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AMENDING THE ENDANGERED SPECIES ACT OF 1973

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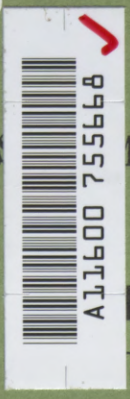

HEARINGS

BEFORE THE

SUBCOMMITTEE ON RESOURCE PROTECTION

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

S. 2899

A BILL TO AMEND THE ENDANGERED SPECIES ACT OF 1973 TO ESTABLISH AN ENDANGERED SPECIES INTERAGENCY COMMITTEE TO REVIEW CERTAIN ACTIONS TO DETERMINE WHETHER EXEMPTIONS FROM CERTAIN REQUIREMENTS OF THAT ACT SHOULD BE GRANTED FOR SUCH ACTIONS

APRIL 13 AND 14, 1978

SERIAL NO. 95–H60

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

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U.S. GOVERNMENT PRINTING OFFICE

29-319 O WASHINGTON : 1978

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CONTENTS

OPENING STATEMENTS

	Page
Culver, Hon. John C., U.S. Senator from the State of Iowa	1
Hodges, Hon. Kaneaster, U.S. Senator from the State of Arkansas	211

LIST OF WITNESSES

APRIL 13, 1978 (p. 1)

Bean, Michael, chairman, Wildlife Program, Environmental Defense Fund	73
Budd, Dan S., alternate commissioner for the State of Wyoming, Upper Colorado River Commission, Big Piney, Wyo	48
Garn, Hon. Jake, U.S. Senator from the State of Utah	44
Garrett, Thomas R., legislative coordinator, Defenders of Wildlife	80
Golten, Robert, Counsel, National Wildlife Federation	82
Prepared statement	196
Greenwalt, Lynn A., Director, Fish and Wildlife Service, Department of the Interior, accompanied by Keith Schreiner, Associate Director, Federal Assistance	16
Hart, C. W., Jr., Assistant to the Director, National Museum of Natural History, the Smithsonian Institution, accompanied by David Challinor, Assistant Secretary of Science, and Ross Simons, Administrative Assistant	38
Prepared statement	91
Jennings, Gerald, Jr., chairman, Endangered Species Committee, American Federation of Aviculture	70
Plater, Zygmunt, counsel, American Rivers Conservation Council	76
Prepared statement	178
Tucker, Samuel, Jr., manager of environmental affairs, Florida Power & Light Co., Miami, Fla., for Edison Electric Institute	64
Prepared statement	170
Widener, P. A. B., Jr., United Peregrine Society, accompanied by Lt. Col. Richard A. Graham (Ret.), and Carter Montgomery	67
Zagata, Michael, Washington representative, National Audubon Society	78
Prepared statement	182

APRIL 14, 1978 (p. 211)

Balcomb, Kenneth, counsel, Colorado River Water Conservation District, accompanied by Robert L. McCarty, McCarty & Noone, Washington, D.C	223
Prepared statement	265
Gehringer, Jack W., Deputy Director, National Marine Fisheries Service, accompanied by Joel D. McDonald, Office of General Counsel, NOAA; and Robert Gorrell, Office of Marine Mammals and Endangered Species, National Marine Fisheries Service	211
Helms, Hon. Jesse, U.S. Senator from the State of North Carolina	229
Kane, John, director, William Amer Co., Philadelphia, Pa	234
Mann, Carroll, president, Safari Club International, accompanied by C. Allen Foster, Managing Director of the American Hunters Educational and Legal Protection Fund	230
Prepared statement	271
Simpson, Donald C., Pacific Legal Foundation	248
Stevens, Christine, secretary, Society for Animal Protective Legislation	218
Prepared statement	254
Thompson, John, Georgia Pacific Corp	221
Prepared statement	258

ADDITIONAL MATERIAL

	Page
Cache River Basin, Arkansas—task force recommended plan	336
S. 2899, reprint of	3
Statements:	
Baker, Hon. Howard H., Jr., U.S. Senator from the State of Tennessee	252
Matsunaga, Hon. Spark, U.S. Senator from the State of Hawaii	325
Buchanan, Hon. John H., Jr., a Representative in Congress from the State of Alabama	327
Maury County, Tenn	338
City of:	
Lewisburg, Tenn	340
Shelbyville, Tenn	343
American Mining Congress	344
Chamber of Commerce of the United States	363
Garden Club of America	372
Goslin, Ival V., Executive Director, Upper Colorado River Basin Commission	149
Hall, John F., vice president, resource and environment, National Forest Products Association	258
Izaak Walton League of America	374
McCarty & Noone	379
McMahan, Clyde	382
Monroe County, City and County Bank of	370
Southeastern Legal Foundation, Inc	383
Tennessee-Tombigbee Waterway Development Authority	401
Upper Duck River Development Association	390
Waterways Journal	397
World Wildlife Fund	404

AMENDING THE ENDANGERED SPECIES ACT OF 1973

THURSDAY, APRIL 13, 1978

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON RESOURCE PROTECTION,
Washington, D.C.

The subcommittee met at 9:35 a.m., pursuant to call, in room 4200, Dirksen Senate Office Building, Hon. John C. Culver (chairman of the subcommittee) presiding.

Present: Senators Culver and Wallop.

OPENING STATEMENT OF HON. JOHN C. CULVER, U.S. SENATOR FROM THE STATE OF IOWA

Senator CULVER. The subcommittee will come to order.

I would like to welcome all of you this morning to this first of two days of hearings by the Subcommittee on Resource Protection on the Endangered Species Act of 1973. As you know, the authorization provided under section 15 of the act for its administration by the Secretaries of Interior and Commerce expires at the end of fiscal year 1978, and reauthorization legislation must be reported by the Committee on Environment and Public Works by May 15.

In addition to the reauthorization, there are other substantive issues connected with the act's administration that we will be discussing, most of which were brought to our attention last July during the subcommittee's oversight hearings on the act.

Perhaps the most important, or at least the most widely discussed of these is the Federal agency compliance requirement of section 7. This provision mandates each Federal agency to assure that actions which they undertake or assist do not adversely affect an endangered or threatened species or its critical habitat. One Federal project, the Tellico Dam in Tennessee, has been stopped as a result of this provision, and there are numerous others that potentially pose similar problems.

Accordingly, the subcommittee has a responsibility to address this situation. In order to provide a vehicle for these discussions, yesterday I introduced in the Senate, along with Chairman Jennings Randolph, Senator Howard Baker and other colleagues from the committee, S. 2899, an amendment to the 1973 act which creates a mechanism to resolve these kinds of conflicts.

The amendment creates a seven-member Endangered Species Interagency Board composed of the Secretaries of the Interior, Agriculture, the Army, Transportation, the Administrator of the Environmental Protection Agency, the Chairman of the Council on Environmental Quality, and the Secretary of the Smithsonian.

Under the amendment as it is tentatively drafted, when a Federal agency believes it has a conflict with the act which cannot be resolved through consultation with the Fish and Wildlife Service under provisions of section 7, it would petition the Board for relief. The Fish and Wildlife Service would have 30 days to respond to this petition. After reviewing the petition and providing an opportunity for a formal public hearing, the board would decide whether the project should be permitted to proceed as planned, be modified, or terminated.

In order to exempt an activity from the requirements of the Endangered Species Act, five of the seven agency heads that I mentioned before would have to determine, first, that there is no reasonable or prudent alternative to the project; second, that the benefit of completing the project clearly outweighs the benefits of conserving the species; and third, that the project is of national or regional significance. In addition, the Board must have the assurance that even under those circumstances, the project agency has taken all reasonable steps to mitigate damage to the species and its habitat that will be caused by completion of the project.

I would like to stress that the assumption behind this proposal is that the interagency consultation process developed by the Fish and Wildlife Service should remain very strong, and that it will, in the vast majority of cases, be successful in resolving these conflict. In those relatively few instances where consultation cannot resolve the problems, I, however, believe that this proposal will hopefully provide a reasonable mechanism of responsible balance.

Since the proposal was introduced only yesterday, I realize that some of our witnesses who are testifying today have not had sufficient time to review its provisions closely, if at all. Therefore, while I would certainly like to discuss with the witnesses today to the extent possible the concepts embodied in this proposal, the subcommittee will leave the hearing record open for a sufficient amount of time so that all individuals who wish to comment upon the amendment may do so.

In all likelihood, many of the witnesses we hear from today will not support this proposal. Some may believe that it adds little, if any, flexibility to the act. Others, no doubt, will prefer to have no amendment at all. And the subcommittee will properly consider all of these views.

But at the same time, I sincerely hope that those of you who will be testifying today and tomorrow will offer constructive comments as to how this measure can be improved. We need your help, and I hope you will provide it to us.

While we will no doubt have some differences, I hope that we all remember that we are working toward a common goal, and that is the preservation of our Nation's treasured, but endangered, fish and wildlife resources.

[The bill, S. 2899, follows:]

95TH CONGRESS
2D SESSION

S. 2899

IN THE SENATE OF THE UNITED STATES

APRIL 12 (legislative day, FEBRUARY 6), 1978

Mr. CULVER (for himself, and Mr. BAKER, Mr. RANDOLPH, Mr. WALLOP, Mr. GRAVEL, and Mr. HODGES) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To amend the Endangered Species Act of 1973 to establish an Endangered Species Interagency Committtee to review certain actions to determine whether exemptions from certain requirements of that Act should be granted for such actions.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Endangerd Species Act Amendments of 1978".

SEC. 2. Section 3 of the Endangered Species Act of 1973 (16 U.S.C. 1536) is amended—

(1) by inserting after paragraph (4) thereof the following new paragraph:

"(5) The term 'Federal agency' means any department, agency, or instrumentality of the United States.";

(2) by inserting after paragraph (7) thereof the following new paragraph:

"(8) The term 'irresolvable conflict' means, with respect to any action authorized, funded, or carried out by a Federal agency, a set of circumstances under which completion of such action would (A) jeopardize the continued existence of an endangerd or threatened species, or (B) result in the destruction of a critical habitat."; and

(3) by renumbering the paragraphs thereof, including any references thereto, as paragraphs (1) through (18), respectively.

SEC. 3. Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1536) is amended to read as follows:

"INTERAGENCY COOPERATION

"SEC. 7. (a) CONSULTATION.—The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened spe-

cies listed pursuant to section 4 of this Act. Each Federal agency shall insure that any action authorized, funded, or carried out by such agency does not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary as appropriate with the affected States, to be critical, unless such agency is granted an exemption for such action by the Committee pursuant to subsection (e) of this section.

"(b) (1) ESTABLISHMENT OF COMMITTEE.—There is established a committee to be known as the Endangered Species Committee (hereinafter in this section referred to as the 'Committee').

"(2) The Committee shall review any application submitted to it pursuant to subsection (d) of this section and determine in accordance with subsection (e) of this section whether or not to grant an exemption from the requirements of subsection (a) of this section for the action set forth in such application.

"(3) The Committee shall be composed of seven members as follows:

"(A) The Secretary of Agriculture.

"(B) The Secretary of the Army.

"(C) The Chairman of the Council on Environmental Quality.

"(D) The Administrator of the Environmental Protection Agency.

"(E) The Secretary of the Interior.

"(F) The Secretary of the Smithsonian Institution.

"(G) The Secretary of Transportation.

"(4) (A) Members of the Committee shall receive no additional pay on account of their service on the Committee.

"(B) While away from their homes or regular places of business in the performance of services for the Committee, members of the Committee shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5 of the United States Code.

"(5) (A) Except as provided in subparagraph (B) of this paragraph, five members of the Committee shall constitute a quorum for the transaction of any function of the Committee.

"(B) The Committee shall not grant any exemption from the requirements of subsection (a) of this section to the head of any Federal agency for any action authorized, funded, or carried out by such agency unless five members of the Committee vote to grant such exemption. The vote of the Committee members shall not be delegated to other persons.

"(C) The Secretary of the Interior shall be the Chairman of the Committee.

"(D) The Committee shall meet at the call of the Chairman of five of its members.

"(6) The Committee may appoint and fix the pay of such personnel as it deems desirable.

"(7) The staff of the Committee may be appointed without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and may be paid without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Service pay rates, except that no individual so appointed may receive pay in excess of the annual rate of basic pay in effect for grade GS–18 of the General Schedule.

"(8) The Committee may procure temporary and intermittent services to the same extent as is authorized by section 3109(b) of title 5 of the United States Code, but at rates for individuals not to exceed the daily equivalent of the annual rate of basic pay in effect for grade GS–18 of the General Schedule.

"(9) Upon request of the Committee, the head of any Federal agency is authorized to detail, on a reimbursable basis, any of the personnel of such agency to the Committee to assist it in carrying out its duties under this section.

"(10) (A) The Committee may for the purpose of carrying out its duties under this section hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence, as the Committee deems advisable.

"(B) When so authorized by the Committee, any member or agent of the Commission may take any action which the Committee is authorized to take by this paragraph.

"(C) Subject to the Privacy Act, the Committee may secure directly from any Federal agency information necessary to enable it to carry out its duties under this section. Upon request of the Chairman of the Committee, the head of such Federal agency shall furnish such information to the Committee.

"(D) The Committee may use the United States mails in the same manner and upon the same conditions as other Federal agencies.

"(E) The Administrator of General Services shall provide to the Committee on a reimbursable basis such administrative support services as the Committee may request.

"(11) In carrying out its duties under this section, the Committee may promulgate and amend such rules, regulations, and procedures, and issue and amend such orders as it deems necessary.

"(12) (A) The Committee shall have power to issue

subpenas requiring the attendance and testimony of witnesses and the production of any evidence that relates to any matter which is the subject of any review or determination by the Committee pursuant to subsection (e) of this section. Such attendance of witnesses and the production of evidence may be required from any place within the United States to any place of hearing within the United States.

"(B) If a person issued a subpena under subparagraph (A) of this paragraph refuses to obey such subpena or is guilty of contumacy, any court of the United States within the judicial district within which the hearing is conducted or within the judicial district within which such person is found or resides or transacts business may (upon application by the Committee) order such person to appear before the Committee to produce evidence or give testimony relating to the matter which is the subject of the review or determination by the Committee pursuant to subsection (e) of this section. Any failure to obey such order of the court may be punished by such court as a contempt thereof.

"(c) The subpena of the Committee shall be served in the manner provided for subpenas issued by a district court of the United States under the Federal Rules of Civil Procedure for the district courts of the United States.

"(D) All process of any court to which application may

be made under this section may be served in the judicial district wherein the person required to be served resides or may be found.

"(13) No person shall be excused from attending and testifying or from producing books, records, correspondence, documents, or other evidence in obedience to a subpena, on the ground that the testimony or evidence required of him may tend to incriminate him or subject him to a penalty for forfeiture; but no individual shall be prosecuted or subjected to any penalty or forfeiture for or on account of any transaction, matter, or thing concerning which he is compelled, after having claimed his privilege against self-incrimination, to testify or produce evidence, except that such individual so testifying shall not be exempt from prosecution and punishment for perjury committed in so testifying.

"(c) REGULATIONS.—Not later than ninety days after the date of enactment of this section, the Committee shall promulgate regulations which set forth the form and manner in which applications by the heads of Federal agencies for review of actions by such agencies shall be submitted to the Committee and the information to be contained in such applications. Such regulations shall require that information submitted in an application by the head of any Federal agency with respect to any action of such agency include, but not be limited to—

"(1) a description of the consultation process carried out pursuant to subsection (a) of this section between the head of such Federal agency and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service; and

"(2) a statement describing why such action cannot be altered or modified to conform with the requirements of subsection (a) of this section.

"(d) SUBMISSION OF APPLICATIONS.—(1) The head of any Federal agency may submit an application for review of any action of such agency to the Committee if, in the opinion of the head of such agency, such agency has complied with the requirements of subsection (a) of this section and that an irresolvable conflict exists with respect to such action. Such application for review shall be submitted in accordance with the regulations promulgated by the Committee under subsection (c) of this section.

(2) The Director of the Fish and Wildlife Service shall prepare and submit to the Committee within thirty days of any submission made under paragraph (1) of this subsection his comments concerning such submission.

"(e) (1) REVIEW AND DETERMINATION.—Not later than one hundred and eighty days after the Committee receives the application and comments submitted pursuant

to subsection (d) of this section, the Committee shall review such application and comments and—

"(A) determine, with respect to the action which is the subject of such application, whether or not—

"(i) the requirements of the consultation process described in subsection (a) of this section have been met; and

"(ii) an irresolvable conflict exists; and

"(B) if it makes both determinations in clauses (A) (i) and (ii), determine after notice and opportunity for public hearing whether or not to grant an exemption from the requirements of subsection (a) of this section to the head of such Federal agency for such action.

"(2) The Committee may only grant an exemption for any action under subsection (e) of this section if it determines that—

"(A) there is no reasonable and prudent alternative to such action; and

"(B) the project is of national or regional significance; and

"(C) the benefits of such action clearly outweigh the benefits of conserving the species or its critical habitat, and that such action is in the public interest.

"(f) NATIONAL ENVIRONMENTAL POLICY ACT.—No

final determination of the Committee under subsection (e) of this section shall be considered a major Federal action under the terms of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

"(g) MITIGATION.—In those instances where the Committee determines that an exception is warranted under subsection (e) of this section the Committee must assure that the action approved for such exemption incorporates all reasonable mitigation measures deemed necessary by the Secretary to minimize adverse impacts upon the affected endangered or threatened species or its critical habitat including but not limited to live propagation, transplantation, and habitat acquisition and improvement. The Federal agency or department receiving such exemption should include the costs of such mitigation measures within the overall costs of continuing the proposed action and the Federal agency or department shall transfer to the United States Fish and Wildlife Service out of appropriations or other funds, such money as may be necessary to implement the conservation programs or mitigation measures required by this section for endangered or threatened species or their critical habitats.

