data to all sectors. Another important point we'll be working on in the NBS is standardizing protocols and data collection techniques.

Chairman Vento and Chairman Studds, that is an idea of my view of the need and purpose for the NBS. With regard to the structure of the NBS, let me give you an overview of some points we'd like to see in H.R. 1845.

Briefly, I think the NBS should have a Director appointed by the President and confirmed by the Senate. The NBS will be located organizationally alongside the FWS and the Park Service, under the Assistant Secretary for Fish and Wildlife and Parks. The NBS needs a Science Council as I described before, so that we work in tandem with states and other Federal agencies. The Director of the NBS should also be advised by an internal Interior Department Policy

Board. This will guarantee that bureau research needs continue to be met.

The functions of the NBS will include a survey as I have described above. I consider a survey to be a process that is never done, but is longitudinal and dynamic. The NBS includes other important biological functions - including research on a large, ecosystem basis, inventory and monitoring programs like the Gap Analysis, information transfer and technical assistance to Interior bureaus, other Federal agencies, states and other institutions.

H.R. 1845 should also include provisions to transfer the National Wetlands Inventory. This valuable collection of data run by the Fish and Wildlife Service began in 1974. Since then, the NWI has produced over 34,00 wetland maps and distributed over 1.6 million copies of them. As part of the NBS's inventory and monitoring program, the National Wetlands Inventory is critical to filling in the biological picture of the country. Because Congress created the NWI under the Director of the Fish and Wildlife Service, I'll need language allowing me to transfer it to the NBS.

Because the NBS is so critical to our having a solid picture of our biological resources, I have chosen to move swiftly to transfer the appropriate biological functions in eight Interior bureaus into a new, free standing, non-regulatory bureau. The NBS budget amendment, which President Clinton forwarded to Congress in April, includes provisions to transfer the Patuxent Research

Center, which is located on a national wildlife refuge, to the National Biological Survey. Patuxent is a jewel in the crown of the Department of the Interior. It functions as a multi-use refuge, with active research projects, hunting in some areas, migratory bird work, and a visitors center under construction. I hope to arrange for the use of the Research Center by the NBS through a memorandum of agreement, rather than amending the Refuge Act. Working with Congressman Hoyer and your Committees, I am sure we can work out a simple solution, so that the important biological work at Patuxent can join the NBS family, but the Refuge remains in the Fish and Wildlife Service. An administrative solution will be easier than a legislative one, and I look forward to working with you all on that.

There are other details to the NBS legislation that are necessary to make sure we fill the vacuum that currently exists for broad scale biological information and assessments of the nation's resources. I know my staff and I are pleased to work with you to ensure that we create a first class organization.

Mr. Vento and Mr. Studds, I again wish to thank you for your leadership in the National Biological Survey, and for inviting me, and our friends, to share our views and vision of the NBS.

OPENING STATEMENT
CONGRESSMAN BRUCE F. VENTO
HEARING ON H.R. 1845
NATIONAL BIOLOGICAL SURVEY ACT OF 1993
JUNE 15, 1993

I AM PLEASED THAT CHAIRMAN STUDDS HAS AGREED TO THIS JOINT HEARING OF OUR TWO SUBCOMMITTEES ON H.R. 1845. THE CREATION OF A NATIONAL BIOLOGICAL SURVEY AS AN INDEPENDENT BUREAU TO PROVIDE THE SCIENTIFIC BASIS FOR INTERIOR DEPARTMENT DECISIONS REQUIRING BIOLOGICAL KNOWLEDGE INVOLVES A MAJOR REORGANIZATION OF EXISTING INTERIOR DEPARTMENT BUREAU PERSONNEL AND BUDGETS. I SUPPORT THE SECRETARY'S FOCUS ON GOOD SCIENCE AND HIS DESIRE TO DEVELOP A COMPREHENSIVE AND COORDINATED PROGRAM TO PROVIDE THE MOST OBJECTIVE AND UP-TO-DATE INFORMATION AND GUIDANCE, AND I BELIEVE THE CREATION OF A NEW ORGANIZATION WITHIN THE DEPARTMENT SHOULD BE DONE ONLY AFTER CAREFUL CONSIDERATION AND WITH APPROPRIATE LEGISLATIVE AUTHORIZATION.

CERTAINLY SUCH REORGANIZATION WILL AND SHOULD RESULT IN SAVINGS, EFFICIENCY AND A THE DELIVERY OF MORE TIMELY AND ACCURATE INFORMATION TO THE BUREAUS THAT USE AND NEED SUCH SCIENTIFIC INFORMATION. TODAY WE NEED A SIGNIFICANT AMOUNT OF BIOLOGICAL SCIENCE. TOMORROW WE WILL NEED MUCH MORE, AND THE BIOLOGICAL SCIENCES ARE CHANGING FROM FIELD LABS TO SOPHISTICATED REPOSITORIES THAT MUST PROPERLY INTERFACE WITH THE FIELD.

THE SECRETARY HAS PROPOSED THAT THE DEPARTMENT COMBINE SIGNIFICANT PORTIONS OF THE SCIENTIFIC ACTIVITIES OF EIGHT DEPARTMENT OF INTERIOR BUREAUS INTO ONE, AND THE INTERIOR APPROPRIATIONS BILL WHICH THE HOUSE IS CONSIDERING TODAY PROVIDES FUNDING FOR THIS NEW PROGRAM. HOWEVER, AUTHORIZING LEGISLATION

HAS NOT YET BEEN APPROVED BY CONGRESS, AND THE SPECIFICS OF THIS PLAN HAVE YET TO BE DETERMINED. OUR HEARING TODAY WILL FOCUS ON THE PROVISIONS NEEDED TO ASSURE THE DEVELOPMENT OF AN INTEGRATED AND MORE PRODUCTIVE SCIENCE AND RESEARCH EFFORT WHICH PROVIDES CLEARER FOCUS AND GREATER OPPORTUNITIES FOR THE DEPARTMENT'S OVERALL SCIENTIFIC PROGRAM YET REMAINS RESPONSIVE TO THE RESEARCH NEEDS OF THE INDIVIDUAL BUREAUS.

AS THE CHAIRMAN OF YOUR SUBCOMMITTEE ON NATIONAL PARKS, FORESTS AND PUBLIC LANDS OF THE NATURAL RESOURCES COMMITTEE, I AM PARTICULARLY INTERESTED IN THE EFFECT THIS NEW INITIATIVE WILL HAVE ON EXISTING RESEARCH MANDATES FOR THE NATIONAL PARK SERVICE AND THE BUREAU OF LAND MANAGEMENT. THE NEED FOR AN IMPROVED SCIENTIFIC RESEARCH PROGRAM IN THE NATIONAL PARKS HAS BEEN WELL DOCUMENTED IN THE LAST SEVERAL YEARS, MOST RECENTLY IN A NATIONAL ACADEMY OF SCIENCES REPORT RELEASED IN AUGUST OF 1992 WHICH DECRIED THE LACK OF A DISTINCT SCIENCE PROGRAM IN THE NATIONAL PARK SERVICE AND CALLED FOR "IMMEDIATE AND AGGRESSIVE ATTENTION" TO THE DEVELOPMENT OF AN APPROPRIATE PROGRAM.

SCIENTIFIC RESEARCH IS INEXTRICABLY RELATED TO RESOURCE MANAGEMENT. THE LACK OF A COMPREHENSIVE AND EFFECTIVE SCIENTIFIC RESEARCH PROGRAM, PARTICULARLY IN THE NATIONAL PARK SERVICE, HAS SOMETIMES RESULTED IN INADEQUATE OR HARMFUL MANAGEMENT OF IRREPLACEABLE RESOURCES. ONE OF MY PRIMARY CONCERNS ABOUT THE CONSOLIDATION OF A SCIENTIFIC RESEARCH PROGRAM DEPARTMENT-WIDE IS THAT IT WILL FURTHER DISASSOCIATE THE RESEARCH FROM ITS APPLICATION TO RESOURCE MANAGEMENT ON THE GROUND. CREATING ANOTHER FILTER COULD FURTHER ISOLATE PARK MANAGERS FROM THE

INFORMATION THEY NEED TO EFFECTIVELY MANAGE AND PROTECT OUR PARK RESOURCES.

I DO NOT BELIEVE THE ESTABLISHMENT OF A NATIONAL BIOLOGICAL SURVEY NEGATES THE NEED FOR AN IMPROVED RESEARCH PROGRAM IN THE NATIONAL PARK SERVICE, AND I INTEND TO PURSUE, IN COOPERATION WITH THE DEPARTMENT, SEPARATE LEGISLATION PROVIDING A SPECIFIC SCIENCE AND RESEARCH MANDATE FOR THE NATIONAL PARK SERVICE WHICH HAS BEEN UNDER CONSIDERATION FOR THE PAST FEW YEARS.

IMPORTANTLY, THE GOAL AND STRUCTURE OF A NEW IMPROVED, COORDINATED COMPREHENSIVE SCIENTIFIC RESEARCH PROGRAM IN THE DEPARTMENT OF THE INTERIOR HAS NEVER BEEN MORE CRITICAL THAN IT IS TODAY. THE THREATS TO OUR RESOURCES HAVE BECOME INCREASINGLY SEVERE AND THEIR MANAGEMENT HAS BECOME INCREASINGLY COMPLICATED. THE DEPARTMENT OF THE INTERIOR AND MOST LAND MANAGERS EXPEND TOO LITTLE ON APPROPRIATE SCIENTIFIC RESEARCH. OBJECTIVE, THOROUGH RESEARCH IS NEEDED TO IDENTIFY THE RESOURCES, TO UNDERSTAND THEIR DYNAMICS AND TO ASSESS THE EFFECTS OF SPECIFIC THREATS SO THAT APPROPRIATE MANAGEMENT DECISIONS CAN BE MADE AND IMPLEMENTED. THIS WILL NOT HAPPEN WITHOUT SUBSTANCE AND FORM DIRECTED BY THE FEDERAL GOVERNMENT.

THE DEPARTMENT OF THE INTERIOR HAS A CLEAR AND THE LIKELY LEAD ROLE WITH THE NATIONAL BIOLOGICAL SURVEY, BUT THIS EFFORT WILL NECESSITATE STRIKING EFFECTIVE COOPERATIVE AGREEMENTS WITH OTHER DEPARTMENTS SUCH AS THE DEPARTMENT OF AGRICULTURE WITH ITS NATIONAL FOREST SERVICE, THE DEPARTMENT OF COMMERCE--HOME OF NOAA, COASTAL AND MARINE SANCTUARIES, THE ENVIRONMENTAL PROTECTION AGENCY, THE NATIONAL SCIENCE FOUNDATION, THE

SMITHSONIAN AND THE DEPARTMENT OF DEFENSE, WHICH IS RESPONSIBLE FOR MANAGING EXTENSIVE LANDS, INCLUDING PUBLIC LANDS WITHDRAWN FOR MILITARY PURPOSES, AS WELL AS AREAS MANAGED BY THE ARMY CORPS OF ENGINEERS.

I LOOK FORWARD TO HEARING THE TESTIMONY TODAY AND TO WORKING WITH ALL PARTIES TO ENACT LEGISLATION PROVIDING FOR THE MOST EFFICIENT AND EFFECTIVE SCIENCE PROGRAM POSSIBLE.



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**STATEMENT OF JOHN C. SAWHILL
PRESIDENT AND CHIEF EXECUTIVE OFFICER
THE NATURE CONSERVANCY
BEFORE THE SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES
OF THE COMMITTEE ON MERCHANT MARINE AND FISHERIES
AND THE SUBCOMMITTEE ON NATIONAL PARKS, FORESTS, AND PUBLIC LANDS
OF THE COMMITTEE ON NATURAL RESOURCES
JULY 15, 1993**

Mr. Chairman, members of the Committee, my name is John Sawhill, and I am President and Chief Executive Officer of The Nature Conservancy.

The Nature Conservancy is an international non-profit, land conservation organization dedicated to the preservation of biological diversity. Our membership includes more than 707,000 individuals and some 800 Corporate Associates.

I very much appreciate the opportunity to participate in your review of H.R. 1845 and the National Biological Survey (NBS). I would like to thank Congressmen Studds and Vento for their leadership in moving forward with legislation on this important matter. The Conservancy would like to state at the outset its strong support for the creation of the NBS. Our country has long been lacking a national agency to inventory and monitor its biological resources for effective species protection and sound land management decisions.

Before discussing the NBS in more detail, I would like to take just a minute to elaborate on the Conservancy's mission. Since its founding over forty years ago, The Nature Conservancy has focused on the preservation of biological diversity. Early on, the Conservancy recognized that to carry out this mission effectively and to make sound land protection and management decisions we needed detailed, credible, and easily accessible information on the condition, location, trends, and processes of biological and ecological diversity. At that time no single such source existed.

As many of you are aware, to meet its own needs and to provide a broader public service, the Conservancy twenty years ago developed a unique private-public partnership – the Natural Heritage Network. This partnership with state and federal governments has grown in scope, sophistication, and geographic coverage and now constitutes perhaps the country's most frequently consulted source of detailed biodiversity information for application to natural resource planning and land use management decisions.

Having mentioned The Nature Conservancy's long experience with gathering and managing detailed biodiversity information, I will now discuss the issues that The Nature Conservancy believes the Committee should address as it evaluates authorizing legislation for the NBS.

The Administration's FY 1994 Budget Justification to Congress for the NBS states that one of the reasons for creating the NBS as a free-standing bureau within the Department of the Interior is to fill "the vacuum that currently exists for broad scale biological information and assessments of the Nation's natural resources." To this end the budget justification explains that the NBS's duties are to "1) perform research in support of biological resource management; 2) inventory, monitor, and report on the status and trends in the Nation's biotic resources; and 3) develop the ability and resources to transfer the information gained in research and monitoring to resource managers and to others concerned with the care, use, and conservation of the Nation's natural resources."¹

RESEARCH AND INFORMATION TRANSFER

I recognize that much of the attention on the NBS has focused on restructuring research within the Department of Interior. My testimony today will focus on a different subject. Because an effective inventory and monitoring capability does not currently exist at the national level, and because the Conservancy's main area of expertise is on the inventory side, I will address the issues surrounding the potential inventory function of the NBS.

With regard to research, let me say that the Conservancy is very supportive of coordinating all of Interior's biological research capabilities. While we fully support the NBS and the idea of a coordinated biological science capability to serve all the bureaus within Interior, we recognize that this will be difficult and that it must be done in such a way as to help resource managers acquire the scientific tools necessary for sound management decisions. This is particularly true with regard to information needs at the field level of land management agencies.

INVENTORY AND MONITORING FUNCTIONS

The national biological inventory component of the NBS is an area in which the Conservancy has considerable experience and expertise. Specifically, I will focus on four issues: 1) the need for a national biological inventory within the NBS; 2) the necessary components of this inventory; 3) a suggested platform upon which to build the inventory; and 4) suggested recommendations for inclusion in authorizing legislation.

A. Need for a National Biological Inventory.

The Conservancy believes very strongly that a sound national inventory of biological resources is the only practical way to provide science-based information to natural resource managers and decision-makers. We applaud Secretary Babbitt's foresight in pursuing this goal.

Successful conservation of biological diversity, land management practices, and sustainable development planning can be achieved only if adequate inventories of what exists on the landscape, and access to this information are available. Ascertaining the relative rarity of a species or natural community on a state, national, and global basis is critical in determining an appropriate management or protective strategy.

¹ United States Department of the Interior Budget Justifications, F.Y. 1994: National Biological Survey (Washington, D.C.), p.1.

The needs to set priorities at a national level through better understanding of the status and trends of biological diversity, and to incorporate this information into the planning and implementation process have never been greater. Recent experience with controversial endangered species listings suggests a need to recognize declining resources and modify management regimes while options still exist for the resources and human populations that depend on these resources. I have attached as Appendix A to my testimony a chart which illustrates the discrepancies that currently exist between federally listed species and those found to be imperiled or vulnerable by The Nature Conservancy and the Heritage Network. Significantly, there are a large number of aquatic species which Heritage has found to be imperiled but which have not been listed as endangered or threatened.

As Secretary Babbitt stated recently, "the National Biological Survey will produce the map we need to avoid the economic and environmental 'train wrecks' we see scattered across the country. The NBS will provide the scientific knowledge America needs to balance the compatible goals of ecosystem protection and economic progress."²

B. Necessary Components of a National Biological Inventory.

As a general comment, let me start by saying that establishing a National Biological Inventory (Inventory) is no simple undertaking – I state that with some authority and experience. In reviewing how the inventory portion of the NBS should function and be structured, I would like to begin with several key assumptions.

The Inventory must be a central focus of the NBS. Adequate resources and attention must be given to the Inventory to allow it to carry out the difficult tasks that it will be expected to fulfill. Although much attention will undoubtedly be placed on the reorganization of existing research capabilities, we must take care to avoid overlooking or minimizing the financial needs associated with development of the Inventory.

1. Using Existing Data and Inventories.

Formation of the NBS provides an excellent opportunity for the Department of Interior to build upon and coordinate the existing biological and ecological inventory efforts of many government agencies, academic institutions, natural history museums, and private organizations. The Inventory should use as its foundation proven, existing systems, with its resources focused on filling in data rather than trying to reinvent the wheel.

2. Compatibility with Other Systems.

Care must be taken to ensure that the Inventory is inclusive rather than exclusive when it comes to compatibility with other programs. This is true not only with regard to the Inventory's ability to accept information from other sources, but also its ability to transmit information to other systems and users. Moreover, coordination with other federal agencies (such as the Environmental Protection Agency, the U.S. Forest Service, the National Oceanic and Atmospheric Administration, and the Department of Defense) is particularly important. Many of these agencies are

² United States Department of Interior Budget Justifications, F.Y. 1994, p.1.

developing their own biodiversity inventory initiatives, require inventory information to accomplish their missions and objectives, or possess inventory data which could accentuate the NBS inventory.

3. Planning Needs.

The Inventory must also be able to provide information that enables us to be proactive – rather than reactive – land managers. We have heard Secretary Babbitt speak repeatedly of the need to avoid the train wrecks of the future. The Inventory must be able to give the federal government and others the information that will tell us where the hot spots and problem areas will be in the future – particularly as they relate to implementation of federal regulations and laws such as the Endangered Species Act and the National Environmental Policy Act.

Although I have stressed the great need to have biological information readily available to the federal agencies to aid in land management and acquisition decisions, I must add that access to this information is also essential to land-use and planning activities of state and local governmental entities, private conservation organizations, academia, private landowners, and businesses. The Inventory should be accessible to meet these needs because many decisions affecting biological diversity – including land-use planning efforts, environmental reviews, the selection, design and management of reserves, and endangered species management – are made by entities outside of the federal government.

4. Timeliness and Quality Control.

A fundamental component of the Inventory must be its capability to compile, organize, and make available in a timely fashion basic scientific data, beginning with the distribution, abundance, health, status and trends of species and ecological communities. This core information would allow a wide variety of users to perform their own analyses, and draw their own conclusions.

Equally important are the quality controls and assurances that should be built into the Inventory to ensure that data generated by the Inventory are accurate and scientifically sound. In addition, financial resources must be allocated to provide for constant updating of the Inventory to ensure accurate, reliable information.

5. Biodiversity Mapping.

The Inventory should be capable of mapping biodiversity at a scale sufficiently detailed to be useful in land use decisions. Mapping should be precise and address as many levels of biological diversity as possible, including populations, species, natural communities, and ecosystems. As important, the Inventory should be able to set priorities and give information regarding the number and location of the most imperiled species and ecological communities in the nation – especially those species which are undergoing rapid change and dislocation. Mapping should include plants and invertebrates, not just vertebrate species. The Inventory needs to include both species and ecological community levels. To meet ecosystem and habitat conservation goals necessary to avoid endangered species conflict, ecological classification work and inventory deserve particular attention.

6. National Data on Biodiversity.

Finally, the Inventory should be capable of assimilating national data on biodiversity. The Nature Conservancy is pleased to see that one articulated goal of the NBS is to have an inventory that can produce information on the status and health of biodiversity in this country. In particular, the NBS is charged with producing a biennial status and trends report to assess the health of ecosystems and biological resources.

