

*White
File*

PARTNERING AND ENDANGERED SPECIES MANAGEMENT

**The 51st Meeting of the Chief of Engineers
Environmental Advisory Board**

**March 10-12, 1993
Portland, Oregon**

**Headquarters, U. S. Army Corps of Engineers
Washington, D. C.**



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

19 OCT 1993

Policy and Planning Division
Office of Environmental Policy

Lettie M. Wenner, Ph.D.
Chairperson
Environmental Advisory Board

Dear Dr. Wenner:

On behalf of the U. S. Army Corps of Engineers, I forward the enclosed report on the 51st Meeting of the Chief of Engineers Environmental Advisory Board to you. The 51st Meeting took place on March 10 - 12, 1993, in Portland, Oregon, and the topic was "Partnering and Endangered Species Management."

As is evident from the Minutes of the Meeting, many views on cooperation in managing the Nation's endangered species were expressed during the meeting in Portland. The Board responded to my Charge (Appendix A), the results of four working groups (Appendices C, D, F, and H), and various statements and scholarly presentations (Appendices E, G, I, and J). Your Report to the Corps (Appendix K) contains many useful insights and recommendations which we have considered in our Response (Appendix L). We, in the Corps, will strive to utilize the information that the Board and meeting participants have provided and carry on with the work which was begun at this meeting.

My thanks to you, the Board, and all the 51st Meeting participants for your continuing service to the Corps. With your help and dedication, we can stay on course in our commitment to partnering and endangered species management.

Sincerely,

A handwritten signature in cursive script that reads "Art Williams".

Arthur E. Williams
Lieutenant General, U. S. Army
Chief of Engineers

Enclosure

TABLE OF CONTENTS

SECTION	PAGE
Table of Contents	i
Minutes of the 51st Meeting, Chief of Engineers Environmental Advisory Board	1
APPENDIX A: Chief of Engineers Charge to the 51st Meeting, Environmental Advisory Board	A-1
APPENDIX B: SPECIAL REPORT: Endangered Species Management in the Wake of Hurricane Andrew	B-1
APPENDIX C: Work Group Summary: Endangered Species-- Their Linkage to Holistic Ecosystem Planning and Management	C-1
APPENDIX D: Work Group Summary: Socio-economic and Cultural Implications of Endangered Species	D-1
APPENDIX E: "The Department of the Army Response to the Endangered Species Act in the Columbia River System" by Leonard Shabman	E-1
APPENDIX F: Work Group Summary: Institutional Problems with the Endangered Species Act--Difficulties of Compliance and Implementation	F-1
APPENDIX G: Statement of H. Dale Hall, Assistant Regional Director, U.S. Fish and Wildlife Service	G-1
APPENDIX H: Work Group Summary: Potential for Partnerships When Dealing with the Endangered Species Act	H-1
APPENDIX I: Statement of John R. Donaldson, Executive Director, Columbia Basin Fish and Wildlife Authority	I-1
APPENDIX J: "The Potential for Partnerships When Dealing With Endangered Species: What Works and What Does Not", J. Michael McCloskey, Chairman, Sierra Club	J-1
APPENDIX K: Environmental Advisory Board Report to the Chief of Engineers	K-1
APPENDIX L: Chief of Engineers Response to the Report on the 51st Meeting	L-1

**MINUTES OF THE 51ST MEETING
CHIEF OF ENGINEERS ENVIRONMENTAL ADVISORY BOARD
ON
"PARTNERING AND ENDANGERED SPECIES MANAGEMENT"**

**PORTLAND, OREGON
10 - 12 MARCH 1993**

Wednesday, 10 March 1993

1. The 51st Meeting of the Environmental Advisory Board was called to order at 0805 hours in the Benson Hotel, Portland, Oregon. The following members were present:

Dr. Warren E. Viessman, Jr., Chairman
Dr. Lettie M. Wenner, Vice-Chairman
Dr. Stanley I. Auerbach
Dr. Peter E. Black
Dr. Thomas J. Green
Dr. Kenneth S. Johnson
Mr. Richard J. Myshak
Dr. James L. Regens
Dr. Donald C. Rhoads

2. MG Ernest Harrell, Commander, North Pacific Division, welcomed the Board to the Pacific Northwest.

3. COL Charles Hines, Commander, Portland District, welcomed the Board to Portland, noting that the issues raised by the Endangered Species Act are of particular importance in this part of the country. Since the 1930's the Corps has spent more than \$1 billion on facilities for anadromous fish, he said. He suggested that work with endangered species be based on "data, not dogma."

4. LTG Arthur Williams, Chief of Engineers, gave his charge to the Board. (Appendix A).

5. Dr. Warren Viessman, EAB Chairman, responded to the Chief's charge. He recognized the work the Portland District staff had done with the EAB in planning for the meeting and introduced the Board's members. He pointed out that what he considers the key words in the Chief's charge, "partnering" and "holism," are almost one and the same. Most environmental problems today have global dimensions that defy political and agency boundaries. He said it is difficult to look at all dimensions of environmental problems at once, but looking at a single dimension often leads to costly and bad solutions. He said the Corps of Engineers has expertise in analysis, and challenged the Corps to use that expertise to address the totality of ecosystems.

He commended the Corps as a progressive agency, willing to tackle difficult topics as indicated by the themes of Environmental Advisory Board meetings.

He noted that this meeting would focus on results of four working groups held the previous day to address questions raised in the Chief's charge - a process that allows field personnel attending EAB meetings more input into the Board's deliberation.

6. Dr. William Klesch, Chief, USACE Office of Environmental Policy, gave administrative announcements and reported on items of old business.

a. He noted that the Army Environmental Strategy was signed on 21 November 1992. This strategy, he believes, ushers in a new era in environmental stewardship. When it was being drafted, the Undersecretary of the Army asked, "where is the Civil Works Program?" so now it is included. The Army's developing action plans to implement the strategy. Originally, he said, the strategy focused on installations, but now it applies to Civil Works projects as well. He recognized that the EAB has asked to be engaged in developing policy to implement the strategy.

b. He reported that a USACE Environmental Conference has been approved, the first since 1985. It will deal with the Army Environmental Strategy and issues raised by the new Administration.

c. He noted that the Acting Assistant Secretary of the Army (Civil Works) has expressed interests in how the Corps evaluates and puts vigor into the environmental planning process, and will try to use the Board in developing techniques.

7. Mr. Hanley Smith, Jacksonville District, gave a report on environmental protection activities in the aftermath of Hurricane Andrew. (Appendix B)

8. Mr. William Hubbard, New England Division, introduced a panel discussion on "Endangered Species and their Linkage to Holistic Ecosystem Planning and Management."

a. Dr. Donald Bevan, Professor Emeritus of Fisheries at the University of Washington; said that his 50 years of experience managing anadromous fish in Alaska and the Pacific Northwest leads him to conclude that the "Endangered species linkage to holistic ecosystem planning and management" is, in fact, not much. Single agencies, regardless of competency, cannot manage ecosystems, he said, but noted that the Corps has valuable experience in river basin planning that comes close to ecosystem management.

Support for ecosystem planning, he suggested, can be measured by looking at appropriations requests. The Corps asks for funds on a project by project basis, with not much for eco-management.

He recalled his experience in fish management in the Bering Sea, looking at interspecies management with some success. The North Pacific Council, he said, got groundfish to a healthy state by listening to their scientists and never

exceeding the "acceptable biological catch". In the Northeast this was not so, and the results have been disastrous. He explained that the "acceptable biological catch" is calculated species-by-species, and totals 2.8 million metric tons, a major portion of the total U. S. catch. The actual "cap" on catch allowed is only 2 million metric tons. Partially, he said, the lower "cap" was driven by politics - many foreigners were fishing. So the Bering Sea is slightly underfished, because he could not get a majority of the North Pacific Council to take the "cap" off.

He asked what happens when the Magnuson Act comes up against NEPA, the Marine Mammal Protection Act, or the Endangered Species Act. So far, he said, it is not clear. The Marine Mammal Protection Act, he said, addresses interaction between marine mammals and salmon fishermen. It should also address interactions between mammals and salmon.

He likened the connection between endangered species and holism to holistic medicine. Holistic medicine, he said, offers a nice overall guide to health, but a patient with clogged arteries would not want to look at biofeedback, relaxation, etc., but would be better off looking for a surgeon. Likewise with endangered species, he said, the government must look directly at salmon. Maybe they can then back into holistic planning, maybe not.

He offered his view that problems of salmon harvest were the result of planning that concentrated on strong stocks and wrote off weak ones, especially those above Grand Coulee and Hells Canyon Dams. Thus some species like the Lower Columbia coho were doomed as a result of no ecosystem planning.

He said he remains optimistic on the possibility of saving endangered species, and advised, "when in doubt, use data and analysis. Good analysis is usually also good politics."

b. Mr. Russ Peterson, supervisor of the Oregon Office, U.S. Fish and Wildlife Service, agreed that there is not much linkage, but said increased emphasis on holistic management can help prevent further loss of species. It may be too late, but maybe not.

Endangered species in Oregon include the bald eagle, the peregrine falcon, some owls and butterflies. Now there are newly listed species and petitions to list others. The Department of the Interior has agreed in court to consider 400 more species, and Oregon ranks third in the number to consider.

Anadromous fish, he pointed out, are the endangered species with the greatest problems in the region. They are the responsibility of the National Marine Fisheries Service (NMFS).

Mr. Peterson reviewed the purpose of the Endangered Species Act (ESA) to provide a means by which the ecosystems upon which threatened and endangered species depend can be preserved.

Under the Act, all Federal agencies are directed to preserve ecosystems, and to consult with state and local agencies on water resources issues. The latter provision has a major effect on the Corps and the Bureau of Reclamation.

In the most recent amendments to the Act, he said, the emphasis on ecosystems was reinforced. The Act directs Federal agencies to carry out conservation programs for endangered species, and requires "Section Seven" consultations to ensure agency actions are not likely to jeopardize endangered species or ecosystems they depend on.

He pointed out that other acts give guidance on endangered species. The Fish and Wildlife Coordination Act requires that natural resource consideration be given equal consideration with other purposes in water resource programs. This law lets FWS assist agencies in developing and studying fish and wildlife resources.

The Pacific Northwest Power Act, he said, also calls for a holistic approach to fish and wildlife aspects at projects, calling for equitable treatment with other purposes. There is also the Water Resources Development of 1986. Section 906(e) of this law authorizes the Corps to enhance fish and wildlife habitat at its projects, while Section 1135 authorizes project modifications. The Water Resources Development Act of 1990 goes further to incorporate environmental protection as a Corps mission and establish a goal of "no overall net loss of the Nation's remaining wetlands."

The Fish and Wildlife Service, he said, has taken initiatives to look at ecosystems and form partnerships with other agencies. One such initiative is underway in the Klamath Basin wetlands in Southwest Oregon and Northern California. Not much natural habitat remains there due to intensive agricultural development, and runoff from farms flows into wetlands. The cooperating agencies will try to manage species there on an ecosystem basis. It will be a joint FWS, Bureau of Reclamation, NMFS, Corps, and State effort.

The FWS, he said, is discussing similar actions with the Corps in the Willamette Basin, a much more complex system where the Corps has lots of projects. This area is one of the most intensively developed agricultural regions in the world, and even much of the old river channel is now gone. Now, FWS is trying to bring some of the old valley back.

Mr. Peterson cited Corps work with others on the West Eugene Wetlands project. Partners in this effort include the Bureau of Land Management, the Nature Conservancy, the Oregon Department of Transportation, Lane County, the City of Eugene, the Soil Conservation Service, FWS, and the Corps.

He concluded that mechanisms used today in managing endangered species are necessary but not enough to ensure survival.

c. Mr. William Hubbard reported on actions to save endangered species

in New England. He also suggested that the next EAB meeting include a session in which members of his panel could provide feedback in light of the Board's recommendations.

He said the Corps supports ecosystem management and want to get ahead of "brush fires." The Endangered Species Act, he said, is a useful tool to that end. He stressed the importance of regional consultations for dealing with several species, and said the Corps should fund updates of existing master plans for environmental values.

A major question Corps environmentalists face, he said, is that of "who's in charge?" Environmentalists work in all parts of a District office. It may be time to consolidate them into one stovepipe, he suggested. He said another question Corps environmentalists ask is whether the primary role of the Corps environmental offices are ecology, or hazardous, toxic and radiological wastes (HTRW).

He suggested that some ecosystem management agencies should be created, but warned that the Corps may have to give up autonomy in the process.

d. Questions from Board Members:

Dr. Black asked Dr. Bevan for his views on data for salmon runs. Highs and lows, he said, are in part attributable to operations. Are the highs abnormally high, letting lows seem lower?