"(h) EXCEPTION ON TAKING.—Notwithstanding sections 4(d) and 9(a) of this Act or any regulations promulgated pursuant to such sections, any action for which an exemption is granted under subsection (e) of this section

29-319 O - 78 - 2

shall not be considered a taking of any endangered or threatened species with respect to any activity which is necessary to carry out such action.

"(i) AUTHORIZATION.—There is authorized to be appropriated to carry out this section not to exceed $2,500,000 for fiscal year 1979, not to exceed $2,500,000 for fiscal year 1980, and not to exceed $2,500,000 for fiscal year 1981.".

SEC. 4. Section 15 of the Endangered Species Act of 1973 (16 U.S.C. 1542) is amended to read as follows:

"Except as authorized in sections 6 and 7 of this Act, there are authorized to be appropriated—

"(1) not to exceed $25,000,000 for the fiscal year ending September 30, 1977, and the fiscal year ending September 30, 1978, not to exceed $23,000,000 for the fiscal year ending September 30, 1979, not to exceed $25,000,000 for the fiscal year ending September 30, 1980, and not to exceed $27,000,000 for the fiscal year ending September 30, 1981, to enable the Department of the Interior to carry out such functions and responsibilities as it may have been given under this Act; and

"(2) not to exceed $5,000,000 for the fiscal year ending September 30, 1977, and the fiscal year ending September 30, 1978, not to exceed $2,500,000 for the fiscal year ending September 30, 1979, not to exceed

$3,000,000 for the fiscal year ending September 30, 1980, and not to exceed $3,500,000 for the fiscal year ending September 30, 1981, to enable the Department of Commerce to carry out such functions and responsibilities as it may have been given under this Act.".

Senator CULVER. I would like to welcome our first witness, Mr. Lynn Greenwalt, who is the Director of the Fish and Wildlife Service. It is a pleasure to have you here. You may proceed.

STATEMENT OF LYNN A. GREENWALT, DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY KEITH SCHREINER, ASSOCIATE DIRECTOR, FEDERAL ASSISTANCE

Mr. GREENWALT. Thank you, Mr. Chairman. As always, it is a pleasure to appear before this committee.

Before I begin my formal statement, Mr. Chairman, I would like to introduce to the committee Mr. Keith Schreiner, who is Associate Director for Federal Assistance.

Mr. Chairman, section 15(1) of the 1973 act authorizes appropriations to the Department of the Interior to carry out functions and responsibilities under the act other than land acquisition and grant-in-aid to the States. Our proposed amendment would extend the authorization at an amount not to exceed $17 million for fiscal year 1979 and authorize such sums as are necessary for fiscal year 1980.

Our suggested authorization level for section 15(1) for fiscal year 1979 is consistent with the administration's budget request of $16.4 million. It will essentially extend current funding levels and allow for a $3.9 million increase to accommodate the acceleration of the program to protect endangered and threatened species on Federal lands, as directed by the President.

I believe that in the 4 years since Congress enacted this historic conservation legislation, the Fish and Wildlife Service has developed a balanced program of listing, protection and recovery efforts. Significant advances have been made in enlisting international, State and private cooperation. Of course, limited resources have necessitated the establishment of priorities.

Endangered native species receive priority over foreign species, full species receive priority over subspecies; and the more endangered a species is, the greater the effort to provide for its conservation. Yet, the Service has remained firmly committee to the ideal, envisioned by the 93d Congress when they passed the legislation, of protecting all species of plants and animals whose continued existence is in jeopardy.

Man's activities threaten a growing number of species with extinction, and it appears that the number has increased at a rate paralleling human population growth. As you know, Mr. Chairman, concern about rapidly deteriorating fish, wildlife and plant habitat, overexploitation of plants and animals and the increasing number of species threatened with extinction resulted in a series of legislative actions culminating in enactment of the Endangered Species Act, signed into law December 28, 1973. The primary purpose of the endangered species program, as directed by the 1973 Act, is to provide a means whereby endangered and threatened species may be conserved.

The many forms of life on this small planet represent millions of years of evolution and diversification. Different species have established intricate interdependent relationships which can be of critical importance to their survival.

The act recognized, and recent experience has confirmed, that it is only through the ability to provide protection to the full spectrum of plant and animal life that we are able to afford protection to any particular species. In other words, if we are to preserve species such as the peregrine falcon, the bald eagle and the grizzly bear, we must also preserve the network of life upon which they depend.

Unfortunately, our growing appreciation for the potential value of all species has coincided with their accelerating extinction rate. Widespread disruption of habitats and over exploitation are the major causes of this problem. However, many endangerments and extinctions can be prevented by the protection of a relatively small area or by the careful development of land and water-use projects.

The President has promised the American public that a reasonable effort to do exactly this will be made at the Federal level. His environmental message of May 23, 1977, requested acceleration of the Federal program to insure species' protection and to resolve any conflicts between protection and other resource uses.

In your letter inviting us to testify today, you asked that we specifically address activities related to section 7 of the act. As you know from the July 1977 hearings on the endangered species program, the administration has made the implementation of section 7 a priority. President Carter, in his environmental message, stated, and I quote:

> To hasten the protection of threatened and endangered species, I am directing the Secretaries of Commerce and Interior to coordinate a governmentwide effort, as required by the Endangered Species Act of 1973, to identify all habitat under Federal jurisdiction or control that is critical to the survival and recovery of these species. The purpose of this program is to avoid the possibility that such habitats will be identified too late to affect Federal project planning. Major projects now under way that are found to pose a serious threat to endangered species should be assessed on a case-by-case basis.

As a supplement to that statement, the President sent a special message to the Secretaries of the Interior, Agriculture, and Defense and the Chairman of the Tennessee Valley Authority directing them to identify lands under their jurisdiction which appear to be critical habitat. This information is then to be submitted to the Secretary of the Interior for a determination of critical habitat if such a determination is justified. The Secretaries of the Interior and Commerce were specifically directed to develop an expedient schedule for implementing this process and to provide guidance and coordination to assure compliance.

The Fish and Wildlife Service has prepared guidelines and a timetable for implementing the President's directive. This document, which was presented to appropriate landmanaging agencies for review in December, establishes a format for critical habitat submissions, including the description maps and justifications necessary for the area in question and identification of environmental impacts for compliance with the National Environmental Policy Act.

The timetable calls for completion of the surveys by January 1980. The plan places the highest priority on identifying the habitat of species facing the greatest threats and will require designation of critical habitat for 35 species in fiscal year 1978, and 77 species in fiscal year 1979. To date, critical habitat determinations

have been made for 24 species and proposals have been published in the Federal Register for 41 more. Completion of this survey identifying critical habitat during fiscal year 1980 will substantially lessen the possibility of future conflicts between development projects on Federal lands and the need for habitat preservation.

Final regulations have been published prescribing the consultation process to assist Federal agencies in complying with section 7 of the act. This rulemaking requires Federal agencies to consult with the Service if their activities or programs may affect listed species of their habitats. After such consultation, it is the responsibility of the involved agency to decide whether or not to proceed with the proposed activity in light of its section 7 obligations.

The decision to require rather than recommend consultation was made to promote conformance with recent Federal court decisions setting forth the policy that this interchange is requisite to administration of the law by the Secretaries of the Interior and Commerce.

Under the new regulations, when Fish and Wildlife Service officials receive a request for consultation from another Federal agency, it is required that they evaluate an activity's impact within 60 days. At that time, the Service can determine that the activity will have no impact on listed species, that it will actually benefit the species, or that it is likely to have a harmful effect. The Service can also request that further studies be undertaken in order for it to render its final biological opinion.

The new rulemaking recognizes that general consultation procedures must be sufficiently flexible to accommodate the myriad activities that are authorized, funded, or carried out by the Federal Government. Accordingly, a new section was written into the procedures providing for the drafting of joint counterpart regulations by Federal agencies, with assistance from the Service and the National Marine Fisheries Service, that are tailored to the needs of individual agencies.

In fiscal year 1977, when consultation was discretionary with the Federal development agencies, over 4,500 were conducted by the Fish and Wildlife Service. When the full impact of this rulemaking is felt in fiscal year 1979, we expect that requests for consultations will exceed 20,000.

Conflicts can and are being resolved through this administrative process. Section 7 guidelines and regulations provide adequate mechanisms to assist Federal agencies in carrying out their actions in ways which are consistent with the needs of endangered and threatened species.

Section 7 is somewhat analogous to the National Environmental Policy Act. For at least 3 or 4 years after passage of NEPA, a number of projects which were initiated prior to that act were confronted with compliance problems and numerous court actions directing compliance.

Recently, however, Federal agencies have included NEPA compliance as an integral part of their planning processes, and conflicts and court actions have become few in numbers. There is no reason to believe that the Endangered Species Act will be any different. Since passage of the act over 4 years ago, there have been only three Federal projects impacted by court actions under

section 7, and only one of these has resulted in what may be considered an impasse. I believe that this indicates that implementation of section 7 will not always have a profound impact that many anticipate.

Mr. Chairman, a legislative exemption from section 7 compliance would, at this point in implementation of the act, set an extremely undesirable precedent. It would undermine present and future good-faith consultation efforts. We would anticipate great reluctance by development agencies to enter into meaningful consultation if there is any possibility of an exemption. Sponsors of projects which have suitable alternatives which would minimize or eliminate adverse impacts might be reluctant to implement even minor modifications if there was a possibility of achieving an exemption.

Generally, Mr. Chairman, Federal development agencies are actively seeking compliance with the act, particularly during the planning stages and often during construction. Alternatives are usually available. The Nation's lands and waters have multiple values and multiple uses. A balance between development and preservation can usually be achieved. I therefore urge you to give the act and the existing administrative processes a longer opportunity to work.

Mr. Chairman, in your letter inviting us to testify today, you asked us to address two other specific issues: The need to provide greater statutory protection for endangered plants and restrictions placed on the exchange of endangered species among zoos, museums, and others.

With regard to the first issue, I do not believe any additional authority to protect plants is necessary. The present restrictions on importation and interstate commerce in endangered plants, along with applicability of section 7 to plants and the availability of funds under the land and water conservation fund to acquire land to protect plant species, all provide a significant degree of protection for endangered plants. We recommend that the committee delay consideration of any additional statutory protection for plants until more plants are listed and we have had time to test the sufficiency of this level of protection.

The committee, however, may wish to consider making financial assistance to States provided for under section 6 of the act available for the conservation of endangered and threatened plant species. If it is desired, Mr. Chairman, my staff will be happy to cooperate with the committee staff on this matter.

With regard to the exchange of captive animals, the Service recognizes that strict application of the prohibitions relating to endangered species at times creates obstacles to the effective propagation of captive wildlife, a result clearly contrary to the spirit of the act. In response to this, the Service is considering two alternatives that would relax the restrictions on exchanges of captive animals.

The first alternative would be to list certain otherwise endangered species as threatened, with regulations that would allow persons holding or propagating these animals more flexibility and greater ease in transferring breeding and propagation stock. The basis for treating captive populations as separate "species" from the wild populations is that they are genetically isolated and

through transfer of stock, the captive animals are allowed to interbreed. Thus, they can be considered to meet the definition of "species" in the act.

Treating captive populations as separate "species" would also allow for the treatment of captive animals under the similarity-of-appearance provision of the act, the second alternative we are considering. Under the act and the regulations, the permit requirements for similarity-of-appearance species are only those necessary to facilitate enforcement and insure the conservation of wild populations of endangered or threatened species.

Both of these alternatives differ from the present regulations on captive self-sustaining populations in that the captive populations need not have reached a self-sustaining level, and it is not restricted to just foreign species.

A notice outlining these alternatives is due for publication in the Federal Register either today or tomorrow. A copy of this notice has been made available to you. I believe implementation of one of these alternatives will substantially facilitate the exchange of animals between zoos, museums, and others.

There are thousands of endangered and threatened animal and plant species throughout the world. While we cannot realistically expect to recover all of them, over 650 of those with the greatest need have been listed by the United States, including 204 United States species. We hope to provide protection to at least an additional 600 priority species by the end of fiscal year 1980.

An authorization of such sums as may be necessary in fiscal year 1980 will give us the flexibility to expand the endangered species program where necessary and appropriate within the constraints of the national budget.

The authorization of appropriations for section 15(1) of the Endangered Species Act expires on September 30, 1978, so I respectfully urge you to give timely consideration to the proposal presented today. We must continue efforts to regain the strength of life on this globe, for ourselves and for future generations.

This concludes my prepared statement, Mr. Chairman. As always, I would be pleased to answer any questions you might have.

[The Federal Register notice, previously referred to follows:]

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

Captive Wildlife Regulation

AGENCY: Fish and Wildlife Service

ACTION: Notice

SUMMARY: It is the policy of the Fish and Wildlife Service to periodically review the regulations published under the Endangered Species Act of 1973. Numerous comments from the public in the past few years indicate that equal application of provisions of the Act to both captive and wild populations of Endangered and Threatened species has interfered with propagation of captive populations of such species. Accordingly, the Service is considering a change in its regulations that would eliminate unnecessary permit requirements for activities involving certain captive species. Controls would be retained to the extent needed to protect wild populations. The Service seeks public comment on the approach outlined in this notice, which could lead to a proposed rulemaking.

DATES: Comments should be submitted to the Director within 60 days. This time limit expires on _____, 1978.

ADDRESSES: Comments should be sent to the Director, U.S. Fish and Wildlife Service, Federal Wildlife Permit Office, Washington, D.C. 20240.

FOR FURTHER INFORMATION CONTACT: Mr. Richard M. Parsons, Chief, Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240, (202)254-8100.

SUPPLEMENTARY INFORMATION:

BACKGROUND

The Endangered Species Act of 1973, 16 U.S.C. §§1531-1543, prohibits certain activities with respect to wildlife listed as Endangered. The prohibited activities include import into, and export from the United States; taking any such species in this country, its territorial sea or on the high seas, possession, sale or transport of unlawfully taken wildlife, and interstate or foreign commerce in the course of a commercial activity. The pertinent exceptions allowed by the Act are for (1) wildlife held in captivity or in a controlled environment on December 28, 1973, (the effective date of the Act), except for wildlife held in the course of a commercial activity; and exception by permit for (2) scientific purposes; (3) enhancement of the propagation or survival of the species; and (4) economic hardship.

In addition to treating Endangered Species, the Act established the category of Threatened species for those that are likely to become Endangered. It was left to the Secretary of the Interior or Commerce to establish the prohibitions and exceptions needed to conserve Threatened species. However, the Act states that the Secretary may by regulation prohibit the same activities for any Threatened species as are prohibited for Endangered ones.

The purposes of the Act are to provide a means for conserving the ecosystems upon which Endangered and Threatened species depend, to provide a conservation program for such species, and to take appropriate steps to achieve the purposes of certain wildlife treaties and conventions. The Act does not specifically provide for special treatment of captive species as opposed to species in the wild. In fact, the exception it provides for pre-Act individuals, the first exception mentioned above, clearly indicates that the prohibitions apply to captive post-Act individuals. The Service considers the purpose of the Act to be best served by conserving species in the wild along with their ecosystems. Populations of species in captivity are, in large degree, removed from their natural ecosystems and have a role in survival of the species only to the extent that they maintain genetic integrity and offer the potential of restocking natural ecosystems where the species has become depleted or no longer occurs.

The Service recognizes that strict application of the prohibitions creates obstacles to the effective propagation of captive wildlife. The response has been to treat the captive populations of certain otherwise Endangered Species as Threatened, which allows persons holding and propagating these animals more flexibility and greater ease in transferring breeding and propagation stock to each other. This treatment, provided in §§17.7 and 17.33 of Title 50 CFR, is restricted to species having captive self-sustaining populations (CSSP's) in the United States. Only eleven species of mammals and birds have been determined to have CSSP's at this time, although

other species are being considered as potential candidates.

The basis for treating CSSP's as separate "species" from the wild populations is that they are genetically isolated from such populations and through transfer of stock the captive animals are allowed to interbreed. Thus, they can be considered to meet the definition of "species" in the Act:

> The term "species" includes any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that inter-breed when mature. (16 U.S.C. 1532(11).

There is a precedent for determining some populations of a given biological species to be Endangered and others to be Threatened. In the case of the American alligator, for example, wild animals in certain parts of the United States are listed in one or the other category, and those in the wild in parts of Louisiana and in captivity everywhere are listed as Threatened under the similarity-of-appearance provision of the Act. This arrangement was necessary because a single listing could not recognize regional variation in alligator abundance and could not provide the flexibility to appropriately regulate or conserve all alligator populations.

The Service has found it difficult to administer the Act with respect to captive wildlife so that both the letter and spirit of the law are observed. Most of the zoos and wildlife breeders in this country have stated that strict application of the Act to their operations has interfered with the propagation of Endangered and Threatened species. The need to obtain a permit has delayed transfer of surplus animals or breeding stock between

institutions. It also has deterred some persons from acquiring such animals because they lacked enough prior experience with similar animals to qualify for a permit. Another complaint is that the prohibition against interstate commerce greatly reduces the market among breeders for Endangered and Threatened species and there is not enough profit to continue their propagation. These are the major problems that have led the Service to the present review of its regulations.

ALTERNATIVES

The Service seeks to improve its regulations in order to protect wild populations of Endangered and Threatened species while interfering as little as possible with their captive propagation. The purpose of this notice is to solicit comments on the alternative approaches, which will be considered if proposed regulations are drafted.