C. Heritage Network as a Platform.

I believe the Conservancy's experience and insight in developing the Natural Heritage Network will be useful to the Committees as they formulate authorizing legislation for the NBS. I am very pleased to note that the Administration's budget justification for the NBS mentions at several points the need to integrate the Natural Heritage Network as an existing biodiversity information network.

I would like to highlight several reasons why the Conservancy believes the Heritage Network can and should serve as one of the platforms upon which the Inventory can build. In my testimony I have set forth the six key ingredients that the Conservancy believes must be incorporated into the Inventory to allow it to fulfill its mission. The Natural Heritage Network can provide portions of all six of these key components.

The Natural Heritage Network is a biological survey that currently operates in fifty U.S. states, the Navajo Nation, four provinces in Canada, and thirteen countries in Latin America and the Caribbean. The Network collects, continually updates, analyzes, and disseminates information concerning the distribution, abundance, health, and status of species and natural communities. The data is computerized and organized to facilitate both conservation and development decisions. The Network has developed the most consistent and complete natural community classification across the nation. Although The Nature Conservancy acts as the principle network organizer (providing support to network participants, conducting research, and developing new techniques to better manage information), the majority of the network participants are part of state government.

Coordination and partnership between the NBS and the Natural Heritage Network makes sense not only because a collaborative relationship already exists with the National Park Service, U.S. Forest Service, Fish and Wildlife Service, Bureau of Land Management, Bureau of Indian Affairs, Environmental Protection Agency, Department of Defense, and National Oceanic and Atmospheric Administration, but also because it would allow the NBS to tap into extensive existing data from all fifty states. Using the state and regional data collected and managed by the state Heritage Network, the Inventory could then synthesize and analyze this data for national trends and planning purposes. This same data could continue to be applied to management concerns at the local level as well. The Heritage Network is uniquely positioned to provide the data necessary for both national and local environmental planning decisions. In addition, the Heritage Network is compatible with and already serves as an important source and foundation for other federal systems currently in place, such as Gap Analysis. Moreover, the Heritage Network provides extensive information to the Fish and Wildlife Service Endangered Species Program for listing, delisting, and recovery activities.

To give you a sense of the number and type of entities currently utilizing the information contained within the Natural Heritage Network, I have attached as Appendix B to my statement a profile of data use. As you can see, the state Natural Heritage Data Centers responded to more than 200,000 information requests this year. The users ranged from researchers, conservation groups, state agencies, engineers, consultants, universities, and the federal agencies. In fact, the federal agencies accounted for more than one-third of the information requests made to the state Natural Heritage Network. To further illustrate the types of uses being made of the Natural Heritage Network, Appendix B also includes several case examples of how private and public groups (including the National Park Service) have used Network information to guide decisions concerning conservation and development.

With regard to identification of critical natural areas and setting priorities for protection, the National Research Council acknowledged in its recent report, Setting Priorities for Land Conservation, that "the most successful acquisition criteria focus on specific purposes and well-understood policy goals, such as TNC criteria, which are based primarily on the goal of protecting biological diversity."³ The Heritage Network focuses on identifying biological diversity and is organized to produce protection priorities based on the analysis of centralized scientific data.

In order to demonstrate Heritage's ability to produce information on biodiversity on a national level, I will make available to the Committees copies of a document entitled "Perspectives on Species Imperilment: A Report from the Natural Heritage Data Center Network." This report was generated at the request of the House Merchant Marine and Fisheries Committee and was previously submitted to them on April 1, 1993. It provides information from all fifty state Data Centers in the Heritage Network and the Navajo Nation about the status of federally listed plant, vertebrate, and invertebrate species on federal lands. Appendix C to my statement is a chart from this report which illustrates that the information on species occurrence gathered and monitored by the Heritage Network is extremely comprehensive; it includes even G4 and G5 species (apparently secure and demonstrably secure species) rather than just those formally listed under the Endangered Species Act.

D. Recommendations.

As the Committees review authorizing legislation for the NBS, TNC believes that in order for the Survey to best serve the nation's biological inventory needs, collaboration with the Natural Heritage Network should proceed in three key areas. First, a national-level Heritage center should be established within NBS to integrate and analyze relevant state-level information and identify other efforts needed to fill gaps in coverage. This center would provide species and ecosystem status and trend information at the national level and would rank species and ecosystems nationally.

Second, an NBS grants-in-aid program should be established in order to bring all State Heritage programs up to existing and future national standards. This will remove inconsistencies in data availability which currently exist among the states due to lack of resources available to programs.

Last, a cost-sharing arrangement should be established for joint TNC/NBS technical assistance to the Heritage Network and for the development of the next generation of Heritage technology. This

³ National Academy of Science, Research Council, Setting Priorities for Land Conservation (Washington, D. C. National Academy Press, 1993), p.8.

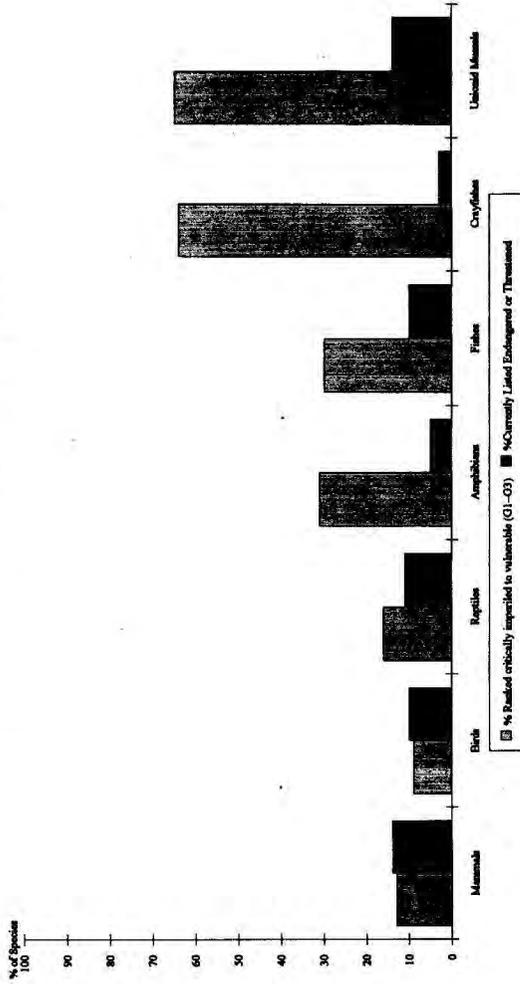
partnership would increase the Conservancy's ability to assist Heritage in the technical, research, and development areas in order to meet the new demands of NBS. This would not only provide NBS with an immediate platform on which to base its biodiversity status and trend work, but would also allow evolving technologies to be better harnessed for use by the Heritage Network and NBS.

Let me close by reaffirming The Nature Conservancy's strong support for the National Biological Survey and particularly the national inventory of biological resources component. We believe the Inventory should be a central focus of the NBS and that the Natural Heritage Network can and should serve as a foundation upon which to build the NBS inventory.

Again, I appreciate the Committees' focusing on this important issue. Thank you for the opportunity to share The Nature Conservancy's views, and I would be pleased to answer any questions you may have.

Appendix A

Species of Aquatic Ecosystems: Pre-listing Management Priorities



Network of State Natural Heritage Data Centers**Profiles of Data Use**

Governmental Agencies:

National Park Service, Yellowstone
Michigan Division of Land and Water

Corporations:

Georgia Power
ARKLA

Citizen Groups:

Lower Poultney River Committee, VT

Research -- Institutions and Individuals:

Electric Power Research Institute
Amateur Lepidoperist

Collaborative Projects:

Merck, Sharpe & Dohme/ INBio
Panama Canal Commission/ ANCON/ University of Panama

The state Natural Heritage Data Centers responded to more than 200,000 information requests this year. The users -- researchers, engineers, conservation groups, state agencies, universities, consultants, and federal agencies -- vary as much as the uses -- natural resource inventories, land development sitings, environmental impact assessments, transportation routing, water development projects, and reserve selection and design. A recent survey of several Heritage Data Centers disclosed the following patterns of consultation:

- 34% federal agencies
- 38% state and local agencies
- 14% private consultants and engineers
- 14% universities, museums, researchers, individuals and conservation groups

The following pages highlight case examples of how public and private groups use network information to guide decisions concerning conservation and development. In a situation where two interests are often at odds, the Institute's inventory system helps to inform and validate decisions involving rare and threatened species and appropriate land management.

**Federal Agency:
National Park Service**

Situation: There are three operating Heritage Programs in the western region (WY, ID, MT) that track rare species and communities, land ownership and management plans. But, there is no combined program specific to the Greater Yellowstone Ecosystem (GYE) -- including Yellowstone National Park, Grand Teton National Park, and seven adjacent National Forests.

Problem: The GYE is threatened by intensifying recreational use and resource development. There is a growing need for more unified management of the ecosystem to permit animals to live without being disturbed by mineral exploration and extraction, recreation, home development, and other activities.

Objective: To establish a Yellowstone Conservation Data Center in cooperation with the National Park Service. This CDC will merge biodiversity information from the WY, ID, MT Heritage Programs and help federal agencies coordinate management activities. It will also access data on rare plants and animals from the manual files of the park and incorporate them for the first time into computer files.

Network Assistance: The three regional Heritage Programs will provide a copy of their computer files and transfer all of their plant and animal records for occurrences within the GYE. The Yellowstone program will record Park Service information on plants, animals, federal ownership, and management plans on computer.

Results/Outcome:

- Combining information from the state heritage data bases and identify gaps.
- Confirming the global, state and regional status of special plant and animal lists.
- Generating a list of rare plants and animals in the GYE.
- Linking the Heritage data bases directly to a compatible Geographic Information System in Yellowstone Park.
- Developing a cohesive set of computer, map and manual files.
- Responding to information requests from cooperating federal agencies.
- Evaluating the effect of planned developments and management activities on lands under federal authority.
- Coordinating regular information exchanges with the state heritage programs.

In the future:

- Complete plant community classifications and rank them according to global and regional rarity.
- Identify potential threats to plant communities in the GYE.

State Agency:
Michigan Division of Land and Water

Situation: A local developer designed a condominium project along the shoreline of Lake Michigan believed to support the Michigan monkey flower, a Federal and State endangered species known globally on only 13 sites in northern Michigan. In order to receive the permit to begin development, the MDNR requested a biological survey for the Michigan monkey flower and other potentially listed shoreline species.

Problem: During the biological survey, the scientists discovered two monkey flower colonies in the proposed development area, and one state listed plant species (Lake Huron tansy) along the beach.

Objective: To build a condominium complex in a sensitive shoreline area that supports Federal and State listed plant species; and to coordinate development activities in a way that provides a sustainable environment for the sensitive plant populations.

Network Assistance: The Michigan DNR reviews all wetland permits in their CIWPIS (Coastal and Inland Waters Permit Information System) data base of natural feature locations for potential natural features (plants, animals, communities) that may be adversely affected by proposed projects. When natural features are flagged within or near a project area, the State Endangered Species Coordinator often consults the Michigan Heritage Program for a more detailed examination of their data base. Coordinators may require a field survey to determine the status and precise location of listed species, or they may find sufficient Heritage information -- records of endangered and threatened species and their distribution -- to make project recommendations or alternative development plans.

Results/Outcomes:

- Heritage biologists conducted a plant survey and generated species distribution maps to indicate where the monkey flower existed within the condominium development site.
- Developer avoided legal conflicts with the State and Federal governments.
- Developer modified site plans and established a naturalist area within the condominium project to educate visitors about protecting rare plants and their habitats.
- Developer will fence in the monkey flower colonies and build a viewing board walk around the plant community to minimize foot traffic in the wetland areas.
- Developer cooperated with the State and Federal agencies to conserve the plant species while still developing the condominium project.
- Improved community support of business and environmental compatibility.

Corporation:
Georgia Power

Situation: Until 1986, there was little recorded information on the rare, unique or threatened plant and animal species, and natural community types in Georgia. Now, Georgia Power consults the Heritage data base before developing transmission lines, re-routing power lines, or beginning construction projects.

Problem: A power line or construction project in danger of disturbing rare or threatened plants, animals or communities or their habitat.

Objective: To develop transmission lines and routing projects in the Southeast without interfering with rare or sensitive species.

Network Assistance: The Georgia Natural Heritage Program identifies the known locations of sensitive plant and animal species in the proposed project area. Scientists supply Georgia Power with a list of these species, their vulnerability, state and federal rank, and habitat requirements. Heritage staff also suggest potential habitat where a ground survey may be useful to indicate additional species occurrences.

Results/Outcomes:

- Protects plant and animal populations susceptible to disturbance.
- Avoids costly delays (in some cases 1 year).
- Facilitates permit reviews.
- Assists with corporate strategic planning; this saves hundreds of thousands of dollars in re-routes or special construction practices well into the project.

**Corporation:
Natural Gas and Transmission Company – ARKLA**

Situation: The company planned to build a major interstate pipeline from Oklahoma to Arkansas.

Problem: ARKLA was concerned, however, that there may be some sensitive species along the designated route, which would interfere with the permit process.

Objective: To obtain the necessary permits from United States Fish and Wildlife Service to build a 225 mile natural gas pipeline.

Network Assistance: The Oklahoma Natural Heritage Inventory provided information at two stages of the pipeline development -- the planning stage and the mitigation stage. Staff scientists generated reports on threatened and endangered species and ecological communities along the proposed corridor, and identified large tracts of forest land. The scientists also suggested appropriate sites for a mitigation project and inventoried an area called Cucumber Creek (ca. 2,000 acres) as a potential Nature Conservancy Preserve.

Results/Outcome:

- Determined threatened and endangered species along the proposed site.
- U.S. Fish & Wildlife Service recommended alternate routes around known populations of threatened and endangered species, and large forest tracts (to prevent habitat fragmentation).
- Shortened the environmental review process.
- Identified the site for a mitigation project - Cucumber Creek Preserve, ca. 2,000 acres.
- Inventoried the mitigation site.
- Purchased Cucumber Creek and established a stewardship endowment for The Nature Conservancy Oklahoma Field Office.
- Prevented a conflict with the National Forest, ie. destruction or loss of endangered species on USFS land.
- Improved community support of business and environmental compatibility.

**Citizen Group:
Lower Poultney River Citizens Committee, VT**

Situation: The Lower Poultney River in Vermont and New York is a biologically diverse system that supports an array of rare mussel and fish species and natural communities found in Vermont and New England.

Problem: The river system is subject to stresses created by an artificial water level control at a hydroelectric facility located nearby. River sedimentation from careless land use practices and organic and chemical pollution may harm the aquatic species.

Objective: To protect and enhance the ecological values of the Lower Poultney River.

Network Assistance: The Nongame & Natural Heritage Program of Vermont Fish and Wildlife Department provided records, reports, and testimony regarding the outstanding biological resources associated with the river system. With science expertise and support, the Lower Poultney River Citizens Committee issued a petition before the Vermont Water Resources Board to designate the Lower Poultney River an "Outstanding Resource Water."

Results/Outcomes:

- Designated the Lower Poultney River an "Outstanding Resource Water" due to its outstanding ecological value, including diverse fish and mussel populations.
- Increased the buffer zone surrounding the river.
- Prompted The Nature Conservancy in Vermont and New York to protect the river corridor.
- Helped The Nature Conservancy obtain funding for the Bald Mountain Preserve.
- Increased state and local awareness and funding for better management of the Poultney River.

Research Institution:
Electric Power Research Institute

Situation: Climate change such as global warming may threaten many plant species with extinction, however, the extent of its possible effects is still unknown.

Problem: Species that cannot adapt locally to increased temperatures and other climatic changes may become extinct unless they disperse and establish latitudinally or altitudinally.

Objective: To estimate the possible effects of climate change on North American plant species to help make better informed conservation and land management decisions.

Network Assistance: The Science Division is providing extensive research and drafting a detailed report on the potential effects of climate change on native North American vascular plant species -- for example rare plants versus abundant plants, based on federal status and global rank. The project staff developed additional data bases to maintain a constant set of information on species biology, rank, and distribution. Project botanists are studying species vulnerability in states and provinces using these traits to quantify results: geographic range and rarity, special habitat requirements (especially wetlands), and dispersal and colonizing ability.

Results/Outcomes:

- Analyzed species vulnerability by state and province; results suggest that many areas of North America may have significant numbers of vulnerable species.
- Determine resource conservation priorities for utility companies' land holdings and rights of way.
- Address plant vulnerability to climate change as a factor in establishing conservation priorities and informed land management options.
- Develop long range plans to consider ecological information when expanding facilities and siting plants, substations, and transmission lines.
- Improve understanding of possible consequences of climate change on native North American plant species.

**Research:
Amateur Lepidopterist**

Problem: Incomplete state records and/or published material on Rhode Island butterfly populations.

Objective: To produce a technical book for an academic audience -- text, maps and photography -- documenting the butterflies of Rhode Island. Text and a distribution map will be devoted to each species. The book may be available by Spring 1994.

Network Assistance: The Rhode Island Heritage Program provided site information to help locate rare and common butterfly species. Based on extensive field work, they supplied a state map with records of all known butterfly populations.

Results/Outcomes:

- Obtained financial support from the Non-Game Program, Division of Fish and Wildlife, to publish the technical book.
- Prompted a several year relationship with an independent researcher who contributed his field work on rare butterfly species to the Heritage data base.
- Enabled the Rhode Island Heritage Program to more accurately determine the status of rare butterflies.

**Collaborative Project:
Merck Sharpe & Dohme and INBio**

Challenge: To increase the number of plants that Merck screens for effective biomedical ingredients.

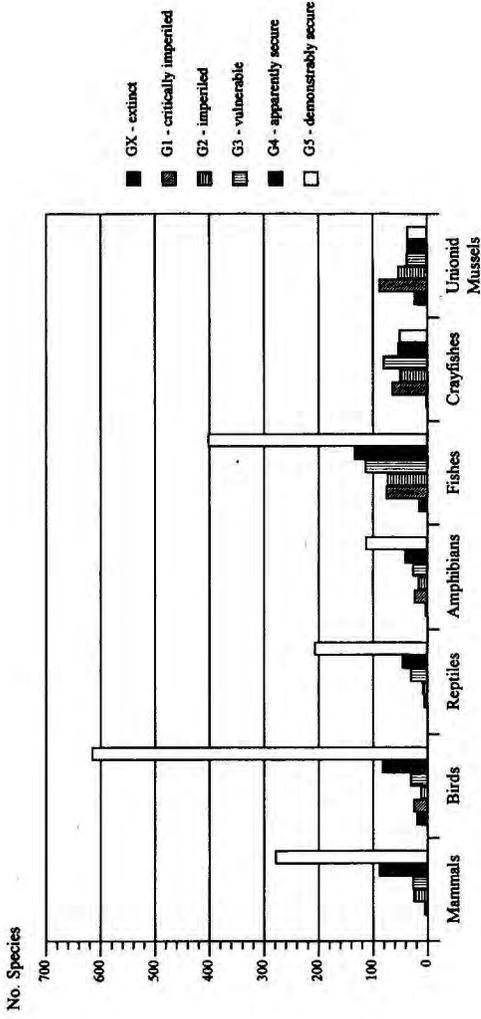
Objective: To discover potentially useful chemicals that may be reproduced synthetically for pharmaceutical purposes. Additionally, to reinvest money back into science and conservation to support sustainable development.

Network Assistance: The Costa Rican Conservation Data Center (operates within INBio, a partner organization) provides Merck with records of the status and locations of plant species in Costa Rica. CDC scientists and other INBio staff will identify, collect, and process various plant extracts and send them to Merck laboratories to determine their medicinal value. In return, Merck plans to train INBio's scientists (including the CDC) in biochemistry techniques specific to plant screening, train locals in plant classification and ultimately increase Costa Rica's self-sufficiency and opportunities.

Results/Outcomes:

- Guarantee Merck's access to an enormous variety of plants.
- Train INBio/CDC scientists in biochemistry techniques specific to plant screening.
- Continue to train Costa Ricans in a plant classification program.
- Exchange technical expertise between Merck and INBio, enhancing the capacity of both.
- Identify active plant substances with potential medical values.
- Share the profits with INBio through a royalty agreement.
- Reinvest money back into science and conservation.
- Exchange access to screen Costa Rica's biological resources for an opportunity to invest Merck's financial resources in conservation.
- Promote sustainable use of natural resources by training locals, and safeguarding forest resources.