Dr. Bevan said most data on factors affecting salmon are not very good. Most of the data come from research for other purposes and not from survival studies for salmon. He said he was not suggesting lots of research, but said that not much time is left to save some species. Certain Chinooks could be extinct in 10 years, he warned. Studies need to focus on passage through dams, he said, but allowed that if someone gave him \$10 million to study the problem, he wouldn't know what he would recommend or how he would spend the money.

Dr. Auerbach referred to Dr. Bevan's comments on watching where money goes as an indication of what society wants; but warned that one can't do that retroactively. As society learns more, it becomes more willing to commit resources.

The Ecological Society of America, he said, listed threatened areas of the United States as early as 1919, but ecosystem thinking was not widely recognized even 20 years ago. Now Congress, the people and the science community are all working in concert on ecosystems, he said. EPA's original purpose, he said, was to do ecosystem research, but in the past 20 years the agency, staffed largely by lawyers, chose to put most of its energies into enforcement. Now however, the EPA's working more on research with other agencies.

Dr. Bevan agreed, but asked whether an ecosystem approach will be able to recover endangered species? Such an approach may drive a necessary education process, he allowed, but more specific solutions are needed to deal with problems of specific species right now.

Mr. Hubbard commented, however, that if government doesn't incorporate holistic habitat planning, more species will be endangered.

Mr. Myshak noted the need to work together presented in Mr. Peterson's statement, but said there would still be questions of "who is in charge," resource constraints, etc. He recommended the Council on Environmental Quality's January 1993 report "Incorporating Biodiversity," as a good assessment of what needs to be done.

Mr. Hubbard agreed that biodiversity needs to be addressed in partnership with EPA, FWS, DOT, etc., but consensus is not always easy. Conflicting use of resources exists, and sometimes managing to help one species hurts another.

Mr. Myshak suggested that, in such cases, agencies should focus on habitat, not power.

Dr. Green asked what historical data were used in the New England salt marsh work Mr. Hubbard reported.

Mr. Hubbard replied that New England Division has collected data since turn of century on diversity, much of it from studies done by the University of Rhode Island.

Mr. Peterson stated that restoring habitats to their historic conditions is very hard. Agencies should focus instead on ensuring that remaining species remain viable.

Dr. Green said that data exist for areas like Yellowstone. He pointed out that elk herds are a recent phenomenon there.

Dr. Regens said the panel had raised two separate issues: what institutional structure exists for endangered species, and how to avoid future endangered species. He asked if the panel had any suggestions for the second issue.

Dr. Bevan said he believed the foremost thing to do would be to evaluate and monitor tools of recovery, especially for salmon that are too close to the brink of extinction to do much study. If successful, those tools may be used for other species.

Mr. Hubbard noted a need to cooperate with State endangered species programs, since the Corps often has no dollars for this work.

Dr. Wenner thanked Mr. Peterson for his law citation and court case analysis. She asked why FWS hasn't been able to identify 400 species and study them - what are the constraints on this action?

Mr. Peterson said the 400 species were identified based on FWS studies. Funds were a problem. Endangered species work gets less in annual funds than the salary of the president of a soft drink company. Given limited budgets, FWS must cooperate with others. Also, he said, it may not be wise to list every candidate species. In the Willamette Valley, for example, it may be better to do an ecosystem recovery plan considering species already listed, then see if measures to protect them will also help new species.

e. Public Comment

Ms. Karen Northup, Seattle District, recalled a series of interagency meetings she had attended for watershed and ecosystem planning. At one, each agency was asked how to define "ecosystem planning". Each agency had a different definition. The next question, "how do you do holistic planning?" was even harder, she recalled. All agreed to start with an inventory, but were unsure where to go from there. Others cited the Corps experience in river basin planning, and suggested the Corps take the lead on holistic planning, but questions then arose on whether the Corps must tie this planning to its traditional navigation and flood control missions. Looking at WRDA 90, she suggested, the Corps may not have to.

The conference, she recalled, eventually decided to look at "how to do ecosystem planning" in a small watershed. They put together an action plan, listing what each player was to do. She said she is optimistic that this approach will work and will serve as a model for others.

9. Dr. Jerry Delli Priscoli, Institute for Water Resources, introduced a panel discussion on "Socio-Economic and Cultural Implications of Endangered Species and How to Value These Resources within Water Resources Development." (Appendix D)

a. Mr. Ted Strong, Columbia Intertribal Fish Commission, noted the unique perspective of Native American tribes in species management. He criticized Corps management of the Columbia River, citing historic conflicts between the Corps and tribes. The tribes, he said, did ecological management even before U.S. settlers arrived in the west. As a result, settlers found plenty of resources. Today this is not so anymore. The U.S can't go back and change time, he said, but it can look at what was negotiated in treaties and remember what was promised to the Indians.

The Corps, he said, promised Indians at the time Bonneville Dam was built in the 1930's that salmon would increase in numbers in spite of the dam; that fish ladders would make it easier for fish to pass. That did not happen, and

mitigation programs did not address Indian needs. He said that there is a misconception about whether the U.S. bought Indian treaty rights when it built the dams. In fact, he said, it only bought easements. Indians have had to turn to courts to resolve the issue. Treaties guarantee tribes sovereign rights over land that had been their traditional fishing areas, and the Corps promised "in lieu" sites when these traditional were sites flooded, but until 1988 they had not made good on their promise.

Lands in the Columbia Basin, he explained, mean as much to Indians as the Nile Valley does to Egyptians. Legend has them as holy fishing sites. Congress, he said, passed a law in 1988 to restore sites, or "in lieu" sites, to Indians. This, however, caused problems among non-Indians resenting such "special treatment."

Today, he said, the Corps and the tribes have a shaky partnership at best. Dams, it was put to the Chiefs who made the original agreements that allowed them to be built, were a matter of national importance. There were also promises that fish would increase. The tribes didn't want the hatcheries that were built as mitigation measures, he said, but are trying to find ways to make them work. He said it was a major problem, however, that the hatcheries mixed fish stocks from several rivers.

He concluded that the U.S. manages a trust resource for Indians that today is bankrupt, and calculated the value of this resource at \$6.5 billion. "Consensus building" on measures to be taken now to protect salmon runs, he said, is a misnomer. Current BPA efforts at building consensus have resulted in 7 lawsuits.

b. Dr. Charles Paulson, Resources for the Future, suggested that alternatives are needed to "evaluation" of endangered species.

Problems of endangered species, he said, can be large scale, complex and expensive, involving lots of interest groups. Objective science, he commented, has only so much to offer in making decisions to protect a given species. Uncertainty is a major component in endangered species decisions.

He said that many people hope economics will be able to say, "this is what a spotted owl is worth to society." This can be done for a few species such as salmon, based on recreational and commercial fishing values. In other cases, he said, people may support saving a species for possible future medical use, or as a genetic resource for agriculture; or its value can be based on asking people "what's it worth to have this species around?" In most cases, however, people will never have heard of the species, and will be unable to respond intelligently.

The Endangered Species Act (ESA), he stated, calls for "cost obliviousness," directing agencies to assume each species to be worth an infinite amount. But resources to save them are limited.

One alternative form of economic analysis, he said, looks at cost effectiveness, plotting dollars against the probability of survival for various options. Some methods that may cost the same allow difficult probabilities for survival, and in such cases one could choose the plan that offers the highest probability of success. Or two plans that offer the same probability of survival may have different costs. In such cases, one could choose the less costly option.

Dr. Paulson suggested improvements for the ESA, to include better biological data, and standards for cost calculations for protection measures similar to the benefit/cost (B/C) calculation handbooks for water resource projects. He said there is a need to track costs for protection to the private sector; and to consider who bears cost of recovery plans, to include indirect costs and mitigation costs. He suggested there should also be methods to include institutional and political factors in ESA decisions.

In sum, he said, economics is of limited use in valuing endangered species.

c. Dr. Leonard Shabman, Virginia Polytechnic Institute, recalled that the Corps used B/C ratios based on national economic development for decades. (Appendix E) When studying salmon runs, it tried to do the same, but got little support.

He stated that the goal of economic valuation is to give a dollar measure of people's preferences--what share of income are people willing to give up? In most cases, such prices are based on individual decisions, freely made, in the marketplace. When a marketplace doesn't exist for decisions, he pointed out, economists try to create simulations. Often such economic estimates are based on a weak technical basis; and "willingness to pay" data do not reflect actual behavior.

Since the 1970's, he stated, other agencies have played a part in what once were solely Corps decisions. The result has been that values are established in group processes and negotiations.

In the past, he pointed out, the Corps has at times bent its analysis to fit a predetermined conclusion; but now it treats its analysis as a tool from which others can draw conclusions. Impartial analysis is a challenge for the Corps, he said, but one in which the Corps is succeeding.

Dr. Shabman discussed group process as a tool for decision on endangered species by pointing out that there are three kinds of conflict: Values (what are the fundamental goals and assumptions of society), Interests (who pays the cost to achieve these) and Factual. Conflicts on Columbia-Snake system, he said, are often based on values or interests, while the Corps is most used to dealing with facts.

Analysis of economic impacts of actions to save endangered species he said, can include "foregone benefits" such as loss of hydropower or a shorter navigation season. Other parties, however, make adjustments for these, such as fishing for other species, shipping goods at other times, etc., so assuming a total loss of benefits leads to a faulty "worst case" scenario.

Dr. Shabman warned that some interest groups reject analysis as unnecessary, or subversive to their goals; and no analytic capacity exists to consider all issues related to endangered species in a given area.

He suggested the Corps take a management approach to gather information as well as to save fish. He said the Corps should make a closer link between its R&D element and project planning.

Negotiation can be a useful tool for reaching decisions, he said, but there is a risk that if negotiators can develop solutions that shift costs to someone not at the table, they will.

d. Dr. Delli Priscoli said the Corps is struggling with new demands for water, dealing with them using its old framework.

He suggested looking at alternative dispute resolution (ADR), interest-based negotiations, and other processes that the Corps has pioneered. The Corps, he said, can be facilitator/convenor of parties in dispute. The Corps can also offer, to "operate the dam any way you want us to if you can agree on it." At Truman Dam, Missouri, he said it followed this approach. He said the Corps can specialize its ADR and public involvement process training for environmental issues.

Dr. Delli Priscoli suggested an article from Harvard Business Review on "Public Partnerships" as offering worthwhile insights.

e. Questions from Board members:

Dr. Black addressed the question of governmental subsidies, saying they are not bad in themselves, but can get abused, or continue without regard to the reason for them.

Dr. Shabman responded that subsidies create behavior. If they are the result of agreement, fine; but not if the agreement is a sweet deal for the negotiators that shifts the costs to someone else.

Dr. Wenner noted Mr. Strong's statement that the Tribes didn't want hatcheries, but are trying to make them work, and asked how they are doing so.

Mr. Strong replied that Indians have often had to adapt to new environments. Now, so have salmon, to "technological pollution." Hatcheries, he said, are tools that can help restore natural runs, if young salmon are introduced to the wild, allowing the strongest to survive. Eventually, he said large hatcheries will become unnecessary if this process is followed.

Dr. Viessman asked how the Corps can do better at evaluating opportunity costs.

Dr. Shabman pointed out that, by assuming no adjustments will take place in response to a given action, one gets a worst case scenario. The Corps needs to consider the response of others to its actions. It is already doing that to some extent.

Dr. Viessman asked how appropriate the Principles and Guidelines still are to Corps planning.

Dr. Shabman replied that, as a decision framework, they are excellent, but for doing calculations, not good. The Principles also need to consider adjustments people will make in response to Corps actions. He also offered that too much effort is going into asking, "how much are endangered species worth?"

Dr. Regens asked whether "willingness to pay" and contingent values measurement were appropriate tools to use in making decisions on protection measures.

Dr. Paulson responded that they are not appropriate for endangered species. "Willingness to pay" and contingent values assume public knowledge that usually isn't there. He said there is also a moral issue in regard to making an irreversible issue decision in such cases.

Dr. Regens asked whether there are any other valuation techniques worth exploring.

Dr. Paulson suggested conflict resolution techniques.

Dr. Green pointed out that species restoration efforts sometimes have effects on other tribal sites, and asked how the tribes decide which are more important, the species or the other sites.

Mr. Strong responded that Indians never viewed humans as supreme on earth, but now are being asked to participate in a system that does. He said Indians hope to restore the natural order to the modern environment as much as possible, but pointed out that the U.S. has stooped to the point where it puts a value on lives, including human ones.

Mr. Myshak referred back to Dr. Delli Priscoli's recommendation that the Corps adopt a "facilitator" role in species management. He said that was tried

in the "Salmon Summit," but no consensus was reached.