1. Determination of status. The provisions of the Act limit the scope of what zoos and wildlife breeders (and the Service) can do to eliminate obstacles to captive propagation of species classified as Endangered. The Threatened classification, however, allows for whatever regulations are deemed necessary and advisable for conservation. Therefore, the first step is to consider whether certain captive populations may constitute separate "species" (see 16 U.S.C. 1532(11)) and whether those species may be reclassified to the threatened category or taken off the list altogether.

The reclassification or deletion of captive populations would have to be in accordance with Section 4(a)(1) of the Act:

> The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors:
> (1) the present or threatened destruction, modification, or curtailment of its habitat or range;
> (2) over-utilization for commercial, sporting, scientific, or educational purposes;
> (3) disease or predation;
> (4) the inadequacy of existing regulatory mechanisms; or
> (5) other natural or manmade factors affecting its continued existence. (16 U.S.C. 1533(a)(1)).

This determination would have to be made for each of the species in question.

There can be separate rules for captive Threatened species differing from the rules in §§17.31 and 17.32 for Threatened species in general. If the captive populations were deleted from the list entirely, they would not be subject to the Act. This could make it impossible to enforce the Act for wild populations of Endangered and Threatened species, which must be protected from uncontrolled taking.

If either reclassification or deletion is undertaken, it should only include those species in which wild populations are sufficiently protected. Otherwise, such action could interfere with the effectiveness of the Act. One possibility is to limit the action to certain captive populations in the United States, since the Service cannot adequately ensure that captive wildlife in other countries was not taken from Endangered or Threatened wild populations. A further possibility is to limit the action to certain exotic species, on the basis that wild populations of species native to this country are more accessible to taking and are not protected by import

controls. In any case, the Service must ensure that the action will not jeopardize the continued existence of any Endangered or Threatened species, in accordance with Section 7 of the Act.

Many, but not all, species listed as Endangered or Threatened under the Act are listed also in Appendices I and II to the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This means that such species are subject to import, export and re-export controls of both the Act and the Convention. However, the Convention cannot always be relied upon to provide controls on international shipment of captive wildlife to make up for any relaxation in Endangered and Threatened species regulations. There are two reasons for this. First, changes in the list of species in appendices to the Convention are made by international agreement. They can occur whether or not the United States agrees, since it is only one of 44 countries now party to the Convention. Second, the Service has had reasons to question the validity of documents issued in certain other countries to meet Convention requirements.

2. Special rules. If captive populations of certain otherwise Endangered or Threatened species are separately listed as Threatened captive species, it is possible to have special rules governing activities involving them. The basic intent of these rules would be to conserve both wild and captive populations. For example, the rules might require registration or marking of captive individuals in a supervised, approved manner so that they can be distinguished with reasonable assurance from species taken from the wild. The

rules might also require persons holding these species in captivity to keep records and to report transactions to the Service.

An important aspect of special rules would be to reduce or eliminate permit requirements for many of the normal practices in captive species propagation. While it might be necessary to prohibit certain activities, and authorize exceptions by permit within certain limits, other activities could be free from prohibitions. It might be necessary to prohibit import, export and taking for certain purposes that are inconsistent with purposes of the Act. "Take" is defined in the Act to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct." The prohibition against taking might also include possession and other activities (selling, delivering, carrying, transporting or shipping) with unlawfully taken wildlife. The purposes for which taking and other activities are allowed without restriction would be similar to those for which the current Threatened species permits are issued under §17.32: scientific purposes, the enhancement of propagation or survival, zoological exhibition and educational purposes.

Permits might still be required for activities that could possibly harm wild populations: import, export and taking for any purpose other than those named above if it is consistent with the purposes of the Act.

3. Similarity of Appearance. Another alternative that would

be available in some instances would be treatment of a captive population constituting a separate "species" as Endangered or Threatened under the Act's similarity of appearance provision, 16 U.S.C. 1533(e). This would involve a determination that the captive population was no longer Endangered or Threatened biologically, but should still be treated as such because the substantial difficulty enforcement personnel would have in attempting to differentiate between it and the wild population, due to the close resemblance in appearance, would constitute an additional threat to the wild population. It would also have to be found that treating the captive population as Endangered or Threatened would substantially facilitate enforcement of the Act and further its policies.

Under 50 CFR 17.50-17.51, any such captive "similarity-of-appearance species" would be listed as Endangered or Threatened and would be subject to the same prohibitions applicable to a species so listed for biological reasons. However, under the Act and 50 C.F.R. 17.52, the permit requirements for similarity-of-appearance species are only those necessary to facilitate enforcement and insure the conservation of wild populations and other truly Endangered or Threatened species (16 U.S.C. 1533(e)). Thus, the application requirements and issuance criteria for similarity-of-appearance permits are less detailed than those for other permits. Permits might be issued to cover any number of otherwise prohibited activities over a specified period of time. However, the control of import, export and re-export needed to protect wild populations might require a separate permit under this same §17.52 for each transaction of these types.

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The Service does not expect to limit its consideration to the alternatives described in this notice. It seeks comments on these and other approaches that should be considered in revising the regulations to make them more effective in achieving the purposes of the Act with respect to captive wildlife.

This document was prepared by Dr. Richard L. Jachowski, Federal Wildlife Permit Office.

NOTE: The Department of the Interior has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11949 and OMB Circular A-107.

Dated: APR 11 1978

Acting Director,
U.S. Fish and Wildlife Service

Senator CULVER. Thank you very much, Mr. Greenwalt.

In your view, are Federal departments and agencies complying with the consultation requirements of section 7?

Mr. GREENWALT. Mr. Chairman, generally speaking, yes, they are. There have been some exceptions, but as a general rule, we find very good compliance with section 7.

Senator CULVER. In those situations where you have something less than satisfactory consultation, what recourse do you now possess by way of remedy, and do you think those are sufficient? If not, what additional authorities do you think might be desirable?

Mr. GREENWALT. Mr. Chairman, the resource presently open to us is to indicate in writing to the agency that is reluctant to consult that consultation is necessary, and that the application of section 7 is obligatory. In the circumstance in which an agency thus advised of its obligation, does not consult and elects to carry out an action which will be in violation of section 7, our experience thus far has been that the provision for citizen suit invariably presents itself. There is a matter of litigation developed that affirms the agency's obligation to consult.

In short, the citizen suit process triggers an action which, in my judgment, stimulates the agency to consult. As a practical matter, we have had very little problem with seeking and getting consultation.

Senator CULVER. So you don't see any need for additional resources?

Mr. GREENWALT. No; I do not.

Senator CULVER. In your statement I notice that you mentioned that after consultation, it is the responsibility, as I understand it, of the Federal agency to decide whether or not to proceed with the proposed activity in light of its section 7 obligations.

Mr. GREENWALT. That is correct.

Senator CULVER. In those instances where you have identified a potential adverse impact upon the critical habitat, how have Federal agencies generally responsed?

Mr. GREENWALT. In most cases where we clearly point out where they may be likely to adversely modify or destroy the critical habitat thus jeopardizing the species, the agency will generally seek ways to modify the project—not in all cases, however. While the agency retains the authority to make its own decision about what it will do, it does so at the risk of citizen suit. If the agency, as a practical matter, makes a decision clearly in opposition to the formal biological opinion rendered by the Fish and Wildlife Service, its position in court is likely to be weakened. There is on record that the action contemplated by the agency is likely to jeopardize the continued existence of a species or adversely modify its critical habitat.

The Fish and Wildlife Service, on the other hand, can provide a biological opinion which in many cases indicates there is no likelihood of jeopardy or adverse modification.

Senator CULVER. You work for modification. You rarely encouter situations where they proceed with a program without modification?

Mr. GREENWALT. Not very many cases. The one that comes to mind is the Tellico situation.

Senator CULVER. Now, Mr. Greenwalt, I mentioned in my opening statement that yesterday I introduced, with a number of cosponsors from the full committee, a bill to provide a mechanism for arbitrating what appears to be an increasing number of apparently irresolvable conflicts that have developed, or are imminent between the act and Federal projects. While I realize the administration has not taken an official position on this amendment, I would appreciate it if you could give me your personal reaction to this proposal.

Mr. GREENWALT. Yes; I would, again recognizing that the administration has not had a chance to react to this. Let me speak generally and philosophically toward the aim of your proposed legislation.

I think the mechanism for resolving otherwise irresolvable confrontations is basically a rather practical one. However, one must consider that the bill contemplates the assembly of the Secretaries, which presents some logistical problem. I might say, from a personal point of view, if the Secretaries themselves, officers of that rank, can be assembled to make these deliberations in a forum that is clearly a public one the decisions are likely to be very good. These men will be operating with the full understanding of the consequences of their decisions, which I think, fundamentally, is what we are after in terms of a degree of biological and national equity with endangered species.

The kind of decisions that will confront us are likely to be ones that relate to whether or not to eliminate a species, which is a thing I cannot take frivolously. This is a very serious consideration, and it should be done with a full understanding of what this implies and means.

I think a mechanism that does assure that everyone involved clearly understands what is at stake and what the implications and possible consequences are is the only practical, equitable, rationale way to confront one of these kinds of decisions.

Again, I say a species, a rare and indeed unique biological entity, is a valuable thing. It should not be cast away without a good deal of forethought.

One weakness which may be inherent in the bill, but which I think is not intended by what you said in your opening statement, is that consultation must be serious, in good faith, and there must be clearly an irresolvable conflict. It should not be carried out in a frivolous manner with the expectation that the exemption can be applied with ease or without much difficulty.

In short, what you said earlier, Mr. Chairman, I think is very much to the point. Any consultation process preliminary to a discussion by the board or commission must be in great detail and in absolute good faith on the part of both parties to attempt to resolve the conflict.

Senator CULVER. As you noted, Mr. Greenwalt, in your statement, we have had a significant number of consultations under this law to date.

You also indicated that we can anticipate two trends. First we will be going into a period where we will have increasing numbers of consultations and potential conflicts as we become more sophisticated and more accustomed to vigorous implementation of objec-

tives of this act. At the same time, hopefully, the trend will be toward diminishment of more difficult confrontations as that process becomes more institutionalized in an anticipatory rather than reactive manner.

But, nevertheless, it is apparent to me, that this Tellico Dam situation is really the tip of the iceberg. We are going to have a proliferation of conflicts certainly in the near term if the act is vigorously implemented, and this is another problem. To what extent will the present political climate have a chilling effect for your agency?

You mentioned getting the Secretaries of Commerce and Interior personally involved, and so on. I think that is most important. But, you know, one of the things that we have to contemplate when we look at an amendment proposed like this is the ability of the Congress of this committee, for example, to come in here and vote up or down on "the merits" of whether or not we go forward or don't go forward with a project? Can we even get a quorum, much less an informed one on this issue? Is this body designed in its historical constitutional mission to make these kind of ad hoc, discrete judgments all over the geographic landscape of this country?

I believe that we would be embroiled in something that would be at a minimum a full-time job, at least in terms of the nature of the political petitioning that we would be subjected to, and the intense lobbying pressures on specialized, ad hoc, episodic, isolated instances of this character. We don't have the competence to make those judgments in a responsible and enlightened way, at least this member doesn't.

Mr. GREENWALT. I think that is why it is vitally important that the consultation process be reinforced in some fashion. So the deliberations of the board or commission on such things does not find itself confronted with frivolous problems.

Senator CULVER. As you note I am concerned that this amendment in no ways undermine the very valuable, and I think increasingly important and, hopefully, successful experience you are having with good-faith consultation efforts. I think it is important that the Federal agencies be sensitive to the fact we are serious about this.

Now, in this amendment, I have required that an exemption cannot be considered by the interagency board unless it determines, first, that the requirements of the section 7 consultation process have been met, and second, that an irresolvable conflict does indeed exist. In your view, would this language be sufficient to prevent less than good-faith negotiations on the part of the project agency? Do you have any suggestions to offer as to other language we might add to make the consultation process stronger and more assured?

Mr. GREENWALT. It might be valuable to spell out a set of standards by which one can determine that the consultation process has, in fact, been carried on in good faith. I am not prepared at this moment to suggest what they might be. It seems to me there might be some little checklist of those things that have had to transpire in order for the consultation process to be followed.

Senator CULVER. Would you be good enough to give that some reflection?

Mr. GREENWALT. Certainly.

[Mr. Greenwalt supplied the following comment:]

This aspect will be considered in development of the administration's position on the legislation.

Senator CULVER. Now, some have suggested rather than providing for a type of balancing mechanism, such as that implicit in this amendment we are considering here, that we should limit the type and number of species protected under the act but that these be given full and absolute protection. What is your reaction to this proposal?

Mr. GREENWALT. Mr. Chairman, I think this has very little practicality from the biological sense, because, as I suggested in my testimony, the interdependency of species is well recognized, although the details of that interdependency is not fully understood in all cases. I think to conclude that a certain class or level of species can be considered for treatment and no other defies the basic ecological idea that species are fully interdependent, and that it would propel the Endangered Species Act toward failure in the final analysis because we could not assure the protection of those species which were identified.

Mr. Chairman, I think it is impractical as a biological matter to consider this point. The act, as it was originated in 1973, speaks to the issue of recognizing the real role played by ecosystems in the protection of the individual species. I think it would be most difficult, if not totally impossible, to biologically make a separation.

Senator CULVER. It has also been suggested that the decision to exempt a project be made by the Secretary of Interior. What is your reaction?

Mr. GREENWALT. That is always possible. I wouldn't envy the individual that would have to make such a decision. It seems to me, theoretically, the President could make certain of those decisions, for example, by insisting on additional consultation or additional efforts to solve the problem.

Senator CULVER. But you think this Board would be suitable?

Mr. GREENWALT. Yes.

Senator CULVER. In your statement you mentioned the administration has requested a $4 million increase in fiscal year 1970 for this endangered species program, which is to accommodate this accelerated program for critical habitat designation, I gather.

Mr. GREENWALT. Yes.

Senator CULVER. Now, the listing of species, of course, is just as important in avoiding conflicts between Federal projects and the act as the identification and designation of critical habitat, is it not?

Mr. GREENWALT. Yes, sir, definitely.

Senator CULVER. Is there a need to step up this or other aspects of the endangered species program in fiscal year 1979, and would any more funds help avoid the kind of problems here that are concerning us?

Mr. GREENWALT. It would obviously help because early identification of species or critical habitats is the way to help avoid conflicts

that accrue after a species has been discovered in the presence of a project. Obviously, Mr. Chairman, additional funds would be useful in this connection.

The Service, and the Department, operating within the constraints of the budget, have developed an approach by which we will be able to do a credible job. It is unlikely we could ever, even with the help of your committee, have enough money and personnel to do the job we are convinced we have to do.

Senator CULVER. Is it a question of just the manpower resources, financial resources, or even just the natural understandable case of identification of and scientific competence, and so on?

Mr. GREENWALT. It is a combination, Mr. Chairman. The efforts we can undertake are obviously constrained not only by the money available, but people available to do the job. In addition, there is no way really to speed up the process of understanding some of these species once we initiate a study. Those things are oftentimes constrained by the nature of the species itself.

Administratively, we could obviously use additional funding and manpower.

Senator CULVER. Will more money really make an important difference, or will more money would make only a slight difference?

Mr. GREENWALT. Quite frankly, the ability to use personnel makes a greater difference.

Senator CULVER. So given present personnel ceilings you are about where you should be to do a prudent, responsible, and competent job?

Mr. GREENWALT. We are within reasonable range with the $4 million for section 7. In all candor, as I have expressed to you before, Mr. Chairman, our real problem, as all agencies' problems are, are related to manpower more than money.

Senator CULVER. Now, a strong section 7 consultation process, of course, is essential to the success of this act. Do you expect to undertake approximately 20,000 consultations in fiscal year 1979?

Mr. GREENWALT. This is what we anticipate.

Senator CULVER. 20,000?

Mr. GREENWALT. 20,000, yes.

Senator CULVER. Do you have enough people to effectively handle this large a number of cases?

Mr. GREENWALT. No; quite clearly we do not have enough people. We have two alternatives, one is to use temporary or less than full time people, or to make some adjustment in the way we do business throughout the Service to meet this need. I find it very difficult to do the latter because of needs Service-wide, with which you are familiar. We are confronted with a staggering problem. Our present approach is to do the very best we can using temporary or less than full time people, which do not count against the ceiling. At the present time, we really have no alternative.

Senator CULVER. In undertaking those 20,000 consultations, have you figured out a way to juggle your limited manpower to make that a credible enterprise in terms of the quality of those consultations?

Mr. GREENWALT. I cannot guarantee we will do as good a job as I think the situation deserves. We are constantly examining alterna-

tives to approach this need. The one approach we have undertaken at present is to utilize less than full time employees, which is not a very desirable situation, but it is the only solution.

Senator CULVER. Could you provide us with more specific information on the nature of the 20,000 consultations?

Mr. GREENWALT. I think the greater number of consultations in the future, if reflective of the past, are likely to be minor, short-lived, and simple processes of identifying the presence or absence of a species or critical habitat in a given area where a Federal agency wants to carry out a project. As a result, in most cases it is a simple process, and the Federal agencies respond by saying they will modify.

However, particularly as we list more species and identify more critical habitats, far more complex and serious consultation may result. It is the latter that troubles me, because it require very skilled, experienced employees in order to do a credible job. The number of the more difficult consultations I am not going to try to project, although I am concerned that it will be significantly larger than any number in the past.

We have attempted to deploy people in such a way we can relate to what we think will be the nature of the consultation problems. But again, only experience will give us information as to whether we are likely to succeed.

Senator CULVER. Senator Wallop.

Senator WALLOP. Thank you, Mr. Chairman.

Good morning, Mr. Greenwalt.

Mr. GREENWALT. Good morning, sir.

Senator WALLOP. Is there a practical way to prioritize those 20,000 with regard to maybe perhaps the species involved as well as the complexity?