Status of Selected North American Animal Groups





THE WILDERNESS SOCIETY

July 15, 1993

**TESTIMONY OF MARK L. SHAFFER, VICE-PRESIDENT FOR
RESOURCE PLANNING AND ECONOMICS, THE WILDERNESS SOCIETY,
ON BEHALF OF NATURAL RESOURCES DEFENSE COUNCIL, SIERRA CLUB,
ENVIRONMENTAL DEFENSE FUND AND GREENPEACE,
BEFORE THE HOUSE SUBCOMMITTEES ON ENVIRONMENT AND NATURAL
RESOURCES, AND PARKS, FORESTS AND PUBLIC LANDS
ON H.R. 1845,
A BILL TO ESTABLISH THE NATIONAL BIOLOGICAL SURVEY IN THE
DEPARTMENT OF THE INTERIOR.**

Good morning Chairman Studds, Chairman Vento, and members of the committees. I appreciate the opportunity to testify before you today on the need to establish the National Biological Survey within the Department of the Interior. In proposing the National Biological Survey (NBS), Secretary Babbitt has taken a bold step toward expanding and improving the information base for natural resource policy making. Congress has already begun to make the Secretary's vision a reality by recommending \$163.6 million in funding for the survey (including \$22.2 million in new funds) and by conducting this hearing on Chairman Studds' bill, H.R. 1845.

The National Biological Survey will significantly strengthen the Department of the Interior's biological science program and improve its ability to handle the important challenge of conserving our Nation's biological heritage. We look forward to working with the committees and the Administration to achieve Secretary Babbitt's goal of having the NBS up and running by the start of the new fiscal year. In the remainder of this testimony we address the need for the survey and make recommendations strengthening H.R. 1845 to ensure the NBS can accomplish its ambitious goals.

Need for Coordination: An Ecological Perspective

We support the creation of the NBS because good science is at the heart of good natural resource management and protection, particularly for biological resources. Through the National Biological Survey, the Administration is proposing to address a major obstacle to understanding and managing ecological systems: jurisdictional and organizational boundaries. The National Biological Survey will combine the research activities now being performed by eight separate Bureaus within the Department of the Interior. This consolidation will allow the NBS to build on the existing capabilities within the

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Department, reduce overlap and duplication of research, and make way for research oriented around ecological -- rather than political -- boundaries.

Purposes of the National Biological Survey

If the NBS is to improve and expand the research capability of the Department of the Interior in an efficient manner, it must have a clear mission and be focused on specific tasks. Both the Administration's budget proposal for NBS and H.R. 1845 identify purposes for the survey.¹ In essence, they describe three tasks: to describe the current state of our biological resources, to develop the ability to predict future trends in those resources, and to provide information to resource managers to improve decision-making and anticipate and avoid future conflicts. We agree that these should be the three priorities of the Survey. In a March, 1993 letter to Secretary Babbitt, The Wilderness Society, Environmental Defense Fund, Sierra Club, National Audubon Society, and Sierra Club Legal Defense Fund identified three goals for the NBS:

To gather information on the distribution and abundance of the subspecies, species, and natural communities that comprise biological diversity. That is, to better describe the current status of our biological resources.

The NBS should provide information to better describe the current status of our biological resources.

To develop the theoretical and empirical capability to predict species' abundance, distributions, and responses to environmental change, including the impacts of human activities.

The NBS should help us anticipate changes in ecosystems and avoid "train wrecks" that result when species or their habitats reach critically low levels.

¹The Department of the Interior has identified the following purposes for the NBS:

1. To provide information on the abundance, distribution, and health of biological resources through a coordinated inventory for plants, animals and ecosystems;
2. To further the understanding of the functioning of biological systems, their relationships with other resources and their responses to human and environmental stress through a research program organized around species, population, and ecosystem research; and,
3. To communicate the results of inventory, research, and technology and methods development, through a state-of-the art technology development and transfer element. (USDA, Budget Justifications, F.Y. 1994, National Biological Survey)

H.R. 1845 establishes three purposes for the NBS:

1. To ensure the comprehensive assessment of the biological resources of the United States;
2. To ensure the provision of information to be used in protecting and managing ecosystems, including their plant, fish, and wildlife components; and
3. To ensure that the Secretary may anticipate and avoid or resolve conflicts arising in the implementation of the Endangered Species Act of 1973 and other fisheries and wildlife conservation laws.

To facilitate the use of sound biological information in natural resource decision making.

The NBS should get high-quality, timely information into the hands of land managers and decision makers to provide an appropriate scientific basis for decisions.

While H.R. 1845 identifies similar purposes for the NBS, we recommend that they be clarified and strengthened in the following ways:

1. *by specifying that the comprehensive assessment of biological resources of the United States will address the distribution and abundance of the subspecies, species, natural communities, and ecosystems that comprise biological diversity;*
2. *by directing the Survey to develop the theoretical and empirical capability to predict species' and community level abundance, distribution, and response to environmental change, including the impacts of human activities; and,*
3. *by making information transfer an explicit purpose of the survey to facilitate the use of sound biological information in natural resource decision making.*

Applying the Knowledge: Meeting the Needs of Resource Managers

The ultimate measure of the National Biological Survey's success will be the extent to which improved scientific information informs natural resource decision making. The proposed National Biological Survey is being designed to be responsive to the information and management needs of the Department of the Interior's bureaus and to provide incentives for resource managers to rely on scientific data and conclusions in on-the-ground decisions. Among the measures Interior has proposed to make NBS responsive to resource managers needs are the following:

- Improved information management and transfer, including establishment of a technical support center;
- Development of memoranda of understanding between the NBS and each Interior Department bureau to identify and meet the research needs;
- Creation of a quick response research program (\$700,000) to allow NBS scientists to respond within the same fiscal year to emerging research and technical assistance needs of the bureaus;
- Continued co-location of National Biological Survey scientists in resource managers facilities to foster communication and coordination between the Survey and the bureaus; and,
- Establishment of an internal policy board, composed of representatives of all Departmental resource management bureaus, to advise the NBS on national research priorities and needs and to make recommendations for the NBS's annual budget.

Currently, H.R. 1845 addresses only one aspect of the structure of the NBS, the role and responsibility of the Survey's Director. We recommend that the bill be amended to

define the function and composition of the policy board to ensure that the primary users of NBS information -- the Department of the Interior bureaus themselves -- are permanently and adequately involved in setting research priorities for the Department.

Meeting the Park Challenge

Meeting the research needs of the National Park Service (NPS) will pose a particular challenge for the NBS. Important strides have been made over the last few years, with the determined leadership of Chairman Vento, to strengthen the Park Service's scientific capabilities in response to the Vail Agenda and the National Research Council's report, "Science in the Parks," which noted that the NPS is not designed to address multi-park or regional issues. We are persuaded the NBS can meet these challenges. The Administration has proposed, and the Interior Appropriations Committee has largely agreed to, a substantial increase in funding for research specifically related to long-term NPS management issues. However, this initiative must remain a priority in the future if it is to improve the long-term integrity of our national parks. It may be useful, therefore, to amend H.R. 1845 to include the priority research needs of the national parks and ecosystems of which they are a part.

Beyond the Boundaries: Coordinating Inventory and Research

The coordination of ecological research should not be limited by the jurisdictional boundaries of the Department of the Interior. Through the National Biological Survey, the Administration proposes to establish a science board of state, federal, and academic science interests to advise the NBS on national trends and biological research needs. Creation of the NBS and its science board are first steps toward much needed coordination of research across all federal agencies working on ecosystem questions, such as the U.S. Forest Service, National Marine Fisheries Service, and the Environmental Protection Agency. Again, we recommend that H.R. 1845 be amended to define the function and composition of the science council to ensure broad representation and participation of other agencies and entities in the council.

Looking Ahead

In the long run, the National Biological Survey will improve the quality of research within the Department of the Interior. The National Biological Survey will meet the need long identified by conservationists, scientists, and resource managers for better baseline information and long-term predictive capability. As Secretary Babbitt has said, the NBS will help us avoid the "train wrecks" that result from failing to understand the workings of ecosystems and their component parts. We look forward to working with you, Mr. Chairman, the Committees, and the Administration to make the National Biological Survey an effective addition to the capabilities of the Department of the Interior.

**TESTIMONY OF THE INTERNATIONAL ASSOCIATION OF FISH AND
WILDLIFE AGENCIES ON H.R. 1845, A BILL TO ESTABLISH
THE NATIONAL BIOLOGICAL SURVEY**

**PRESENTED BEFORE THE HOUSE OF REPRESENTATIVES
COMMITTEE ON MERCHANT, MARINE AND FISHERIES,
SUBCOMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES AND
THE HOUSE COMMITTEE ON NATURAL RESOURCES,
SUBCOMMITTEE ON NATIONAL PARKS, FORESTS AND PUBLIC LANDS**

**Presented by
R. Max Peterson, Executive Vice President
International Association Of Fish And Wildlife Agencies**

July 15, 1993

Mr. Chairman, we appreciate the opportunity to appear before you today to discuss H.R. 1845, the National Biological Survey Act of 1993, an issue of great concern to the International Association of Fish and Wildlife Agencies.

As you are aware, the International Association of Fish and Wildlife Agencies was founded in 1902 and is 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 federal governments of the U.S., Canada and Mexico. All fifty 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 habitats in the public interest. As such, we should stress that state-federal cooperation is not a luxury, but an imperative in fish and wildlife resource management.

It is for these reasons that the subject matter of this hearing is of great interest to us. State fish and wildlife agencies, in cooperation with the Fish and Wildlife Service, have a long history of managing the nation's fish and wildlife resources. We worked with the Service years ago when it was known as the Biological Survey. State fish and wildlife agencies have a long track record of collecting data on game species, threatened and endangered species, and many more vulnerable species, as well as some of the common backyard birds. As the nation's human population and its use of land has expanded, state and federal fish and wildlife agencies have expanded their efforts to collect data on the wildlife species threatened or endangered by these changes.

The Association first testified on the formation of the National Biological Survey on April 29, 1993 before the National Research Council Committee on formation of the National Biological Survey (NBS). At that time, the Association had not yet adopted a position on the proposed NBS. This was largely due to the fact

that the Association has a standing practice of carefully examining proposed changes or expansion in programs or organizations which affect state fish and wildlife management before making judgment at that time. Very little information had been set forth to enable us to make an informed decision on the merits of the NBS.

In spite of numerous briefings, position papers, even budget amendments, the Association still has not been given what we believe to be adequate information on the proposed NBS to develop an informed position. We continue to question whether the Administration has fully assessed the impacts or anticipated the gravity and ramifications of the proposal. We are not able to make a completely reasoned assessment of the proposal.

We recognize, Mr. Chairman, the Secretary of Interior's authority to propose reorganization of the Department of Interior's programs to suit the Administration's needs and desires. However, when any reorganization is proposed that has the potential to considerably impact our agencies, we must express our discomfort. Research is an ongoing and dynamic process and simply changing uniforms and logos does not improve the quality and quantity of research.

We have seriously questioned how the agency would accomplish the stated goals: to perform research in support of biological resource management, inventory, monitor and report on the status and trends in the Nation's biological resources, and to develop the ability and resources to transfer the information gained in research.

We are troubled that the transfer of the research functions from the U.S. Fish and Wildlife Service (USFWS) may seriously impact management capabilities. Research, for better or worse, is married to healthy fish and wildlife management and close client/research is most important. Breaking up such a relationship ought not be done without a clear understanding of the implications and true costs. It is noteworthy that the very formation of the USFWS was done to insure close ties between research and management--between client and researcher.

For example, the USFWS, through its migratory bird office, began the Breeding Bird Survey (BBS) in 1965. Their role was to put together researcher and field managers. This effort has worked well for the avian resource because it is an integrated effort. It also represents a close tie between managers and researchers.

We need such efforts coordinated and synthesized on a national level for amphibians, especially with the declines in frogs and salamanders, reptiles, invertebrates such as butterflies, and plants.

We also have grave concerns that once the researchers are

released from the more mundane day-to-day research that serve as the backbone of management, whether the new agency will over time, become a haven for "sky blue yonder" research, and be tempted to delve into areas that, while no doubt interesting and important, would have little relevance for the "on-the-ground" fish and wildlife resource manager.

Further, we are concerned that in the rush to do something "new", that less disruptive and lower cost alternatives may not have been given the kind of scrutiny that they deserve.

A reasonable and desirable goal of an NBS should be the coordinated and concerted effort to understand our nation's basic elements; its animals and plants, and how their habitats relate to human use of the lands. A great deal of biological information is already being collected by many state and federal agencies as well as non-profit conservation organizations. Before another group is charged with a comprehensive assessment of biological resources, there needs to be a hard look taken at information already available, and then target specific high priority information needs. Further, sharing data, and making it available to all interested parties, is necessary. We need to know when and why populations and habitats are declining, and what we can do about these changes. We agree that we need more information, and need it collected in a coordinated, systematic and standardized way.

The Association has some specific suggestions. Attached to my written testimony, I have included a letter from Mr. Steve Wilson, President of the International Association and Director, Fish and Game, Arkansas, to the Secretary of the Interior and a copy of my testimony before the National Academy of Sciences for further examination by members the Subcommittee, including:

- 1) explain more fully how the system of state cooperative units will work with the states; in the new system and what changes make their transfer more desirable;
- 2) leave specific Fish and Wildlife Service research units doing applied research and technical assistance with the U.S. Fish and Wildlife Service;
- 3) leave operating inventory and monitoring programs with the Service, pending development of an overall framework for biological inventory, monitoring and information transfer;
- 4) concentrate on developing a framework for protocols and standardization of biological data in cooperation with other state and federal agencies and non-governmental organizations, while determining the most appropriate role for the NBS;
- 5) establish a specific council composed of state and federal agencies to realistically examine the best options for

accomplishing the goals set out by the Secretary;

6) determine what are reasonable priorities for the NBS in the monitoring and inventorying of the nation's biota. It should be noted here that various state, non-profit conservation organizations and universities collect numerous data that should contribute to any national inventory. Coordination of these efforts is needed;

7) research needs to concentrate on developing a better understanding of animal and plant population dynamics and how they are affected by human populations.

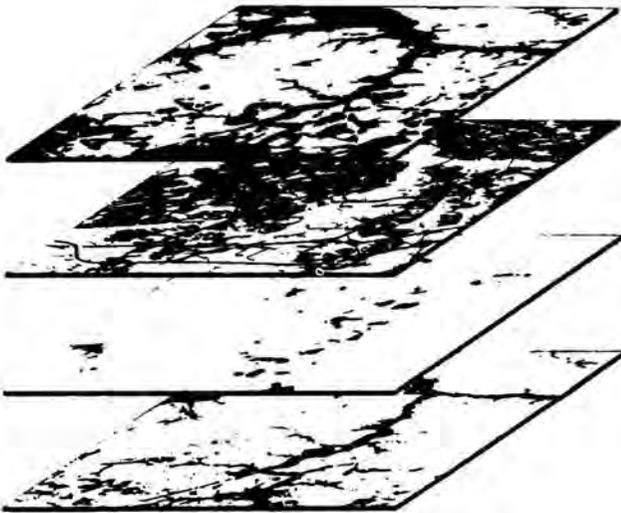
If the NBS legislation is enacted, we believe that it would be of vital importance for all involved if a more specific Charter or enabling documentation was forthcoming. What has been provided so far by the Department of Interior or in the legislation is insufficient for the outlined tasks ahead. We strongly urge the Subcommittee to wait for the National Academy of Science report on the NBS due out later this fall before making any substantive decisions.

We believe that H.R. 1845, the legislation being considered, needs considerable work to eliminate vague references to what NBS will do and better reflect what, in reality, could be done.

In conclusion, Mr. Chairman, in the spirit of an improved research system, we recognize the value that the NBS could have as an important player in coordinating the inventory and monitoring of the nation's biological resources. Although the Department of Interior has begun efforts to inform the states about what the NBS will be, there still exists a great gulf between where we believe the NBS should be and where it presently is ... a "train wreck" in the making. Cooperation is of utmost importance and in order for NBS to work effectively, we need a cautious, prudent and carefully considered approach. Expediency in this matter should not be the goal but rather the goal must be keeping the trains on the track and running on time. We appreciate having the opportunity to speak to the Subcommittee and would be pleased to answer any questions that you or other members may have.

Federal Geographic Data Committee

Manual of Federal Geographic Data Products



■ Federal Geographic Data Committee Overview ■

On October 19, 1990, the Executive Office of the President, Office of Management and Budget (OMB) revised Circular A-16, "Coordination of Surveying, Mapping, and Related Spatial Data Activities." The goals of the Circular are to develop a national digital geographic information resource, to reduce duplication, to reduce the expense of developing geographic data, and to increase the benefits of using available data and ensuring coordination of Federal agency geographic data activities. A major objective of A-16 is the development of a national spatial data infrastructure with the involvement of Federal, State, and local governments, and the private sector. This national information resource, linked by criteria and standards, will enable sharing and efficient transfer of spatial data between producers and users.

Circular A-16 established the Federal Geographic Data Committee (FGDC) to promote the coordinated development, use, sharing, and dissemination of geographic data. The committee oversees and provides policy guidance for agency efforts to coordinate geographic data activities. Federal agencies were assigned the responsibilities of leading coordination activities for categories of data (Figure 1). Agency responsibilities include providing governmentwide leadership in developing data standards, assisting information and data exchange, and coordinating data collection.

The FGDC has organized subcommittees to manage activities related to data categories, and working groups to address crosscutting issues common to all data categories. Subcommittees establish protocols and implement standards for data content, quality, and transfer; encourage the exchange of information and the transfer of data; and organize the collection of geographic data to reduce duplication of effort. Working groups have been established for Standards, Technology, and Liaison with the non-Federal spatial data community.

The FGDC is currently composed of representatives from 14 departments and independent agencies, including:

Department of Agriculture	Department of Transportation
Department of Commerce	Environmental Protection Agency
Department of Defense	Federal Emergency Management Agency
Department of Energy	Library of Congress
Department of Housing and Urban Development	National Archives and Records Administration
Department of the Interior	National Aeronautics and Space Administration
Department of State	Tennessee Valley Authority

The Departments of Education, Health and Human Services, Justice, and Labor; the General Services Administration; the National Capital Planning Commission; and the Smithsonian Institution also participate on FGDC subcommittees and working groups.

The FGDC sponsors and participates in conferences and other forums concerning issues important to the development of the national spatial data infrastructure. The committee also publishes the Federal Geographic Data Newsletter, Summary of GIS Use in the Federal Government, annual reports, and other publications of interest to the spatial data community.

For more information about the FGDC, its activities, the *Manual*, or to be added to the newsletter mailing list, please contact:

Federal Geographic Data Committee Secretariat
 U.S. Geological Survey
 590 National Center
 Reston, VA 22092
 USA
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■ Preface ■

The *Manual of Federal Geographic Data Products* describes Federal geographic data products that are national in scope and commonly distributed to the public. Geographic data products include maps, digital data, aerial photography and multispectral imagery, earth science, and other geographically-referenced data sets. Federal agencies were encouraged to list only those geographic data products that are supported by an office to which the public could make inquiries and place orders. Federal agencies also were encouraged to list only those geographic data that would be available by January 1993.

Data products are described in a standardized format and grouped by producing agency. A cross-reference matrix is provided to help readers find products by data type.

The products listed in the *Manual* include only those that currently are distributed by the agencies. Readers interested in historical Federal geographic data products should contact the Reference Services Staff of the National Archives and Records Administration at (202) 501-5579. The Map and Geography Division of the Library of Congress also has an extensive collection of current and historical geographic data products from Federal and non-Federal sources. The Division can be reached at (202) 707-MAPS.

While much effort was made to ensure that the *Manual* is comprehensive, inevitably there will be products that were overlooked. In addition, rapidly changing geographic data technologies, especially digital technologies, are resulting in new products and new forms of existing products. Readers should contact the offices listed in the *Manual* to inquire about the availability of new products and references to other Federal geographic data. The FGDC intends to revise the *Manual* approximately every 2 years.