Dr. Delli Priscoli pointed out that, at the Salmon Summit, the Corps was not a facilitator, but an operating agency. His recommendation, he said, was for the Corps to be a convener of negotiations by others, then agree to abide by whatever decision is reached. It was not for the Corps to be a facilitator, per se.

Dr. Shabman suggested that if the Corps is going to get into a fray, it should do so in a way that will produce agreements.

Dr. Delli Priscoli added that there are a number of good modeling software packages available that allow users to build algorithms as well as use them. He suggested use of these to reduce some of the distrust others have for the Corps and its analytical procedures.

Dr. Viessman asked what role IWR could play in adjusting Corps analytical capabilities for endangered species.

Dr. Shabman suggested there was no expertise there that could not also be found in Corps districts; but he said IWR could train field personnel in conflict resolution techniques.

Dr. Delli Priscoli said IWR is already doing that, but not pinpointing the issues addressed at this EAB meeting. He recalled Corps partnering efforts with the Associated General Contractors.

Dr. Black recalled Mr. Strong's statement that the U.S. purchased easements, not treaty rights, when it acquired Indian sites for its dams; and asked him to amplify his remarks.

Mr. Strong said surveys in the 1930's showed the land that was to be inundated. These lands were indeed inundated, but the right to fish there still belongs to the tribes.

Dr. Wenner asked if it would be useful to have people from other districts attend EAB meetings and participate in workshops.

Dr. Shabman said it would, if funds were available. Today, he said, the Corps often makes policy in Washington, but word of it doesn't filter to the people in the field who have to carry out that policy.

f. Public Comments

Mr. Doug Latka, Missouri River Division, noted that his division is revising its master manual for the six lakes on the Missouri River mainstem; following many of the recommendations for conflict resolution, etc., brought out by panelists at this EAB meeting.

Ms. Northup noted that economists and biologists both deal with uncertainty, and can learn from each other. She also recommended facilitation training; the Corps offers a three week course.

10. Mr. Dennis Barnett, South Atlantic Division, introduced a panel on "Institutional Problems with the Endangered Species Act." (Appendix F)

a. Mr. Roy Fox, Bonneville Power Administration, pointed out that ESA offers opportunities. Under it, government decision making is evolving from an agency by agency, species by species approach. The spotted owl and salmon controversies, he said, point out the need for an integrated, ecosystem approach. Such an approach is not precluded by the Act, but is not much practiced. Agencies, he said, need to take a greater look at combined efforts and interagency coordination. BPA and the Corps have a well-established relationship, but both need the same with others.

He said agencies shouldn't focus on the limits of their authority, but should look at what needs doing, then decide who can do it under their existing authorities.

Models can be useful in answering what is happening to fish, he said. The Corps built the FISHPASS model a few years ago. Now it needs to develop trust in the models, and in itself, among other agencies.

Another problem, he said, is that there is not a wealth of data really needed to evaluate conditions for fish.

Limits on resources, he suggested, can force agencies to get together and make decisions that are defensible under ESA.

b. Ms. Carol Whiteside, Assistant Secretary for Inter-governmental Relations, California Department of Natural Resources, noted that California has more endangered species (130 listed) than any other state. At least half the candidates for new listing can be found there. Problems for endangered species are driven by population growth: 600,000 new Californians every year. But saving endangered species is economically intrusive and not always successful, she said, adding that sometimes efforts to save one species move development to other areas and damage other species. For example: keeping channels in California's delta for salmon changes the salinity of salt marshes nearby, threatening species that live there.

Ms. Whiteside described the process that led to California's Natural Communities Conservation Plan (NCCP). In developing guidelines, she explained, the State consulted local governments and property owners, and developed partnering with the USFWS. A Memorandum of Agreement between the State and the FWS pledges cooperation, and promises to use shared data all can agree on.

Ecosystem planning is more possible today, she said, since there is a trend in society away from specialization. Also, there is greater understanding today that litigation is not usually the best way to solve problems, she said. GIS use is also helpful, and the ESA itself allows agencies to identify problems and look for solutions.

Problems with the ESA process, she said, include lack of scientific wisdom (as opposed to mere information) and environmentalists unwilling to trust voluntary efforts, preferring to rely on enforcement action by government to achieve the same ends.

Another problem common in the bureaucracy, she said, is an attitude that "this Administration will go away soon enough, so why worry about it."

In promoting NCCP, she said, the State got property owners to enroll and make commitments to support the plan. To do so, the State had to create benefits. Developers wanted certainty regarding their ability to build. Local governments wanted equity with other towns in carrying the burden of environmental regulations. Environmentalists wanted biodiversity.

To move the process, she said the State needed "whips and spurs", which she provided. When people said "this won't work," she recalled, she said "we'll make it work," and had a commitment from the Governor that he would support her in that effort.

Today, she said, the press considers the California program a model for the rest of the country, and it has the support of the new Secretary of the Interior.

Ms. Whiteside concluded by saying she hopes the Corps can use some of California's experience.

c. Mr. Dale Hall, U.S. Fish and Wildlife Service, stressed the need for "the bureaucracy" not to get in the way of innovative solutions such as those in California. (Appendix G)

d. Mr. Gary Smith, National Marine Fisheries Service, discussed that agency's responsibilities for implementing the Endangered Species Act. He recalled that the proposed listing of Snake River salmon on the endangered species list came in 1990, and was completed in April 1992, at the time of the Salmon Summit. That meeting, he said, demonstrated the need for open processes, and for agencies to take measures to avoid future listings of species as endangered.

After the listing came for Snake River salmon, he said, NMFS set up a Recovery Team, seven experts asked to complete a plan in record time. This plan, he said, will be available later this year, and will look at the "4 H's" (habitat, hatcheries, hydropower, and harvest) as factors impacting salmon.

When the Recovery Plan is adopted by the agency, he said, he hopes to have underpinnings in place for a modeling system that can move salmon from jeopardy to recovery.

Work in the Columbia Basin, he pointed out, requires treaty consultation with Canada, and with Indian tribes. NMFS wants to protect salmon from California to Alaska, he said.

For all the years that studies have been going on, he said, little reliable data has been found on fish, water flows, etc. that could help identify man-caused mortality (as opposed to natural).

Mr. Smith also noted that bold decisions lead to lawsuits when some parties think government requires too much of them, or not enough from others. Economic considerations, he said, must be put in balance to allow for species recovery. It is not just a matter of telling ranchers, "get the cows out of the creek."

e. Mr. Barnett summarized the findings of his working group, noting its geographical diversity.

f. Questions from Board members:

Dr. Auerbach noted comments made by panelists on the EAB being an ongoing oversight organization, and asked how panelists would react to the creation of a single overarching environmental organization to carry out the mandates of Congress.

Mr. Barnett said he was not sure a "mega-agency" would be needed or desirable, but said that Federal agencies must work in partnership, taking advantage of the different strengths of each.

Mr. Myshak noted his familiarity with the items talked about at this Board meeting, and recalled a situation a decade ago, when other agencies and tribes refused to seat the Corps at their table to discuss fisheries. If the Corps had been there, he suggested, the situation may have been better. He said he hoped the agencies involved learned from the disaster that resulted.

Dr. Green asked if Corps biologists get together to exchange information.

Dr. Klesch said there have been no such meetings since 1986 or so, but he is pleased that now they'll be able to hold one.

Mr. Barnett said some meetings only have presentations. He prefers meetings to have a format like this one, where everyone who comes can take part in work group discussions.

Dr. Green asked Ms. Whiteside if tax incentives were part of the California plan she discussed.

Ms. Whiteside said they were not; the tax situation in California is too complex to explain. But she said that certainty is enough incentive for developers to agree to support the plan.

Dr. Regens asked what barriers exist to interagency cooperation on the Endangered Species Act.

Mr. Hall said the barriers are mostly political - politicians and interest groups wanting to keep issues stirred up. Also, he said, agencies fearing cooperation will interfere with their missions create barriers. Corps philosophy still doesn't really embrace environmental work, vis-a-vis navigation and flood control, he said. Section 404, he said, created a schizophrenic view within the Corps. The Corps has a role as developer and regulators that still creates a lot of internal tension within the agency.

Dr. Wenner noted that all speakers agreed on the need for a holistic approach, preventing species from becoming endangered. Enforcement actions and lawsuits, however, must be based on single species due to the way the Endangered Species Act is written. She asked what changes in the law the panel could recommend.

Mr. Hall said the law allows citizens to petition to list species. If a petition suggests the need for further review, the FWS must follow up in 12 months. He suggested this time frame be extended to allow FWS and others to agree to pre-listing actions to avoid a listing when possible.

Mr. Smith pointed out that the Corps has its own biological staff. When they see a species in decline, they can take action to save it before a listing is required. Most listed species have populations so low one has to ask, "why weren't they listed before?"

Ms. Whiteside said California is getting more experience with special rules, allowing parties to develop solutions.

Mr. Smith said agencies shouldn't waste time fighting the ESA, but should look at ways to make the law work for them.

Mr. Fox said there is no need to change the Act, but to forge partnerships to address issues in advance.

Dr. Black recognized that the California plan needed leadership and vision. He asked whether the Corps should always take the lead. Can someone else provide leadership?

Ms. Whiteside replied that public servants all have the obligation to do what

the public needs. The Corps can initiate, or cooperate; the obligation to lead falls to whoever sees a problem first. Often the Corps is in that position, and should ask, "if not me, who, if not now, when?"

Dr. Johnson noted the good BPA-Corps relationship and asked about building similar relationships with others.

Mr. Fox replied that the Corps and BPA are "joined at the hips" in running the Columbia-Snake system. The two agencies haven't had as close a relationship with others but BPA now sees itself as a multipurpose agency, and this view should help build relationships with others involved in BPA's purposes. He said there has been a major failure in interagency cooperation on research, but BPA has flexibility to fund research some other agencies don't have.

Dr. Rhoads noted the convergence of recommendations among the work groups. All, he said, talked about interagency relationships. How about agency-citizen partnerships - the use of grassroots volunteers?

Ms. Whiteside said California didn't seek citizen participation, but citizens checked up on the work her agency was doing. She established a toll-free number and asked people who saw habitat-degrading actions to call. However, she warned, some environmental groups just want to stop projects, so she also established an oversight unit to evaluate the reports that came in on the 800 number.

Dr. Viessman recalled that partnering had been discussed at the last EAB meeting (St. Louis, November 1991) and asked if there has been action since then to establish partnering procedures.

Mr. Barnett said there have been ad-hoc efforts all over the country, but no attempts to institutionalize them Corps-wide. Relationships still need to be established between agencies, he said. When that is done, the process will run much more smoothly.

Dr. Viessman said it was clear during the Board's visit to Bonneville that a protocol exists for cooperation between the Corps and other agencies there. He asked if such protocols exist elsewhere.

Mr. Barnett said they do only on an ad-hoc basis. The protocol at Bonneville came about only as a result of great pressure on the agency.

Dr. Viessman asked what needs to be done at Corps Headquarters to encourage partnering.

Mr. Barnett said that what guidance exists deals mainly with the planning of new projects. Partnering proponents should also look at how they operate existing ones to see if there are opportunities for partnering there.

Mr. Smith said encouragement of partnerships was more a matter of developing an attitude than implementing a policy.

Dr. Viessman warned of the dangers of "overinstitutionalizing". He said the overall partnering philosophy should be pervasive, but specific solutions to problems can be tailored.

Ms. Whiteside said people in the Corps need to be empowered to solve problems at the lowest possible level.

g. Public Comment

Dr. Bevan suggested that the process of studying endangered species involves studying survival rates, and asked about the Corps role in this. He noted that fewer than half of the young fish reaching the first dam they come to on the Columbia or Snake River survive to pass through the last. He asked why agencies can't partner to address the issue.

Ms. Beverley Getzen, South Pacific Division, noted the difficulty of finding partners when it involves putting cash on the table. The law requires that partners put up a 25% share of construction for environmental projects, and often requires them to assure operation and maintenance responsibilities.

She pointed out that the Corps currently has a policy, in writing, not to implement Section 906(e) of WRDA 86. The Corps needs a written policy saying "we will implement this section when the time is right."

Mr. Owen Mason, North Pacific Division, said agencies should recognize that the ecosystem we have now is not what we had in 1900 on the Columbia; and should look at how animals adapt to this new ecosystem.

Mr. Hall responded that, for FWS to list a species, there must be predicted continuing decline. If there is a sudden drop, then stabilization, when a habitat changes, then the species has adapted; but with salmon that is not the case.

Mr. Mathew Laws, Walla Walla District, stated that interagency teamwork and cooperation with the public are both alive and well. He said there is no need to debate policy here. What is needed is to put together "dream teams" for issues - the best talent available from all agencies.

Dr. Viessman said the Board recognizes it won't solve all endangered species problems in one meeting, but when it sees voids in policy, it can make recommendations.