Mr. GREENWALT. We, I think, can predict the complexity of the consultation in terms of its relationship to the species involved. One of the problems, Mr. Wallop, is we do not always know what kind of project or activity is likely to be consulted about. We try to stay ahead of it and understand the things that Federal agencies are doing. But it is very difficult sometimes to anticipate when one will escalate from a simple problem to a complicated one.

Again, I am confident most of them are likely to be relatively minor. One of the realities we are confronted with is a self-imposed, and I think entirely logical, time constraint. We are obligated to respond within 60 days, which I think is fair under the circumstances. That complicates our life, but I think it is fair given the nature of the impediment we might impose by not responding promptly.

Senator WALLOP. One of the problems that we hear and have heard of during the course of this hearing is that how can we insure that the States are consulted with during either the listing of species and delineating of their critical habitat?

Mr. GREENWALT. Well, this is outlined in the act clearly, and we have undertaken some actions in the recent past to insure that the States are consulted, particularly in the development of a reaction to a petition or to some other consideration that may result in the listing of the species and/or determination of its critical habitat. I

am convinced none of us will succeed at all without the very complete involvement of the States.

We are working very closely with the States now, and I can assure the committee, and you, Mr. Wallop that the States will be, as they have every right to be, involved in these matters and as early in the process as we can make it possible.

Senator WALLOP. You heard, though—I think you were even present when some of the State wildlife commissioners were testifying earlier.

Mr. GREENWALT. Yes, I was present.

Senator WALLOP. They were having kind of a hard time. Is there any way that could be incorporated into our amendment?

Mr. GREENWALT. I hadn't thought about that specifically. I think there might be a way to do that to avoid uncertainties and differences of opinion about whether and when the States should be involved. There are things that occur to me immediately that make it possible, for example, under the Administrative Procedures Act but I am not sure how it relates to the amendment. I would like to think about this.

Senator WALLOP. I think it would be very helpful if you look at that with that in mind. Maybe there could be a representative of the States added to that commission.

Mr. GREENWALT. I think there are a number of things that could be made more effective in the amendatory language.

Senator WALLOP. Let me shift gears a little bit. Can you see a solution to the long-standing problem the peregrine falcon breeders have under the Endangered Species Act?

Mr. GREENWALT. Yes; I think I can. Let me characterize the problem in this way: One of the real responsibilities we have under the act is to assure that whatever is done or permitted under the act does not encourage an unwarranted removal of an endangered or threatened species from the wild, and this is where the problem is troublesome. You are aware, I am sure, that the Service has experimented with a marking process. The answer clearly is a marking process that enables us to identify properly permitted, properly held wildlife of any kind as opposed to those which may have been illegally taken from the wild.

In the case of falcons, we have a marker which is not successful at present. Without trying to go into great detail, Mr. Wallop, I think the answer from every perspective is a marking system that enables us clearly and without any real probablity of altering or counterfeiting it, to identify properly held birds as opposed to those taken from the wild. The mandate of the Service is to prevent, to the degree possible, the exploitation of wild endangered or threatened creatures. If we can achieve that, we can solve a great many of these problems. We continue to work on this problem.

Senator WALLOP. Thank you, Mr. Chairman.

Senator CULVER. Thank you, Senator Wallop.

Thank you very much, Mr. Greenwalt. We would appreciate receiving as soon as you could provide it some of the points that have been raised here and the additional information that has been requested.

I want to thank you very much for your testimony and your appearance here.

Mr. GREENWALT. Mr. Chairman, if I might make an observation for the record, the response of the administration, of course, will be provided as a report on the legislation as proposed. I will separately, at your request, provide any other information you asked for.

Senator CULVER. Thank you very much.

Our next witness is Mr. C. W. Hart. It is a pleasure to welcome you here, Mr. Hart, and you are, of course, Assistant to the Director of the Museum of Natural History. Would you identify those gentlemen that are accompanying you here today, and you may proceed however you like.

STATEMENT OF C. W. HART, JR., ASSISTANT TO THE DIRECTOR, NATIONAL MUSEUM OF NATURAL HISTORY, THE SMITHSONIAN INSTITUTION, ACCOMPANIED BY DAVID CHALLINOR, ASSISTANT SECRETARY OF SCIENCE, AND ROSS SIMONS, ADMINISTRATIVE ASSISTANT

Mr. HART. Thank you, Mr. Chairman. On my right is David Challinor, the Assistant Secretary of Science, and on his right is Ross Simons, his administrative assistant.

Senator CULVER. We are running a little short of time. Because we have about three panels yet this morning, maybe you would be kind enough to summarize, and we will include your whole statement in the record. [See p. 91.]

Mr. HART. I will summarize.

The Endangered Species Act is only one of a number of laws that are causing problems within the scientific community, but as the Endangered Species Act is the subject under discussion, I will limit my remarks to it. I think I would be correct to say that few scientists quarrel with what they perceive to be the original intent of the Endangered Species Act: "To conserve to the extent practicable the various species of fish or wildlife or plants facing extinction."

Questions and problems arise, however, regarding the implementation of the act. The question of permits to take, transport, possess, and even engage in acceptable husbandry practices involving endangered species require inordinate amounts of time and effort to procure.

We applaud the recent initiative of the U.S. Fish and Wildlife Permit Office to streamline its permit procedures, but do not feel that this is necessarily the remedy needed by the scientific community. The irretrievable costs in time and money must still be expended, and one wonders what the controls on already dead museum specimens actually accomplish. They will have no effect on living natural populations. They will not restore anything to the wild. Nor will they appreciably reduce the number of organisms taken from the wild.

There are problems related to the receipt of unsolicited specimens. We cannot help it who sends us specimens through the mail. This kind of thing causes embarrassment.

Finally, many scientists question how far down the phylogenetic scale the concept of endangered species should be taken. Few people question the premise that the protection of many endangered or threatened mammals, birds, reptiles, frogs, fishes, and plants is a justifiable aim. There is, perhaps, justification for the

inclusion of some invertebrates. But there appears to be no working philosophy that considers where Federal protection should stop, where one reaches a point of diminishing ecological returns.

Senator CULVER. Is that due to limitations of current scientific knowledge, of data about what the ecological system itself in its totality?

Mr. HART. Yes, sir. I think there are points that could be raised about what Mr. Greenwalt said about that.

We recognize the lengths to which the Endangered Species Office goes in determining whether or not an organism is actually threatened or endangered, but some of us question whether large expenditures of time and money and anguish should be expended to protect certain animal groups at all.

The scientific community appreciates the wisdom of the various acts, and some of the implementing regulations which have been developed.

Senator CULVER. Isn't there a general acceptance, though, that this remarkable creation we have is in one way or another, even if we don't understand all of it, all part of a critical web of life?

Mr. HART. I think certainly it is.

Senator CULVER. Who plays God the second time around?

Mr. HART. That is a very good question, and one I am not able to answer, but I think it should be addressed and should be thought about without going to the efforts to protect everything. I don't think it is feasible to protect everything. The act, as it is written, has no end. It is open ended.

Senator CULVER. But we aren't in any position to make an informed recommendation to cut it out or not.

Mr. HART. No.

Senator CULVER. Given the scientific complexity and number of elements that would have to be factored in such an intellectual undertaking it seems to me that such a decision would just defy the imagination.

Mr. HART. Yes.

Senator CULVER. And you aren't even close to being able to hint at what the parameters of that decision would even be.

Mr. HART. I think when you consider far down the phylogenic scale——

Senator CULVER. If you assume it starts somewhere, the farther down you go, it really is the basement.

Mr. HART. Yes; it is the basement, but it is also the area in the ecosystem in which you have the greatest flexibility.

Senator CULVER. There are redundancies?

Mr. HART. There are redundancies. There is backup there, organisms in species pools which replace one another on a continual basis.

Senator CULVER. They were put in there for a good reason.

Mr. HART. As a backup system.

Senator CULVER. Because they were thought to be needed. So when you start playing with that composition, don't you run a risk, too?

Mr. HART. Yes; you probably do. But I think it is a backup system with a great degree of flexibility.

Senator CULVER. Kind of like our triad.

Mr. HART. Yes; the environmental triad.

Senator CULVER. I am reluctant to tinker with the Constitution, much less the universe. That is an inhibition I have. But go ahead.

It is just troublesome for me as a legislator to try to draw that line when you in the scientific community don't have any informed idea as to where the lines should be drawn. Then we who don't know anything about it are supposed to assume the risk.

Mr. HART. It is a terribly frustrating question; it is one that we could debate for quite a long time.

The scientific community appreciates the wisdom of the various act and some of the implementing regulations which have been developed. But while recognizing and agreeing with the importance of these matters, the problems raised by their inflexible application will, if not resolved, impede and obstruct the legislated functions of several Federal institutions, as well as the ability to inquire, which is, afterall, the cornerstone of science.

I think underlying all of our concerns in regard to applicable laws and regulations promulgated is the idea that a sharp distinction should be drawn between commercial activity and scientific activity. There is a vast difference between a scientist attempting to learn something about an organism's biology and the dealer who is continually reducing wild populations, and possibly distorting the gene pools, of a few selected species over a prolonged period of time for monetary gain.

I believe in the past year we have seen considerable progress toward a mutual understanding of the problems faced by the regulatory bodies and the biological community. The regulators have their perceived mandate; we have ours. Each of us is beginning to recognize the problems faced by the other. Problems still remain, however, and that is why I am concerned. Our dealings with the Fish and Wildlife personnel indicate they now basically understand our problems, they sympathize with our frustration, but they appear powerless to change much without legislative mandate.

The scientific community is committed to obeying the regulations, as well as we understand them, but we would like to work toward the goal of seeing that the rules do not put unfair burden on the very segment of the community that is needed to achieve an understanding of what species are endangered and how their chances for survival might be improved.

I would like to suggest that most of the basic legislation under which the movement of scientific specimens is regulated carries few explicit restrictions applicable to the scientific community, and that the permit requirements, regulations, and restrictions to which the scientific community is subjected not only do not serve the objectives of the legislation, but constitute a drain on public and private resources.

In summary, I would like to say that the wildlife laws now require few, if any, direct costs to the museum or university. But there are hidden costs in, for example, the time required to prepare permit applications and await their issuance, the effort expended in complying with meaningless requirements, or in defending staff members from prosecution when they inadvertently violate a regulation. Each of these laws, in its own way, adds to the burden.

The long-term potential opportunity costs of such regulations to scientific research are unknown. As Spriestersbach and Farrell recently pointed out in Science, "Although we have difficulty measuring what regulations have done to us, we have even more difficulty envisioning what they might have kept us from doing." They were speaking of other Government regulations, not the wildlife regulations. They fear, as I do, that these kinds of Federal impacts may carry with them the highest social cost of all: "The loss of new knowledge, new creativity, and new understanding."

Senator CULVER. You know, Mr. Hart, we are into an area, whether we like it or not, that we have got to do a better job of achieving a delicate and responsible blend of social responsibilities and scientific inquiry; would you not agree?

Mr. HART. I certainly do.

Senator CULVER. With all due respect to the historic mission of science to seek truth and so forth, we are getting into some areas where there are some very substantial threats if we don't sit down and at least consider where some of the social, political, economic, and health consequences of unrestrained pursuit of this objective might lead. Is that not true?

Mr. HART. That is true.

Senator CULVER. For example, in an area like DNA, I would hope any responsible scientist would eagerly seek out this kind of information. I think increasingly we are going to have to face these issues. We are pushing the frontiers of knowledge in such a really frightening—you could say exciting—way; we have a new dimension of trying to keep apace of that frontier both from a political and a moral perspective. Would you not agree?

Mr. HART. Yes.

Senator CULVER. I am just saying it is too easy to say we have too much paperwork, let's just run amok. We ought to pause and at least think through in a more collective sense even beyond the scientific community as to where we go from here. Would you agree with that?

Mr. HART. Yes.

Senator CULVER. How can the problem specifically that the scientific community is experiencing with the Endangered Species Act be best resolved? You have alluded here to your frustration. What we need is some specific, practical, responsible suggestions and an indication as to whether or not those solutions will best be obtained administratively or whether they may require amendments to the act. What do you have to tell us in that regard?

Mr. HART. I believe that amendments to the act are not required. I think administrative solutions are possible. It may be valuable if the Congress could in some way express its views as to what should be covered, what should be examined, this kind of thing.

Senator CULVER. Do you want to give more serious thought to that and give us something we could put in the record?

Mr. HART. I will try.

Senator CULVER. Did you want to add something?

Mr. CHALLINOR. Yes. I am David Challinor, Assistant Secretary for Science of the Smithsonian. I want to support the section 7 of the existing Act that calls for consultation between those agencies that are concerned. We feel very much that this has been very

successful in all the 3,000 or 4,000 cases that have come up that have required a solution. We feel that almost every one, with the possible exception of Tellico Dam, which is coming all the way to the Supreme Court, have worked a reasonable solution.

So I want to enforce what Mr. Greenwalt has testified to earlier, and I feel that administrative solutions that Mr. Hart has already mentioned are the best way, perhaps, to solve some of these dilemmas facing the scientific community.

Senator CULVER. You have indicated, Mr. Hart, that an inordinate amount of time and effort and money has been spent on the protection of what some would view as less important species. But again the thing that troubles me is that I don't sense from you that the scientific community has any general agreement on what species should be protected and what species shouldn't. It is like beauty; it is in the eyes of the beholder.

Mr. HART. You are absolutely right. I am speaking with my own opinions on this.

Senator CULVER. But even if I gave you the authority to barge in here right now and say, "Here is where it is; here are the things you keep; this is the stuff that constitutes a waste of time, and there is the line." That is Hart's line. You can sleep tonight.

Mr. HART. I might have trouble sleeping, but I think it should be done.

Senator CULVER. Why? In the interest of saving money and being responsible stewards of your research?

Mr. HART. In the interest of saving money and not having regulations on every aspect of our research.

Senator CULVER. You could do that confidently?

Mr. HART. Confidently, yes; with trepidation, yes.

Senator CULVER. And you urge somebody to do it?

Mr. HART. I think it should be thought about.

Senator CULVER. Thought about. Well, we think about a lot of things.

I realize you have not had an opportunity to review the specific provisions of the subcommittee's amendment that was introduced yesterday. Nevertheless, I wonder if you have any general reaction to this amendment as described in my opening statement and commented on by Mr. Greenwalt.

Mr. CHALLINOR. If I may, Mr. Chairman, I would like to make one statement. We understand on one of the amendments the Smithsonian is listed as a member of the committee which will review and make recommendation. The Institution, I think, would prefer rather than being mentioned specifically in the legislation to be an observer on such a committee.

Senator CULVER. No responsibility.

Mr. CHALLINOR. No, we already have this responsibility in our charter. We don't think it has to be spelled out again in the legislation.

Senator CULVER. Well, if we give you a new assignment——

Mr. CHALLINOR. Mr. Chairman, may I make one point, we are not an executive agency.

Senator CULVER [continuing.]. We might think you are doing such a good job we want to get you involved substantively in the act as well as think in some of these decisions.

Mr. CHALLINOR. Yes; but we are not in the role of implementing legislation, not being an executive agency.

Senator CULVER. Well, you are supported by approximately 80 percent of Federal funds, right?

Mr. CHALLINOR. About 75 percent, between 66 and 75; it varies from year to year in directly appropriated funds.

Senator CULVER. And we think you may well possess vital experience we need.

Mr. CHALLINOR. And we are more than prepared to offer it.

Senator CULVER. What if we draft you?

Mr. CHALLINOR. We have no choice.

Senator CULVER. You want to serve. Uncle Sam needs you.

Mr. CHALLINOR. We would like to be asked to, and would be more than happy to serve.

Senator CULVER. Well that's reassuring, and an ominous signal to the Soviet Union.

Senator WALLOP. Mr. Chairman, you are in rare form this morning.

I want to make a comment that occurs to me. Frequently when we are talking on these matters, the range in the spectrum isn't quite as black and white and running amuck or a blizzard of paperwork. There has got to be some practical middle ground that doesn't constitute running amuck and also a recognized practicality of the world we live in, giving all the attention necessary to the protection of species.

I would like one explanation from you on a statement that you made earlier that the farther down the chain one goes, the greater the flexibility there is. I wonder if you could just briefly expand on that statement.

Mr. HART. Well, from my experience in working in streams—I have spent 20 years studying pollution ecology—in any given period of time, if you run a survey on a body of water 1 year, 2, 3 years—some of them I have carried on for 20 years—you can look in the individual ecological niches, as we call them, year after year, and you may seldom find the same species you found the year before. You will find a similar species occupying those same niches, carrying out those same functions.

That is generally what I had in mind. You have the tremendous flexibility in the system, and that is the beauty of it.

Senator WALLOP. That is carried on into the subspecies, is that kind of what you are talking about? I am not trying to put Tellico Dam on the spot. It is a thing people have argued. I haven't the foggiest notion when it becomes flexible and when it is hard to contrast.

Mr. HART. I am talking about organisms at the species and subspecies level.

Senator WALLOP. Well, we hope maybe somebody within the Smithsonian, or some other place, might try to produce a paper that would give this committee some guidance as to what constitutes biological flexibility.

Mr. HART. There are several I can find that refer to this very subject of the flexibility and resiliency of the ecosystem.

Senator WALLOP. Thank you, Mr. Chairman.

Senator CULVER. Thank you, Senator Wallop.

Senator Garn, did you have any questions of these witnesses?

Senator GARN. No.

Senator CULVER. I want to thank you very much. We may submit some additional questions to you.

Mr. HART. Thank you, Mr. Chairman.

Senator CULVER. Senator Garn, we are very pleased to welcome you here this morning and look forward to your statement. We know you have a very real interest in this general subject area.