Readers are invited to provide corrections and to suggest other Federal products or information for inclusion in future editions of the *Manual*. Readers also are encouraged to comment on the usefulness of the *Manual*, and to suggest improved methods of presenting the information. Please see the "Reader Response Form" on page A-1.

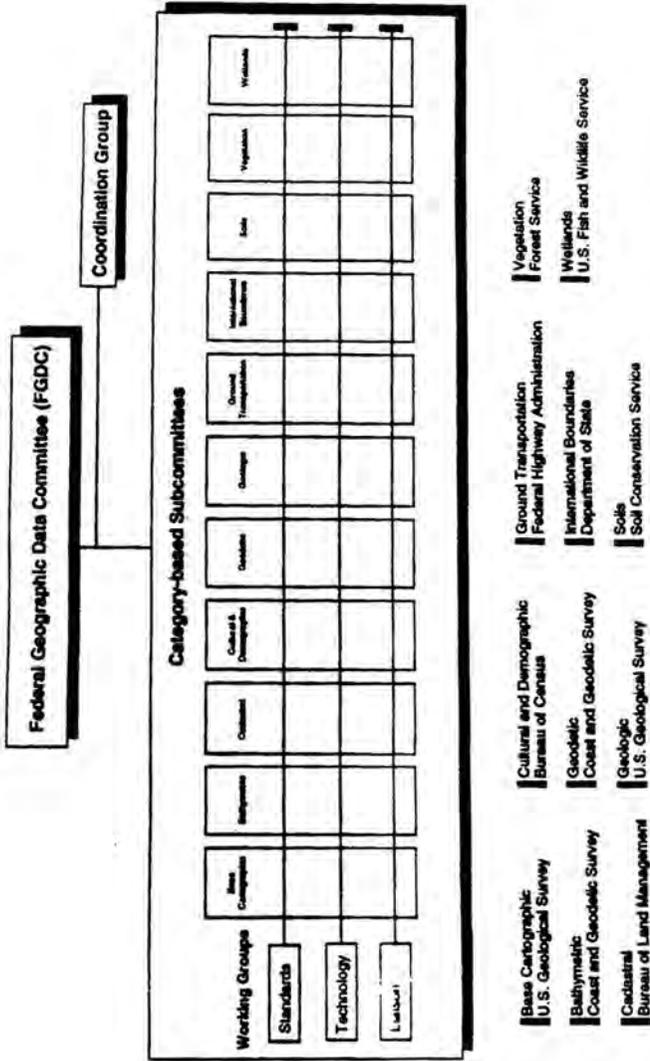


Figure 1: FGDC Organizational Structure

Wildlife Management Institute

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Statement of Rollin D. Sparrowe
 on

H.R. 1845, to Establish the Biological Survey
 in the Department of the Interior
 Committee on Merchant Marine and Fisheries
 Subcommittee on Environment and Natural Resources
 and the
 Committee on Natural Resources,
 Subcommittee on National Parks, Forests, and Public Lands
 July 15, 1993

I am Rollin D. Sparrowe, President of the Wildlife Management Institute, an 82-year-old organization dedicated to advancing professional wildlife management in North America. We work extensively to support and strengthen federal and state agency biology programs, and have a deep interest in the proposal by the Secretary of Interior for formation of a National Biological Survey (NBS), as well as the Biological Survey proposed in this bill.

Until two and one-half years ago, I had pursued a 22-year career with the U.S. Fish and Wildlife Service, personally supervising many of the programs potentially to be affected by proposed changes in the Department. Consequently, I have personal knowledge of successes and failures in generating and using data for management decisions.

Currently I am serving on a National Research Council (NRC) Committee on the Formation of the National Biological Survey. This Committee is responding to a request from the Secretary of the Interior to study the issue. Let me clearly state that I do not speak for this Committee, nor are my reflections on this bill and the potential impacts on specific federal agencies and programs derived from my Committee work. Rather, they come from my personal experience working in the Department of Interior. The charge to the NRC Committee does not include the main issue I wish to address, however, some of the issues I discuss may be addressed by the report.

We, at the Wildlife Management Institute, support the concept of a Biological Survey for the United States, especially an expansion of monitoring, evaluation and research on the biological resources of our country. Our main concern is not whether to develop a Biological Survey, but *how* to develop one and maintain important existing programs. It seems that many proponents are willing to accept a Biological Survey at any cost; we are not.

Six months have passed since public discussions first were held on Interior's proposed National Biological Survey. Progress has been made in establishing a dialogue between the Department of Interior and many constituency groups, but few details are available about exactly what will happen with extant personnel and programs. A recent Fact Sheet (dated June 8, 1993) and previous 1994 budget documents and amendments for the Department provide only sweeping generalizations as to how staff and dollars are to be redeployed to form the NBS. Of concern is that only broad statements are provided about achieving national resource management goals, integrating but separating science and policy, assuring information transfer to users, a new focus on ecosystem research, and better information to implement the Endangered Species Act (ESA).

My main purpose here is to make certain that some attention is given to the unanswered questions about affects on the agencies involved in these transfers. It appears that decisions are being made within the Department of Interior, and by the Congress, without adequate analyses of the potential impacts on programs that authorizing and appropriations committees have followed and scrutinized closely in the past. Many of these programs have been initiated and supported in concert with the states and conservation organizations. In many cases, entities outside Interior depend on those programs on a daily basis. Overall, major program change appears to be occurring by appropriation without much analysis, and certainly without any detailed analysis made available outside the Department.

In the June 8, 1993 Fact Sheet from DOI on the NBS, we see, for example, that:

NBS proposes to incorporate elements from eight DOI bureaus to form a new one;

- most of the staff and dollars for NBS will come from the Fish and Wildlife Service;
- the Service, for example, will lose 26 percent of its scientific personnel;
- all of the research functions of the Service, including monitoring and similar activities of a national scope, will be transferred; and
- scientific support for management will be maintained by leaving the majority of scientists within DOI in their current agency.

Assurances are made that the Secretary intends that managers will not lose any of the support from research. We are told that existing programs and services will all be maintained, that NBS will be nonpolitical and not make recommendations to managers, and that administrative costs will remain low. Some of these assurances don't seem to add up logically.

Some discussion may be useful about the roles of the types of personnel that apparently would be moved from the Fish and Wildlife Service. The 25± percent of scientists who would be moved are those most active in research, current scientific thinking, peer contact within the rest of the scientific community, and actively supportive of management programs. The other scientists referred to often have administrative duties and many other daily tasks that are not science. NBS proposes to extract the best and brightest of those actively engaged in scientific investigation. Further, the Service would lose 100 percent of its veterinary scientists. These experts primarily are engaged in diagnostic work for management, such as migratory bird disease outbreaks, or provide support for keeping animals for research and captive breeding. The Service also would lose 81 percent of its mathematicians and statisticians to NBS. This would remove the core of management and technical assistance in study design and analysis of data for both research and management.

Again, beyond general assurances that scientists' interactions with managers will be maintained, there is no information about how this will be accomplished. One might ask, if coordination currently is so poor that change is needed, how will those functions and interactions be maintained to support

management when individuals are in different agencies?

Mr. Chairman, I am attaching specific comments for the record on endangered species, migratory bird management, and other Service functions that illustrate the close, interwoven relationship of research and management in the agency. They illustrate the tremendous impact such change would have on the Service and its primary source of credibility -- its scientific expertise. This is a major change in the capability and strength of this important agency and must be approached with great care.

My experience within the Fish and Wildlife Service and the Department of Interior tells me that supervision of a situation in which some employees in the same office work for one agency, and others for NBS will be a management nightmare. Priorities, personnel evaluations, workloads and other matters simply do not work efficiently or effectively in government without some recognizable chain of command. Leaving staff in place as proposed appears to be a device to understate eventual administrative costs of forming the NBS. A statement is made that, to the extent practical, NBS will buy administrative services from Interior bureaus. Earlier accounts had suggested that, at least initially, other DOI agencies may bear the administrative costs. These are important considerations for the evolution and future costs of existing and NBS programs.

The Wildlife Management Institute helped establish the original Cooperative Wildlife Research Units, was and is the sole private cooperator, and led the fight in the 1980s to save both the wildlife and fishery units when they were out of administration budgets for three years. The contributions of Cooperative Units in research, training, and service to each of the cooperating entities have been invaluable to the management of fish and wildlife resources in America. The National Park Service has used similar units effectively, and BLM also has begun to do so. The Secretary has made important statements indicating that more thought will be given to the future of the Units and that changes will be negotiated directly with all of the cooperators. This is a positive move. So far, work on what that future might be is occurring only within Interior. It is time to bring these negotiations out of the closet and

involve the cooperators if something positive is to result. This Institute certainly would be ready to assist in consideration of the future of the Cooperative Units.

Mr. Chairman, for the record I am attaching questions raised by The Wildlife Society in an early letter to the Secretary about the effects on agencies of the proposed transfers. These questions entertain many of the concerns that remain about effects on agencies within Interior, and they remain largely unanswered.

We have been working with various conservation groups to enhance the scientific capabilities of the Bureau of Land Management (BLM). BLM has had so few scientists that any loss is a major concern. The lands that BLM manages are vast and greatly in need of better data and better management. The public is loudly demanding such change. BLM needs more scientific strength with or without an NBS.

H.R. 1845 is a basic statement that a Biological Survey should be established in the Department of Interior. It reflects generic statements of need for data to be used in protecting and managing ecosystems. However, it provides few details about how such a survey would really work both within Interior and between agencies. Probably because we all are operating under the same lack of hard information, H.R. 1845 does not deal specifically with many of the issues that have been raised about the NBS proposal. It provides a beginning framework from which to discuss the real need for a Biological Survey and how it might proceed.

Clearly, the Fish and Wildlife Service is targeted to take the biggest hit in loss of scientific and technical staff and budget. Of all the resource agencies, the Service has the largest mandate for protection and management of biological resources through its many legislative authorities, including the ESA. Since it will retain the largest measures of responsibility for resource management actions, we feel the Service should have a special role. We recommend a leadership role for the Service, through enabling legislation, on any body set up to set priorities for monitoring or research. In that way, the Service's priorities in implementing the ESA, Migratory Bird Treaty Act or other authorities under its mandates would receive

proper attention. We and others are reluctant to see the Service role be submerged within large group decision making when it ought to be where a lot of the action is.

Conspicuously missing from H.R. 1845 is any reference to how a Biological Survey in Interior will relate to other federal agencies, state or private entities in the comprehensive assessment of the biological resources of the United States. Also, the target for resolving conflicts in resource management must be broadened to include legislative mandates other than ESA. This should include meeting needs for management of national forests, private lands, military lands and other blocks of natural resources. Unless huge new funding is available, Interior is by far not the only needed component of a Biological Survey.

We at the Institute believe that prior to action on 1994 budgets, or other legislation, there should be an in-depth analysis of impacts of proposed changes on the affected agencies. This should be provided by Interior. Too much appears driven by the federal budget process and an October 1 implementation deadline. Still needed are specific answers and much critical thinking about structure, function and interaction between research and management.

ATTACHMENT 1

The proposed removal of Region 8 from FWS would remove many individuals and programs that carry out (1) operational, day-to-day management functions that are (2) part of the heart of the agency's statutory responsibilities.

Example A: Endangered Species Program, its (a) species listing, (b) recovery programs for individual species, and (c) primary technical support for many Section 7, critical habitat, jeopardy opinions, and other functions.

1. The Endangered Species Program, and in fact the Endangered Species Act itself grew directly from work in the 1960s and 70's at Patuxent Wildlife Research Center on whooping crane, bald eagle, DDT, Everglades Kite, Puerto Rican Parrot, California Condor, black footed ferret, and other species.

2. The DDT research on eggshell thinning in peregrine falcon and other birds, and sublethal and lethal effects of DDT and its related compounds formed the basis for much of the Service's scientific credibility and was of such quality and landmark significance that it had a widespread impact on the perception of our society's need to deal with pesticides carefully for wildlife, ecosystems, and human health.

3. Active recovery, a management function, is now being carried out by direct involvement of researchers and their laboratories on red wolves, whooping cranes, black-footed ferrets, Puerto Rican Parrots, Hawaiian birds, timber wolf, Aleutian Canada goose, Colorado squawfish, razorback sucker, and many other species.

4. Active recovery is being carried out directly in conjunction with state wildlife agencies, other federal agencies including Canada and Mexico, Canadian Provinces, and a variety of NGO's. They work with an array of academic and other colleagues and the Cooperative Research Units through Recovery Teams to carry out this management function. If ecosystem management is to proceed, these people will do it - Interior can only lead.

5. Status surveys, consultations on critical habitat, and jeopardy opinions done by management biologists in Service Regional Offices and Field Stations rely directly on FWS research biologists, at the various Research Centers, Cooperative Unit students and staff, recovery team participants and other daily contacts for their scientific credibility. They are done in direct consultation with affected states and federal agencies. The states have the legal responsibility for on-the-ground management of most of the species, whether plant or animal.

Conclusion: Removal of Region 8 from the Fish and Wildlife Service, for Endangered Species functions which are a primary concern, would make these interactions more difficult and add a new and separate agency to coordination of management functions. It would remove from the Service staff carrying out significant, statutory management functions in responsibilities under the Endangered Species Act, not just research.

Example B: Migratory Bird Management for more than 650 species of migratory birds. Only ± 60 are hunted and relate to surveys and regulatory processes apparently to be left with FWS. A substantial part of the federal mandate for preventative action to forestall the problems that occur after ESA listing (such as the gnatcatcher in California) is operationally conducted by the mixed research and management functions proposed to be moved out of FWS.

1. Scientists at Patuxent Wildlife Research Center worked with migratory bird managers to develop survey and analytical methods that formed the foundation of the complex process by which hunted species are regulated by the Service with Canada and Mexico. They also developed the Breeding Bird Survey, which is the best North American data base on songbird populations. These were transferred to FWS's management as the operational foundation for (a) managing hunted species and (2) expanding management of songbirds.

2. During the 1980s, FWS's managers struggled to keep songbird work from being discontinued under Reagan administration mandates. With the direct help of several Congressional committees, funds were added to: (a) upgrade and expand songbird survey methodology, and (b) put management biologists in the FWS Regions to coordinate with the vast array of state and federal agency biologists and local NGO's to build a stronger national management focus on songbirds.

3. In 1991 Partners in Flight was started by the National Fish and Wildlife Foundation, bringing together the primary federal land management agencies, the states, and about 80 NGO's to coordinate nationally and internationally on songbird biology and management. The Fish and Wildlife Service has a lead role because of its skills in research and management, and its legal mandates under the Migratory Bird Treaty Act, Endangered Species Act, and the 1980 Fish and Wildlife Coordination Act.

4. This is the strong beginning of a network of cooperators, especially State Fish and Wildlife Agencies, taking action that is the largest pre-listing, preventative effort ever mounted since the Endangered Species Act was passed. It is being developed partly based on the "models" of the programs for hunted species. It involves so many locations and entities, that no single agency, or even the whole federal government can carry it out alone. The agencies, like the Fish and Wildlife Service and DOI, can only lead, develop techniques and some of the science, and coordinate the effort.

5. The Service has never been able to invest separately in managers with the same skills as the researchers involved. At Patuxent, Northern Prairie, Alaska, Louisiana, and Madison research centers, scientists are developing the techniques and testing and analyzing the data provided by the field efforts of managers. If they and parts of the Migratory Bird Management Office are removed from the Service, the Service will lose much of its direct capability to lead the pre-listing work on behalf of songbirds.

Conclusion: Removal of Region 8 and some regional and other management biologists will stall Service development of preventative songbird management programs. It transfers the capability of the Service to a separate new agency at a time when the Service has finally begun to take its expected role in songbird management. It would transfer biologists and dollars specifically added by the Congress with extensive conservation community support.

Example C: Contaminants and fish and wildlife. Based on the 1960s and 70s work on DDT at Patuxent, and the 70s and 80s work at Columbia on a vast array of contaminants in aquatic systems, the Service has transferred to management both monitoring and productive support for regulatory actions. Research now runs operational chemistry for management and provides the scientific credibility for management and enforcement actions.

Example D: Animal Welfare Compliance for Service and the state wildlife agencies. The Service coordinates standards and procedures without which all animal handling would be subject to challenge.

Example E: Aquaculture at Service Research Centers supports the production of both recreational and commercial fish used by the states.

Example F: Hatchery chemical registrations through FDA are done by the LaCrosse Center to allow hatchery trout, salmon and other fish to be raised by public hatcheries nationally.

Example G: Great Lakes stock assessment for managing the fisheries of the Great Lakes is done through the Ann Arbor Center. Negotiations with Indian tribes regarding utilization of Great Lakes fisheries are conducted through the laboratory.

Example H: Migratory bird disease work is done by the Wildlife Health Laboratory (in Madison, Wisconsin) for national wildlife refuges. Removal of those scientists to NBS will directly separate a management function from application to national wildlife refuges and state management areas.



THE WILDLIFE LEGISLATIVE FUND OF AMERICA
To protect the Heritage of the American Sportman to hunt, to fish and to trap.

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Statement by
The Wildlife Legislative Fund of America

regarding

H.R. 1845, the
"National Biological Survey Act of 1993"

before the

House Committee on Merchant Marine and Fisheries,
Subcommittee on Environment and Natural Resources

and the

House Committee on Natural Resources,
Subcommittee on National Parks, Forests and Public Lands

July 15, 1993
Washington, D.C.

My name is William P. Horn, Director of National Affairs for the Wildlife Legislative Fund of America (WLFA). We appreciate the opportunity to appear before these two subcommittees and present our views on the proposed National Biological Survey (NBS).

The WLFA opposes the creation of the National Biological Survey (NBS) as authorized in H.R. 1845, the NBS Act of 1993.

WLFA is an association of sportsmen's conservation organizations established to protect scientific wildlife management as well as the heritage of American sportsmen to hunt, fish, and trap. Through its associated organizations, WLFA represents an aggregate membership of more than 1.5 million sportsmen-conservationists.

The creation of NBS is reinventing a "wheel" that was found to be broken earlier this century. In previous Congressional testimony Secretary of the Interior Bruce Babbitt told of the development of a similar agency over one hundred years ago. The Division of Biological Survey in the United States Department of Agriculture (USDA) was created to examine "the geographic distribution of animals and plants."¹ This eventually evolved into today's United States Fish and Wildlife Service (FWS) which integrates research and management functions: an arrangement deemed superior over 50 years ago and clearly superior the proposed NBS. NBS is stepping back in time and making a misdirected attempt to fix what isn't broken. In fact, this approach of dividing research and management capabilities -- an approach WLFA believes to be wrong -- was attempted again in the "mid-1960's when an Office of Ecology was created to consolidate biological skills from all Interior agencies into a new agency that would operate independent of the rest of the Department (of the Interior). This idea failed because it ignored the deep connection of research to operational programs"²

WLFA is persuaded that separating research from management will result in a host of problems. Management will become less effective. Rather than directing research efforts toward specific management problems, managers will become ensnared in a bureaucracy where requests for research must go to a separate entity -- NBS. The NBS researcher may or may not respond favorably depending on the directives he or she is receiving from supervisors. The concept of establishing "client service" personnel within NBS does little to solve this fundamental flaw and simply adds another level of personnel to complicate the interface between research and management. It also imposes more costs on the taxpayer.

¹ Quoting Dr. Clinton Hart Merriam, Chief of the Division of Economic Ornithology and Mammology (a precursor to the Division of Biological Survey) in the United States Department of Agriculture (USDA), in "Conservation: If it Ain't Broke . . ." an article by George Reiger the June 1993 issue of *Field and Stream*.

² Ibid.

There will be a diminution of important accountability. We are greatly concerned that there will be a tendency for senior policy makers to hide behind a facade of "science." When a controversial action is taken, we fear that policy makers will say the "scientists told us to do it." Science is a critical element, especially in wildlife management matters, but policy concerns grow each year. This is especially true given the growth of the radical animal rights movement. As long as there was a virtual policy consensus that supported activities such as hunting, fishing, and trapping, science was properly the determining factor in wildlife policy. Now, however, that traditional consensus is under attack and there are those who -- as a matter of policy -- would eliminate such traditional activities as well as all uses of animals. We do not want animal rights policy decisions masquerading as science and we do not want such policy makers hiding behind a facade of "science." Policy makers must be fully accountable to our citizens.