11. The meeting was recessed at 1740 hours.

Thursday 11 March 1993

1. The meeting was reconvened at 0800 hours.
2. Mr. Jim Boone, Jacksonville District, presented a panel discussion on "Potential for Partnerships when Dealing with Endangered Species: What Works and What Doesn't." The report of his work group is Appendix H.

- a. Dr. John Donaldson, Columbia Basin Fish & Wildlife Authority, described his agency's involvement in partnering (Appendix I). Changes on the Columbia have meant more dams and fewer fish. Data on fish are used as weapons by parties with rigid agendas. Most of the time of parties to discussion on the future of the Basin's resources is spent on developing new measuring tools to be used by adversarial consultants. One group estimated that \$50 million in hydropower revenues are lost every year in the effort to save salmon. Native Americans, on the other hand, cite cultural losses. He asked how the parties can we get from this to a holistic situation, and quoted Einstein, who said one can't solve a problem with the same consciousness that created it.

He cited human history as one of partnerships, with no armies of war until certain invaders installed the hierarchal system still used in Western civilization, with its goal of conquering nature. As a result, he said, people have lost partnering skills and need to re-learn trust and acceptance. He asked whether salmon can survive long enough for humans to learn partnering, and whether society in fact wants salmon to prosper. Failing to reach an agreement can only lead to the courts, he warned.

- b. Mr. Dale Hall, U.S. Fish & Wildlife Service, complimented the Corps for its efforts under ESA. Endangered Species Act responses, he said, are similar to alcoholism--agencies respond first with denial, then try to blame someone else, but finally accept that action is needed and take it. Many agencies, including the Corps, have progressed to third stage, he said. He cited the work of the Forest Service with red cockaded woodpeckers and grizzly bears as an example of how agencies can take a pro-active position on species protection. He commended the Corps' work on the Kissimee River in Florida and the Upper Mississippi River System Environmental Management Program as models of partnerships to solve environmental problems without adversely affecting project purposes. In Arkansas, he said, the Corps has undertaken water temperature control measures that help the trout population.

He suggested that the Section 7 consultation process required by ESA can be an amiable way to reach solutions to endangered species problems, not a hard-core permit process, although FWS does render legally enforceable decisions. He also suggested that the Corps can be of great help in saving endangered species through the Section 404 program. About half the Nation's endangered

species depend on wetlands.

What doesn't work in partnering, he said, is the way FWS used to run ESA, with no public participation. He reminded the audience that regulations and laws belong to the public, and the public should be involved in decisions that affect them. FWS now recognizes the need for public outreach, he said.

FWS encourages local groups to define ecosystem areas they can work with. Then they look at who is involved in the area's problems, and bring them all to the table. FWS asks interests such as farmers, "how can we take care of you and keep you in business while taking care of the ecosystem?" This approach gets over barriers where people see the FWS as a bureaucracy. It is important to have parties see each other as people, rather than as impersonal entities to fight through the press.

c. Mr. S. Tamaribuchi, representing the Irvine Company, a land developer in Orange County, California, discussed the company's experience in partnering under the California plan described the previous day. He pointed out that the Irvine Company agreed with City of Irvine to donate 9,000 acres for habitat in conjunction with future development, and worked with the Nature Conservancy on mitigation.

Partnering in his view involves "circles" of landowners, local governments, resource agencies and environmental groups. The listing process under ESA forced these "circles" to work together; although landowners oppose further listings.

Local governments the Irvine Company deals with include Orange County and 10 cities, each with authority over land use. There are also a transportation authority and two water authorities the company deals with. The county has cooperated with his company by surveying and mapping species on open lands.

At first, he commented, he and other landowners considered resource agencies as "the bureaucracy," and had problems dealing with the FWS on three levels: local, regional and Washington. He appreciated FWS solving that problem by appointing a single point of contact.

The environmentalist "circle," he said, includes five groups the company has been working with, but there are many others out there. He said his company will concentrate on working with the most responsible ones.

Three elements, he said, will determine whether the "circles" will overlap to a degree where NCCP will work: common vision, top management commitment, and acceptance and integrity within "sub-partnerships" (e.g. among agencies).

The Irvine Company, he said, views NCCP as a partial success at this time. In the next twelve months the circles will get into the specifics of tradeoffs,

how much land to give up or restore, etc. and these will be the "make or break" issues for NCCP.

Mr. Tamaribuchi said he is confident the California program will work, and encouraged the Corps to use NCCP as a model, especially for the Section 404 Program.

d. Mr. Mike McCloskey, Sierra Club and Natural Resources Council of America, presented views he thought would be typical of NRCA's member organizations. (Appendix J)

He said the Corps has tried for two decades to reach understanding with environmental groups, with some success. Problems remain, however. Environmentalists see backsliding by the Corps in public participation; and the Corps continues to champion projects environmentalists don't like. He said he often sees a lack of enthusiasm for restoration work. The Corps, he said, is usually more enthusiastic and effective in doing "behind the scenes" promotion of navigation and flood control projects. As a result, people in environmental community still have trouble trusting the Corps, and don't see it as a disinterested party.

Environmentalists favor holistic approaches, interdisciplinary teams, and "erring on the side of naturalness," he said. It's almost like a religion among environmentalists - a belief that humans have taken too much from nature and given too little back.

With respect to endangered species, he said, most problems will not have adverse economic consequences like the spotted owl and salmon cases do.

Old approaches to public involvement haven't worked, he recalled. Until the 1960's, he said the Corps consulted only its own "constituencies" when seeking input on projects. Then it did "pro forma" participation - going through the motions of public hearings to reach a pre-ordained conclusion.

In the 1960's and 70's, he recalled, there were efforts to "game the process" by calling meetings at sites and times that favored one group, or making minimal changes to project proposals despite strong public dissent, or developing bogus alternatives that the agency knew no one would support.

By the late 1970's, he said, the Corps allowed "fish bowl participation" with a wide range of alternatives, including non-traditional ones proposed by citizen groups. This was an improvement, he said, but not enough.

Partnership, he said, could involve public input, coalition building, or "power sharing" with non-government entities. In the Reagan and Bush Administrations, partnership was a way to get non-Federal interests to take on roles the Federal government was no longer funding. In Canada, partnering involves government asking private groups to prepare white papers on issues.

In the U.S., he suggested, groups could be asked to organize panels to testify at public hearings; they do so now before Congress. Techniques of partnering could include small groups discussions with key stakeholders.

When there are economic conflicts, he said, it is hard to find a "win-win" solution, especially when moral values are involved. He advised the Corps to avoid sending messages that offend the environmental community, such as the first sentence in the Chief's charge, "(e)xtinction is the natural course of life". Such a statement, even if scientifically accurate, sends a red flag to the environmental community by saying "your beliefs are not well supported."

e. Mr. Boone discussed his work group's findings and recommendations.

f. Questions from Board members:

Dr. Auerbach asked Mr. McCloskey about implications of ecosystem science versus "ecosystem holism". The former, he pointed out, is rigidly defined. Under it, he explained, there is no such thing as an "endangered species," only species that can no longer survive in new conditions. Nature tends to correct for changed conditions, he said. ESA, however, is a reflection of social wants, not how nature really works.

Mr. McCloskey replied that science can explain what is there, but is unable to address what society wants. What science describes could be a dead planet, he said, while ESA and environmentalists' desire for biodiversity reflect a social desire not to live in industrial barrens.

Dr. Auerbach pointed out that "industrial barrens" are not ecosystems, and said he feels more comfortable is preserving habitats.

Dr. Donaldson replied that he sees the whole world as an ecosystem. He said he has been part of a scientific process that contracts, and now wants to be part of a human system that expands.

Mr. Hall said that when species are eliminated in an area, others move in to fill the niche. He doesn't disagree with preserving habitats, but said people must also look at species.

Mr. Myshak commended Mr. McCloskey's suggestions on power sharing and volunteerism, but said power sharing should be advisory. One partner ultimately bears responsibility. He then asked about rankings of species.

Mr. Hall explained the FWS process to rank priorities for listing a species. This was authorized by Congress based on imminence of threats.

Mr. McCloskey said that unless agencies heed the advice of their partners, nobody will want to be one. He said EPA has a partnership process that works

well.

Dr. Green cited another process that requires consultation. The "Section 106" process allows the agency to retain control, and could be a model.

Dr. Black asked if one can have "power sharing" with private landowners.

Mr. McCloskey said there is a role for intermediaries such as the Nature Conservancy in this process, working within the private market system. This process is showing success in Maryland and Virginia.

Dr. Johnson asked about interagency job exchanges.

Mr. Boone said there have been some exchanges between the Corps and other agencies that have contributed to interagency understanding and professional development for all. The Army also has its "Training with Industry" program with the private sector.

Mr. Hall agreed that interagency exchanges are worthwhile, and described FWS training programs that require details to jobs outside the agency.

Dr. Rhoads asked panelists, if the Board recommends NCCP as a model, did they have any suggestions for information transfer to the Corps.

Mr. Tamaribuchi noted that the NCCP focus is not on endangered species, but on prevention and habitat preservation. The key, he said, is to get all parties to use their energies in a positive direction. He said he had no doubt that FWS and the California Department of Natural Resources would share information they have developed.

g. Public Comment:

Mr. Owen Mason, North Pacific Division, said partnering sounds good, but is difficult in practice. Other agencies often say cooperation would compromise their positions. This was the case when North Pacific Division tried to form partnering agreements with FWS and NMFS.

Mr. Hall said he would work to correct that attitude among his staff, and offered to discuss the situation further.

Mr. Boone noted that agencies often have parochial views of other agencies, based on a history of conflicts.

Mr. Barnett commented on recommendations for guidance from Headquarters, saying they may give the impression that people in field want to be "spoon fed". That is not so, he said. He also noted that the Corps sometimes doesn't partner well internally.

Dr. Klesch said "partnering" is not a magic word, but there have been successes where trust has been developed, people share a common vision and are willing to work hard toward goals.

Ms. Northrup noted that Seattle District has had successes and failures at partnership. Those that work best are those born of environmental initiatives. In crisis situations, however, everyone walks in with historical baggage, so partnering is more difficult.

Mr. Hall agreed that agencies historically have had many fights, and still have people who carry baggage. In FWS we tell them "we love you, you do good work, but this is what we think, and if you can't bring yourself to go along, you might do better somewhere else."

Mr. Mathew Laws, Walla Walla District, suggested that the future of resources in the Pacific Northwest will be determined by plate tectonics. Evolution is natural, but man can cause revolutionary changes.

Dr. Viessman said public policy is always changing, reflecting new social values, and will continue to do so. The U.S., he said, has been a reactive society. Many of the comments made at this EAB meeting, he said, will help create a more proactive society, in which technical people will also understand social values.

3. The meeting was recessed at 1025 hours, at which time the Board moved to executive session to prepare its recommendations.

Friday, 12 March 1993

1. The meeting was reconvened at 0800 hours.
2. The Board presented its Report to the Chief of Engineers (Appendix K).
3. BG Stanley Genega, Director of Civil Works, accepted the Board's report on behalf of the Chief of Engineers. He thanked the Board, and committed the Corps to provide feedback as requested in Recommendation #32. He said a pervasive theme in all the recommendations is the need to keep talking. Partnering is one way to keep the lines of communication open; but it involves more than "just talk." The fundamental element for partnering, he said, is a set of common goals. He reassured the Board that the leadership of the Corps is committed to fulfilling its responsibilities for environmental protection.
4. Public Comment :

Mr. Michael Williams, Seattle, Washington, said he first noted the meeting the day before in the Federal Register. He suggested that future meetings be publicized through the mailing list of the Ecological Society of America or

similar "umbrella" groups.

Dr. Klesch replied that Mr. Williams' comments were well taken. The EAB, he said is required by law to conduct open meetings, and Corps Headquarters has struggled to find the best ways to publicize the meetings. Using a nationwide list may not be practical, he said, but the Corps may want to use districts' regional lists of environmental groups.

Mr. Williams pointed out that most environmental societies have quarterly bulletins, and it would be helpful for meeting notices to be sent out in time to be publicized by them.

5. Final Comments from the Board

Dr. Black thanked the Corps for having the Board. Service on the Board, he said, is educational for members and he can use information on the Corps in his policy classes.

Mr. Myshak recalled that he had been interacting with Corps since the early 1980's, and noted how dedicated Corps personnel are, especially those who come to EAB meetings. He said he thinks the public is not aware of this dedication when they talk about "dam engineers."

6. The meeting was adjourned at 0910 hours.

7. The Corps response to the Board report (Appendix K) can be found at Appendix L.

WILLIAM L. KLESCH, Ph.D.
Executive Vice-Chairman
Environmental Advisory Board

WARREN VIESSMAN, JR, Ph.D.
Chairman
Environmental Advisory Board

Appendix A.