Senator GARN. Thank you very much, Mr. Chairman. I see that you are in the same form you were in the Armed Services Committee with the Secretary of Defense.

Senator CULVER. I thought this was Armed Services. Somebody switched rooms on me.

STATEMENT OF HON. JAKE GARN, U.S. SENATOR FROM THE STATE OF UTAH

Senator GARN. Mr. Chairman, I appreciate this opportunity to testify this morning on endangered species legislation. It is always dangerous, I guess, to tamper with sacred cows, and I think the Endangered Species Act has acquired something of that character. Nevertheless, I do not wish to attack the concept of protecting endangered species. I would like to attack some of the uses to which the act has been put, and some of the extremes to which species' protection has been taken.

Yesterday, I introducted an amendment to the Endangered Species Act. My intent was to provide a vehicle for discussion during these hearings, and I fully recognize that the amendment will probably have to be modified. This morning I would like to describe breifly what my intention was, and then I will be happy to discuss the amendment, answer questions, or proceed in any way that suits the convenience of the subcommittee.

To begin with, my amendment was designed to permit the modification of the critical habitat of an endangered species in such way as to improve that habitat. Right now, the act is being interpreted as permitting no change whatever in the habitat, even if the change would make the habitat more conducive to the preservation of the endangered species. You have a couple examples of this in Utah where the changes in salinity in the water would actually improve the habitat, but the way the act is being interpreted, they will not be allowed to proceed even if it would improve the habitat.

It seems to me that that interpretation stands the intent of the act on its head, and lends itself to purely obstructionist actions by private groups.

Second, my amendment requires the agency which has proposed a Federal action to take all practical steps to avoid harm to an endangered species or to its critical habitat, as presently established under the Endangered Species Act.

Third, my amendment provides that, where the habitat can't be improved as an adjunct to a Federal action, and where all practical steps will not succeed in avoiding harm to an endangered species or its habitat, then and only then shall the Governor of a State balance the benefits and costs of the action and the species in question.

This approach is obviously based on certain assumptions. I assume that the value of each individual species or subspecies of plant and animal life is not an absolute. It may very well be that if the Tellico Dam, or the LaVerkin salinity control plant in my own State, threatened the existence of the humpbacked whale or the beaver, that they ought to be stopped. But those projects do not threaten such animals. They threaten the snail darter and the woundfin minnow, two undistinguished members of the fish family whose only benefit to man lies in their existence.

I do not believe that any animal, no matter how worthless, ought to be allowed to halt any project, no matter how valuable. There are certainly going to be problems of balancing interests, measuring costs and benefits, but those are the kinds of problems courts and legislatures have always wrestled with, and there is no reason to back away from them now. There has to be a mechanism whereby the benefits of the stopped project can be weighed against the possible loss of a single species.

My amendment is motivated by another assumption, frankly. That is that much of the use of the Endangered Species Act by various environmental groups has been very cynical. It has been based less on a desire to protect the furbish lousewort than on a desire to stop the Dickey-Lincoln project.

That can be seen most clearly when groups try to use the Clean Water Act to stop a project, and when that fails turn to the Wild and Scenic River Act. When that fails, they try the Endangered Species Act, and when that fails they resort to historic preservation. Such activity reflects an attitude of no-growth, not a genuine concern for the environment. My amendment is designed to retain essential protections for endangered species, but to remove the act as a fail-safe weapon against any development.

Because, Mr. Chairman, the fact is that there are enough obscure species of plants and animals to guarantee that nothing at all will happen in this country if no endangered species is ever to be disturbed in its corner of the environment. I do not believe the Congress intended that situation when it passed the act, and I do not believe the American people will permit that situation to continue. It is better to try to introduce some flexibility into the act, through an amendment such as mine, than to risk seeing the entire act repealed in a revulsion against environmentalist excesses.

I firmly believe this, Mr. Chairman. If we don't have some flexibility and some reasonableness, if we continue on this course looking for some species that maybe has one more rib than some other and exists in one place and nobody really cares whether it lives or not, that was not the intent of the Endangered Species Act of Congress, and we are going to see a backlash when vitally needed environmental legislation is going to be killed or changed in too drastic a manner.

I sincerely believe the Endangered Species Act is necessary, but carried to these excesses, we will get a backlash, because people in my State, who don't care if the woundfin minnow lives or dies—and I don't think the environmentalists do either think the act is just being used in a cynical way to impair a needed project.

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Now, if there is some really fine endangered species, I will go along. But these gimmicks and uses are going to cause something the environmentalists will not like, unless we get some good old common horsesense and quit obscuring the original intent of Congress.

I do not believe this amendment opens a huge loophole. The actions that would be required of anyone wishing to build a dam, a power project, a highway, or whatever, are very considerable. The balancing test provided for when all else fails is severe, and would, of course, be reviewable by the Federal courts. What this amendment does is offer some hope that some room will be left for man to act in and on the environment of which he is a part.

There are other aspects of the present legislation which are unsatisfactory: The process by which species are designated "endangered" is too loose; the provisions for public and State input into the administration of the act have been ignored; traditional questions of equity have been ignored. But I am not going to take the time of the subcommittee this morning to discuss these problems. I am sure the subcommittee is aware of them. I wish you success in wrestling with them, and offer my own assistance in the development of improvements.

I know you are behind schedule, Mr. Chairman. There are some officials from southern Utah who wanted to testify on the Warner Valley project and the woundfin minnow. They have not yet completed their analysis and scientific studies of the problem. So I would hope the record would remain open and they would be able to submit their analysis.

Senator CULVER. Without objection, so ordered.

Senator GARN. I also have an analysis of the Warner Valley project by the Vaughan Hansen consulting firm of Salt Lake City that I would like to submit for the record.

Mr. Ival Goslin, who is on my left, is the executive director of the Upper Colorado River Commission. He also has a statement, but will not take the time of the committee to read that. I would submit that for the record. [See p. 149.]

Then also I have a couple newspaper articles, which might be of interest to the subcommittee. I will submit one for the record and the other being very brief, I will read it. This was in yesterday's Wall Street Journal:

Overlooked Species: United Press International reports a 14-legged water bug called the Socorro isopod is the newest addition to the list of endangered species. It is a half-inch long and has survived millions of years from the Pleistocene period, when what is now the Southwest United States was ocean. Which moves us to wonder whether the endangered species folks have noticed that, according to repeated reports of the World Health Organization, the smallpox virus is on the verge of extinction. And was there an endangered species impact statement on the Salk vaccine?

[The article submitted by Senator Garn follows:]

[From the Washington Star, Aug. 7, 1977]

CULT OF THE ENDANGERED SPECIES

(By Boyce Rensberger)

After some early starts, the U.S. government lost its interest in wildlife conservation and virtually nothing was done for purely aesthetic or ecological reasons until about a decade ago when Congress passed the Endangered Species act of 1966. The

act, however, applied mainly to species that were already so reduced in numbers that an ecological impact from their disappearance had already been suffered.

The law's chief purpose, then, was aesthetic in satisfying the desires of the new wildlife constituency that wants simply to know of an animal species that it is there. However tenuous the species' hold on survival, the law allows us to take a measure of satisfaction in knowing that we are not yet guilty of wiping it out.

However laudable the 1966 act and its motivating sentiments may have been—and they are laudable—it has given rise among people to a curious new form of wildlife appreciation that may be called the "cult of the endangered species." Members of this cult make so much of endangered species that popular interest in them soars far above that in nonendangered species.

Take, for example, the ivory-billed woodpecker, a species that is so endangered it may already be extinct. Thousands of wildlife enthusiasts would give their eye teeth to be able to spot one and thousands go to great efforts to do so in such places as the Big Thicket National Biological Preserve of East Texas where some say the species may still exist.

As it happens, there is another species of woodpecker that doesn't look all that different, called the pileated woodpecker. It is not endangered, but far fewer people have heard of it and even fewer are eager to go out in the woods and appreciate one of these. The reason for this behavior, of course, is exactly the same that once motivated hunters to seek out the rare animals for their trophy rooms.

Perhaps the most outlandish expression of this new cult is the interest in saving the Devil's Hole pupfish, a species of quite unremarkable inch-long fish that lives in but one small pool in a Nevada cave. There never were any other places in which this fish lived; it is a local variant of pupfish that evolved into a distinct species because it was isolated from all other pupfish. There are thousands of such local variants of many kinds of animals all over the world.

The Devil's Hole pupfish has no ecological significance beyond its own tiny pool where only about 200 live. And yet there has been a substantial national battle to protect this species. Its chief threat is a nearby rancher who would like to pump more water out of his own well to irrigate his land. This, however, would reduce the water level in the pupfishes' pool, depriving them of much of their food. The battle has been taken to the U.S. Supreme Court and has been counted as meriting an impassioned editorial in the New York Times. In 1976 the Supreme Court ruled in favor of the pupfish. So much attention has come to these tiny beasts that they are far better known by wildlife enthusiasts and scientists than are many of the more common fish in American waters that are, by their very commonness, vastly more significant factors in their much larger ecosystems.

From an interest in conserving wild animals simply to shoot them later on, the interest in game saving has metamorphosed over the centuries to the point where there is a nearly total opposition to any thought of killing wild animals for any reason (witness the rise of the "animal liberation" movement, in which it is argued that people have no right to kill any animal).

Modern conservation sentiment has also brought us to the point where the most prized species in the eyes of many are those that are the most endangered, or at least believed to be the most endangered. It matters little whether the animal has some intrinsic qualities that make it attractive or useful; rather it is the fact of endangerment that draws so much interest in it. This preoccupation with endangerment has led many conservationists to make almost unrelenting attacks on their own species, Homo sapiens. The endangered species is good, the conservationists' values suggest, while the endangering species is bad.

Senator GARN. I think this is an example of the ridiculous use of this act by some people. Again, I want to repeat: the act is necessary. I want to see it renewed. I want to see endangered species protected. I suggest this subcommittee and Congress might put some sense and reasonableness back into this act so that we can truly protect endangered species and not get an overreaction from people where we would have environmental laws weakened too much and be unable to have a balance in this situation.

In closing, Mr. Chairman, also with me is Mr. Dan Budd from Wyoming. Therefore, I will let the distinguished Senator from Wyoming introduce Mr. Budd.

Senator CULVER. Thank you very much, Senator Garn. I will make those statements all part of the record, and I will also leave

the record open for a reasonable time so the analysis you spoke of can be submitted.

[The material submitted by Senator Garn may be found at p. 97.]

Senator GARN. Mr. Chairman, if you do not have any questions, I will leave, but Mr. Goslin will remain, if you have any question of him after Mr. Budd's statement.

Senator CULVER. Thank you very much.

Senator Wallop, would you introduce our next witness.

Senator WALLOP. I would be happy to introduce him. Mr. Budd is a rancher from Big Piney, Wyo., a longtime Wyoming family, and a family that has been involved in one aspect of another of the commerce of the state, but particularly in the ranching and livestock business.

I served with—I think it was your nephew in the Wyoming Legislature.

Mr. BUDD. My third cousin.

Senator WALLOP. I have known the Budd family for a considerable time. And I am always impressed when people take their own time and own money to journey out here to the campus inside the beltway and try to enlighten us in one manner or another on what it feels like to operate under some of the things of this Congress.

STATEMENT OF DAN S. BUDD, ALTERNATE COMMISSIONER FOR THE STATE OF WYOMING, UPPER COLORADO RIVER COMMISSION, BIG PINEY, WYO.

Mr. BUDD. Thank you, Senator Wallop. It is a pleasure to be introduced by a fellow Wyomingite. There are not very many of us, only 350,000.

Senator WALLOP. We are, in the scheme of things, an endangered species, perhaps.

Mr. BUDD. My statement is not too long, and I will read it and try to answer any questions that you might have.

I am Dan S. Budd, rancher on a Green River tributary in Wyoming. I am assistant Wyoming commissioner for the Colorado River and a member of the Colorado River Salinity Control Advisory Council. I am here representing Dan H. Budd and Sons, Inc., a ranching family that has been in business 100 years this year.

You may wonder why, as a rancher, I am taking the time and money to testify before this august body. I feel that ranching, as an industry, is vitally affected by the Endangered Species Act of 1973, and in that light, I will submit some recommendations that will strengthen the act and provide lateral movement that we must have in order to provide the food and consumer products for a sound economy. This is a must if we are to be in harmony with our environment.

I feel it is necessary to digress and consider our past in order that the future might come into focus.

The Earth is the Lord's and the creatures thereon. Each shall fulfill his appointed time and place. The endangered species of both plant and animal, including man, are in the realm of the possible.

In my opinion, mutation and extinction are a normal process in the building of the changing ecology. In other words, change is inevitable and unavoidable. All planning must be in this circumference. Planners are always looking for relic areas to compare the

past and present, but are often mesmerized as they return to the past and try to protect the status quo of the plant and animal community. But, there is progression.

The world is never the same from day to day. The changes are minute. But in a relative short time, large changes are inevitable. Geologists can read these changes in the formation of the Earth.

With this brief prolog, I will attempt to bring into view the need for some change in the scope of the Endangered Species Act, Public Law 93–205, as amended by Public Law 94–359.

Section 7 is so diverse and mired in the realm of double talk that it has been the subject of much litigation which, in the most part, has been nonproductive or led to more confusion.

The act itself, in section 4(a), lists as factors to be considered by the Secretary in the determination requiring the listing of species as endangered and/or threatened: "(1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, sporting, scientific, or educational purposes. * * *"

One other explanation should be made concerning the coverage of the act so that its full impact can be understood. The term "species" is defined to include subspecies. It appears that the protective mantle of the act will apply when one subspecies is endangered or threatened even though there may be other subspecies of the same species in abundance in other areas.

By definition, endangered or threatened species' protection is afforded to the listed species if such is in danger of extinction throughout all or a significant portion of its range. The Fish and Wildlife Service takes the position that localized populations of listed species must be protected, and the position is justified by the wording of the statute. Species can be listed by areas also, although they may be abundant and unlisted in other areas.

I will not quote section 7 in full, because I think we are all aware of that section. It has been quoted and referred to several times this morning.

This section, in other words, would prohibit any development and may even require a set-aside, such as wilderness and even require propagation even though the species has served its appointed time.

This brings me to something that happened on the Green River, and something that was referred to in other testimony today of people doing research in the light and in the interest of trying to preserve. The Green River was being studied as a wild and scenic river several years ago. U.S. Fish and Wildlife and some other people flew over the river in a helicopter during the critical nesting time of the geese, and those geese left the nest.

I have been told by people in the banding of the eagles and other endangered species that very often the mothers leave the nests, there is contamination of the birds, and she refuses to feed birds. Even though these people with very good intent are trying to help and protect this endangered animal, in many cases they lead further to its destruction much faster than it would be if it were left alone.

This section would prohibit any development and may even require a set-aside. The vagueness of the intent of such terms as "take" could mean to harass or pursue. This could mean banding

or going out and studying these animals. I think this is a section that needs to be looked at.

The act may cover all areas, including private land. I think there are some implications that it could cover and involve the development on private lands, if it were proved or suspected that one of these endangered species did exist on that land. Through litigation, I am sure it could at least halt it for a considerable length of time.

We are living, quite obviously, in an irrational age, and our politics are all too often dictated by emotional caprice and naive sentimentality. The public is encouraged to voice its opinion regardless of what their level of knowledge and experience is, leaving a bonanza for the legal defense counsels, and a nightmare for the overworked courts. And it all leads to the producing of a much more inflated economy.

I would like to introduce into the record this exhibit II. It is addressed to Ival V. Goslin, executive director of the Colorado River Commission, and it is from Paul L. Billhymer, general counsel. It is the legal counsel's comments on the various sections. I think you might find it useful and enlightening and give you other aspects in order to make your consideration.

Thank you.

[The exhibit referred to follows:]

Exhibit II

UPPER COLORADO RIVER COMMISSION

355 South Fourth East Street
Salt Lake City, Utah 84111

April 6, 1978

MEMORANDUM

TO: Ival V. Goslin, Executive Director

FROM: Paul L. Billhymer, General Counsel

SUBJECT: Endangered Species Act, Public Law 93-205, as amended by Public Law 94-359.

In order to focus on the real impact of the Endangered Species Act only a few of its Sections will be considered herein.[1] Basically the present law is a continuation of earlier Congressional attempts at protecting wildlife.[2]

A broad outline of the Act is as follows:

Section 2 sets forth a strong statement of Congressional purposes and policy (16 U.S.C.A. 1531). Significantly Congress indicates that one of the purposes of the Act is ". . . to provide a means whereby the ecosystem upon which endangered species and threatened species depend may be conserved . . . ." Under the policy declaration, Congress seems to announce a mandate to ". . . all Federal departments and agencies . . . to conserve endangered species and threatened species . . . ." Further the Federal establishment is told to ". . . utilize their authorities in furtherance of the purposes of this Act."

Section 3 is the definition section. In the various definitions Congress has indicated the intent to extend the Act to not only fish and wildlife species but also to plants and to the subspecies of the same (16 U.S.C.A. 1532).

Section 4 sets forth the procedure by which the determination is made for listing the endangered and threatened species. Public participation in the listing procedure is encouraged. The state wherein the species is known to occur is offered an opportunity to participate in the listing (16 U.S.C.A. 1533).

Section 5 allows the Secretary of the Interior to acquire land and water to support a program of protection and restoration of the endangered and/or threatened species (16 U.S.C.A. 1534).

Section 6 provides for a program of cooperation with States whereby States will have input into the operation of the programs looking toward carrying out the mandates of this Act (16 U.S.C.A. 1535).