It is also a fallacy to think that "science" issues can be discretely separated from policy matters. In many cases, there is a substantial element of art in current biological controversies. For example, taxonomy can make or break endangered species listings. Subspeciation has often been the critical factor in a listing decision and taxonomic determinations often turn on whether the scientists involved are "lumpers" or "splitters." The latter rarely see a subspecies they don't like while the former tend to discount subspeciation. Science is policy in these cases and the outcome depends on which camp of scientists is chosen to make the decision. In such instances, the ultimate decisionmakers -- the non-scientists -- should remain accountable for their decisions. Turning effective decisionmaking over to a designated set of ostensibly apolitical scientists strikes us as anti-democratic.

Dividing research from management is also likely to expose U.S. Fish and Wildlife Service hunting and fishing programs to renewed legal attacks by animal rights zealots. Previous assaults against migratory bird hunting and hunting on public lands have focused on the scientific data that support hunting programs. FWS has had to demonstrate that its research arm provides sufficient information to the managers to support continuation of traditional hunting programs. This has been done to the satisfaction of the courts and blunted anti-hunting lawsuits by the animal rightists. Without adequate data, hunting programs would have been -- and will be -- enjoined by U.S. courts.

The stated purpose behind NBS is to charge off after endangered species matters and items such as biological diversity. The Department's NBS rhetoric -- and H.R. 1845 -- is noticeably short on expressions of concern or understanding regarding traditional fish and wildlife management programs such as migratory waterfowl or interjurisdictional fisheries. NBS leadership that gives short shrift to research involving these traditional programs

will simply invite the animal rights radicals to mount new legal challenges to hunting and fishing activities.

The provision by NBS of inadequate scientific information to FWS on such issues, will mean the eventual loss of duck hunting. If a solution is to give the FWS Director some measure of direct control over allocation of NBS resources, why create a new bureau in the first place?

Research and management are irrevocably linked. WLFA is opposed to reinventing a previously broken wheel and dividing critical research functions from management. Until a more compelling case is made for this presently unwarranted separation, WLFA is opposed to the creation of NBS and H.R. 1845. While the interface between research and management can always be improved, creating a costly new bureaucracy is a step backward in time.

TESTIMONY, NBS



NATIONAL CATTLEMEN'S ASSOCIATION

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TESTIMONY

on behalf of

NATIONAL CATTLEMEN'S ASSOCIATION

in regard to

H.R. 1845, The Biological Survey Act of 1993

submitted to

The National Parks, Forests, Public Lands Subcommittee

of the

**United States House of Representatives
Committee on Natural Resources**

and

The Environment and Natural Resources Subcommittee

of the

**United States House of Representatives
Committee on Merchant Marine**

by

Jim Little

**Chairman, Endangered Species and Wildlife Subcommittee
National Cattlemen's Association**

July 15, 1993

The National Cattlemen's Association is the national spokesman for all segments of the beef cattle industry—including cattle breeders, producers and feeders. The NCA represents approximately 230,000 cattlemen. Membership includes individual members as well as 46 affiliated state cattle associations and 29 national breed associations.

Good morning. My name is Jim Little and I am a cattleman from Emmett, Idaho. I am also Chairman of the Endangered Species and Wildlife subcommittee of the National Cattlemen's Association and represent their views here today. Cattlemen are vitally interested in H.R. 1845, The Biological Survey Act of 1993, as we graze cattle on pastures and rangelands which occupy over half the surface of this country.

NCA certainly appreciates the need for more solid, timely, objective science as recognized by this legislation. More and more natural resource issues which acutely impact the viability of our ranches depend on government decisions made on the basis of allegedly scientific information. I have had direct experience with this as I have a forest grazing allotment which has two listed species.

However, NCA has several questions about this specific legislation and the lengthier proposals for the National Biological Survey now circulated by the Department of Interior. We think it would be highly premature and inappropriate to pass H.R. 1845 in its present form. I will now briefly review the areas of our greatest concern.

THE RISK OF DEPLETING CURRENTLY NEEDED RESEARCH IN USFWS

Current research in the USFWS serves many practical, problem solving needs that are locally beneficial. There is already a substantial backlog of requests for this problem solving research. As proposed, the TBS would remove \$130 million of the current \$178 million in USFWS research money. This would gut current USFWS research. Although more recent TBS proposals imply that USFWS scientists moved over to a national biological survey agency could continue their present research, the very different mission of this new agency makes this doubtful. NCA believes we need more, not less, of this highly practical, cost effective, field tested and applied research akin to the Soil Conservation Service's (SCS) traditional mission in assisting land users.

NEED FOR SPECIFICATION OF KEY TERMS

An overriding mission of this legislation is a national inventory of the populations, abundance, health, status, and trends of all this nation's biological resources. Although frequently described as a biological counterpart to the USGS, the proposed Biological Survey has a different mission and unavoidable different function than the USGS' non-controversial mission of physical measurement. To inventory and monitor "the health, status, and trends" of resources and to identify "critical national resources" are to make qualitative judgments about which there is neither scientific nor political consensus.

The Endangered Species Act (ESA) defines in law many key terms and procedures. Legislation which authorizes the government to assess the condition, quality, and national value of resources, H.R. 1845 should also define key terms and the standards by which they would be applied.

AUTHORITATIVE GOVERNMENT SCIENCE UNAVOIDABLY TIED TO POLICY, REGULATION, AND MANAGEMENT

DOI current proposals state that the proposed NBS will be an "independent, objective scientific bureau" without advocating positions on management issues or carrying regulatory authority. On the other hand, the same proposal states that the NBS will serve managers and policy makers need for scientific information on biological resources. Notwithstanding this contradiction, current statutes like the ESA plainly preclude any distance between authoritative government science and management, regulatory decisions. Almost all government actions dictated by the ESA are to be made on science and science alone. The accessibility of more comprehensive science as envisioned by this NBS could very likely accelerate regulatory enforcement of the ESA. Identification of so-called "critical national resources" would more than likely expedite increased government land acquisition as proposed methodologies like Gap Analysis imply. The social forces advocating more land acquisition, more regulatory enforcement of the ESA through elaborate planning requirement would be unavoidably promoted by the NBS as it is now proposed. This could increase not decrease, the number of "train wrecks" about government's control of productive natural resource use.

BROAD INTRUSION ON BASIC PROPERTY RIGHTS

It would be impossible to accurately inventory and monitor biological populations, distributions and to assess condition without field studies. H.R.1845 does not specify by what methods the inventory would be conducted. Although satellite imagery and aerial photography are now used for similar functions, those methods yield fairly nebulous, general information. Any practically useful information and certainly any information used to make a judgment decision would necessitate on the ground work. At least 6 out of 10 acres in this country are private property. The NBS's basic mission would involve trespass on a vast scale. Further, landowners have a right to any of this information about their deeded lands just as they have access to IRS records and other government data.

DUPLICATES OTHER RESOURCE INVENTORIES

Several other federal agencies have well established responsibilities and programs to inventory natural resources. The U.S. Forest Service does this on forested lands. The SCS does this on private agricultural lands. BLM is also in the process of gathering this data. The USGS geographical information includes extensive data on natural resources. And EPA and NASA have programs to map resources. The current NBS proposal as well as this legislation omit any reference to a need for coordinating these agencies' work. The NBS very comprehensive mission and elaborate function question its proposed seat in the USFWS and also whether it could actually be created and maintained at the relatively modest figures beyond current DOI budget.

PREMATURE LEGISLATION

The DOI proposals for the NBS imply that preserving, restoring, and in all manner studying biological diversity is national policy. Although there have been bills in this House to make this explicit, they have not been passed. NCA believes it is important for congress to consider this basic policy issue before creating an entire new agency whose mission assumes the affirmation of this policy. We also believe H.R.1845 should not be moved until congress concludes debate and reauthorizes the ESA. Because of the heated controversy over the current law and because this NBS is so closely related to decisions about enforcement of the law, resource users and owners are cautious about more authoritative government science.

NCA wholeheartedly supports the need for more timely, objective scientific information relevant to natural resource use and natural resource protection. However, we believe the information needs to genuinely empirical, field tested, peer reviewed, addressed to practical issues, and challengeable by affected parties.

103D CONGRESS
1ST SESSION

H. R. 1845

To establish the Biological Survey in the Department of the Interior.

IN THE HOUSE OF REPRESENTATIVES

APRIL 22, 1993

Mr. STUDDS introduced the following bill; which was referred to the
Committee on Merchant Marine and Fisheries

A BILL

To establish the Biological Survey in the Department of
the Interior.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Biological Survey Act
5 of 1993".

6 **SEC. 2. ESTABLISHMENT OF BIOLOGICAL SURVEY.**

7 (a) IN GENERAL.—There is established in the De-
8 partment of the Interior an office which shall be known
9 as the Biological Survey. The purpose of the Survey is
10 to ensure—

1 (1) the comprehensive assessment of the bio-
2 logical resources of the United States;

3 (2) the provision of information to be used in
4 protecting and managing ecosystems, including their
5 plant, fish, and wildlife components; and

6 (3) that the Secretary may anticipate and avoid
7 or resolve conflicts arising in the implementation of
8 the Endangered Species Act of 1973 and other fish-
9 eries and wildlife conservation laws.

10 (b) DIRECTOR.—

11 (1) IN GENERAL.—The head of the Survey is
12 the Director of the Biological Survey, who shall—

13 (A) be appointed by the President, by and
14 with the advice and consent of the Senate, from
15 among individuals having expertise in the bio-
16 logical sciences; and

17 (B) be compensated at the rate provided
18 for level V of the Executive Schedule.

19 (2) FUNCTIONS.—The Director, under the su-
20 pervision of the Assistant Secretary, shall perform
21 the following functions:

22 (A) Assess and study biological resources,
23 including plants, fish, wildlife, and ecosystems
24 and their components.

1 (B) Develop, test, and monitor methods of
2 ecosystem management in order to improve the
3 capability of the Secretary to conserve biological
4 resources and diversity.

5 (C) Collect and analyze data and informa-
6 tion to determine and inventory the distribu-
7 tion, abundance, health, status, and trends of
8 biological resources and ecosystems.

9 (D) Develop methods for the consistent
10 and systematic collection and analysis of data
11 on ecosystems and their components.

12 (E) Disseminate information to resource
13 managers, scientists, and the public.

14 (F) Provide technical assistance in support
15 of legislative, regulatory, and resource manage-
16 ment decisions.

17 (G) Perform international activities related
18 to the management of biological resources.

19 (c) DEFINITIONS.—In this section, the term—

20 (1) “Assistant Secretary” means the Assistant
21 Secretary for Fish and Wildlife of the Department
22 of the Interior established under section 3 of the
23 Fish and Wildlife Act of 1956 (16 U.S.C. 742b);

24 (2) “Director” means the Director of the Bio-
25 logical Survey appointed under subsection (b);

4

1 (3) "Secretary" means the Secretary of the
2 Interior; and

3 (4) "Survey" means the Biological Survey es-
4 tablished under subsection (a).

5 **SEC. 3. CONFORMING AMENDMENT.**

6 Section 5316 of title 5, United States Code, is
7 amended by inserting after the item relating to the Direc-
8 tor, United States Fish and Wildlife Service, Department
9 of the Interior, the following:

10 "Director of the Biological Survey, Department
11 of the Interior."

○

BALANCED RESOURCE SOLUTIONS

Solving Problems for Land Users by Balancing
Economic and Environmental Objectives

Statement of

Allan K. Fitzsimmons, PhD

prepared for the

Joint Hearing on

H.R. 1845, the Biological Survey Act of 1993

held by

The Natural Resources Committee,

Subcommittee on National Parks, Forests, and Public Land

and

The Merchant Marine and Fisheries Committee,

Subcommittee on Environment and Natural Resources,

United States House of Representatives

July 15, 1993

MR. CHAIRMEN IT IS A PRIVILEGE TO PROVIDE THE REQUESTED STATEMENT ON H.R. 1845 -- THE BIOLOGICAL SURVEY ACT OF 1993 -- AS THE SUBCOMMITTEES CONSIDER THIS LEGISLATION AND THE DEPARTMENT OF THE INTERIOR'S INITIATIVE TO ESTABLISH A NATIONAL BIOLOGICAL SURVEY. I AM DR. ALLAN K. FITZSIMMONS, PRESIDENT OF BALANCED RESOURCE SOLUTIONS, A CONSULTING FIRM IN WOODBRIDGE, VA. I HAVE A PHD IN GEOGRAPHY FROM UCLA AND HAVE HELD POSITIONS IN GOVERNMENT AND ACADEMIA, INCLUDING CHAIRING THE ENVIRONMENTAL STUDIES PROGRAM AT GEORGE WASHINGTON UNIVERSITY. A BIOGRAPHY IS APPENDED TO MY STATEMENT.

CREATION OF A NATIONAL BIOLOGICAL SURVEY (NBS) RAISES TROUBLING ISSUES ON SEVERAL FRONTS. MY TESTIMONY, HOWEVER, WILL ONLY ADDRESS THE FUNDAMENTAL MISCONCEPTIONS FOUND IN H.R. 1845 AND THE DEPARTMENT OF THE INTERIOR'S (DOI) NBS INITIATIVE REGARDING THE ECOSYSTEM CONCEPT. IT QUESTIONS THE APPROPRIATENESS OF USING THE CONCEPT AS THE FOUNDATION FOR FEDERAL INTERVENTION INTO LAND USE DECISIONS THROUGHOUT THE NATION UNDER THE BANNER OF ECOSYSTEM PROTECTION AND MANAGEMENT.

ECOSYSTEMS ON THE LANDSCAPE

THERE IS NO DEFINITIVE PATTERN OF ECOSYSTEMS ON THE LANDSCAPE AWAITING DISCOVERY BY SCIENTISTS. TOO OFTEN WE SEEM TO FORGET THIS ELEMENTARY GEOGRAPHIC TRUTH ABOUT ECOSYSTEMS AS EVIDENCED BY THE SECRETARY OF THE INTERIOR'S CLAIM THAT "THE NATIONAL BIOLOGICAL SURVEY WILL PROVIDE THE MAP WE NEED TO AVOID THE ECONOMIC AND

ENVIRONMENTAL TRAIN WRECKS WE SEE SCATTERED ACROSS THE COUNTRY.”

THE ECOSYSTEM CONCEPT AROSE FROM EFFORTS BY ECOLOGICAL SCHOLARS TO FIND MORE EFFECTIVE WAYS TO THINK ABOUT THE WORLD AROUND US. A.G. TANSLEY, A BRITISH BOTANIST, IS GENERALLY CREDITED WITH FIRST USING THE TERM "ECOSYSTEM" OVER FIFTY YEARS AGO. BIOLOGIST, ELDON ENGER, IN CONCEPTS IN BIOLOGY, DEFINED AN ECOSYSTEM AS:

AN INTERACTING COLLECTION OF ORGANISMS AND THE ABIOTIC [NON-LIVING] FACTORS THAT AFFECT THEM.

G. TYLER MILLER, REFERRED TO ECOSYSTEMS AS:

A SELF-SUSTAINING AND SELF-REGULATING COMMUNITY OF ORGANISMS INTERACTING WITH ONE ANOTHER AND WITH THEIR ENVIRONMENT (LIVING IN THE ENVIRONMENT, 3RD. ED.).

THE KEY TO THE CONCEPT ARE THE INTERACTIONS BETWEEN LIVING THINGS AND NON-LIVING THINGS ON SOME PART OF THE LANDSCAPE. ESTIMATES OF THE SPATIAL SCOPE OF A SMALL SUBSET OF THESE INTERACTIONS GIVES RISE TO THE LOCATION, SIZE, AND SHAPE OF A PATCH OF GROUND THAT IS LABELED THIS OR THAT ECOSYSTEM.

ON THE LANDSCAPE, AN ECOSYSTEM, LIKE BEAUTY, EXISTS IN THE EYE OF THE BEHOLDER. ITS GEOGRAPHIC REPRESENTATION IS DETERMINED BY THOSE INTERACTIONS THAT A RESEARCHER CHOOSES TO EXAMINE IN CONJUNCTION WITH THE PROJECT OF THE MOMENT AND NOT BY SOME

NATURAL LAW. FOR A STUDENT OF FOOD WEBS, INTERACTIONS IN A POND MAY MAKE AN EXCELLENT SUBJECT FOR STUDY SO THE POND BECOMES AN ECOSYSTEM. TO LEARN ABOUT YELLOWSTONE'S GRIZZLIES, A SCIENTIST MAY SEEK TO CONSIDER THE THINGS THEY INTERACT WITH, THUS THE BEARS' RANGE BECOMES AN ECOSYSTEM.

IN PRACTICE ECOSYSTEMS ARE DELIMITED USING BUT A TINY FRACTION OF THE TOTAL NUMBER OF INTERACTIONS THAT OCCUR IN AN AREA. COMPROMISES ARE REQUIRED OWING TO THE IMPOSSIBILITY OF STUDYING ALL THE INTERACTIONS ENCOMPASSED BY THE ECOSYSTEM CONCEPT. IMAGINE TRYING TO FIRST IDENTIFY ALL THE LIVING THINGS IN AN AREA (INCLUDING THOSE VISIBLE ONLY THROUGH A MICROSCOPE); ESTIMATE THEIR POPULATIONS; AND THEN IDENTIFY AND MEASURE THEIR INTERACTIONS WITH ONE ANOTHER AND WITH ALL THE PHYSICAL COMPONENTS OF THEIR ENVIRONMENT. IT IS NOT SURPRISING THAT THE PRACTICAL NEEDS OF RESEARCH MEANS THAT ECOSYSTEMS SELECTED FOR STUDY (AND THE MAPS REPRESENTING THEM) REFLECT VERY LITTLE OF THE OVERALL ECOLOGICAL ACTIVITY OF AN AREA.

SINCE THERE ARE A LIMITLESS NUMBER OF INTERACTIONS THAT MAY BE SELECTED FOR STUDY, THERE ARE A LIMITLESS NUMBER OF ECOSYSTEMS THAT MAY BY DEFINED FOR THE NATION OR ANY OF ITS REGIONS -- EACH OF WHICH MAY BE PERFECTLY VALID FOR THE PROJECT IT SUPPORTS. AS A CONSEQUENCE, A GIVEN PIECE OF GROUND COULD APPEAR ON MANY DIFFERENT ECOSYSTEM MAPS AND BE DISSECTED BY ALL MANNER OF ECOSYSTEM BOUNDARIES.

ECOSYSTEM BOUNDARIES

ECOSYSTEM BOUNDARIES APPEARING ON MAPS ARE ALWAYS ARTIFICIAL AND FREQUENTLY IMPRECISE. THEY ARE APPROXIMATIONS BECAUSE OF THE DIFFICULTIES IN SPATIALLY BOUNDING THE INTERACTIONS AT THE HEART OF THE ECOSYSTEM CONCEPT. EVEN ECOSYSTEMS THAT SEEM TO HAVE EASILY IDENTIFIABLE BOUNDARIES, LIKE LAKES, ONLY CAPTURE A FRACTION OF RELEVANT INTERACTIONS -- WITNESS THE MOVEMENT OF BIRDS, INSECTS, AMPHIBIANS, AND OTHER LIFE FORMS BACK AND FORTH ACROSS THE LAKE SHORE.