**CHIEF OF ENGINEERS CHARGE TO THE 51ST MEETING
ENVIRONMENTAL ADVISORY BOARD**

"Partnering and Endangered Species Management"

Lieutenant General Arthur E. Williams

**Portland, Oregon
10 March 1993**

**CHIEF OF ENGINEERS CHARGE TO THE 51ST MEETING
ENVIRONMENTAL ADVISORY BOARD**

"Partnering and Endangered Species Management"

Lieutenant General Arthur E. Williams

**Portland, Oregon
10 March 1993**

Mr. Chairman, members of the Environmental Advisory Board, distinguished speakers and honored guests:

Extinction is the natural course of life as paleontological records continue to demonstrate the wide diversity of life that once existed on the earth; however, man and his activities have accelerated the process for many species of plants and animals, particularly as our species, Homo sapiens, has increased in numbers. More than 500 species have been estimated to have become extinct since Colonial times. The U.S. Fish and Wildlife Service currently estimates that there are now 760 species of plants and animals listed as either threatened or endangered. Another 400 species are expected to be listed within the next four years as a result of an out of court settlement in December 1992 which directed the Service to accelerate its listing program.

In addition to the individual species that have been identified by the agencies responsible for their listing, we are also experiencing increasing declines in coastal fisheries and avian populations. In nearly every case where a fishery or avian population decline has occurred we have seen a corresponding decline of coastal and terrestrial habitat, i.e., wetlands, bottomland hardwoods, and other fish and wildlife habitat. One must wonder if these species and their habitat are like the canaries used in coal mines at the turn of the century, warning us of environmental threats that could also affect our own health and ability to survive.

Corps Policy Regarding Compliance With The Endangered Species Act

Corps policy since passage of the Endangered Species Act, has been to comply with its requirements; however, there have been questions regarding our "authority" to conduct Endangered Species Act activities on projects; the adequacy of funding; and the proper justification for Endangered Species Act activities within the budget process. The Army Environmental Strategy into the 21st Century, which was signed on 19 November 1992 by the Secretary of the Army and the Army Chief of Staff, will provide further

emphasis on environmental stewardship of Army lands, including the nearly 22 million acres of civil and military project lands. In particular, the strategy focuses upon compliance with environmental statutes, protection of the environment, prevention of pollution and the restoration of damaged environments. Headquarters is presently in the process of developing an action plan to determine how the Civil Works Program will implement the provisions of the Army Environmental Strategy. Therefore, with the environmental emphasis being placed upon all Army activities and the pro-environmental statements of the Clinton Administration, the Corps will continue to be a leader within the Federal community regarding Endangered Species Act compliance.

Statistics from the last four fiscal years on Endangered Species Act expenditures within the Civil Works Program show an increase from \$4.0 million in Fiscal Year 1989 for 91 species to over \$83.0 million in Fiscal Year 1992 for 163 species. Let me give you an idea of the type of activities we are engaged in today:

In our South Atlantic Division we are cooperating with the National Marine Fisheries Service to investigate the presence/absence of endangered sea turtles in the navigation channels of the Atlantic Intracoastal Waterway and the harbors we maintain. The research conducted to date has provided valuable information on the behavior of the turtles that we intend to use to avoid harming them, e.g., trawling in front of the dredge to remove turtles from harms way; examining various types of acoustical equipment and its effects upon moving turtles out of channels; and accurately documenting the seasonal turtle movements in the area, thereby avoiding them by scheduling our dredging operations at times when the turtles are no longer present.

In our Missouri River Division we are reexamining the operating plans of the six reservoirs in the Missouri River Basin to develop a management plan that will allow suitable water releases while sustaining Least Tern and Piping Plover habitat. We recognize that a balance must be struck among flood control, recreation, navigation and fish and wildlife.

In our host Division for this meeting, the North Pacific Division, we are also reexamining the operating plans of the hydropower dams and reservoirs on the Columbia and Snake Rivers to provide passage of adult and juvenile salmon to and from their spawning areas and suitable habitat and spawning conditions for several species of endangered salmon, while attempting to maintain navigation and power generation. In fact, restrictions on hydropower generation have resulted in over \$50.0 million in lost revenues, a figure that has been used to question the value of salmon.

The Corps and Its Future With The Endangered Species Act

The overall theme of this meeting of the EAB is Endangered Species and Partnering. We use the term "partnering" in a broad context, one which includes other Federal agencies, state agencies and non-government organizations to address some of the issues identified when collectively dealing with endangered species. Along this theme we have hoped to engage the invited speakers and Corps participants into a series of four discussion topics that would provide the Board with insights into how to address the questions with which I am about to charge them. The four general topics and their associated questions follow:

Single Species Versus Multiple Species Management

Today, within both the environmental and developmental communities, there is growing acceptance of the concept of sustainable development. The concept of sustainable development implies the wise use of our natural resources while providing an improved quality of life for our citizens, i.e., a balance in which we will not jeopardize the resources of future generations for the gain of the present generation. In attempting to achieve sustainable development in our programs, there is a need to demonstrate a linkage between environmentally sustainable development and the proper management of endangered species. Sustainable development calls for wise development decisions today in order to sustain the living natural resources for future generations while providing the quality of life society demands. Perhaps greater emphasis should be placed upon examining ecosystems in a more holistic fashion, thereby ensuring that the extinction of individual species will occur at natural rates.

The question I would thus put before the Board is, should we continue to pursue single species management or should we begin to examine ecosystems in a more holistic manner? Secondly, how would we begin to incorporate the concept of holistic analysis into our programs and would such an approach still benefit those species that are presently at risk?

Valuation (Cultural and Economic) of Endangered Species

We must also recognize that the Endangered Species Act makes a distinction between how economic data will be used, i.e., economic values or losses are not to be used in the listing of a species; however, the Act does allow the use of economic impacts in the designation of critical habitat. Given the global emphasis being placed upon environmental issues today there is a real need to develop analytic techniques to help in the evaluation of

endangered species as well as other environmental resources. Too often in the past our techniques have focused only on the negative impacts of a particular proposal. New and innovative environmental planning and design concepts must be developed to both avoid and minimize the environmental impacts of projects and programs and to restore and/or improve damaged ecosystems as well as conserving valuable ecosystems.

The questions in this category include, how do we include in our analytic frameworks for both existing and future projects/programs a greater consideration of endangered species and other environmental considerations? What techniques, of which you are aware, should be adopted and integrated into our programs? Further, how do we balance the tangible and intangible values within the current process?

Difficulties of Compliance

There is a greater need to more fully recognize that the requirements of the Endangered Species Act constitute, in and of themselves, an authority to engage in management activities that would reduce or eliminate threats to endangered species and to seek and gain the necessary financial support to engage in these activities. However, we must also recognize the restrictions of the Endangered Species Act on management actions we undertake on behalf of endangered species; e.g., we have very little statutory involvement in the preparation of the "biological opinion" which directly establishes the nature of Corps endangered species actions on a given project. We can develop independent management plans for endangered species but they must be approved via the Section 7. consultation process with either the NMFS or the USFWS prior to implementation, and we and/or our contractors must obtain the necessary permits to conduct these activities.

Regarding the question of authority ... we typically do not engage in endangered species activities until after the Endangered Species Act is invoked, i.e., a species and/or its critical habitat is listed and a biological opinion issued for a particular project. Now, are there other ways in which we could recognize that a particular species and/or habitat is in trouble and take the necessary preventative steps (protecting candidate species) before actually triggering the requirements of the Endangered Species Act?

There are obvious conflicts between the "traditional way of doing business" and compliance with the Endangered Species Act. How can we promote the development and examination of new ways of doing business (new solutions to old problems) to lessen impacts and sustain natural resources? What would you suggest? Finally, the continued and accepted valuation of species and their critical habitat can be central to this approach, but, how do we "justify new ways of doing business", i.e., what institutional changes must be made within our organization?

Partnerships

Today there is an obvious need and trend to move away from the single mission orientation of individual Federal agencies and promote more collaborative relationships. Further, there is a need, driven by limited dollars, to use all the assets of the Federal, State, local and private sector communities in developing these collaborative relationships and finding sustainable solutions. Finally, there is a growing need to promote more of a collective problem solving attitude within the government and private sector institutions.

What must be done by the government and private agencies collectively involved to make this happen, what types of attitudes must prevail and specifically what steps should the Corps take to accomplish this within our programs?

Closing

I have given you some very ambitious questions and I look forward to the discussions and, more importantly, to the recommendations of the Board on this most challenging topic.

Appendix B.

SPECIAL REPORT

**ENDANGERED SPECIES MANAGEMENT IN THE WAKE OF
HURRICANE ANDREW**

**Hanley K. Smith
Jacksonville District**

**Portland, Oregon
10 March 1993**

Endangered Species Management in the Wake of Hurricane Andrew

**Presentation by Hanley K. Smith
Chief, Environmental Services Branch, Jacksonville District**

Hurricane Andrew struck south of Miami before dawn on Monday, August 24, 1992. It was dark, so there was no dramatic TV coverage of the storm, and the first pictures we saw showed fairly light damage, but within a day we saw scenes of tremendous destruction.

I've tried, and I've listened to many people try to describe this disaster, but pictures and statistics don't do it.

This was a very compact and intense storm. The damage looks more like that expected from a tornado. Imagine a suburban neighborhood, perhaps where you live. Now take a 20-mile wide swath through that neighborhood and imagine damage to every home, every tree, every workplace and every church.

The statistics are staggering. The storm left 250,000 homeless and destroyed 74,000 homes. Many natural systems were also damaged. Coral reefs and mangrove forests were impacted, as was a rare upland forest type called pine rocklands. But hurricanes are a fact of life in South Florida. These systems have been hit before, and they should fully recover.

None of the high visibility endangered species in the area - such as the wood stork, the American crocodile, the manatee or the Florida panther, were apparently harmed. Everglades National Park took the full force of the storm, but the greatest damage to the park was to its visitor centers and infrastructure. The Park was closed for over three months.

One of the more significant long term problems the storm caused may be the release of exotic plants and animals from zoos and botanical gardens. Exotic tropical species do very well in south Florida.

The Corps moved in immediately, and in response to missions assigned by the Federal Emergency Management Agency, began clearing the roads, providing temporary roofing, water, ice, toilets, showers, school repairs and temporary housing. Within a few weeks a Corps office of over 800 people was in place in Miami.

Debris removal was the largest of all of our missions - we removed 20,000,000 cubic yards at a cost of about \$300,000,000. Of all the missions, debris removal presented the greatest environmental concerns.

As soon as the mission was assigned we realized there was no landfill space available in Dade County, so we established 27 temporary stockpile sites on vacant land. There were relatively few sites available - most open spaces in Dade County are parks, wetland or farms. Oregon site, was a Coast Guard Communication Station.

Debris came in every sort and condition. Almost 40,000 acres of orchards were destroyed, so we had no shortage of wood, but most was a tangle of all the things you'd expect to find in a suburban setting.

In an effort to reduce the total volume, we began burning immediately. The sites used air-curtain burners. This is a very hot burn in which wood is put in an air-fed pit. When done properly there is very little smoke and little air pollution. Some of the incinerators burn at nearly 3000 degrees.

About a month into the process we began chipping as much of the woody material as possible. We piled huge amounts of mixed debris in open fields in suburban neighborhoods, and burned and chipped as much of the clean material as we could.

Air quality was a concern from the first - people were very glad to have their area cleaned up but objected to smoke, even though there wasn't much smoke. We quickly closed the burn sites that were near residences, but concern over burning continued and became a political issue. After two months, the county commissioners banned burning.

Water quality issues are especially sensitive in this area. The Biscayne aquifer lies at or slightly below the surface throughout the area. Essentially anything you pour on the ground has immediate access to the aquifer. Obvious sources of contamination were separated and properly disposed of before they arrived at the debris sites. When we found HTW in the debris piles it was temporarily stored in lined pits.

Most of the contamination we observed was from very small spills, such as oil and fuel from dump trucks. We do not believe water quality was compromised.

We were concerned that there could have been a rapid buildup of rats and mosquitos, but this didn't occur. There was very little food in the piles, and the piles weren't around long enough to allow populations to build.

We mobilized thousands of dump trucks in a relatively small area for 4-5 million round trips. The result was damage to roads and weeks of traffic jams. There was a lot of commotion - many suburban neighborhoods took

on the noise and activity of busy landfills - but most people interpreted the activity as a sign of recovery. The major complaints we got were about the alarm sound that trucks make when they back up.

Virtually all of the natural upland forest in Dade County has been cleared. Those parcels that remain, called pine-rocklands, contain a variety of endangered plants. These battered forests were prime candidates for debris storage sites, tent cities or Army bivouac area, and we worked very closely with the U.S. Fish and Wildlife Service to keep the public and the military out of these areas.