Section 7 provides for federal interagency cooperation and requires Federal agencies to exercise their authorities so as to promote the purposes of the Act. This section will receive extended discussion below (16 U.S.C.A. 1536).

Section 8 provides a framework for international cooperation looking toward the protection and rehabilitation of endangered and threatened species (16 U.S.C.A. 1537).

Section 9 sets forth the activities which this Act prohibits. Fundamentally the Act automatically protects a species listed as endangered against being taken, possessed, imported, exported, transported, sold, or moved in commerce by "*any person.*" Threatened species may be given the same protection by regulation. The term "take" has been given a broad inclusive definition to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[3] "Harm" has been defined by administrative rule to include "significant environmental modification or degradation" which "significantly disrupts normal behavioral patterns, which includes, but are not limited to breeding, feeding, or sheltering."[4] (16 U.S.C.A. 1538)

Section 10 provides for some exceptions to Section 9 prohibition. Permits are authorized where the possession will be for scientific purposes or will "enhance the propagation or survival of the affected species." Certain takings by Alaska Natives are regulated under this Section 10 (16 U.S.C.A. 1539).

Section 11 provides for penalities and enforcement. Civil and criminal penalties are authorized. Citizen suit enforcement is also authorized (16 U.S.C.A. 1540).

Section 12 provides for a study of endangered plants by the Smithsonian Institution with the results to be sent to Congress within a year. (16 U.S.C.A. 1541).

Congress, through the Endangered Species Act, sought to accomplish the protection of major decline of species by regulating the two main causes of this decline; namely, (1) the sport and commercial taking of the individual species, and (2) the degradation and destruction of the habitat of the species. Congress recognized these two factors as needing special attention. In the Senate Report 93-307, at page 2, we find the following:

> "The two major causes of extinction are hunting and destruction of natural habitat."

The Act itself, in Sec. 4(a), lists as factors to be considered by the Secretary in making the determination requiring the listing the species as endangered and/or threatened:

> "(1) the present or threatened destruction, modification, or curtailment of its habitat or range;
> "(2) overutilization for commercial, sporting, scientific, or educational purposes. . . ."[5]

One other explanation should be made concerning the coverage of the Act so that its full impact can be understood. The term "species" is defined to include subspecies (Sec. 3(11)). It appears that the protective mantle of the Act will apply when one subspecies is endangered or threatened, even though there may be other subspecies of the same species in abundances.

By definition (Sec. 4(4)-(15)) "endangered" or "threatened" species protection is afforded to the listed species if such is in "danger of extinction throughout all or a *significant portion of its range* . . . ." The Fish and Wildlife Service (hereafter Service) takes the position that "localized populations" of listed species must be protected, and the position is justified by the sweep of the statute. Species can be listed by areas also, thus the species may be abundant and unlisted in one area, and listed in another where the listing criteria are found to exist. At least the statutory definition would seem to encourage such a position. This position should be considered with reference to the discussion under Section 7 infra. It enlarges the impact of Section 7.

Finally it should be observed that Congress was interested in doing more than protecting the "status quo" of the "listed species." The thrust of the Act is toward developing a program by which the "listed species" become unlisted. See, for example, the definition of "conserve" in Sec. 3(2), reading as follows:

> "(2) The terms "conserve", "conserving", and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking."

See also 50 C.F.R. 402.02, the regulations issued in connection with Interagency Cooperation required by Sec. 7 wherein the following is found:

"Recovery" means improvement in the status of listed species to the point at which listing is no longer required.

It is with this background that the following analysis is made.

The really dynamic section of this Act is seven, and it is so important that it will be quoted in full:

> *"Sec. 7. The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal departments and agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act and by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical."*

It is very likely that the full implications of this section were not realized by Congress when it was before that body. The legislative history on the section is somewhat limited, yet Congress clearly indicated by the changes that it made in the new statute, that it intended some mandatory action from Federal agencies.[6] Even the implementation by the Secretary of the Interior has been delayed. Final regulations covering Interagency Cooperation Regulations, Endangered Species Act of 1973, were issued January 4, 1978.[7] Even allowing for the two years or so that these were in the rulemaking process, it would seem that the administrative response has been somewhat delayed.

It is the second sentence of the section which requires the Federal agencies to review their activities in the light of the Endangered Species Act. The burden of this direction is three-fold, namely:

> "First, it directs them (Federal agencies) to utilize their authorities to carry out conservation programs for listed species.
>
> "Second, it requires every Federal agency to insure that its activities or programs in the United States, upon the high seas, and in foreign countries will not jeopardize the continued existence of a listed species.
>
> "(T)hird, section 7 directs all Federal agencies to insure that their activities or programs do not result in the destruction or adverse modification of critical habitat."[8]

The above is a statement of the scope of Section 7 from the viewpoint of the two agencies charged with administering the Section 7 program. It is to be noted that these regulations place the real burden upon the program directing agency to make the initial determinations of the impact of its program upon the "listed species." It does seem that

the regulations take the position that Section 7 requires a positive response from the program agency. It should be pointed out that the concern here is with domestic "listed" species.

The regulation in §402.03 clearly indicates that it is intended that

> "Section 7 applies to all activities or programs where Federal involvement or control remains which in itself could jeopardize the continued existence of a listed species or modify or destroy its critical habitat."

This construction that Section 7 covers "all" activities of all Federal agencies would seem to include all present on-going activities as well as future activities. This construction also seems to have the backing of Congressional legislative history. The language of Section 7 is not qualified by any such statement as "insofar as practicable." Note also that no qualifying language is found in Section 2(b) "purpose" and 2(c) "policy" section. One author has suggested that the 1969 Act was flawed because of the qualifying language and the change was deliberate to insure that Federal agencies would have a positive mandate to comply with the rigorous requirements of Section 7.[9]

Perhaps it would be helpful to determine what is mandated of Federal agencies by Section 7. It would appear that the first requirement is that the agency institute an internal program wherein the particular agency's basic "authorities" are used to carry out "conservation programs for listed species." Note the statutory language suggests that this program is to be done "in consultation with the Secretary." Apparently the Secretary did not think this injunction required implementing regulations because the regulations mentioned above make no provision for this type of consultation.

Actually the failure to cover this area may be due to the fact that it is probably not an enforceable requirement. Courts are not likely to involve their time in an on-going agency internal operational program. (Querry: Could NEPA (P.L. 91-190, 42 U.S.C.A. 432, et seq.) be a tool for the enforcement of this section?) It may be academic because the other provisions of Section 7 really take care of most, if not all, situations.

The second and third requirement will be considered together because one part deals with the species and the other the critical habitat of the same. Here the agency must act to insure that its authorized operations do not "jeopardize the continued existences of the listed species" or result in "modification or destruction" of critical habitat of such species. The Secretary of the Interior is required to make the determination of what is "critical habitat."[10] The Act does not spell out when a determination of "critical habitat" is to be made. In a conversation with local representatives of the Service, it was learned that in some cases the determination will be made at such time as the original listing takes place, but there is no rule that such will

occur. When the Service is called upon to evaluate a project or action, some consideration of "critical habitat" would seem to be required. The regulations issued pursuant to Section 7, above mentioned, really deal with the problems resulting from the "Second" and "Third" above-mentioned requirements.[11]

The first cut at compliance with the section must be taken by the Federal agency in charge of a program or action. It must consider and determine the impact of such activity on listed species or their habitat. It may seek advice from the Service, which is placed in charge of Interior's responsibility under the Act.[12] This advice does not take the place of consultation. If the Federal agency decides that its activity may affect the listed species or their habitat, there is a requirement for a written request for consultation.[13] 50 CFR 402.04(a)(3) The agency is responsible for furnishing all necessary information to the Service so that an evaluation can be made. This information may include specialized studies financed by the requesting agencies which the Service finds necessary for the evaluation. The agency is required not to make any irreversible or irretrievable commitment of resources which would foreclose the consideration of modification or alternatives to the identified activity or program. The Service will issue a biological opinion which will evaluate the impact of the project or activity on listed species or their habitat, including any recommended modifications. Note if the modifications are accepted further consultation may be called for.[14]

The major concern would be with a "biological opinion" which finds the project or activity in violation of the mandate of Section 7. The responsibility for final decision rests with the Federal agency proposing the action. It must evaluate its position with reference to the opinion and determine whether to proceed.[15] It would appear that it would indeed require a brave agency to proceed counter to a biological opinion. In view of the liberal citizen suit provision provided for in the Act, a citizen suit would seem to follow as a matter of course, using the biological opinion as the basic grounds for a claimed Section 7 violation.[16] Up to the present time no case has dealt with the consequence of an adverse report issued pursuant to the new regulations.

One case should be considered as giving insight as to what the Courts would likely do in this situation. That case is *National Wildlife Federation v. Coleman*, C.A. 5, 529 F.2d 359. The issue involved was an alleged violation of Section 7 of the Endangered Species Act by a highway project which, if completed, would damage the habitat of an endangered species (Mississippi Sandhill Crane). In spite of Interior's determination that unless modified the highway would violate the critical habitat of the crane, the project was recommended by the Highway Agency without the recommended modification.

The Court made some rather significant rulings in the case.

(a) Based on a review of the legislative history, the Court concluded that "Section 7 . . . imposes on federal agencies the mandatory duty to insure that their actions will not either (1) jeopardize the

existence of an endangered species, or (ii) destroy or modify critical habitat of an endangered species."

(b) There is further the requirement to consult with the Service prior to taking action, but the Secretary of the Interior has no veto power over the project if consultation has taken place. (Querry: Can the Secretary of the Interior veto a project where consultation has not taken place?) The sponsoring agency must assume the responsibility for the project and "determine whether it has taken all necessary action to insure that its actions will not jeopardize the continued existence of an endangered species or destroy or modify habitat critical to the existence of the species."

(c) Courts will review the agency's decision to determine whether "the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." (citation omitted)

(d) The National Wildlife Federation Appellants had the burden of establishing that the appellees failed to take necessary action to prevent violation of Section 7.

(e) The Court reviewed the evidence and found that the lower court's evaluation of the evidence was wrong. The lower court failed to appreciate the nature of Section 7. The Appellant's evidence indicated that proper modifications had not been made in the project to preclude a Section 7 violation. The Court's injunction in this case was unique. It delayed the highway construction until such time as the Secretary of the Interior found that necessary modifications were made to protect the crane.

The case would indicate that any federal agency planning to continue action after an adverse biological opinion had better have its case in order. It would appear that the agency would at least be required to prepare a well-articulated response to such "biological opinion." Very likely such response would be a part of the NEPA EIS.[17]

One further problem raised by this Act should be discussed, namely, its impact on Federal activities started prior to the Act. One such case has been litigated, or better is still in progress, namely, *Hill v. T.V.A.*, C.A. 6, 549 F.2d 1064, 9 ERC 1737, cert. granted, 46 L.W. 3316, Nov. 15, 1977. This case presents an unique situation. The dam in question (Tellico) was almost finished; Congress was aware of the problem, but continued to furnish money for the dam; the fish in question was unknown until 1973--only four months prior to the passages of the Endangered Species Act; the fish was added to the "list" in November 1975 over TVA's objection; suit was brought enjoining completion of the dam in February 1976; and the lower Court found that the dam closure in 1977 would probably destroy the fish, but refused to enjoin the closing. On appeal, the Sixth Circuit reversed the lower court's ruling and enjoined the closing of Tellico.

The court stated the issues as follows:

"(1) Does Tellico Dam completion violate the Endangered Species Act?

"(2) Assuming a violation, are there adequate grounds for exempting Tellico from compliance?

"(3) If no exemption is justified, is injunction the proper remedy to effectuate the purpose of the Act?"

The Court found that certainly the closing would violate the Act. The Secretary's construction of the Act as to "critical habitat" wherein the Secretary by regulation (40 Fed. Reg. 17764-17765) had ruled that any action which:

> "might be expected to result in a reduction in the number or distribution of [the] species of sufficient magnitude to place the species in further jeopardy or restrict the potential and reasonable expansion or recovery of that species."

was proper. Note the lower court had found that the closing of Tellico would likely destroy the species. The Appellate Court refused to consider balancing the value of the almost complete project against the value of saving the fish. The Court suggested that the statute was to be taken to its logical extreme, and even if a species was discovered to be endangered on the day before closing,. that the closing should be enjoined. The Endangered Species Act does not allow for a NEPA-type of balancing. The Court found that a NEPA balancing error would be subject to later correction, but should the Court grant an exemption here, any error could not be corrected because the species would be gone. The Court found that there were no grounds for exemption and that the injunction was the proper remedy.

Actually the Court returned the Tellico to Congress. If the project is to be completed, Congress will have to face the problem of balancing the value between the fish and Tellico. This is not unlike the Alaskan pipeline case. Congress, by amendment of the Mineral Leasing Act, did allow the construction of the pipeline after the injunction in *Wilderness Society v. Morton*, D.C. Cir., 479 F.2d 842, cert. denied, 411 U.S. 917 (1973). The Congressional exemption procedure on a case-by-case basis may be one way of solving the conflict. Such process if over-exercised would destroy the efficacy of the Endangered Species Act. It does finally depend upon the value system principles which we wish developed. One caveat should be made, *Hill* is before the Supreme Court, and the final word is still out with respect to this case.

One other Circuit Court case should be mentioned, namely, *Sierra Club v. Froehlke*, C.A. 8, 534 F.2d 1289, 8 ERC 1944, involving the Meramec Park Dam project impact of the Indiana Bat. After finding that the Endangered Species Act applied to an on-going project, the Circuit Court affirmed a lower court's refusal to enjoin the construction of the dam on the grounds that the evidences were insufficient to make out a case of substantive violation of the Act. This case really does not provide any real insights as to the court's reaction to requirements of the Endangered Species Act.

An observation is in order with respect to the possibilities of control of non-federal actions and projects which impact on the listed species. Note such impact could well amount to a "taking" which has been defined as:

> "(14) The term "take" means to harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

Section 9 enjoined taking, and as such is subject to civil and criminal penalties in addition to citizen enforcement suits. The impact of possibilities for non-federal activities control has not been fully explored in court cases. It would appear that the Act can be used to attack non-federal activities which might impact the listed species.

Summary

1. Congress in 1973 established a comprehensive method for the protection of endangered and threatened species.

2. This protective system seeks to control taking and habitat destruction of the endangered and threatened species.

3. A special obligation is placed on Federal agencies to "insure" that their actions "do not jeopardize the continued existence of or result in the destruction or modification of habitat of such species."

4. The present court construction of the Act has made the duties of the Federal agencies mandatory, and the Act's application has been broadly defined to include present programs authorized prior to the Act.

5. Courts have refused to enter into a value balancing procedure with respect to mandates of the Act as it impacts the Federal agency on-going programs.

6. The full impact of the Act has yet to be realized with respect to Federal development programs.

7. Non-federal activities would seem to be subject to the impact of this Act.

FOOTNOTES

1. The Act has received extended discussion in legal literature. See Palmer, "Endangered Species Protection: A History of Congressional Action," 4 *Envt'l Aff.* 255 (1975).

   Lachenmeier, "The Endangered Species Act of 1973; Preservation or Pandemonium," 5 *Envt'l L.* 29 (1974)

   Wood, "Section 7 of the Endangered Species Act of 1973: A Significant Restriction for All Federal Activities, 5 *ELR* 50189 (1975).

   Coggins and Hensley, "Constitutional Limits on Federal Power to Protect and Manage Wildlife: Is the Endangered Species Act Endangered?" 61 *Iowa L. Rev.* 1099 (1976).

   Note: "Obligations of Federal Agencies Under Section 7 of the Endangered Species Act of 1973," 28 *Stan. L. Rev.* 1247 (1976).

   Comment: "Implementing Section 7 of the Endangered Species Act of 1973: First Notices from the Courts," 6 *ELR* 10120 (1976).

2. See Senate Report 93-307, Public Law 89-669, Public Law 91-135.

3. See Section 3(14).

4. 50 C.F.R. 17.3.

5. Other indication of "habitat" concern is found in the purpose section of the Act, Sec. 2(b). See also Sec. 3(2) defining the term "conserve"; Sec. 5 authorizing funding for habitat acquisition; and Sec. 7 to be discussed.

6. See Wood, *supra,* Note 1 at 50199, and the Law Note from *Stanford Law Review* cited in Note 1 at pages 1254-1256 for a discussion of the legislative history. See also 2 *U.S. Code Cong. & Admin. News* 1973, 93rd Cong., 1st Session, at 2988-3008. The most compelling indication of the meaning of Section 7 is found in Congressman Dingell's statement during the debate on the Conference Report where he discusses the law as it existed prior to the 1973 Act in the context of some former Air Force bombing activities:

   > "Another important step which we have taken in this bill--and in this regard the two bills are virtually identical --is that we have substantially amplified the obligation of both agencies, and other agencies of Government as well, to take steps within their power to carry out the purposes of this act. A recent article in the Washington Post, dated December 14, illustrates the problem which might occur absent this new language in the bill. It appears that the whooping cranes of this country, perhaps the best known of our endangered species, are being threatened by Air Force bombing activities

along the gulf coast of Texas. Under existing law, the Secretary of Defense has some discretion as to whether or not he will take the necessary action to see that this threat disappears--I hasten to say that I believe that Secretary Schlesinger, who I know to be a decent and honorable man, will take the proper steps whether or not the law is amended, but the point that I wish to make is that once the bill is enacted, he or any subsequent Secretary of Defense would be required to take the proper steps." (119 Cong. Rec., p. H11857, 93rd Congress, 1st Session, December 20, 1973, daily ed.)

7. 43 Fed. Reg. 870, January 4, 1978.

8. 50 C.F.R. 402.01 - 43 Fed. Reg. 874.