IMPRECISION IN DELIMITING ECOSYSTEM BOUNDARIES ARISES IN MULTIPLE WAYS. A MAP OF THE RANGE OF YELLOWSTONE'S GRIZZLIES, FOR EXAMPLE, IS COMPOSED OF DATA FROM DIFFERENT SOURCES OF DIFFERING QUALITY. AGGREGATING SUCH DATA INTO A SINGLE BOUNDARY PERFORCE REQUIRES SPATIAL GIVE-AND-TAKE AND PLAIN GUESSWORK, ALL OF WHICH IS MASKED ON THE FINAL MAP. APPROXIMATIONS AND GEOGRAPHIC COMPROMISES INCREASE AS THE NUMBER OF SPECIES OR OTHER VARIABLES ARE INCLUDED IN THE DETERMINATION OF ECOSYSTEM BOUNDARIES. CONSIDER A RESEARCHER DESIRING TO DEPICT A PINE-JUNIPER FOREST AS AN ECOSYSTEM. WOULD THE ECOSYSTEM BOUNDARY BE DRAWN TO INCLUDE AREAS WHERE THE RATIO PINES TO JUNIPERS WAS AT LEAST, SAY, 1:1? HOW ABOUT 1:5? HOW ABOUT 1:100? HOW ABOUT DRAWING THE BOUNDARY WHERE THERE ARE JUNIPERS BUT 5 MILES PAST THE LAST KNOWN PINE JUST TO BE SURE ALL PINES WERE INCLUDED? ON THE OTHER HAND MAYBE THE RESEARCHER WOULD USE SOME RATIO OF JUNIPERS TO PINES. THE RESULTING MAPS WOULD EACH PRESENT A DIFFERENT PICTURE OF A PINE-

JUNIPER ECOSYSTEM.

THE BOTTOMLINE IS THAT THE ECOSYSTEM CONCEPT UNAVOIDABLY YIELDS ECOSYSTEM MAPS THAT ARE SUBJECTIVE, IMPRECISE, AND REFLECT ONLY A FRACTION OF THE ECOLOGICAL INFORMATION FOR THE AREA THEY DEPICT. THE CONCEPT DOES NOT AND CANNOT RESULT IN THE GENERATION OF A "BEST" PATTERN OF ECOSYSTEMS FOR THE COUNTRY OR ANY PORTION OF THEREOF. THE CREATION OF A NATIONAL BIOLOGICAL SURVEY WILL DO NOTHING TO ALTER THESE FUNDAMENTAL CHARACTERISTICS OF ECOSYSTEMS AND THEIR GEOGRAPHIC REPRESENTATION.

ECOSYSTEMS AS A BASIS FOR FEDERAL LAND USE POLICIES

THE ECOSYSTEM CONCEPT WAS NOT INTENDED TO FORM THE BASIS FOR PROTECTING AND MANAGING LAND AS ANTICIPATED BY H.R. 1845 AND AS IS CLEARLY THE THRUST OF THE NBS INITIATIVE PRESENTLY BEING ADVANCED BY THE DEPARTMENT OF THE INTERIOR (DOI). OUR PAST EFFORTS TO MAP ECOSYSTEMS FOR THE PURPOSE OF IMPLEMENTING FEDERAL PROTECTION AND MANAGEMENT POLICIES HAVE BEEN HIGHLY CONTROVERSIAL. THE DELINEATION OF WETLANDS, FOR EXAMPLE, IS NOTHING MORE THAN TRYING TO DETERMINE THE BOUNDARIES BETWEEN ONLY TWO CATEGORIES OF LAND, WETLAND ECOSYSTEMS AND EVERYTHING ELSE. NONETHELESS, WE CANNOT AGREE ON THE COMPARATIVELY SIMPLE IDEA WHERE A WETLAND STOPS.

THE NBS INITIATIVE IS FAR MORE COMPLEX THAN LOCATING WETLANDS. IT REQUIRES THE IDENTIFICATION AND MAPPING OF SCORES OF DIFFERENT KINDS OF ECOSYSTEMS ACROSS THE NATION. ONE WELL RECOGNIZED

NATIONWIDE GENERAL ECOSYSTEM CLASSIFICATION SCHEME INCLUDES NEARLY 60 ECOSYSTEM TYPES. AT A MINIMUM, THE NBS INITIATIVE WOULD LEAD TO THE ESTABLISHMENT OF TENS OF THOUSANDS OF MILES OF ECOSYSTEM BOUNDARIES THROUGHOUT THE COUNTRY SO THAT THE PROBLEMS MANIFEST WITH WETLAND DELINEATION WILL BE MULTIPLIED MANY TIMES OVER BY H.R. 1845 AND THE PROPOSED DOI NBS PROGRAM.

GIVEN WHAT WE KNOW ABOUT THE CHARACTERISTICS OF ECOSYSTEMS ON THE LANDSCAPE IS IT IMPORTANT TO UNDERSTAND WHAT IT IS ABOUT THEM THAT H.R. 1845 AND THE DOI NBS INITIATIVE SEEK TO PROTECT AND MANAGE. DO THEY WISH TO PREVENT CHANGE IN THE INTERACTIONS THAT ARE USED TO DEFINE ECOSYSTEM BOUNDARIES? IF SO, WHY? DO THEY DESIRE TO PREVENT OR LIMIT CHANGE IN ALL INTERACTIONS WITHIN AN ECOSYSTEM? DO THEY WANT TO ADDRESS ONLY HUMAN INDUCED CHANGE IN INTERACTIONS? DO THEY WISH TO RESTORE PAST ECOLOGICAL CONDITIONS? IN ESSENCE, WHAT DO THE SPONSORS OF THIS LEGISLATION AND THE NBS INITIATIVE HAVE IN MIND WHEN THEY SEEK TO INVOLVE THE FEDERAL GOVERNMENT IN ECOSYSTEM PROTECTION?

WITH ALL OF THESE DIFFICULTIES AND OUTSTANDING ISSUES, IT IS FAIR TO QUESTION THE BASIC NOTION THAT ECOSYSTEM PROTECTION AND MANAGEMENT OFFER A DESIRABLE BASIS FOR FEDERAL INVOLVEMENT IN LAND USE DECISIONS NATIONWIDE. ECOSYSTEMS ARE NOT CONFINED TO FEDERAL LANDS OR PLACES OF NOTABLE ECOLOGICAL SIGNIFICANCE. CONSEQUENTLY, ECOSYSTEM PROTECTION POLICIES COULD EXPOSE LAND OWNERS AND USERS EVERYWHERE TO RESTRICTIONS AKIN TO THOSE PRESENTLY IMPOSED UPON WETLAND OWNERS.

CONCLUSION

H.R. 1845 AND THE DOI NATIONAL BIOLOGICAL SURVEY INITIATIVE REFLECT BASIC MISUNDERSTANDINGS OF THE ECOSYSTEM CONCEPT, ESPECIALLY AS IT IS APPLIED TO LANDSCAPE. AS A RESULT, SEVERAL QUESTIONS SUGGEST THEMSELVES:

1. GIVEN THAT FACTS THAT: 1) ON THE GROUND, ECOSYSTEMS REPRESENT AN ARBITRARILY SELECTED PORTION OF THE LANDSCAPE; AND 2) THE ECOSYSTEM CONCEPT CANNOT YIELD A DEFINITIVE PATTERN OF ECOSYSTEMS, HOW CAN A FEDERAL POLICY FOR THE GENERAL PROTECTION AND MANAGEMENT OF ECOSYSTEMS BE JUSTIFIED?

2. WITH NUMEROUS DIFFERENT AND EQUALLY LEGITIMATE ECOSYSTEM PATTERNS AND MAPS POSSIBLE FOR THE NATION AND ITS REGIONS, HOW CAN ONE BE SINGLED OUT FOR USE AS THE BASIS OF FEDERAL ECOSYSTEM PROTECTION AND MANAGEMENT POLICIES?

3. HOW CAN GOVERNMENT POLICIES BE APPLIED ON THE BASIS OF ECOSYSTEM BOUNDARIES WHOSE LOCATIONS CAN VARY BY MANY MILES?

4. SINCE A GIVEN TRACT OF LAND CAN APPEAR IN NUMEROUS DIFFERENT ECOSYSTEMS, EACH DEVISED FOR A PARTICULAR PURPOSE, WOULD A SUCH A TRACT BE SUBJECT TO OVERLAPPING FEDERAL RESTRICTIONS?

5. WHAT ARE ECOSYSTEMS BEING PROTECTED FROM? WHAT ARE THEY BEING PROTECTED FOR?

Allan K. Fitzsimmons, PhD

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Dr. Fitzsimmons is the founder of *Balanced Resource Solutions*, a consulting firm specializing in the analysis of federal environment and natural resource policies effecting land use.

He has nine years of senior level policy staff experience advising cabinet and subcabinet officials in the Departments of Energy (DOE) and Interior (DOI) and for nine years was a university professor. He has authored numerous publications and papers on environment, natural resource, and energy issues.

At DOE he was Special Assistant to the Deputy Under Secretary for Policy, Planning, and Analysis, and to the Assistant Secretary for Domestic and International Policy. He represented the Secretary on the White House Interagency Wetlands Task Force and was chief architect of the market-based approach to wetlands regulation adopted by President Bush. He was part of the senior group that led preparation of the President's National Energy Strategy with particular responsibilities for land use issues impacting energy production.

As Special Assistant to the Deputy Director of the National Park Service (NPS) and to the Assistant Secretary for Fish, Wildlife, and Parks at DOI, he played a key role in devising balanced policies for the management of the national park system. He directed the effort to overhaul NPS' manual guiding all management policies. He was instrumental in development of legislative proposals, including the creation a Tall Grass Prairie National Park in Oklahoma, and represented the Secretary on the Florida governor's task force whose report resulted a major expansion of Everglades National Park.

Prior to his public service, he was Associate Professor of Geography, and Chair, Environmental Studies Program, at George Washington University (GWU) for five years. At GWU and elsewhere he taught graduate and undergraduate courses on environment, resource management, energy, and the geography of the U.S.

During the 1960s he was a scientific programmer analyst with Hughes Aircraft Corporation and TRW Systems Inc.

Raised and educated in Los Angeles, he earned a PhD in geography from UCLA, an MA in geography from California State University Northridge, and a BA in mathematics from the same school.



association of systematics collections

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WRITTEN STATEMENT FOR THE RECORD
 BY THE ASSOCIATION OF SYSTEMATICS COLLECTIONS

ON HR 1845

A BILL TO ESTABLISH THE BIOLOGICAL SURVEY

IN THE DEPARTMENT OF INTERIOR

BEFORE THE ENVIRONMENT AND NATURAL RESOURCES SUBCOMMITTEE
 AND THE
 NATIONAL PARKS, FORESTS AND PUBLIC LANDS SUBCOMMITTEE

JULY 15, 1993

The Association of Systematics Collections, representing the nation's biodiversity research institutions that house collections of biological specimens, is pleased to support the establishment of a National Biological Survey. We commend Congressman Studds and the Merchant Marine Committee and Congressman Vento and the House Natural Resources Committee for holding these hearings. ASC has long recognized the need for a comprehensive National Biological Survey. We called for its establishment in our 1986 book Foundations for a National Biological Survey, and in testimony before this committee in 1991 where we drew an analogy between the US Geological Survey and the kind of scientific support needed for a national biodiversity institute.

The United States already has many research performers and clients for a national biological survey in addition to the Department of Interior, USDA, NOAA, and other federal agencies that hold mandates for management of land and aquatic resources. We urge that the new National Biological Survey be broadly construed so that it may support the acquisition and use of biological information for management and for more effective use of biological resources. To take advantage of our full array of national talent, the NBS should have mechanisms to include research performers from universities, research institutes such as natural history museums and marine biological laboratories, state biological surveys, and state conservation units. In addition to extramural funding programs, there might be encouragement of joint projects between, for example, federal land managers, taxonomic researchers in universities or freestanding research institutions, and conservation professionals such as staff at state Heritage Programs.

Central in any national biological survey are repositories for biological voucher collections. There are already institutions in place to perform this task for the biological survey, including the Smithsonian's National Museum of Natural History, major natural history museums, culture collections, botanical gardens, and many university and state museums. But they do more than the accession of new specimens collected for various survey activities. These institutions are centers for identification of

biological materials, for new research on unknown species, and for research on the relationships among biological organisms and their value to humankind. They provide the basic databases on systematics and biogeography that are fed into land and aquatic management databases.

The historical element of collections-based databases is critical — for example, it allows us to know the changes that have occurred in the range of species, so that we can know if a species has always had a limited distribution or if it is truly endangered. Museum databases are also critical for the updating of taxonomic information, as new species are discovered and old ones are re-assessed. It was museum scientists who discovered that the snail darter was found in more than one locality, and who discovered that an endangered species in New York was being confused with an introduced species from Europe that did not need protection.

Legislation for a National Biological Survey should provide authorization for funding to link the databases AND research activities at our network of systematics collections with the state Heritage Programs, state biological surveys, and the federal agencies involved in the National Biological Survey. Specific research projects for management and use of biological resources will be one result; another will be the most efficient development of highly useful, historically-based, national biological information network.

IN SUMMARY, ASC recommends:

- * a broadly-based national biological survey that takes advantage of existing institutions and research performers and managers;
- * authorization for funding to support the entire flow of biodiversity information management, starting with taxonomic and biogeographic information that can be regularly updated using the resources of natural history collections;

* encouragement of inter-agency cooperation (at federal and state levels) to link the protection of biodiversity with its use, e.g. in medicine and agriculture. In this way, national biological survey information will support the U.S. biotechnology industry and the needs of all our citizens.

ASC and our member institutions would be pleased to provide any additional information on how multiple state, federal and private not-for-profit institutions can practically participate in the very exciting new National Biological Survey now and in years to come.

* Appended to this statement is a list of ASC member institutions, all of which are already engaged in biological survey activities, including provision of information to federal agencies and state Heritage programs.

ASC MEMBERS

Institutions

Academy of Natural Sciences of Philadelphia
 Agriculture Canada, Biosystematics Research Center
 American Museum of Natural History
 American Type Culture Collection
 Beltsville Agricultural Research Center
 Bernice P. Bishop Museum
 Botanical Research Institute of Texas
 Buffalo Museum of Science
 California Academy of Sciences
 Canadian Museum of Nature
 Carnegie Museum of Natural History
 Cincinnati Museum of Natural History
 Cornell University
 Cranbrook Institute of Science
 Dallas Museum of Natural History
 Delaware Museum of Natural History
 Denver Museum of Natural History
 Department of Natural Resources, Florida
 Duke University
 Field Museum of Natural History
 Florida Department of Agriculture and Consumer Services
 Florida Museum of Natural History
 Fort Hays State University
 Gulf Coast Research Laboratory
 Harvard University
 Hunt Institute for Botanical Documentation
 Illinois Natural History Survey
 Illinois State Museum
 Instituto de Geologia Museo de Paleontologia
 Louisiana State University - Baton Rouge
 McGill University
 Miami University
 Michigan State University
 Milwaukee Public Museum
 Missouri Botanical Garden
 Moore Laboratory of Zoology - Occidental College
 National Museum of Natural History
 Natural History Museum of Los Angeles County
 New York Botanical Garden
 New York State Museum
 North Carolina State Museum of Natural History
 North Carolina State University
 Ohio State University
 Paleontological Research Institute
 Pennsylvania State University
 Purdue University
 Rancho Santa Ana Botanical Garden
 Royal British Columbia Museum
 Royal Ontario Museum

San Diego Natural History Museum
 Santa Barbara Museum of Natural History
 Texas A&M University
 U. S. Fish & Wildlife Service
 University of Alaska
 University of California - Berkeley
 University of California - Davis
 University of California - San Diego
 University of Colorado
 University of Georgia
 University of Illinois
 University of Iowa
 University of Kansas
 University of Louisville
 University of Michigan
 University of Minnesota
 University of Nebraska
 University of Oklahoma
 University of Puget Sound
 University of Texas - Austin
 University of Texas - El Paso
 University of Utah
 University of Washington
 University of Wisconsin - Madison
 Virginia Institute of Marine Science
 Virginia Museum of Natural History
 Virginia Polytechnic Institute & State University
 Washington State University
 Yale University

Societies:

American Bryological and Lichenological Society
 American Malacological Union
 American Ornithologists' Union
 American Society of Ichthyologists and Herpetologists
 American Society of Mammalogists
 American Society for Microbiology
 American Society of Parasitologists
 American Society of Plant Taxonomists
 Association of California Herbaria
 Association of Southeastern Biologists
 Biological Society of Washington
 Coleopterists Society
 Crustacean Society
 Entomological Society of America
 Herpetologists' League
 Mycological Society of America
 Phycological Society of America
 Society of Nematologists
 Society for the Study of Amphibians and Reptiles
 Society of Systematic Biologists
 United States Federation for Culture Collections
 Xerces Society

Testimony of
Defenders of Wildlife



on the National Biological Survey

submitted to

The Committee on Merchant Marine and Fisheries
Subcommittee on Environment and Natural Resources

and

The Committee on Natural Resources
Subcommittee on National Parks, Forests and Public Lands

Thursday July 15, 1993

Testimony of Defenders of Wildlife
on the National Biological Survey
before The Committee on Merchant Marine and Fisheries
Subcommittee on Environment and Natural Resources
and before The Committee on Natural Resources
Subcommittee on National Parks, Forests and Public Lands
Thursday July 15, 1993

Chairmen and committee members, I am Sara Vickerman, Director of State Conservation Programs for Defenders of Wildlife. I appreciate the opportunity to submit testimony covering the National Biological Survey and its possible involvement with the Gap Analysis Program or GAP.

Congressman Studds, Defenders of Wildlife appreciates your introduction of H.R. 1845 to create a National Biological Survey. Chairmen and committee members, we are supportive of the a National Biological Survey suggest that its primary purpose should be to monitor the location and status of the nations's biological resources to help ensure their long-term conservation. We understand that the proposed legislation is very general by design, giving the Administration the latitude it needs to establish and operate the agency in accordance with Secretary Babbitt's ideas.

We offer the following comments on the proposed National Biological Survey for consideration by the Committee, although we recognize that this level of specificity may not be addressed in the bill. Similar comments were submitted to Dr. Peter Raven, Chairman of the National Research Council at the National Academy of Sciences.

Concerning the overall structure and priorities, the NBS needs clearly defined long and short-term goals. In the short run, the goal should be to compile enough existing information to make better resource allocation decisions before too many options are eliminated. In the long run, NBS should build a system capable of monitoring ecological changes and providing information that enables managers to prevent crisis management.

A hierarchical approach, starting at the landscape level then moving down to more detailed inventory of plants and animals on specific sites may be the most cost and time effective. It will take years to build and catalog a comprehensive and systematic collection of specimens. While this may be a useful exercise, there is a limit to the amount of money that can be spent on the details, given the urgency associated with our rapid resource depletion.

One of the most important initial functions of the proposed NBS should be to facilitate the rapid completion of the Gap Analysis Project (GAP). If the President's budget is approved by Congress, this landscape-level inventory will be expanded into a total of 46 states in FY 1994, with a target national completion date of 1998.

As a member of the National GAP Working Group, and an enthusiastic advocate of the program generally, we recognize some of the major strengths of this program. It uses existing data from a variety of sources, compiling it across agency boundaries in a consistent format. It is conducted at an appropriate scale to provide a context in which land management decisions at a finer scale can be made. If funded as now requested, it will be completed quickly enough to ensure that the inventoried resources will not be gone by the time the work is finished.

The Working Group has identified three major phases of the GAP project: The first is research -- building the data layers for vegetation, species, land ownership, etc. Using these layers, the analysis can be conducted to identify habitat types that are currently unprotected or under-represented in existing conservation areas. The second phase is data transfer. This occurs at two levels. One is the opportunistic response to inquiries from agencies, conservation groups, academics, etc. The other is the systematic development of plans and conservation strategies based on the analysis of the GAP data. The third and final phase is application or implementing the conservation requirements on the ground. This includes land acquisition, land trades, changes in management practices, etc.

In most states, the Cooperative Research Units, operated by the Fish and Wildlife Service, build the data layers, working in cooperation with other agencies and interested organizations. The universities in which the Coop Units are located then have a tremendous data base upon which to base endless additional inquiries that form the basis for scientific studies.

However, the second and third phases of the project -- data transfer and application -- are by no means automatic. In fact, despite several years of discussion by the GAP Working Group, no agency has stepped forward to define the means by which this critical information on the location of the nation's biodiversity will be used. The long-term maintenance and updating of the data bases have not been decided. Potential users of the data have difficulty gaining access to it -- either because they lack knowledge about its existence, cannot afford to pay for it, or lack the hardware, software, and technical expertise to use it. Interpretation of the information is no simple task, given that there are no widely accepted standards for reserve design, ecosystem management, etc.