What happens to environmental regulations in a situation like this? NEPA is essentially suspended. Emergency response to a federally declared disaster is not considered a major federal action under NEPA. The State of Florida suspended many of its environmental regulations to allow necessary repairs. They put out an order that essentially said, "do what you have to do, and report what you did in a month." The Endangered Species Act remained intact - consultation was done very quickly and informally. The Corps issued an emergency Section 404 permit allowing wetland activities essential to the cleanup; and we worked closely with the State Historic Preservation Officer, using the telephone and fax machines to make sure we didn't further damage historic or cultural sites. In short, we found that it was possible to meet the spirit and intent of environmental legislation but avoid or modify the procedural aspects of routing coordination.

Environmental groups were active from the first, trying to make sure the cleanup from the storm didn't add even more damage to the environment. Burning was stopped largely because of the political pressure they were able to mount. They insisted wood should be either shipped to fuel poor Caribbean countries or chipped and used for mulch. We did consider shipping wood to Haiti, but rejected it because of cost. The environmental groups did cause us to rely more on chipping. Almost 3 million yards of wood chips were produced and distributed to local farmers for use as mulch. One avocado orchard was piled about a foot high with chips.

Six months after the hurricane, where are we? Most of the many FEMA missions are completed, and we're in the process of cleaning up the debris sites. We're conducting an environmental audit at each of the debris sites to ensure they are left clean. Generally, this consists of a visual and VOA scan and soil sampling. If soil testing indicates a problem we conduct water quality testing. After the audit, a remediation contractor cleans up any contaminated soil and restores the site to its original contour and vegetation.

What about the community?

The debris is cleaned up

The tent cities are gone.

The schools are rebuilt.

The immediate humanitarian response is over.

The people in South Florida have a strong will to overcome. Less damaged areas are in pretty good shape now, but it will be a long time before they are in full recovery in the badly hit communities.

Appendix C.

**ENDANGERED SPECIES-THEIR LINKAGE TO HOLISTIC ECOSYSTEM
PLANNING AND MANAGEMENT**

**Work Group Summary
Mr. William Hubbard, New England Division**

**Portland, Oregon
10 March 1993**

ENDANGERED SPECIES-THEIR LINKAGE TO HOLISTIC ECOSYSTEM PLANNING AND MANAGEMENT

Work Group Summary Mr. William Hubbard, New England Division

ISSUES

1. SCALE:

- a) Project operations may or may not influence an entire ecosystem.
- b) Regional problems need to be identified and prioritized for habitat management to be efficient.
 - Corps is a land use planning agency;
 - How do we get involved (WRDA) on regional i.e. landscape/ecosystem management? Who decides what habitats are priority?
 - What is our authority (i.e. funds)?

2. ATTITUDE - HOLISTIC ECOSYSTEM MINDSET

Corps focus as an agency. Endangered Species Act (ESA) preamble identifies habitat management as a function of the ESA process.

3. NEBULOUS MANAGER - LOBBY ON HILL FOR GREENWORK, GOOD WORK, BUT WHERE IS IT LOST IN MIDDLE MANAGEMENT?

- a) BCR narrows alternatives
- b) Field management selects BCR alternatives

4. ALTERED NATURAL HABITATS BENEFIT CONFLICTING ENDANGERED SPECIES

- a) Proliferation of endangered species
- b) (Holistic planning versus one or another species), e.g. Woodstorks versus Snail Kites in S. Florida

5. ECOSYSTEM FUNCTION MANAGEMENT

- a) Corps can't do it by itself
- b) Who is in charge (e.g. Columbia River)?
- c) Perspective looking upriver vd. downriver
- d) Actions at last stage for endangered species - conduct Holistic planning up front - review habitat, with vd species to manage prior to listing.

(Politics) * SE - large projects - Corps lead

* NW - small project - Corps follow

* Other uses - recreation may conflict with ecosystem habitat goals.

6. EXISTING MANAGEMENT PERSPECTIVE: THEIR AGENCY, THEIR LANDS, THEIR SPECIES:

Many problems are water resources problems. It is the water resource that is the common perspective.

7. REGIONAL PLANS - DO WE UNDERSTAND SYSTEMS?

- a) Need to obtain more scientific data before we conduct plan.
- b) Will we do a plan (need social and political support)?
- c) Who will define data needed to plan the plan?
- d) Monitor, evaluate, and fine tune our follow-ups to plans.

8. ESA HAS ECOSYSTEM FOCUS - AGENCIES ARE FOCUSING ON HOW ESA IMPACTS THEM, QUICKLY DEFAULTING TO SPECIES MANAGEMENT.

9. BUILD CONSENSUS VD. DO WHAT WORKS - MANY DIVERSE INTEREST WITH UNEVEN PRIORITIES; (WHO'S IN CHARGE?)

- * River Basin Commissions?
- * River Basin Authorities?
- * Is it right group?

Consensus means giving up some part of each interest to attain a balance.

10. BASIN CONSERVATION PLANS OVERLAY WRDA AUTHORITY WITH SPECIES RECOVERY PLAN, FISH AND WILDLIFE COORDINATION ACT, RECREATIONAL PLANS, OPEN SPACE PLANS, USGS WATER QUALITY PLANS.

- * Corps is logical lead (quote from FWS)

11. AUTHORITY AND FUNDING

- * need a plan (planning funds)
- * need a cost estimate to implement planning process
- * need funds to implement planning process

12. REGIONAL BIOLOGICAL ASSESSMENTS/OPINIONS

Pre-listing - species of priority - implement habitat improvements - look at recovery, stay farther from jeopardy.

13. USE ESA TO DO ECOSYSTEM PLANNING.

14. REGIONAL MITIGATION PRIORITIES - NOT NECESSARILY IN-PLACE, AND IN-KIND.

- a) Corps' own regional mitigation bank of habitats on our lands.
- b) FWS-Basin ecosystem conservation plan with state, BLM, USFW, industry.

* intergovernmental group - Corps involved through regulatory

- c) Concurrent restoration - starting in the worst basin.
- d) Permit data helps evaluate success.

15. RESEARCH INTO BIOLOGICAL CERTAINTY

- a) Regional interagency focus
- b) Need a plan - who's in charge?

16. WHY AREN'T WE DOING ECOSYSTEM PLANNING:

- a) Money
- b) Control - Corps doesn't control the whole region
- c) We don't want to force consensus - rely on data and analysis - but public perception interplays with this

* Corps projects are second largest cause of mortality on juvenile salmon on the Columbia River; if unlimited funds, we still need to get data to gather consensus to define how to conduct the plan that will develop a plan that when implemented will solve the problem.

17. NEED TO MATCH THE FUNDS TO THE SPECIES - NATIONALLY LOOK AT WHAT OUR ENDANGERED SPP. DOLLARS ARE PURCHASING.

- a) Conservation - fact versus opinion
- b) Need a plan on how to get to ecosystem planning to convince the regional authorities we are on the right track.

18. THOMAS REPORT FOR OWLS

* Bevan plan for salmon hasn't occurred - much more diverse interests

19. NEED AN ENVIRONMENTAL PERSON IN CHARGE - THE CORPS NATIONALLY, NOT PLANNING, ENGINEERING, OPERATIONS, ETC.

- a) FWS and NMFS have conflicting groups within their agencies. Who is at the table?
- b) Our own offices within districts and divisions must consistently implement policy from OCE.

20. RESTORATION - TAKE DAMS OUT, KISSIMEE WITH NO BCR.

* Getting more congressional direction versus traditional project planning seems to be the most expeditious way to accomplish ecosystem planning at this time.

21. EIS TIMELINE FOR "DEMONSTRATION" OF RESTORATION PROJECTS TOO LONG, PUBLIC CANNOT WAIT FOR OUR PROCESS - TOUGH TO PARTNER WITH US.

- 22. NEED REASONABLE BIOLOGICAL CERTAINTY OF SUCCESS.
- 23. ECOSYSTEM MANAGEMENT NEEDS AGENCY CONSENSUS.
 - a) Consensus gives up power.
 - b) Changing budgets will affect agency control.

ISSUES AND RECOMMENDATIONS

- 1 - ENVIRONMENTAL EMPHASIS IS NOT SUPPORTED BY CORPS MANAGEMENT STRUCTURE.
 - A - DE + Management performance evaluations critical elements should include environmental change.
 - B - Environmental office within districts and divisions that have an inter-directorate stovepipe and a stovepipe to CECW-PO
 - C - Environmental directorate should be equal to PLNG, CON-OPS, ENG
 - D - Support to proactive coordination of ecosystem planning to other agencies.
 - E - The Corps environmental role of the future is not defined.
 - 1) - Is it HTRW or ecological?
 - 2) - Develop Corps Missions for environmental restoration and environmental engineering.
- 2 - WILL THE CORPS NATIONALLY COMMIT TO "HOLISTIC ECOSYSTEM" OR LANDSCAPE PLANNING? COMMITMENT MEANS ACCEPTING CONSENSUS OF USES AND ALLOWS NON-CORPS ENTITIES TO SET PRIORITIES FOR OUR PROJECTS (IF NOT--WHAT'S THE ALTERNATIVE).
 - A - Policy statements are needed from OCE with direction.
 - B - Cumulative impacts section of EIS; should incorporate regional biodiversity.
 - C - ERGO should have a Sec 1135 & endangered spp. Action section.

- D - Master plans for civil works projects should be funded and updated to incorporate ecosystem planning.
- E - Altered natural habitats benefit conflicting endangered species.
 - 1) - Update management plan to include issue (maybe within the operational range).
 - 2) - NEPA, ESA and alternatives processes disclose impacts.
 - 3) - Corps decides.
- F - No incentive for Corps to pursue holistic ecosystem management/planning. Riverbasin Planning studies of the past would have an environmental emphasis if done now.
 - Responsibility to reformulate existing projects within current values to define our future basin interactions.
- 3 - WHO IS IN REGIONAL LEAD FOR ECOSYSTEM MANAGEMENT?
 - A - Encourage regional definition of lead.
 - B - Cooperate with other agencies in establishing a comprehensive ecosystem management commission (e.g. multispecies, multi-issues, riverbasin commissions) of natural resource agencies with a congressionally authorized concerns vs balance (= consensus planning) goal.
 - C - Fund Corps participation in these commissions.
- 4 - USE OF ESA TO IMPLEMENT HOLISTIC PLANNING
 - A - Regional Biological Opinions - for action.
 - B - Regional studies stimulated by ESA concerns - leads to ecosystem approach.
 - C - ES used as indicators for ecosystem health (carrying capacity).
- 5 - THERE IS NO INTEGRATED FEDERAL ECOSYSTEM MANAGEMENT PROGRAM TO DEFINE RESTORATION PRIORITIES OR MITIGATION PRIORITIES.

- A - Have environmental directorate work with other federal agencies towards establishing an integrated federal ecosystem management policy.
- 6 - WILL THE OTHER AGENCIES AND NGO'S ACCEPT THE CORPS' COMMITMENT TO LANDSCAPE PLANNING BEING INCORPORATED INTO PROJECT FORMULATION.
- A - PAL funds for meaningful inputs from FWS and NMFS for a review of ecosystem planning objectives and the proposed project "fit".
- B - NGO's will be convinced by action.

LIST OF PARTICIPANTS

BOB WILLIS

MIKE PASSMORE

BO SMITH

DON BEVAN

RUSS PETERSON

SCOTT CLARK

KEN BRUNNER

JOHN TYGER

BILL HUBBARD

Appendix D.

**SOCIOECONOMIC AND CULTURAL IMPLICATIONS OF
ENDANGERED SPECIES**

**Work Group Summary
Dr. Jerry Delli Priscoli, Institute for Water Resources**

**Portland, Oregon
10 March 1993**

SOCIOECONOMIC AND CULTURAL IMPLICATIONS OF ENDANGERED SPECIES

**Work Group Summary
Dr. Jerry Delli Priscoli, Institute for Water Resources**

I. METHOD:

In the morning the group listed about 40 issues, concerns and problems. Then they prioritized them into first, second, and third order priorities. After lunch, using this list, the group generated 15 recommendations and prioritized them into 1st, 2nd, and 3rd order priorities.