9. Note: "Obligations of Federal Agencies Under Section 7 of the Endangered Species Act of 1973," 28 *Stan. L. Rev.* 1247-1253. See also Congressman Dingell's statement, 119 Cong. Rec., p. H11837, December 20, 1973 (daily edition).

10. The methods of determination of "critical habitat" are set forth in §402.05 as follows:

> (a) *Procedure.* Whenever deemed necessary and appropriate, the Director shall determine critical habitat for a listed species. After exchange of biological information, as appropriate, with the affected States and Federal agencies with jurisdiction over the lands or waters under consideration, the Director shall publish proposed and final rulemakings, accompanied by maps and/or geographical descriptions in the FEDERAL REGISTER. Comments of the scientific community and other interested persons will also be considered in promulgating final rulemakings. The modification or revocation of a critical habitat determination shall also require the publication in the FEDERAL REGISTER of a proposed and final rulemaking with an opportunity for public comment.
>
> (b) *Criteria.* The Director will consider the physiological, behavioral, ecological, and evolutionary requirements for the survival and recovery of listed species in determining what areas or parts of habitat (exclusive of those existing man-made structures or settlements which are not necessary to the survival and recovery of the species) are critical. These requirements include, but are not limited to:
>
> (1) Space for individual and population growth and for normal behavior;
>
> (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
>
> (3) Cover or shelter;

29-319 O - 78 - 5

(4) Sites for breeding, reproduction, or rearing of offsprings; and generally,

(5) Habitats that are protected from disturbances or are representative of the geographical distribution of listed species.

(c) Emergency determination. Paragraphs (a) and (b) of this section notwithstanding, the Director may make an emergency determination of critical habitat if he finds that an impending action poses a significant risk to the well-being of a listed species by the destruction or adverse modification of its habitat. Emergency determinations will be published in the FEDERAL REGISTER and will remain in effect for no more than 120 days.

See also Note 12, infra.

11. A list of important definitions are as follows:

§402.02 Definitions.

"Activities or programs" means all actions of any kind authorized, funded, or carried out by Federal agencies, in whole or in part, ...

"Critical habitat" means any air, land, or water area (exclusive of those existing man-made structures or settlements which are not necessary to the survival and recovery of a listed species) and constituent elements thereof, the loss of which would appreciably decrease the likelihood or the survival and recovery of a listed species or a distinct segment of its population. . . . Critical habitat may represent any portion of the present habitat of a listed species and may include additional areas for reasonable population expansion.

"Destruction or adverse modification" means a direct or indirect alteration of critical habitat which appreciably diminishes the value of that habitat for survival and recovery of a listed species. . . . .

"Jeopardize the continued existence of" means to engage in an activity or program which reasonably would be expected to reduce the reproduction, numbers, or distribution of a listed species to such an extent as to appreciably reduce the likelihood of the survival and recovery of that species in the wild. . . .

"Recovery" means improvement in the status of listed species to the point at which listing is no longer required.

12. Note the National Marine Fisheries Service has responsibility for some administration under the Endangered Species Act, and the regulations were issued jointly. See Sec. 3(10) and Sec. 4.

13. If the Agency decides that its program does not affect the listed species or their habitat, no further action is called for unless initiated by the Service, 50 C.F.R. 402.03(a)(2).

14. See 50 C.F.R. 402.04 which sets forth the regulations on "Consultation."

15. 50 C.F.R. 402.04 (g) reads:

> (g) *Responsibilities after consultation.* Upon receipt and consideration of the biological opinion and recommendations of the Service, it is the responsibility of the Federal agency to determine whether to proceed with the activity or program as planned in light of its section 7 obligations. Where the consultation process has been consolidated with interagency cooperation required by other statutes such as the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) or the National Environmental Policy Act (42 U.S.C. 4321 et seq.), the final biological opinion and recommendations of the Service shall be stated in the documents required by those statutes.

16. Section 11(g), 16 U.S.C.A. 1540(g), outlines Citizen Suit provision, even allowing for attorney's fees.

17. See Note, 28 *Stan. L. Rev.* 1247 at 1266, et seq., for a more detailed analysis of this problem.

Senator CULVER. Thank you very much, Mr. Budd, for coming out here and sharing your views with us. We will look at the additional material you have asked us to include in the record.

I have no questions at this time.

Senator WALLOP. I have only two short questions.

Mr. Budd, are you here as a private citizen or as a commissioner?

Mr. BUDD. I am here representing Dan H. Budd & Sons, Inc., which is a ranching enterprise, and I do serve on various committees in the State. We are faced with the problems on the Colorado River Development; and will be in Wyoming.

On my own ranch, we do have a subspecies that has been identified, and that makes me wonder whether we will have to fence part of it in order to keep the cattle away.

Senator WALLOP. Have you had experience or compliance cases with the Endangered Species Act as a private rancher?

Mr. BUDD. We haven't been involved other than this being identified as a critical area, and they are on our ranch fencing out some streams because of endangered species of fish and not allowing grazing on those banks. The BLM, of course, their list is not complete. In grazing on public land, if we have a permit out there and they find an endangered grass, are you going to tell the cow she can't graze, or cut our permits, or make adjustments to accommodate this endangered species? So, it does affect us and affects us vitally in basically on our permits on the public lands.

Senator WALLOP. I have no further questions.

Senator CULVER. Thank you very much, Mr. Budd.

Our next witness is Mr. Samuel Tucker. It is a pleasure to welcome you here, Mr. Tucker. We do have some very severe time constraints, and to the extent you feel you can summarize the highlights of your testimony, we would appreciate that.

STATEMENT OF SAMUEL TUCKER, JR., MANAGER OF ENVIRONMENTAL AFFAIRS, FLORIDA POWER & LIGHT CO., MIAMI, FLA., FOR EDISON ELECTRIC INSTITUTE

Mr. TUCKER. Mr. Chairman, I am W. Samuel Tucker, Jr., manager of environmental affairs for Florida Power & Light Co. I am also the chairman of the Land Use/EIS Subcommittee of the Edison Electric Institute. My comments today represent the views of the institute.

EEI is the principal national association of investor-owned electric companies. Member companies serve about 99 percent of all customers of the investor-owned segment of the electric industry and 77 percent of the Nation's electric users.

While we strongly support the goals of the Endangered Species Act, we are also convinced that society has other values as well, and that no single value can be absolute in terms of the real-world decisions and judgments which society and the Government which represents it must make. This is precisely the problem with the Endangered Species Act as it is presently written, interpreted, and enforced. The basic inflexibility of the act has grave implications on other things society values, such as an adequate, reliable, and economic supply of electrical energy.

Mr. Chairman, we would hope that this testimony will serve to remedy the common misconception that the Endangered Species Act only impacts public works or developments of Federal agencies. The wide proliferation of environmental regulatory programs now in force effectively encompass practically every significant development by the private sector as well, by virtue of the fact that the issuance of the required Federal permits and licenses provide the trigger to the Endangered Species Act. The broad application presently applied by the Corps of Engineers 404 permit program is a case in point.

I do not think it is necessary to belabor the point, but I would remind the committee that the delivery of electric service requires a system of many components stretching from the generating plant down to each individual home, office, and business. This system of powerplants, transmission lines, substations, switching stations, distribution lines, and so forth, covers a typical land area like a spider's web, for the very simply reason that it has to get to where people are.

We have an example in Florida involving the everglade kite. I have brought a map here today to illustrate graphically the problem this presents as far as this act is concerned. The Peninsula of Florida is overlaid with dark blue lines which indicate the service area of my company. The color-coded marks, as indicated on the exhibit, show the critical habitats which have so far been designated by the Secretary of Interior. You can see that it covers some pretty broad expanse of our service area.

I think you can immediately see what the impacts would be because of the nature of the developments that we must make in order to provide our service, when we encounter these broad expanses where very much development we might entail would be made very difficult, if not completely prohibitive.

We had an occasion to try to get a line through part of the blue area there, which is an everglade kite critical habitat. We needed to go through one corner of that area. We were denied the permit by Interior, and then we negotiated for a land swap for the corner we wanted to cross with our transmission line, which was necessary to bring power into the population in the southeast. That was actually not suitable in its present condition as a habitat for the apple snail, which is the only thing the everglade kite feeds on. We offered a land exchange with equal type habitat, and in addition offered $1 million for the development of the everglade kite habitat. We were turned down by Interior.

They stated one of the principal reasons in turning us down was their responsibility for protecting the species under the Endangered Species Act. I would submit no one benefitted from this type of inflexibility, perhaps least of all the everglade kite.

We have also had some difficulty with power outages in southeast Florida. We have one transmission corridor coming into southeast Florida from the north and another from southwest Florida. The Florida Public Service Commission has directed us to construct an additional 500 kilovolt transmission line on a new corridor between southwest and southeast Florida in order to improve the reliability of service in that area and reduce the frequency of blackouts which have occurred in the past. The Commission has

also recommended additional generation in southeast Florida to improve reliability over the longer term.

The problem is, as you can see, the critical habitat of the everglade kite has virtually isolated southeast Florida. You combine it with the fact we have already had a determination formally that a transmission line is incompatible with kite habitat, you add to that we would need to get a 404 permit from the corps in order to bring a line through it, since it does involve wetlands, then you immediately trigger the section 7 of the act, I don't see any way we could bring a transmission line into southeast Florida.

How about additional generation? Several years of careful studies have identified only one suitable power plant site in southeast Florida, our South Dade site. It has now been enshrouded by the critical habitat for both the American crocodile and the Florida manatee.

I think everyone would agree there is no way you can develop a powerplant facility without creating some adverse impact on the environment. Obviously, again, you have a direct confrontation, and I don't really see under the present interpretation of the act how we could develop that site, although it is a very ideal site for a powerplant, and there is general agreement on that among the environmental communities who have had discussions with us on this.

I hope you can see from some specific examples in the private sector where we do have critical human needs to be met that are being threatened by this act because of the lack of flexibility.

I would also suggest, Mr. Chairman, that the present interpretation of this act is in conflict with NEPA. NEPA requires or stresses the necessity of considering all factual aspects of a certain situation in making a decision, along with weighing costs and benefits, and analyzing alternatives. The same kind of philosophy is inherent in the Clean Air Act and every other piece of environmental legislation and completely ignored in this particular act. Therefore, in our opinion, it is actually in conflict with national environmental policy.

The real world is rarely, if ever, an either-or proposition. Creative thinking, cooperation, and good planning can minimize conflict and even lead to a more favorable solution for all concerned, if sufficient legal flexibility exists.

I think the development of that site we were talking about there would actually improve the habitat for those two species that are endangered in that area, but the present interpretation of the act would prevent us because we would in fact go in and adversely modify the habitat.

The act is in danger of being totally discredited and discarded as a result of backlash from current events. How long will 3 million people put up with blackouts and brownouts because of what someone perceives as a potential threat to 100 birds? Complete repudiation of the act would not do anybody or any plant or any animal any good.

In summary, the Endangered Species Act ignores practical considerations and forces foregoing of more desirable options in some cases. It flouts commonsense, good judgment, and basic national environmental policy. It makes a mockery of the efforts of many

people who are truly interested in preserving endangered species and not simply blocking some project. If not amended, the Endangered Species Act may ultimately be remembered as the worst enemy of the very species it purported to save.

Senator CULVER. Thank you very much, Mr. Tucker.

Senator Wallop, do you have any questions?

Senator WALLOP. I have one clarification I would like to have. You made two statements which on the face are in conflict. You said you would actually improve the habitat, but building the plant would adversely impact the habitat. It would seem it couldn't do both.

Mr. TUCKER. Senator, I think it could in this sense: there are 10,000 acres. We would impact, let's say, 500 acres adversely, severely without question. The other, let's say, 950 acres would be kept as a buffer zone for that plant, and as such would be, in effect, preserved in its present condition, perhaps. Actually, it would be improved, the whole impacted area, by development that took place many, many years ago before we owned the property. But the actual condition as far as a habitat of the whole piece of property on a necessary basis would be improved, in our opinion. However, the 500 acres would be adversely impacted, and under the very narrow interpretation the courts have given and Interior has given on the Endangered Species Act. The point is, we would be in conflict with section 7, because we would modify the critical habitat.

Senator WALLOP. Has there been the consultation process with the Fish and Wildlife Service?

Mr. TUCKER. No, sir, not on this project. We are not to that point.

Senator WALLOP. Thank you, Mr. Chairman.

Senator CULVER. Thank you very much, Mr. Tucker.

Our next panel will be Col. Richard Graham and Mr. Jerry Jennings. It'is a pleasure to welcome you here.

Senator WALLOP. Mr. Chairman, I would like the privilege of introducing to the committee Mr. Pete Widener, who is from my hometown in Wyoming, Sheridan. He is one of a rare breed, a falconer. He has the most extraordinary falcon aerie on his ranch in Wyoming, something that would be worthwhile if the members of the committee and staff could see. It is something that is a benefit to the domestic propagation of falcons, and in the long run to the assurance of a wild breed of falcons in the country.

So, it is a pleasure to welcome you here.

STATEMENT OF P. A. B. WIDENER, JR., UNITED PEREGRINE SOCIETY, ACCOMPANIED BY LT. COL. RICHARD A. GRAHAM (RET.), AND CARTER MONTGOMERY

Mr. WIDENER. Thank you. I am Pete Widener from Sheridan, Wyo. My colleagues are Lt. Col. Richard Graham and Carter Montgomery. We are here to represent the United Peregrine Society and have the authority to speak on behalf of Mr. Roger Thacker, president of the North American Falconers' Association and Dr. Tom Cade of the peregrine fund.

We appreciate the opportunity to appear before this subcommittee. We are here today to talk about the Endangered Species Act as it applies to raptors.

We support the Endangered Species Act in its intent to conserve endangered raptors and other wildlife. We strongly object to certain regulations and policies that the Interior Department has promulgated pursuant to the authority of this act and other associated legislation.

The original intent of the Endangered Species Act was to implement methods by which we could save and preserve for posterity various species of fauna and flora which are threatened with extinction. We are here to inform the members of this subcommittee that regulations and policies of the Department of Interior are acting in direct opposition to what we believe was the intent of Congress; namely, actions or policies that would increase the numbers of an endangered species.

The peregrine falcon, an endangered species, has been raised in captivity only by falconers. Instead of encouraging the falconers' efforts, the Interior Department regulations and policies have destroyed the incentive for the falconers to raise these birds.

Current regulations and policies prohibit or restrict the following: (1) Use of captive-reared endangered species for falconry; (2) transportation of such birds; (3) exchange of captive-produced raptors for breeding or falconry.

The use of captive-reared endangered species for falconry purposes will create an incentive for falconers to raise greater numbers of these birds. It should be stressed that falconers are the group who have pioneered the successful breeding of endangered raptors and are at present the only group engaged in continually successful captive breeding projects, the effects of which can only benefit the species.

The unencumbered transportation of these birds is crucial to the captive propagation efforts of all concerned.

The exchange of captive-produced raptors must occur to allow for expansion and exchange of gene pools. The exchange of these birds for falconry is desirable because it provides incentives to breed more birds. It should be pointed out that the majority of falcons flown in sport are eventually lost to the wild where they may augment wild populations.

After nearly 6 years of unproductive attempts to obtain workable regulations with regard to the use, transportation and exchange of captive-reared endangered raptors, we strongly feel that an amendment is needed to clarify the intent of Congress as it pertains to this act.

Accordingly, we submit for consideration the following amendment to the Endangered Species Act of 1973—this is a suggested amendment to section 9 of the Endangered Species Act of 1973: The provisions of this act shall not apply to any raptor held in captivity or in a controlled environment on the effective date of this act, or to the captive-bred progency of any raptor, provided that such raptor has not been intentionally returned to a wild state.

Mr. Chairman, this has been respectfully submitted for your consideration.

Thank you.

Senator CULVER. Thank you very much, Mr. Widener.

Senator Wallop, did you have some questions?

Senator WALLOP. Thank you, Mr. Chairman.

Mr. Widener, can you see an administrative solution to the long-standing problems that falcon breeders have had in recent times?

Mr. WIDENER. Senator Wallop, there has been 6 years of attempt at administrative solutions in terms of regulations or policies, and they haven't been forthcoming, and they are stiffling the efforts of people who want to raise these birds. I am not about to go out and breed something that I can't utilize. I am a falconer. I would like to fly the bird.

I think the only way to really assure us of being able to have the birds not only for falconry purposes but for continuation of a species is through an amendment to the act, a clearcut law where there is no question.

Senator WALLOP. Mr. Greenwalt testified that they were about to issue some regulations. Do you have any understanding of what those are going to be?

Mr. WIDENER. Yes. I haven't had a chance to look them over, but I know this same thing occurred 2 years ago in terms of regulations coming up the day of the hearing. In my words, they have dragged their feet for the past 5 years, and incentives are diminishing and something needs to be done.

I am aware of the intentions, but I feel a guarantee is needed.

Senator WALLOP. I am wondering if you could do this: Assuming Mr. Greenwalt and the Service do produce their regulations as proposed tomorrow, would you all take the time to look at those and comment on them to this committee as well as the regular process of comments? It would be helpful to us to have them quickly.

Mr. GRAHAM. Mr. Chairman, Mr. Wallop, as I understand, the Interior Department has offered an intent to modify the regulations, which would take an answering period and so forth. Then thereafter they might regulate it in a manner we would find acceptable.

Six years ago we started this process. We have gone from year to year to year on this type of thing with no guarantee. We have an endangered species. These falconers are able to breed and increase its numbers. You would think, logically, that the Interior Department would provide incentives and encourage the breeding of numbers of these birds. To the contrary, they published regulations that specifically make it a criminal act for you to use the birds that you are breeding. So it is in contradiction.