We provide this example to illustrate a common problem with research facilities. They often become isolated and fail to provide the necessary information to guide sound management decisions, because either the research topics are too esoteric relative to real management issues, or the results are communicated poorly or slowly (if at all) to users.

Defenders is not a research institution. Our role in research traditionally has been to support public funding for research important to our conservation priorities, and where appropriate, share with our constituents and policy makers what we consider to be the important policy implications of scientific research. Many conservation organizations perform this function. We, and similar organizations, could do a much better job if we

had better access to research data generated by government agencies and by academic institutions.

From this perspective, we offer a few specific suggestions concerning the structure of the NBS:

1. The development of research priorities is not strictly a scientific question. These decisions should be jointly made by a panel of managers, scientists, and outside interests.
2. The proposed reorganization offers an important opportunity to develop standard methods, terminology, reports, hardware and software, etc., to save money and provide better information upon which to make land and wildlife management decisions.
3. Special attention must be given to the data transfer function of the NBS. We recommend creating an "extension office," for lack of a better term, whose function is to keep track of biological research and monitoring projects and present the information to users (the public, policymakers, press, etc.) in a user-friendly manner. This office should be staffed with people who are expert communicators (not necessarily scientists) who have the proper equipment to publish high-quality materials like brief reports, fact sheets, slides, drawings, etc.

This office should not limit itself to the distribution of publications. It should have the capability to answer questions asked by other agencies, local governments, etc. For example, a state fish and wildlife agency might want to find out where the highest concentration of sensitive species are located in order to develop plans to keep them from becoming endangered.

4. Besides the extension function, a system is needed to facilitate the application of new information to management situations. Perhaps pilot projects in adaptive management could be initiated and monitored over a period of time as more knowledge is gained about how to restore damaged systems, reintroduce extirpated species, and extract resources more benignly.
5. We understand that discussions are taking place between The Nature Conservancy and the proposed NBS staff. We strongly urge the committee to recommend a structure in which information from the state Heritage programs is incorporated into the national system. As far as we know, the Heritage programs have the best data on site specific occurrence of rare species and sensitive habitats.
6. State resource agencies devote considerable attention to inventorying, monitoring, and researching certain plant and animal species. The NBS would provide a valuable service to everyone concerned if it were to keep a centralized data base in which the information generated by the states was stored. Such a system could

help avoid duplication of effort and facilitate regionwide or national analysis of trends. If funds were available for grants to states to do some of the biological surveys, they should be awarded only to researchers who submit proposals for high-priority projects, follow consistent standards, and agree to assist the NBS "Extension Office" in the publication of information for the public.

7. Another possibility would be to develop research management training courses to assist managers in keeping up with contemporary scientific thinking. Effective implementation of ecosystem management strategies will require managers to learn some new, interdisciplinary techniques.

8. NBS should define appropriate boundaries for landscape level planning. The most useful outcome would be a nested hierarchy identifying ecoregions, subregions, watersheds, or "biogeocultural regions." The purpose would be to avoid overlapping, and perhaps, conflicting planning exercises. Drawing these boundaries would also provide a rationale for allocating funds to multi-agency, ecosystem management projects on a geographic basis.

9. Finally, we raise the concern that in order to accomplish many of its most important goals, the NBS should ultimately incorporate some research functions from EPA and the Forest Service. As major natural resource agencies, both should be working closely with the Interior agencies in the development and application of standardized techniques for inventory, monitoring, and research on ecosystems.

Again thank you for introducing this bill Chairman Studds. Chairmen and committee members this concludes my testimony.

Working for the Nature of Tomorrow



NATIONAL WILDLIFE FEDERATION

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STATEMENT OF THE NATIONAL WILDLIFE FEDERATION

ON

H.R. 1845

A BILL TO ESTABLISH THE NATIONAL BIOLOGICAL SURVEY
IN THE DEPARTMENT OF THE INTERIOR

PRESENTED TO

HOUSE SUBCOMMITTEES ON
ENVIRONMENT AND NATURAL RESOURCES
AND
PARKS AND PUBLIC LANDS

PREPARED BY

LESLIE M. FEWINKEL
RESEARCH ASSOCIATE
&
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DIRECTOR
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NATIONAL WILDLIFE FEDERATION

JULY 28, 1993

On behalf of the National Wildlife Federation (NWF), the Nation's largest conservation education organization, thank you for this opportunity to present testimony on H.R. 1845, "A Bill to Establish the National Biological Survey." NWF supports H.R. 1845 as a means to authorize the creation of the National Biological Survey (NBS), and thanks Chairman Studts for taking the initiative to move Interior Secretary Bruce Babbitt's important proposal one step closer to fruition.

NWF strongly supports the proposed National Biological Survey. For more than 50 years, NWF has been a leader in the conservation of wildlife and its habitats. Sound scientifically-based management of our Nation's natural resources has always been the touchstone of NWF's conservation efforts. Such management is impossible without accurate and objective information about what is out there and what is at risk. In simplest terms, this should be the mission of the National Biological Survey.

More specifically, NWF supports the following purposes for the NBS detailed in H.R. 1845:

- (1) To ensure the comprehensive assessment of the biological resources of the United States;
- (2) To ensure the provision of information to be used in protecting and managing ecosystems, including their plant, fish, and wildlife components; and
- (3) To ensure that the Secretary may anticipate and avoid or

resolve conflicts arising in the implementation of the Endangered Species Act of 1973 and other fisheries and wildlife conservation laws.

NWF would like to underscore in particular the need to approach the tasks of the NBS using an ecosystem approach. Our recent experiences in the Pacific Northwest have powerfully demonstrated that simply focusing on the status of a particular threatened species, like the northern spotted owl, only partially addresses the more serious problems of an unraveling ecosystem, in this case the region's highly-fragmented old-growth forests on which literally hundreds of species depend. Thus, it is important to not simply focus on the gathering of endless amounts of data about the occurrence and life cycles of every conceivable taxa. Instead, the National Biological Survey should: (1) identify and delineate, on a regional basis and, where feasible, at the landscape level, the ecosystems of the United States; (2) describe the ecological relationships which operate within each ecosystem, identifying to the maximum extent feasible the species, habitats, and functions of ecosystems and correlating the functions of ecosystems within the United States with the functions of other continental, hemispheric, and global ecosystems; and (3) identify the current and projected threats to the continued integrity of the Nation's ecosystems, and the relative risk of deterioration for each ecosystem.

Timely communication of this information by the NBS to the

other bureaus of the Department of the Interior will allow for the necessary planning to prevent conflicts between habitat conservation for imperiled species and other land-use practices to the maximum extent possible. The NBS will also serve to minimize management incongruencies that occur across agency boundaries by providing all land managers in the Department of the Interior the same base of biological information on which to make land management decisions.

In conclusion, NWF strongly supports the establishment of the National Biological Survey as a much-needed and long overdue effort to provide accurate and objective information about the Nation's biological resources so that future natural resource management decisions may be based on sound science. NWF appreciates the opportunity to offer support for this proposed agency, and looks forward to its establishment in the beginning of the new fiscal year.

NATIONAL ASSOCIATION OF STATE FORESTERS

Written Statement

Submitted by

The National Association of State Foresters

to the Committee on Merchant Marine and Fisheries, Subcommittee on Environment and Natural Resources and Committee on Natural Resources, Subcommittee on National Parks, Forests, and Public Lands



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H.R. 1845: The National Biological Survey Act of 1993

July 21, 1993

The National Association of State Foresters represents the Directors of the State forestry agencies of the fifty States and three U.S. Territories (Guam, Puerto Rico and the U.S. Virgin Islands). In that capacity, our members are responsible for providing management and protection services to the vast majority of the Nation's forest resources. The members of NASF have some specific concerns regarding the proposed creation of the National Biological Survey within the Department of Interior.

The bill before you today, H.R. 1845, would give the Secretary of Interior broad authority to create a National Biological Survey. The goals of the NBS, as espoused by this legislation and by Interior Secretary Bruce Babbitt, are laudable; an effort which would improve the quality of research on and inventories of the nation's biological resources would be a good step forward. However, as the details of the NBS begin to emerge, the picture is less clear cut, and the principles being used to justify the creation of this new Interior research agency are more open to controversy. A primary concern of the NASF is the separation of researchers from the managers who depend upon them for accurate and timely information.

Before moving on to that concern, we wish to highlight some of NASF's efforts in the area of inventorying and monitoring.

The members of NASF have worked extensively with the USDA Forest Service on two key inventory and monitoring efforts; the Forest Inventory and Analysis (FIA) program and the Forest Health Monitoring (FHM) programs. These programs are absolutely vital to the nation's forest managers, including managers of state, private and federal forest lands.

FIA provides vital information about the extent of forests, stocking, and growth rates. This is critically important information to those who must manage forests for multiple benefits, including foresters and wildlife managers. The FHM program is making strides towards tracking forest pathogens and diseases. These include such long-term problems such as Gypsy moths and southern pine beetles, and emerging forest health problems such as dogwood anthracnose and hemlock woolly adelgid.

Those put in charge of the new NBS should make every effort to work with and support these programs. The legislation currently under consideration does not provide adequate direction for them to do so, although report language adopted by the House Appropriations Committee does direct the Department of Interior to report on how the new NBS will work with these and other survey and monitoring efforts.

We believe that if a new NBS is created, it should be required not simply to analyze it's own relationship with these other federal and federal-state research efforts, but it must involve these agencies and other research institutions as full partners in the development and long-term direction of the proposed new agency. The current legislation could ensure stronger consideration of these ongoing efforts, and seek out areas of mutual cooperation and weed out areas of potential (and unnecessary) duplication. The Department of Interior's budget proposal presents many opportunities to ensure adequate consideration of the needs of research and management partners.

Two final concerns. First, it has come to our attention that our colleagues in the State fish and wildlife agencies have expressed alarm at the proposal to create the NBS. They quite rightly point out that information on the new research agency, while more detailed than at first, is still quite sketchy. The potential effect of moving existing research units into a new bureau has not been adequately weighed, and no one is sure what it

will mean operationally, even if the Department has said it wants to make the organizational change "transparent." We share the concerns of our colleagues in the State fish and wildlife agencies on this point, particularly as the proposed changes would effect the Departments' various Cooperative Research Units.

Lastly, and very importantly, we are questioning the idea of "improving" research by severing it from the land and resource managers who must ultimately interpret and apply the results. The Department lists this as one of the benefits of the new NBS, although it does not say why an "independent" research wing will necessarily provide substantial benefits to the resource managers on the ground. As others have rightly pointed out, the U.S. Fish and Wildlife Service was created through a merger of the Department of Interior research and inventorying capabilities.

The committees should ask themselves whether they can expect the results promised by undoing a merger which has served the country well for over a half century.

In closing, the committee is to be commended for considering authorizing legislation for this proposed new agency. It should take the opportunity to ensure that doing so will actually result in tangible benefits for the management not just of the nation's fish and wildlife resources, but all its natural resources. If the Congress decides to move forward with the idea, they should seek to ensure that the creation of the new agency does not disrupt ongoing relationships to the point where the benefits are outweighed by long-term operational difficulties. Lastly, the Congress should ensure that this one effort to eliminate duplication of federal efforts does not inadvertently create competition among other related federal agency efforts, and that all such efforts function together harmoniously. Thank you.

**FIELD MUSEUM
OF NATURAL HISTORY**

OFFICE OF THE PRESIDENT

July 27, 1993

The Honorable Gerry E. Studds
Chairman
Subcommittee on Environment and Natural Resources
Merchant Marine and Fisheries Committee
545 Ford House Office Building
Washington, D.C. 20515

The Honorable Bruce F. Vento
Chairman
Subcommittee on National Parks, Forests, and Public Lands
Natural Resources Committee
A812 O'Neill House Office Building
Washington, D.C. 20515

Dear Chairmen Studds and Vento:

This letter is being submitted for the written record of the joint hearing held by the Environment and Natural Resources Subcommittee and the National Parks, Forests, and Public Lands Subcommittee on July 15, 1993 concerning the National Biological Survey (NBS). As the presidents of the three largest, free-standing, natural history museums, we appreciate this opportunity to provide additional information to the Subcommittees on this important proposal. We want to take this opportunity to describe the roles of natural history museums and systematic biology in the NBS.

Although ninety percent of the globe's biological species remain unidentified, over a million have been discovered over the past two centuries by systematic biologists, many conducting research within our nation's natural history museums. Unlike many other types of institutions, natural history museums have worked to maintain natural science research programs. These programs include some of the world's largest biological collections and natural history libraries. Also within the realm of natural history museums are active programs of field exploration, surveys and inventories, and systematic research on the earth's biological diversity.

Through systematics, our scientists work to (1) generate the primary database for documenting biological diversity, (2) understand the organization of life and the underlying reasons for its complexity, and (3) document the distribution of species in the earth's varied habitats and ecosystems in order to understand their historical development through space and time. In carrying out

this research, our institutions strive to establish common guidelines and priorities. This type of work fosters the development of new methods of data analysis and provide new information for systematic and evolutionary biology theory, making biological surveying more comprehensive.

These large, carefully maintained scientific collections serve as the basis for systematic research. The vast collections within the nation's natural history museums act as a permanent reference source for comparisons with newly discovered species or newly surveyed and studied habits. Furthermore, they provide the empirical framework for understanding the history of life. Collections provide the essential underpinnings for accurate assessments of environmental quality and change. The museums' vast biological collection of specimens act as an "encyclopedia", referencing much of the known biological world.

Aside from our strong research activities, natural history museums actively disseminate information both among the formal scientific community and the general public. In this capacity we hold symposia, publish articles, create exhibits and sponsor lectures. Additionally, our museums train graduate and postdoctoral students in systematics and other fields of natural science, contributing to the continual training of the future scientific workforce.

In the Secretary's memorandum to the Cabinet announcing the NBS (March 17, 1993), he states its mission -- "to gather, analyze and disseminate the biological information necessary for the wise stewardship of our Nation's natural resources, and to foster understanding of biological systems and the benefits they provide to society." Natural history museums are well-situated to meet the basic components of this mission. Already in place are methods used to "gather, analyze and disseminate" information regarding the nation's biological composition. Furthermore, a primary task of museums is to educate the public.

For all of the reasons cited above, the nation's natural history museums should play a fundamental, extramural role in the proposed NBS. The involvement of natural history museums and other scientific institutions within a peer-reviewed, extramural program will strengthen the program offered by Secretary Babbitt. In particular, the objective of reducing duplication of efforts within the Department can be assisted by incorporating the work of natural history museums and universities. The desire of the Department to establish a leadership role and enhance its credibility is furthered by an extramural grants program based upon the integrity of peer-reviewed research. Finally, Interior states that it hopes to provide "land and resource managers more timely, objective scientific information essential for decision-making within the Department." By supporting an extramural grants program, the survey will more likely be an objective examination of the scientific facts, valuable to, but removed from, other roles housed

within Interior.

Natural history museums offer a stable scientific base for the NBS. Our institutions share the Subcommittees' commitment to a successful program. If we can be of assistance or provide further information to the Subcommittees, please feel free to contact us. We thank you for the opportunity to comment on the record.

Sincerely,

Willard L. Boyd
President
Field Museum of
Natural History

Craig C. Black
President
Natural History Museum
of L. A. County

George D. Langdon, Jr.
President
American Museum of
of Natural History



THE WILDLIFE SOCIETY

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1 April 1993

The Honorable Bruce Babbitt
Secretary of the Interior
Washington, DC 20240

Dear Mr. Secretary:

Leaders of The Wildlife Society listened with interest to your address to the North American Wildlife and Natural Resources Conference. It was a great pleasure to hear you strongly express your commitment to improved natural resource conservation.

The Wildlife Society is the organization of wildlife professionals dedicated to excellence in wildlife stewardship through science and education. Our 8,600 members are employed in the public and private sectors and engaged in wildlife research, management, education, administration and law enforcement. We are pleased to respond to your request for comments on the proposed National Biological Survey.

We strongly support improved research quality and productivity, increased cost effectiveness and research capability, expanded commitment to technology transfer and support, a proactive approach to ecosystem management, improved interagency coordination, and cooperative relationships. Change is desirable and necessary to ensure that biological research within the Department of the Interior is timely and focused on resource management needs.

However, we have some questions about the National Biological Survey that we believe merit your attention before you implement the program. These questions address integration across the federal government, separation of research and management, research and inventory, specific aspects pertinent to the Fish and Wildlife Service and the cooperative research unit program, state agencies, and funding.

We raise these questions to help strengthen research in the Department, make the National Biological Survey successful, and ensure that existing statutory programs and important cooperative partnerships are enhanced. We would be pleased to meet with you to discuss these questions in detail.

Sincerely,

Thomas M. Franklin
Wildlife Policy Director

Enclosure

cc: H. Salwasser
H. Hodgdon

QUESTIONS REGARDING THE PROPOSAL TO ESTABLISH A NATIONAL BIOLOGICAL SURVEY

INTEGRATION ACROSS THE FEDERAL GOVERNMENT AND THE SEPARATION OF RESEARCH AND MANAGEMENT

1. The proposal should explicitly state its limitation. The proposed horizontal integration should be matched with an analogous vertical integration of all layers of management and research, from local to national scales. Under a generous interpretation, this structure could be inferred from the statements: "...enable land and resource managers at Federal, state, and local levels to develop comprehensive ecosystem management strategies..." and "more effective partnerships with state...and local entities." However, this proposal does not address the issue of integrating conservation research across the Federal government. For example, the USEPA and USDA Forest Service have major research efforts regarding conservation of natural resources that will not be affected by the proposal. Thus, Federal effects in conservation research will remain fragmented. How will this possible fragmentation be addressed?
2. Because this is not a comprehensive effort, the fourth objective cannot be fully realized. In fact, by having a focal point for conservation biology in DOI, there may be more opportunity for conflicts with USEPA (e.g., GAP versus EMAP). How will the NBS program to "...assess the overall status and trends...in ecosystems..." relate to USEPA's EMAP program? On the surface, it can be argued that DOI is establishing a new agency with a mission that duplicates ongoing research and monitoring efforts within the Federal Government.
3. There appears to be significant overlap in what the proposed NBS would do, and the proposed National Institute for the Environment. How would the two relate?
4. A major problem under the proposal is that research and survey activities will be even more separated from management than they are currently. Shouldn't research and management be integrated at all levels?
5. The NBS should add an objective that commits the DOI to vigorously pursue Adaptive Resource Management (ARM) where it is applicable. We should be doing management in a structured way so that we gain reliable knowledge as we manage. Wouldn't this approach necessitate that managers and researchers work closely together?
6. Moving all of the laboratories into the NBS seems to include many facilities whose mission does not match those stated for the survey. Why should these be moved?

RESEARCH VS INVENTORY

1. Although we recognize that biological research in DOI does not include such fields as human medicine and veterinary science, others will not. Thus, biological research needs to be clearly defined. Would a more appropriate term be conservation research as a more accurate description of the proposal's focus?
2. Note that the section Questions on the National Biological Survey states that "...the determination whether a particular tract of land includes a population of an endangered species is not research..." While this is not research, the proposal states that the NBS will do endangered species inventories. Is there a contradiction here or does the NBS plan to do only some types of inventories for nationally endangered species?
3. How much of current research funded by the Congress to do specific kinds of work will be redirected into ecosystem or survey and monitoring work?
4. As written, it appears that all inventory and monitoring of natural resources will be in the NBS. However, the major (perhaps even the majority) of resource inventories in Interior agencies are not done by researchers. For example, in BLM all fish and wildlife inventories are done by management biologists at the local level. Even within the FWS, major inventory and monitoring work occurs in the operational parts of the agency (i.e., Coastal Projects of Ecological Services, inventories and monitoring on NWRs). What makes an inventory activity worthy of inclusion in the new agency? Even if the inventory remains out of NBS, how will these data be accessed in the assessments of overall ecosystems?

FISH AND WILDLIFE SERVICE

1. Please analyze, point by point, how FWS is going to do its job. What exactly will be the costs to FWS and what exactly will be taken out of the agency?
2. Will there be future added costs in personnel and resource dollars to rebuild scientific capabilities within FWS to enable it to do its job?
3. How will the FWS be able to fulfill its statutory responsibilities for the Endangered Species Act, Migratory Bird Management Act, various fishery management statutes, and others without a very significant part of its scientific expertise?
4. What role will a Director of the new NBS play in regulatory decisions by FWS, such as listings of threatened and endangered species, hunting regulations, management actions to enhance species recovery, or various permitting activities?