II. ISSUES/PROBLEMS/CONCERNS

1st ORDER OF PRIORITY:

- * Lack of sufficient scientific data to define benefits and alternatives.**
- * With high biological uncertainty should (does) economics have a role?**
- * Lack of view of the "total" ecosystem interaction.**

2nd ORDER OF PRIORITY:

- * Not enough info on cost of ES Recovery. Direct cost are unknown. Opportunity cost are problematic. No one in charge of how to measure private costs.**
- * Cost/effectiveness is our best tool, but there are a number of issues to address to use the tool. So, should Corps try to improve cost/effectiveness?**
- * Do we have sufficient authority? (Given the existing legal constraints on how we operate.)**
- * Could greater institutional flexibility help save money in the long run?**

3rd ORDER OF PRIORITY

- * FS can impact selection of NED plan (Choose a less than economically feasible alternative.)**
- * Cost distribution issues: Should they be taken into account? If yes, what about mitigation for losers? (Raises issues of social conflict)**
- * Public has existing perception (expectation) of projects. It's their project and we are not taking the people into consideration.**
- * What about trade-offs between different species: How do we handle this? How do we value these?**

- * We have abandoned ideas of "willingness to pay or sell" - We have given up too soon! (People do differentially evaluate species)
- * We are not doing economics of research. Not "partnering"- (Ex: if F&W had to kick in funds they would be a lot less critical)
- * Our documents have a lot on negative impacts: But, we get criticized "Why are you looking at actions outside the Corps?) Maybe better economic approaches beyond Corps focus - we focus too narrowly (Hold that which is outside our control static) (ex: relation of spawning to fishing)
- * There are High costs associated with suits and courts. These resources could be better used elsewhere.
- * Native American perception is that ES are part of their culture and spiritual life. They are nations so we lose control (Under treaty rights).
- * Can we expect to define benefits for ES? Should we?
- * Whatever approach we take there will be mitigation (compensation) necessary.
- * Without a NEPA EIS, when working with ESA we can create suspicion of "what we are doing behind closed doors." Act is not structured to allow cultural/social aspects - procedurally.
- * Should the Economists and Biologists be working closer within the Corps?
- * What do we measure against the benefit (ex: \$'s against end results).
- * Corps continually gets blindsided by ES in middle of projects.
- * Most of what the Corps is doing is O&M funding. Why should this tight budget be asked to fix project now? It is hard to get funds for the future? (What about 1135, Coastal America?)
- * When we need more info it is always the Corps that has to fund it and this is perceived as unfair.
- * Most people outside the Corps don't believe the Corps has good info. Yet, most of the info out there is funded by the Corps (through states, etc.).
- * Many people in region don't want answers to questions.

- * There is value of ES to Corps. It can be big PR and favorable press (but this depends on region).
- * No definition of risk and uncertainty making major decisions on one year of less of data. We are pushed to do something immediately on the ES list and this strains us.
- * There is a clear break in our responsibility where: (1) we are the primary force and, (2) we are not the primary force but receiver - when it comes to putting species on the list.
- * Ultimately decisions will have to be regionally based: How much will people pay?
- * We -regionally- Don't have the ability to trade (ex: highway for X species).
- * Actually behavior within Corps is different among Districts on ES - so we need to keep this in mind. (ex: sea turtles in one area may be necessary but not sufficient - may need action in another area...)
- * Are recovery plans supposed to address items above? It is the "sufficient" part.
- * ESA almost implies there are limits to growth: And this is imposed on the public.
- * Two Types of Action
 - a. New product/action that can wait.
 - b. Other actions which you just can't stop - (we'll get sued anyway!)
- * No fixed time for which biological data is adequate
- * Knowledge/Info is increasing at rate faster than system can handle it.

III. RECOMMENDATIONS

General Framing Statement:

All of what we are doing here with ES implies an alternative planning model which is not yet articulated.

1st ORDER OF PRIORITY

- * The Corps should form a task force to examine our approach to cost/effective evaluation with a goal to examine regional impacts and opportunity costs.**
- * The Corps should take a leadership role in developing a consensus on scientific issues on what we know and don't know on fish, modeling, economic impact...etc. It should adopt a facilitator role to get others to agree.**
- * The Corps needs to better integrate its R&D with others and with decision making and planning capacities (ex: monitoring...etc).**
- * The Corps should recognize that valuing issues are as much procedural and process as analytical, thus it can't squeeze ES into traditional C/B analysis. The Chief should institute field guidance and training in process techniques in how to present trade-offs and to gain agreements.**

2nd ORDER OF PRIORITY

- * The Corps should take a more holistic approach to acquiring data rather than just a species specific approach. Data must be statistically defensible.**
- * The Chief should convene a panel to advise the Corps on research on ESA efforts beyond regional focus.**
- * The Corps needs to set up standards - (ex: life cycle modelling...etc.) to approach ES (One model to do this is the Interagency Panel on Water Resources).**
- * The Corps needs to better articulate and to explain its posture of neutrality within our authorities (i.e. our role & mission)**
- * The Corps should institute some type of periodic info exchange and newsletters to know what Districts are doing.**

3rd ORDER OF PRIORITY

- * A task force/committee within the Corps should be established to develop analysis that arrays gaps in information and prioritizes them. Then a 5-10 year program to fill in the gaps should be developed (Parallel to CW/R&D Committee).
- * The Corps needs to establish standards on effectiveness. What is the end result we want?
- * During update of O&M plans all candidates of ES will be evaluated holistically at periodic Environmental and Economic Assessments of projects which is not just a checklist.
- * The Corps should change its culture in the way we manage projects. The Corps needs a more systematic approach (beyond project by project) (ex: Expand on the Missouri Master Manual, the Systems Review Operations of the Columbia, and the Upper Mississippi review ideas).
- * Be careful not to lock the Corps into yesterday's law. Be prepared to move to a new level of ES (which is holistic rather than species by species)
- * The Chief should reexamine the appropriate levels of decision making in the ES process and set up procedures to deal with conflicting demands (species vs species and species vs other purposes) of agencies which can't be resolved at the district level.

IV. PARTICIPANTS

USACE MODERATOR:

Dr. Jerry Delli Priscoli

USACE SEMINAR ATTENDEES: Mr. David Kenyon

Mr. William F. Adams

Dr. Thomas Pullen

Mr. David Ponganis

Dr. William Willingham

Mr. Ed Woodruff

Appendix E.

**THE DEPARTMENT OF THE ARMY RESPONSE TO THE
ENDANGERED SPECIES ACT
IN THE COLUMBIA RIVER SYSTEM**

Leonard Shabman

**Department of Agricultural and Applied Economics
Virginia Polytechnic and State University**

**Portland, Oregon
10 March 1993**

**THE DEPARTMENT OF THE ARMY RESPONSE TO THE
ENDANGERED SPECIES ACT
IN THE COLUMBIA RIVER SYSTEM***

Leonard Shabman

Professor, Resource and Environmental Economics
Department of Agricultural and Applied Economics
Virginia Polytechnic and State University
Blacksburg, Virginia

For decades the Corps' calculated a money measure of the value of project outputs--benefits--and compared these to project costs. This so called National Economic Development--or NED--analysis was acceptable because most project outputs, while not traded in markets, had close market substitutes like steam power or railroads. These substitutes provided a benchmark for establishing value. Not surprisingly then, in the late 1980's, when the Corps evaluated actions to enhance downstream migration of juvenile salmon, the evaluation was done in traditional NED terms. However, benefit cost analysis of fish passage alternatives found little support in the region or at Corps' headquarters -- the market logic didn't seem to apply to fishery habitat as well as it applied to power or navigation. Of course, benefit cost analysis of alternatives to under the Endangered Species Act (ESA) is prohibited. However, the validity and utility of benefit cost analysis for rating salmon recovery actions was questioned on grounds other than the legality of the approach. Because the association of economics with valuation is so strong, some of the limitations of extending economic valuation to environmental services should be listed.

First, what is economic valuation? Economic valuation provides a money measure of peoples preferences for a particular state of nature. The level and intensity of preferences is measured by peoples' willingness to pay, that is, give up a share of their income, for the direct use or prospective future use of an endangered species, or for simply knowing it exists. An alternative value basis, willingness to accept compensation (WTA), can also be described.

Willingness to pay is calculated by interpreting the exchange of money for goods and services--that is by interpreting market prices. Prices emerge from market negotiations among willing buyers and sellers who only reach agreement on exchanging dollars for goods when their individual preferences are satisfied. Hence, there is a logic of linking preferences with prices. When market negotiations--and prices--for the good do not exist, prices from auxiliary markets (land) or from hypothetical markets (surveys) can be interpreted in developing value measures.

E-1

*Remarks prepared for Environmental Advisory Board, U.S. Army Corps of Engineers, Portland, Oregon, March 10, 1993.

While some economists struggle to measure the economic value of the environment, many observers question whether actual or simulated prices can be interpreted to create measures of value. Some economists stress that prices describe historical preferences, not preferences for some yet to be realized situation, such as a changed environment. People's preferences change in response to new opportunities and information.

Using an argument from a particular system of ethics, certain philosophers assert that some aspects of our lives should not be valued as if they were commodities that might be bought and sold in markets. The examples they offer are the right to vote and the life support services of the environment for endangered species. A sustainability critique, which is more utilitarian than ethical, argues that human preferences expressed in market negotiations will not, and cannot, recognize the dependence of all economic activity on the biosphere.

There are counter arguments to these critiques, but there also are other challenges to economic valuation. Often the value estimates rest on a weak technical foundation. For example, the current uncertainty over how changes in river flows will affect salmon passage on the Columbia River makes assigning economic values to strategies that increase flows seems premature, at best. Another critique stresses the difficulty of verifying value estimates from non-market situations. Reviews of WTP estimates made by the contingent value method show that people's statements of WTP often are not related to the good being valued and may not translate into actual spending behavior.

Taken together these criticisms, whether clearly understood or not, have the practical result that economic value estimates influence few environmental restoration decisions. This is because all these criticisms recognize, in one way or another, that the measurement of preferences preempts the very purpose of the political decision process. Politics is supposed to collectively explore, define and redistribute rights and values to resources. It is this which explains the hostile response to purported measures of the value of endangered species (or most environmental services).

If not measurement of values, then what is the alternative for decision making? Since the early 1970's, many agencies and interests have come to share in decisions which used to be reserved solely for the Corps. No longer can the Corps act using its own internal, and presumably expert, decision making criteria. So who chooses? Today, more than ever, agencies and groups engage in bargaining and negotiation to seek agreements on the use of water resources. Therefore, a new emphasis must be placed on initiating and structuring interest group negotiation to establish a collective W.T.P. in matters such as restoration of habitats (ecosystems) for endangered species. Values are established in group instead of individual market negotiations.

One negotiation forum for the Columbia River Salmon is the NMFS recovery team--despite the pretense that a single minded biological determinism will dictate choices. Even before the listing of certain species of salmon as endangered, the Northwest Power Planning Council took the role of leading a regional negotiation and consensus building process over such matters as spilling water for fish passage, rather than using the flows to generate power.

The reality of this new, negotiation based, decision process was driven home to the Corps in the late 1980's. The Corps completed an NED analysis, and then declared that neither spilling of water or construction of some juvenile fish by-pass facilities was warranted. However, the region and the Congress were not persuaded by the traditional NED analysis. Today, spill goes on and bypass construction is underway.

One legacy of that experience is that because the Corps defended a position contrary to many interests in the region, and because the position was defended by reference to a closed analytical process, all aspects of the Corps' analysis were attacked as being biased. In all candor, the Corps over the years had earned some reputation for, at times, making their analysis conform to a predetermined outcome. And, as remarks by the Idaho governor and some environmental interests suggest, suspicion of the Corps remains high.

However, in the early 1990's, the ASA(CW) and HQUSACE directed a new analytical and policy posture for the Corps' regional offices. Recognizing the new reality of "negotiation as planning," and the lessons of the spill and bypass analysis, today the Corps is striving for an open analysis of the full range of alternatives for operating and modifying the system of dams on the region's rivers. Coming out of the "Salmon Summit," and now manifested in the approaches to the System Configuration Study (SCS) and System Operation Review (SOR), the Corps is promoting its analysis as a source of intelligence to aide negotiation among regional interests, more than as a contribution to its own internal decision making protocols or as a basis to protect a particular agency agenda. Within limits of its authority, and by an expressed willingness to seek new authorities, the Corps has committed itself to full cooperation with the decisions made in the region on the modification and operation of the dams. Because the consequences of these changes will be felt directly by the regional interests who have assumed decision making responsibility, through the effects on electric power rates in the region, the Corps position is especially attractive as a way to test for collective willingness to pay for system changes.

Fitting its analytical tradition into this new "impartial analyst" role will pose challenges to the agency. Today, the Corps finds itself engaged in observing and reacting to various types of conflict in the ESA process--value, interest and

factual conflict--but is only being asked by Washington to contribute to the resolution of conflict over facts. Value conflict stems from different assessments of the desirable goals of public action. Indeed, many group's agenda is not fish, but the removal of the Snake River Dams to recreate the values of a natural system. Interest conflict arises from the different distributional consequences of different policy choices. Two examples of interest conflict are the Idaho position favoring drawdown over flow augmentation in order to protect Idaho irrigators, and the region's reluctance to reduce ocean harvest for fear of effects on commercial harvesters. In the face of value and interest conflict the Corps planner must have reduced expectations for reaching agreement through its analysis and must be willing to accept long delays in decision making. The current experiences of the Corps with the Columbia and Snake Rivers salmon restoration effort is a case where value and interest conflict is causing a certain frustration in an agency which is known for its "can do" philosophy and has the historical experiences of usually being "in charge."

Also, Corps' planners must be able to allocate a limited planning budget to those analyses which are most useful to the region, and not only do analyses to meet its own internal requirements. Analysis is expected to help participants in the decision process form and reveal their preferences so that a basis for agreement can be found. Toward this end, financial and other impacts on particular groups and regions can become as important a focus for analysis as impacts on the economic welfare of the nation's citizens (the presumption of NED analysis). Recent efforts have described the engineering costs of alternative draw down plans and other physical alteration to the system. These cost estimates were offered to help interests screen alternatives for future consideration. In the SCS and SOR more complex and complete analyses are being conducted of a range of operational and structural alternatives for the storage system, but do not extend to analysis of other actions such as harvest limitations or stream bank restoration.

Consider economic analysis in particular. All those engaged in the Columbia River Salmon restoration program have adopted an "opportunity cost versus restoration effect" framework for decision making. This is to assure cost effectiveness, but also displays the absolute costs of restoration. Costs to be considered include both life cycle financial outlays by government and individuals, as well as the foregone benefits of power, navigation, etc. if the system is altered.

The Corps' contribution can be to bring its significant and unique expertise in economic evaluation among Federal and state agencies to getting these costs "right." However, I am concerned that the many traditional approaches for economic assessment of traditional water project benefits overestimate

opportunity costs in the private economy. Opportunity costs are impacts on economic entrepreneurs, but these economic agents are constantly in the process making creative adjustments to unexpected shocks within the economic system; adjustments which are far more creative than the ones planners imagine in their impact models.

Examples of this argument are many. Commercial fishermen will switch species, use lower cost harvest methods and find new sources of employment if fish harvest quotas are enforced. If navigation capacity is reduced shippers will find alternative times to ship and alternative origins and destinations; the shippers may produce other goods which are more suited to alternative modes and markets. If power generating capacity is curtailed, there will be changes made within the power generation firms, in power marketing arrangements and on the demand side, which will minimize the cost of replacement power.

Therefore, the credibility of its economic impact analyses to all the parties to the salmon negotiation must become a central concern for the Corps' analysts. That analysis must be built on assumptions, models and data understood in advance and produce results in a form which is understandable for all parties in the negotiation. This is why the Corps is making significant efforts to use fish passage and life cycle models which are built upon a consensus of analysts in the many agencies, or at least to present its results with consideration of the differences in the fish passage and life cycle models. I am concerned that a similar effort is not being made to gain a trust in, and consensus about, the economic impact assessments. Of course, I also recognize that some interests in the region reject analysis as unnecessary, or even subversive of their goals.

I also am concerned that the Corps will not formulate or evaluate plans which fall outside its implementation authority. For example, the Corps will not consider freeing up water rights markets and power marketing arrangements to synchronize the flows of water and the passage of anadromous fish in the Columbia-Snake Basin, nor will it consider non-passage alternatives including habitat restoration and control over the harvest of adult salmon, which may prove cost effective in increasing the salmon life-support services of the Columbia-Snake system. Where is this full accounting to be done? In the region there is no way to do careful cost-effectiveness studies for the full range of alternatives with the comprehensiveness and rigor that the Corps will bring to the alternatives it is looking at. There is no comprehensive analytical capacity in the region to look at all alternatives in a similar way. This institutional gap will be especially clear as analysis will be required to move to the ecosystem level so that trade offs between all listed species--sturgeon, bull trout, various salmon species, and who knows what else--can be made. The Corps could do this job, but only if the trust in its analytical stance is established more completely. Two other concerns.

First, the admonition to present the "facts" of a situation includes a presumption that the effects of any action can be known with some degree of certainty. This presumption is untenable for the ESA challenge on the Columbia system and an institutional response to pervasive uncertainty is warranted. This institutional accommodation has been termed "adaptive management," and has also been called incremental decision making. Adaptive management means that the planning process has a long time horizon. Adaptive management means that the responsible agency must take a researcher's perspective, choosing alternatives and operating a project, in part, to create information about restoration success. Information becomes an objective of plan formulation and the economic cost of different approaches to gaining information can be assessed. Adaptive management means that particular experimental designs should be developed to address specific unknowns about restoration. Adaptive management means that monitoring of the effects of decisions should be conducted according to a carefully designed research protocol. Organizationally, for the Corps, adaptive management demands a closer link between its research and development capacity at its labs and the execution of individual projects. But, for the region, I am concerned that the open antipathy to information by some, and the view that we can just spend and wait, is very strong.

Finally, my emphasis has been on the public interest potential of well informed, negotiated, outcomes. However, if the interests who are party to the bargain are not the only ones affected by a decision--if beneficiaries do not bear the costs of an action--the potential for cost shifting to others will make the negotiated outcomes optimal for the parties to the negotiation, but may come at a cost to the society at large. My concern is for a new "restoration pork barrel," with resulting inefficiencies and inequities. But Federal dollars will be even more limited so this threat may be lessened.

However, consider, just as one example, the possibility that salmon restoration may require operational changes, not new construction. If there is a need to draw down pools on the Columbia and Snake reservoirs and grain slippers are damaged i) should there be compensation and for what? and ii) what should be the source of funds for the compensation? If a "bill" based on some arbitrary estimate of opportunity cost can simply be sent to Washington, there is that much less incentive for the regional interests to be absolutely sure that drawdown is the best solution. The recognition of this possibility, as well as a parochial concern for its own budget, should motivate the Corps to do the best job possible of opportunity cost analysis. It should motivate the highest levels of the Department of Army to push for up-front financing of all costs by BPA and the region. It should also promote innovative approaches for determining the validity of damage claims, placing the burden on parties claiming damage to demonstrate the extent of the harm and their rights to compensation for that harm. In summary:

- (1) There is much the Corps and its economists can and should do, other than placing money values on fish and their habitat.
- (2) The Army position to offer analytical assistance is sincere, but is often rejected because of past agency behavior or because analysis *per se* is unwelcomed by some interests in the region.
- (3) The Army contribution can be enhanced by attention to adaptive management principles, promotion of up-front financing rules for ESA costs, and creative compensation mechanisms.

Appendix F.

**INSTITUTIONAL PROBLEMS WITH THE ENDANGERED SPECIES ACT-
DIFFICULTIES OF COMPLIANCE AND IMPLEMENTATION**

**Work Group Summary
Mr. Dennis Barnett, South Atlantic Division**

**Portland, Oregon
10 March 1993**

**INSTITUTIONAL PROBLEMS
WITH THE ENDANGERED SPECIES ACT -
DIFFICULTIES OF COMPLIANCE AND IMPLEMENTATION**

**Work Group Summary
Mr. Dennis Barnett, South Atlantic Division**

I would like to introduce the USACE members of our work group and tell you where they are from:

Dr. John Bushman	Office of Environmental Policy, HQ
Douglas Latka	CEMRD
Owen Mason	CENPD
Matt Laws	CENPW
Beverley Getzen	CESPD
James Woody	CESAC

Carol Whiteside, California Resources Agency, also participated and made a great contribution to our deliberations.

We had a diverse work group with broad geographical distribution; represents about 120 years of experience in the environmental/water resource planning field.

Over the next few minutes, I will summarize the efforts of the group to address institutional aspects of compliance with ESA.

- * Identification of Issues
- * Formulation of recommended actions for consideration

Work group spent about two hours identifying issues related to our topic. ESA is by nature crisis-oriented:

- * Species in danger
- * Options limited
- * Emotions high - political polarization
- * Reactive/defensive protection emphasis

Issues emerged in four general areas:

Technological Challenges
Biological Uncertainty
Lack of Information
Tradeoff Analyses
Valuation

USACE Organization - Structure/Budgets/Programs
Mechanisms thru which COE responds to the ESA

USACE Policies - Values/Outlook/Perspective
Proactive vd. reactive mentality

Interagency Relationship
How do we interact to further the spirit of ESA

Technological Challenges emerged quickly - group acknowledged issues and their significance, but moved toward discussions in the other areas.

Let me identify key issues that emerged in these other areas:

USACE Organization

- * Fragmentation of Internal Structure
 - Matter of control (budgets, programs)
 - Interpretation of Authorities
- * Institutional biases foster project-by-project consultation rather than a more comprehensive approach
- * Institutional memory and organization not structured to facilitate shared learning - "lessons learned" and "success stories"

USACE Policies - "Proactive" vd. "Reactive" Management

- * "Dueling Endangered Species" - Focus on single species may be detrimental to another
- * No emphasis or mechanism to facilitate proactive and/or preemptive management
 - Promote recovery, not just maintain status quo
 - Preempt listing where possible

* USACE has responsibility to avoid jeopardy - must not abdicate that responsibility

- We, as agency, tend to downplay our stewardship capabilities, we are the "engineers," they (FWS/NMFS) are the "biologists"

- When we do not embrace our responsibilities, we are headed for trouble

* USACE is not generally open to regional, river wide/ basin wide, or ecosystem approach

* How do we effectively work with multiple agencies with jurisdiction over the same species?

Interagency Relationships

* FWS/NMFS have jurisdiction over same species - often face conflicting agendas and objectives

* What is the role of states with aggressive endangered species programs?

* How do we link NEPA, ESA, Fish and Wildlife Coordination Act, and other laws in agency interactions?

* Because of inherent nature of ESA, agencies tend to build artificial walls and hedges of self-protection rather than partnerships to address issues - How do we overcome?

RECOMMENDATIONS

After organizing into issue areas and recapping, we determined that the challenges we face are process-oriented.

For simplification, we focused on two general process areas:

* Those internal to USACE structure and operation

* Those which relate to our external relationships

Some recommendations may not be applicable in every case, but represent a desirable direction for USACE.

Internal USACE Process Actions

- * HQ should develop and implement a comprehensive policy and specific procedures for endangered species program.
- * Establish a clear focal point for environmental in HQ (non- HTRW).
- * Establish Corps-wide vehicle(s) for sharing information regarding "lessons learned" in ESA.
- * USACE, through its policies and procedures, should promote species protection and recovery on a systematic or regional basis where practical and prudent.

External Process Actions

- * USACE, F&WL Service, & NMFS should broaden the consultation process to actively include state, local, and Native American jurisdictional interests.
- * Develop preemptive strategies in partnership with resource agencies to avoid the necessity of listing new species.
- * Establish a partnered vision with FWS and NMFS for endangered species protection and management.
- * Pursue an aggressive personnel exchange program between FWS/NMFS and USACE to foster cooperation and understanding (externing).
- * Emphasize the scientific talents, expertise and experience of USACE environmental specialists to effectively address endangered species issues (i.e., we are more than an "engineering" agency).

After hearing these recommendations, I am sure that proactive/ preemptive approaches to endangered species automatically begs for tremendous resources above those now available.

Our group cited numerous examples with 20/20 hindsight where proactive invention and management would have been significantly less costly than our reactive response. In many cases we could have predicted (or did predict) we were headed for problems.

In closing, I would like to cite a particular example which demonstrates benefits of simple, proactive behavior. A small victory, but I like small victories - they tend to help people believe something larger might work.

- * Endangered right whales calve off the coast of South Georgia and North Florida.
- * For years we have complied (objective - do not hit a right whale).
 - Is it right, is it cost effective, is it reasonable?
 - We don't know.
 - It has been reactive.
- * In late 1992 a partnership developed - Navy, USACE, NMFS, Marine Mammal Commission, States of GA and FL, Sea World.
- * Studies of whale behavior in the area relative to shipping, dredging, etc., are underway.
- * Outputs - management recommendations
 - Cost effective compliance and coexistence is the basic goal, but seeking to benefit the whale and its habitat where possible.
- * The effort attracted media attention (CNN).
- * During media filming in the area, a Coast Guard cutter hit and killed a right whale calf. Because of the ongoing proactive effort of the partnership, USACE and other agencies receive very positive comments on their efforts.
- * Benefits
 - Proactive - doing the "right" thing
 - Partnership - common stakeholders from diverse backgrounds

- Cost reduction thru improved knowledge
- Positive image - environmental ethic
- Most important - Resource Protection and Improvement.
After all, that's why we are here in the first place.

I urge you (EAB) to help to keep us honest. We can say good things - go home and do nothing. Consider asking for a detailed report at a future meeting on what we have done and are doing to follow-up on the recommendations that evolve from this meeting. Accountability is a very effective stimulus to cause action and response.