5. Apparently, more than half the funds and personnel for the NBS will come from the Fish and Wildlife Service. Isn't that highly costly to an agency that has a lot of daily responsibilities that are based on science?
6. How will FWS discharge its responsibilities for migratory bird management under the Migratory Bird Treaty Act if migratory bird functions (including staff) are split between two agencies?
7. Has a detailed analysis been done on the effects of the proposed transfer of staff and dollars on maintaining traditional services for aquaculture, drug registration, fish disease management, fish and wildlife disease diagnosis and forensics support, migratory bird management, endangered species status, testing and recovery, contaminants monitoring and effects, and other tasks normally done by the Fish and Wildlife Service?
8. Will the work done at wildlife and fishery research centers be reprogrammed?

COOPERATIVE RESEARCH UNITS

1. Are all current cooperative agreements voided (and will new ones have to be renegotiated)?
2. This proposal is for an "internal reorganization." Coop units are joint programs supported by the states, universities, and other cooperators. Have these cooperators had input into the program and have they agreed to the changes?
3. What specific changes in program and direction are planned for coop units?
4. Units should expect to add extension staff, and perhaps BLM and NPS staff. At a couple of Units that would exceed 30 staff! Further, a strong thrust through Units would be GAP analysis, monitoring, and surveys. Such would not qualify for graduate thesis or dissertation materials. Are Units being presented as transforming into "state offices," yet with no changes in programs occurring?

STATE AGENCIES

1. Under the heading entitled Budget, it implies that endangered species inventories will be done by the NBS. FWS personnel do few on-the-ground inventories of endangered species. In most states FWS contracts with the state management authorities to do these inventories. Historically, endangered species work, including inventories, has been grossly underfunded. Will NBS increase funding for these inventories, or will the agency do the work in-house? Either way, what administrative mechanisms (i.e., contract specialists, species specialists) will be used to work with the states?

2. Are researchers restricted to working only within the state where they are stationed? This has ramifications for agencies other than the USFWS.
3. Will each state have a director? How will funds be allocated?
4. Public remarks indicate that the proposed NBS would focus on nongame programs. The state agencies have statutory responsibilities for most nongame, and all of the habitats except those on federal lands. How will the state wildlife conservation agencies participate in these programs?

FUNDING OF NBS

1. How will funding priorities be set given the different missions of individual agencies? The majority of employees from the NBS will come from the USFWS. Do Parks or BLM issues take a lower priority? How will this be prevented?
2. Working on a reimbursable basis with agencies (e.g., USGS) commonly makes it too expensive for local land managers to afford services. How will this be prevented? If, in the case of the USGS, a local client does not fit into the work plan of the servicing agency, it is often difficult to have work implemented (even if you can afford it). How will this be prevented?
3. DOI currently lacks some of the expertise to accomplish the work activities outlined. For example, will botanists, systems ecologists, physiological ecologists, and taxonomists be hired? If so, where will the funds come from?
4. What will be the cost to each agency?
5. Creation of a new agency would appear to add considerable costs for administration. Will these resources be reprogrammed from within, or will new funds be needed?
6. The proposal for the NBS suggests that research will be improved in quality and productivity at lesser cost. However, this proposal would add significant administrative costs for a new agency, and you have stated that all services will be maintained to current clients - which implies continuation, not redirection of resources. How can all of this be accomplished?



International Association of Fish and Wildlife Agencies

Organized in 1947

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May 6, 1993

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Honorable Bruce Sabbitt
Secretary
U.S. Department of the Interior
1849 C Street, NW
Washington DC 20240

Dear Mr. Secretary:

I want to express appreciation on behalf of the International Association of Fish and Wildlife Agencies for the opportunity to meet with you and to discuss at some length the proposed National Biological Survey. As you know, the group that met with you -- Herb Doig (NY), Boyd Gibbons (CA), Bob Miles (WV), Max Peterson (IAFWA staff), and Rollie Sparrowe (Wildlife Management Institute) -- were designated by me following your invitation at our Executive Committee meeting to further discuss the proposed formation of the National Biological Survey.

We appreciated the opportunity for a candid exchange of views and for your willingness to spend a considerable amount of your scarce time in meeting with us.

We particularly appreciate your making it clear that you do not plan to transfer responsibility for administration or management activities such as nongame species, endangered species, or the regulatory aspects of waterfowl management, to the new Biological Survey. We also very much appreciate your support for the need for reliable and adequate funding for a nongame program. This Association, the Wildlife Management Institute, and many other organizations, supported the passage of the Fish and Wildlife Conservation Act of 1980 (Nongame Act), as well as Senator Mitchell's Partners in Wildlife Act of last year. We are optimistic that with your support, the special initiative we launched three years ago to obtain funding for nongame species will be successful.

As we discussed with you, we are seriously concerned and have questions about several aspects of the National Biological Survey which involves transfer of research, inventory and monitoring functions from several Interior agencies, the apparent concept of one agency with centralized responsibility for inventoring and

Honorable Bruce Babbitt
May 6, 1993
Page 2

monitoring of biological data, and the potential impact of transferring the state wildlife cooperative units to a new bureau. We are also frankly frustrated and concerned about the speed with which the proposal is moving. That and the secrecy surrounding the details which are reflected in the budget amendment, coupled with the apparent markup schedule on the Hill for the 1994 appropriations, seems to effectively preclude any real opportunity for either constructive input or an ability to influence the shape of the National Biological Survey. We have a number of specific suggestions which we request be considered by you and your staff as final decisions are made concerning the National Biological Survey. These suggestions include the following:

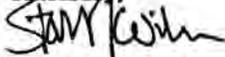
- 1) Delay irreversible decisions such as the establishment of the eco-regions and transfer of the state cooperative wildlife units until further evaluation of options can be considered. If, as we understand there is no expectation of immediately changing the mission of the state cooperative wildlife units, leaving those units alone pending further analysis should not be a problem and should not adversely affect other plans.
- 2) Leave specific Fish and Wildlife Service research units which are primarily doing applied research, technical assistance to the Fish and Wildlife Service, etc., with the Fish and Wildlife Service. This would include units such as the Southeastern Cooperative Wildlife Disease Study in Athens, Georgia, the laboratories at La Crosse in Madison, as well as Patuxent River and Lestown, West Virginia.
- 3) Leave operating inventory and monitoring programs such as the national wetlands inventory, gap analysis, and other such ongoing inventory activities with the Fish and Wildlife Service pending development of an overall framework for biological inventory, monitoring and information transfer.
- 4) Concentrate specific resources on developing a framework for protocols and standardization of biological data in cooperation with other state and federal agencies and non-governmental organizations. After a careful review of existing inventorying and monitoring, determine the most appropriate role for the Biological Survey and the inventorying and monitoring that would be most appropriate.

Honorable Bruce Babbitt
May 6, 1993
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- 5) Establish a specific council composed of state and federal agencies to realistically examine the best options for accomplishing the goals that you have outlined including both research and biological information.

As we mentioned in our meeting, the State fish and wildlife agencies are long-standing partners with the Department. Whatever evolves with the NBS issue, we want this partnership to continue.

Sincerely,



Steve N. Wilson
President

bcc: Mr. Herb Doig
Mr. Boyd Gibbons
Mr. Bob Miles
Mr. Max Peterson
Dr. Rollin Sparrowe

STATEMENT BEFORE THE NATIONAL ACADEMY OF SCIENCES (NAS)
NATIONAL RESEARCH COUNCIL COMMITTEE
ON FORMATION OF THE NATIONAL BIOLOGICAL SURVEY

By R. Max Peterson, Executive Vice President
International Association of Fish and Wildlife Agencies
April 29, 1993

Mr. Chairman and members of the Committee. I am Max Peterson the Executive Vice President of the International Association of Fish and Wildlife Agencies. I appreciate the opportunity to present a brief statement today concerning the proposed formation of a National Biological Survey.

As you may know the International Association of Fish and Wildlife Agencies was founded in 1902 and is 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 federal governments of the U.S., Canada and Mexico. All fifty state 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 habitats in the public interest.

First, let me emphasize to the Committee that the International Association has not adopted a position on the National Biological Survey either as to whether there should be a NBS or what functions it should perform. We find ourselves in that situation for two reasons. First, the Association has a long standing practice of carefully examined proposed changes in programs and organizations before taking a position to support, oppose or request changes; and secondly, very little information has been available as to the specifics of a proposed National Biological Survey. Unfortunately, most of the material that has been available consists primarily of statements about how great the idea is without any real information as to what is proposed.

As many of you know the idea of a National Biological Survey is not new. In fact, the Congress created the Bureau of Biological Survey within the Department of Agriculture in 1885 where it remained until 1939 when it was transferred to the Department of Interior along with the Bureau of Fisheries from the Department of Commerce. In 1940 the Bureau of Biological Survey and the Bureau of Fisheries were consolidated to become the U.S. Fish and Wildlife Service. Since 1940 there have been sporadic attempts to establish a Biological or Ecological Survey as a part of the U.S. Fish and Wildlife Service.

I recite that bit of history to make the point that a Bureau of Biological Survey actually existed in the United States for more than half a century. For what was considered good and sufficient reasons at the time it was consolidated with other activities to create the U.S. Fish and Wildlife Service.

As we understand the proposed National Biological Survey from the brief information that we have seen the proposal is to transfer all of the research component of the U.S. Fish and Wildlife Service plus substantial research responsibilities from the National Park Service and the Bureau of Land Management and lesser amounts of research from several other agencies within the U.S. Department of Interior to form a National Biological Survey.

Ideally the formation of such an organization would be preceded by a reasonably rigorous examination of problems that exist which require a change in organization to remedy. Following this a series of options would be developed in cooperation with other directly involved organizations, and each would be subjected to analysis including a period of public review and comment. For reasons that are unclear to us that procedure was not followed in this case and we now are faced with a proposal which is far enough developed that a specific budget amendment in substantial detail has been completed and presented to the Congress earlier this week. At the same time this Committee has been commissioned presumably to provide some useful advice on the proposed Biological Survey. It is certainly unclear as to what role, if any, the report of this Committee will play unless you merely rubber stamp the decisions that have already been made. Frankly, we have some concern which I have already expressed to the staff of the National Research Council as to whether the time available to the Committee, the composition of the Committee or the Committee charge will really allow it to play a useful role in helping determine the appropriate future role and responsibility of the proposed National Biological Survey.

Let me also express concern over the very ambitious time schedule to form the new entity and for your report. Although there may well be a need for such an organization, moving rapidly ahead at the expense of thoughtful deliberation by this Committee and appropriate involvement by affected parties and public comment is likely to cause more problems than it solves. It certainly is the antithesis of thoughtful public scrutiny of proposed public agency actions which are embodied in laws such as the Administrative Procedures Act and the National Environmental Policy Act. Although members of the Association have had an opportunity to meet with Secretary Babbitt and members of his staff and we have more information at this point than the public at large we have not been able to determine the specifics of the proposed National Biological Survey nor to make informed judgments about the proposal.

Let me know turn to some specific concerns and questions that we believe it is important for this Committee to address:

1. The underlining hypothesis for the creation of the National Biological Survey is that by separating research from management and consolidating it into a separate agency that the quality, productivity, timeliness and cost of research will be reduced and that the public will be better served. What evidence exists to either support or refute that hypothesis? Are there some actual examples of research being removed from operating agencies and placed in separate organizations that resulted in substantially improved performance of the agencies being served. If so, what are those examples? The reverse is also worthy of examination. We are

aware that in the medical field and in electronics there has been a strong tendency to bring most research back in closer contact with management and production to both improve research and shorten the application phase? How does this Committee plan to approach that question which is central both to the creation of the National Biological Survey, it's mission and how it might function.

2. In 1992 a National Academy Committee issued a report entitled "Science and the National Parks", which specifically recommended certain major actions related to research in support of National Park Service activities. That report recommends a separate research line item in the National Park Service budget, expansion of the science program and elevation and reinvigoration of the position of chief scientists to lead and guide a major science program for the National Park Service. Presumably that Committee, which included at least one member of this Committee, recognized the importance of a strong science program to an operating agency. What is likely to be the short and long term affect of removing major research functions from operating agencies.
3. In a report issues last year entitled, "A Strategic Plan for Improving the Natural Research Program of the National Park Service", page two included a very useful diagram showing the relationship between research and resource management as a part of a total Natural Resource Program. If that diagram is relative, which at least I think it is how would that diagram be used with a new National Biological Survey?
4. Currently, there are seventy-two cooperative research units, forty of which are cooperative wildlife research units operated in cooperation with host universities and state fish and wildlife agencies more than half of the support from these is provided by the state of host universities. These units not only conduct research but provide back-up technical assistance to operating programs of the Fish and Wildlife Service and the state as well as provide both extension and instructional support. At this point it is not at all clear whether the level and type of support these units provide will be continued under the National Biological Survey or whether the state and the Fish and Wildlife Service will have to create new units to perform the functions now being done by the coop units. There has been no real consultation to date on these vital questions.
5. Much of the attention of the National Biological Survey proposal has been concentrated on its research activities. There also appears to be a major effort envisioned in inventorying and monitoring as well as information transfer for biological information covering both animals and plants. As many members of this Committee know this information is currently being obtained, stored and made available mostly by state, local and non-governmental organizations. It is not at all clear how the activities envisioned by the National Biological Survey will mesh with those on-going activities. In other words, is the National

Biological Survey really envisioned as a data collection organization or is it somehow in the business of helping develop standardized data collection retrieval and storage capabilities? Also, within the Federal Government Circular A-16 issued October 19, 1990 by the Executive Office of the President, sets forth principals and procedures for coordination of surveying, mapping and related spatial activities for the Federal Government. A quick reading of the National Biological Survey description indicates that a great amount of spatially related information is envisioned to be collected, stored, retrieved and made available to other agencies and to the public. It is not at all clear as to the extent such activities will duplicate those already underway at state, local and federal levels and if not, how they will be integrated and coordinated.

6. Within the United States the primary responsibility for fish and wildlife rests with the state with only limited responsibility of the Federal Government primarily related to threatened, endangered or migratory species, trust responsibilities and some federal lands where the state federal government exercises normally limited jurisdiction. Because of this data collection for fish and wildlife is primarily a state and local activity with some non-governmental organizations providing active support. It is not at all clear how the inventorying, monitoring, and information transfer activities envisioned by the National Biological Survey will relate to those activities.
7. Removing the Research component from several operating agencies obviously will project the ability of that agency to get its job done. Those of us who are concerned about fish and wildlife in general have questions as to how the research and information previously available will be provided under the new scheme.

On Monday of this week, we received a list of key questions that this Committee will address. Obviously, in the time available since then it has not been possible to develop in-depth answers. Given that reality we have tried to address a few of the questions.

QUESTION: How can existing information about the biota of the U.S. be organized so as to be useful for a wide array of purposes, including management, scientific study, education and conservation? How can the censusing of the biota be advanced, by taxonomic groups and regionally, so that the information and its usefulness are continually improved?

ANSWER: That question illustrates, better than most, the fact that information serves a variety of users and uses which makes it practically impossible to provide an answer unless it is related to the real word or management decisions that are being considered now or likely to be considered in the future. For example, certain broad scale information may be adequate for those who are concerned about macro changes in such things as habitat types or the overall population of migratory waterfowl of a certain species. There are very different information requirements for someone who is trying to envision what happens on a particular piece of land if certain changes are made in the existing situation.

The second part of the question requires the assembly of a great deal of information as well as technical knowledge which usually is not available from one person or even one discipline. For that reason for many years we have recognized an interdisciplinary approach to decision making as an important principle. It seems to us that one of the first tasks would be simply to catalog and understand the type and scope of biological information that's already being calculated and then consider existing or future mechanisms for sharing such information and for making it readily available to those who need it. For example, it's technically feasible at the current time to collect, store and retrieve numerous layers of information that is geographically related so that information on soils, terrain, geology, vegetation, hydrology, meteorology, etc. for a particular area could be accessed by a computer for use by a state, county, federal agency or a private organization who needs such information. It's not clear from the description of the National Biological Survey whether it's intention of working on methodology to share information and to classify information so that it's more usable or whether its intention to actually go out and do specific inventorying and monitoring.

QUESTION: What national needs, in keeping with the overall mission of the Department of the Interior, will the NBS fill?

ANSWER: This is probably the most fundamental question that should be answered within the context of what is being done by other agencies, by the states, by NGO's, etc. There is a recognized need for such things as a National Wetlands Inventory which is currently bogged down by arguments over what constitutes a wetland there are also clear needs to better understand the interaction between plants, animals, human populations and natural events such as, earthquakes, tornados, fires and climatic variations. There is a vast amount of work going on regarding these subjects by universities, by NGO's, by states, by federal government, etc. At this point it is not clear to us just what the role of the NBS is in such efforts.

QUESTION: What functions (in research, analysis, information, etc.) will be necessary in the future to fulfill the identified mission of the NBS?

ANSWER: Frankly, we have not seen a description of the mission of the NBS which would be adequate to even begin to answer that question. Also, the immediately preceding question needs to be answered. One apparent function would be a better understanding of the dynamic interactions including population dynamics of plant and animal inter-relationships and how they are affected by human populations and use. This might include trying to determine whether a decline in species or a group of species can be detected early enough to take specific action to prevent their becoming threatened or endangered. The tendency to concentrate on species only after they become threatened and endangered is obviously a questionable approach both in terms of the likelihood of success and economic impact.

QUESTION: What essential new elements will the NBS need to fulfill its mission and functions?

ANSWER: It certainly does not appear to us to be feasible for the NBS to actually inventory and store the vast amount of biological information that is already available in the United States let alone add substantially to it. This means that either the NBS will act in a role of helping provide insights as to how to better identify important information, or maybe help simplify information gathering through such techniques as using indicator species or habitat types. Such simplifications obviously will be needed if concepts of ecosystem management are to be a reality.

QUESTION: How should the NBS cooperate with other programs in the Department of the Interior, other federal, state and territorial agencies, NGOs, and the private sector to fulfill the mission of the NBS and to ensure compatibility with other data gathering and dissemination activities?

ANSWER: The rather candid answer to that question is that cooperation is a two way street which has not been demonstrated thus far in the creation of the NBS. The lack of consultation so far in the process of establishing the NBS is an unfortunate legacy which can only be overcome by action not words. Our organization is one of the many that is very willing to participate constructively in the process.

Let me end this statement by acknowledging that none of us can change what has happened to date in the formation of the NBS. We can from this day forward cooperate effectively if both the time and opportunity to do so are available. We believe this Committee must look seriously at the task before it, the composition of the Committee and the time that is available and ask some hard questions as to how to proceed. We will certainly be more than willing to cooperate with you as you do so.

Southeastern Association of Fish and Wildlife Resources Agencies

R E S O L U T I O N

WHEREAS, the U. S. Department of the Interior and the state fish and wildlife agencies are primarily responsible for the management of the fish and wildlife resources of the nation; and

WHEREAS, the state fish and wildlife agencies have worked closely with Congress and the Department of the Interior to develop cooperative programs that have resulted in unparalleled fish and wildlife populations; and

WHEREAS, the Department of Interior has proposed a major reorganization which would establish a new bureau, entitled the National Biological Survey; and

WHEREAS, the establishment of the National Biological Survey would result in a significant transfer of funding and personnel from established and successful fish and wildlife programs; and

WHEREAS, the Department of the Interior proposes to establish the National Biological Survey through the amendment of its proposed 1993-94 budget; and

WHEREAS, this process will not allow for a thorough review of the necessity for, and the probable impacts of, this major reorganization on the fish and wildlife programs of the Department of the Interior and the state fish and wildlife agencies.

NOW, THEREFORE, BE IT RESOLVED, that the Southeastern Association of Fish and Wildlife Agencies opposes the use of the budget process by the Department of the Interior to establish the sweeping changes envisioned by the National Biological Survey and urges that such a major change in the nation's fish and wildlife programs only be done by specific legislation which would assure a complete review of the proposal by Congress including adequate public hearing, understanding and input.

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