These things tend to be because of the enforcement problems that the bureau feels they have. We think if there are enforcement problems, fine, there are a few people that are doing these things. But it is certainly not a real problem. And after our previous 6 years of attempts, we no longer feel—and we have discussed this thoroughly—we do not feel that we have any assurance that the Interior Department will act in a manner that will give us the freedom to use, to transport and to exchange these birds that are vital, if we are to breed them.

Now the Interior Department says you can breed birds that are not endangered, but if you want to breed these birds that are endangered and use them, you can't. This doesn't make common sense. It might to certain people in the enforcement agency, but we simply don't think it does.

Senator WALLOP. Well, I would still hope that despite it all, you can find time to look at whatever proposals they do come up with and comment as if they were going to become the regulations.

I think it would be helpful, Mr. Chairman, to kind of see what they propose and if it is a satisfactory proposal.

I realize the history you are talking about. The only other thing I would ask, is the amendment proposal, if it would be adopted in this or some other form, if you thought it would be useful to put in some kind of a penalty clause for abuse, a fairly substantial penalty clause for abuse of wild species?

Mr. GRAHAM. Senator Wallop, we believe there are already substantial penalties now, 10 to 20 years in jail for violation of the Endangered Species Act for taking these endangered species out of the wild without permit.

But to the other end of it, those of us who for the last five to 10 years have produced our own private peregrine falcons, many of which were endangered species, the act goes back as it is interpreted by Interior and their regulations that we have no right to the offspring we are breeding. This is a problem that we met 2 months ago here in Washington. Mr. Schreiner and others agreed that an amendment would clarify their responsibility in this area as towards the captive-produced progeny.

But I do agree there should be, and I believe there are, stringent penalty clauses that are in effect for violations that would impact the wild population.

Senator WALLOP. Do you agree with that conclusion that a fail-safe marking system is necessary?

Mr. GRAHAM. There is no fail-safe marking system. They have a banding system, but the enforcement people feel that, well, what if someone of us goes out and gets a young bird 2 or 3 days after it hatches and brings it into our project and says, "We bred this bird; prove we didn't." I submit that the falconers with their limited birds and the obstacles they have had to overcome today produced in captive last year more peregrine falcons than were produced in the United States in the wild except for Alaska, and anyone who wanted a bird would be an idiot to fly up to Alaska or Canada where he could get that one rare bird in the wild and take all of that risk when he could come to Joe Blow and get one that was bred in somebody's barn for his use. This bird doesn't impact the wild population. We have a bird that is fully capable of returning to the wild and augmenting the wild population. We feel all these activities are of ultimate benefit to the wild population.

Senator WALLOP. Thank you.

Senator CULVER. Thank you very much. We appreciate your testimony.

Mr. Jennings, you may proceed.

STATEMENT OF GERALD JENNINGS, JR., CHAIRMAN, ENDANGERED, SPECIES COMMITTEE, AMERICAN FEDERATION OF AVICULTURE

Mr. JENNINGS. Thank you, Mr. Chairman.

My name is Gerald Jennings. I am representing the American Federation of Aviculture. I would also like for the record to show I am a member of the California Department of Fish and Game

Wildlife Advisory Committee and the California Food and Aviculture Limited Species Committee.

The American Federation of Aviculture is the leading spokesman for U.S. aviculterists representing over 50,000 concerned bird breeders in the United States who are affected by the U.S. Fish and Wildlife Service's implementation of the Endangered Species Act. The American Federation of Aviculture is a nonprofit organization dedicated to the conservation of wildlife through encouragement of captive propagation, scientific research, and education of the general public.

It is our firm belief that as the destruction or encroachment of the habitats of the majority of the world's avifauna continues, the future of numerous species is in serious peopardy. Many species, especially of the *Gallifornes* and *Psittaformes*, are not capable of adapting to a disturbed environment and must surely perish.

It is not within the capacity of the AFA nor the U.S. Government to determine the direction that land usage will take in the underdeveloped nations, whose territory comprise more than two-thirds of the world's remaining, undisturbed habitat. Rain forests and savannas of Asia, Africa, and Latin America are being cleared at an alarming rate to make way for agriculture and urban development, with little regard for the wildlife heritage they represent. Wildlife conservation and concern for the environment take a distant backseat in these Third World countries, as governments are pressured to improve the quality and quantity of life for their citizens.

The AFA, and aviculturists in America, are acutely aware of the problems facing the world's avifauna and are taking positive steps toward resolving those problems. Our efforts are directed towards the captive propagation of as many species as possible, with a purpose of establishing captive, self-sustaining populations. From these captive populations, surplus animals may be returned to the wild, as has already successfully been accomplished with the Masked Bobwhite and Nene Goose in the United States, with the Swinhoe and Edward's Pheasants in Taiwan, and the Cheer Pheasant in Pakistan. Further, these captive populations will eliminate any pressures on wild populations for the supply of zoological or scientific specimens.

The majority of species of the world's avifauna are not endangered in the wild. For those that are, we support full protection and the purposes of the U.S. Endangered Species Act of 1973. The U.S. Endangered Species Act has successfully controlled the importation of endangered species into the United States, limiting such activities to qualified individuals and institutions who have legitimate needs for such wildlife. The act permits use but not abuse.

However, there are significant captive populations of endangered species of avifauna within the U.S. populations that are separate from their counterpart wild populations. In order to maintain these captive, self-sustaining populations, it is necessary to breed them and not to inbreed them. This frequently requires the transportation of these animals in interstate commerce in efforts to pair unrelated individuals.

Currently, the bulk of captive individuals of many of the endangered species tends to be concentrated in a few States while other

States have virtually none. Large concentrations of individuals in one or a few locations leave that population open to total devastation from infectious disease, such as the recent outbreak of Newcastle Disease in southern California during the spring of 1977. It would be wise to decentralize these captive populations and encourage the development of many captive populations of these animals in a number of States.

Aviculturists today are burdened with paperwork imposed by the U.S. Fish and Wildlife Service's implementation of the Endangered Species Act. Further, incredible delays from 90 to 120 days or more are routine from the time of application for a permit to receipt of that permit. Such delays create intolerable maintenance costs for surplus animals and taxed to the limit the available space aviculturists have for the maintenance of nonbreeding stock.

The AFA seeks relief from current regulations and recommends the following actions: (1) Captive-bred endangered species in the United States be exempted from current permit requirements for interstate sale and shipment; and (2) depopulation of endangered species for Newcastle Disease or other infectious poultry diseases by the U.S. Department of Agriculture be rigidly supervised by the U.S. Fish and Wildlife Service, such that endangered species are not destroyed until proven via laboratory testing that such birds are indeed infected.

I would like to elaborate on that point a little bit. Recently, we experienced a nationwide outbreak of exotic Newcastle disease which occurred in the winter and early spring of 1977. During this period of time, any bird suspected to have been exposed was summarily destroyed without proof of infection.

James Gunderson, an attorney who is a member of our organization, had a flock of some 250 pheasants, of which a number of birds were on the exposed species list. A number of these birds were destroyed and then after the fact were found to be free of infection.

I have a letter from Mr. Gunderson that I would like to read at this time.

For many years I have been a breeder of rare and exotic birds. In spite of the fact that none of my birds were sick or had any signs of Newcastle's disease, on March 8, 1977, the Newcastle's task force killed all of my birds without making any tests to determine whether or not they were in fact infected with the disease. While it is true that I consented to the killing of these birds, I was informed that the outcome would be the same whether I consented or not.

Being a lawyer by profession, I was well aware that my civil rights were being totally ignored by the Federal Government. Trying also to be a practical businessman, I realized that defending my rights would require a great deal of my time and money, none of which would be tax deductible since my birds are a hobby, not a business.

I am appalled that our government will spend millions of our tax dollars promulgating laws which they label "conservation" but when put to the acid test of conserving the lives of a species which is endangered, our government will not spend one cent for test or quarantine facilities to see whether or not those endangered species really have a disease.

The endangered species killed on my premises included the following: Two pair Brown-eared Pheasants; two pair Mikado Pheasants; two pair Edward's Pheasants; two pair Swinhoe Pheasants; two pair Humes Pheasants; and a trio of Elliott's Pheasants.

In addition, I had some extremely rare birds which were not on the endangered species list, such as Bartlett Bleeding Heart Doves and Tragopan Pheasants.

A total of 250 birds were killed on my premises, and not one of them had any trace of any disease of any kind.

I believe that immediate steps should be taken to stop this outrage on our society.

I might add, to get the Department of Agriculture to slow up its kill-and-burn policy, we had to take it to Federal court and spend an extreme amount of funds and manpower to slow down the process. The litigation is still in trial. They have come up with a policy that they will test first before they destroy. But the Fish and Wildlife Service, after many appeals, exerted no effort to resolve this problem.

In view of that, we are very much in favor of your amendment to the Endangered Species Act that would encourage arbitration.

I would also like to encourage an amendment be issued or brought forth to the Endangered Species Act that would establish a permit-free system for transportation by interstate commerce to maintain these captive, self-sustaining populations. That rule has been passed as of last June. Today I still have to go through the lengthy permit process in order to ship these animals interstate.

The second point would be to see that the Department of Agriculture is not allowed freely to destroy endangered species before determining whether they are infected.

Senator CULVER. Thank you, Mr. Jennings. Would you also look at the rules that are going to be promulgated tomorrow and in the Federal Register and give your comments on those and how adequately they address some of the matters that you have expressed concern about in the way of recommended changes.

Mr. JENNINGS. Yes.

Senator CULVER. I appreciate very much your bringing this problem to our attention and we will review that with the Department of Agriculture and also with the Fish and Wildlife Service.

Thank you very much for your appearance here today.

Our next panel will be Mr. Golten, Mr. Garrett, Mr. Plater, Mr. Bean and Mr. Zagata.

Good morning, gentlemen. Would you identify yourselves.

STATEMENTS OF MICHAEL BEAN, CHAIRMAN, WILDLIFE PROGRAM, ENVIRONMENTAL DEFENSE FUND; ROBERT GOLTEN, COUNSEL, NATIONAL WILDLIFE FEDERATION; THOMAS R. GARRETT, LEGISLATIVE COORDINATOR, DEFENDERS OF WILDLIFE; ZYGMUNT PLATER, COUNSEL, AMERICAN RIVERS CONSERVATION COUNCIL; AND MICHAEL ZAGATA, WASHINGTON REPRESENTATIVE, NATIONAL AUDUBON SOCIETY

Mr. BEAN. Mr. Chairman, my name is Michael Bean. I am chairman of the environmental defense fund's wildlife program and author of the book "The Evolution of National Wildlife Law." It is a pleasure for me to appear before you on behalf of the environmental defense fund, Natural Resources Defense Council, and World Wildlife Fund United States.

It is also a pleasure, being born and raised in Fort Madison, to appear before you, the Senator from the State I call home.

We are here to discuss reauthorization of the Endangered Species Act of 1973. Let us be frank in that discussion. There have, since 1973, been certain developments that have caused some among you to express concern about the possible consequences of our efforts to protect endangered species. I want to respond to that concern in a constructive fashion. I think the best way to do that is

to take a renewed hard look at some of the reasons that moved Congress to enact this stringently protective law in 1973.

In 1973, Congress was told—and indeed, it was persuaded—that every species of life, no matter now obscure or apparently worthless, offered at least the potential for enormous human benefit. The extinction of any such species, of necessity an irreversible fact, thus constitutes a total and permanent loss of whatever medical or scientific or other benefit that species might ultimately have conferred on humankind. In 1973, the Senate report that accompanied the bill which was to become the Endangered Species Act said the following:

> From the most narrow possible point of view, it is in the best interests of mankind to minimize the losses of genetic variations. The reasons is simple: They are potential resources. They are keys to puzzles which we cannot solve, and may provide answers to questions which we have not yet learned to ask.
>
> Who knows, or can say, what potential cures for cancer or other scourges, present or future, may lie locked up in the structures of plants which may yet be undiscovered, much less analyzed? More to the point, who is prepared to risk losing those potential cures by eliminating those plants for all time? Sheer self-interest impels us to be cautious.

That is certainly very eloquent prose. But is it any more than just eloquent prose? Has the promise made in 1973 that the then apparently valueless creatures would someday significantly benefit us been fulfilled? Five years is a terribly short time in which to expect an affirmative answer to that question, and yet the answer is most definitely yes.

Take the example of the horseshoe crab, not a crab actually, but rather a crablike marine invertebrate whose closest evolutionary relatives are thought to be spiders. The horseshoe crab is a truly ancient creature. It has survived, in pretty much the same form as it exists today, for some 200 million years. For approximately 199,999,997 of those years, the horseshoe crab offered essentially no benefit to man. In fact, in commercial shellfishing areas it was considered a nuisance because it fed upon shellfish. Then, 3 years ago, it was discovered that the blood of the horseshoe crab can be used as an extraordinarily sensitive detector of bacterial endotoxins in intravenous fluids. So sensitive is the crab's blood that it has been predicted that this discovery may change the purity standards for biological tests by a whole order of magnitude.

Another example might be the armadillo. It, too, is a rather ancient and curious creature which, in 1973 at least, neither offered any particular benefit to humans, nor did it then appear likely ever to do so. We know better now, for it appears that the armadillo may furnish the vehicle for the development of a leprosy vaccine. This discovery, likewise made in 1975, revived research efforts that had been moribund for many years.

Admittedly, neither the horseshoe crab nor the armadillo is an endangered species, not yet. But the lesson they teach applies equally to endangered species and demonstrates clearly that no species should be considered frivolous and dismissed as offering no value to mankind.

A second thing which Congress was told in 1973 and of which it was apparently persuaded is that no species, not even man, exists independently of all other species. Rather, the fates of species are interconnected in a variety of still poorly understood ways. Remove

one species from that intricate web and others will be significantly affected.

Well, that, too, sounds like a clever statement of ecological theory. It rolls off the tongue nicely, but who really believes it? Is there any evidence in the last 5 years to confirm the accuracy of this dire prediction? Frankly, that is an even more astounding question to expect an affirmative answer to in the short space of 5 years, and yet, the answer is again "yes." There is such evidence.

It concerns one of the most familiar of historical extinctions, that of the ungainly dodo bird, slaughtered to extinction on the island of Mauritius by Dutch sailors in the 17th century. For 300 years the world has been without the dodobird, and what has it cost us? Until last year, one would have had to answer nothing. But last year a rather startling discovery was made.

An ingenious scientist pieced together the puzzle of the decline of the Calivaria tree, a tree once so abundant on the island of Mauritius that it was commercially logged there. Today, of the Calivaria forests that once covered Mauritius, only a dozen or so trees remain, each of them more than 300 years old. Why? Because the Calivaria tree was dependent, totally dependent, upon the dodo bird, which ate the fruit of the tree and, by grinding its hard seeds in its gizzard, prepared them for germination. Since the last dodobird died, not a single Calivaria seed has germinated. And thus, 300 years after the fact, we see that the loss of the dodo has cost us more than we ever thought. Perhaps, because of this last-minute discovery, it will be possible to save the Calivaria tree, but if not, who can say what will follow, and when?

These examples show us that in 1973, Congress was not off on a lark, subordinating the interests of human welfare to the interests of a few scaly fish or slimy snails. No, it is clear that the interests of human welfare were always first, and still are. All that you did in 1973 was to stand firm against a myopic view of the world and man's role in it.

You affirmed a view of the world and of man first set forth in the story of the biblical flood, in which Noah was directed to take with him into the ark two of "every creeping thing that creepth upon the face of the Earth." The Endangered Species Act represents a determined, perhaps even desperate, effort to keep that biblical ark afloat. Along the way, it is true that a lot of species have fallen off the ark, some have even been unwittingly crowded off by man himself; never before, however, has any species been intentionally thrown overboard.

Thank you.

Senator CULVER. Thank you very much, Mr. Bean.

STATEMENT OF ZYGMUNT PLATER

Mr. PLATER. I am Zygmunt Plater, professor of law at Wayne State University, here today representing the Environmental Policy Center, the Little Tennessee River Alliance, and myself.

As some may know, I have been associated with the Tellico Dam case since 1973. I thought that I could serve the committee's purpose best in these hearings by summarizing the Tellico Dam case as it was reviewed in the fine hearings held by this committee last

July, and catching up on the Tellico Dam story under section 7 to the present.

I guess I would ask the committee to consider for the moment what we in Tennessee had to think about back in 1974 when we began thinking about filing an Endangered Species Act lawsuit. The snail darter would be extirpated by Tellico Dam. We felt if there ever were a honest public review that weighed the damage against the protection, that the public interest would emerge the victor.

However, it certainly didn't appear that by filing the lawsuit, and even worse being successful, that the newspapers would report "Silly Little Fish Stops $100 million Dam. Foolish Endangered Species Act Called Into Question." The cartoonists and news writers indeed had a field day.

The danger there was clearly not just in Tennessee, but that filing a lawsuit that wasn't based on the whooping crane, or whatever, that we would bring the whole act open to emotional, nonfactual attack, that you know certainly did happen.

We sincerely congratulate this committee for taking a topic which in this city, and elsewhere, has been argued in the most emotional terms and incited a rigorous factual analysis of the Tellico case and the entire Endangered Species Act program. Out of that analysis has come a precedent that is very important for the act and that proves a lack of substance of many of the same arguments we hear today.

The procedure you established was oversight hearing on the act, insisting on instances, how many obstacles could not have been resolved through administrative consultation, and the answer you received was none out of thousands of potential conflicts and hundreds of actual conflicts between species and construction. There never was a case that could not have been resolved through good faith consultation.

Beyond that, the committee has a GAO study done on the Tellico case, and reviewed the Tellico case in particular. What was shown in the case was the TVA had persistently refused to even discuss with the Department of Interior any option for the project except building the dam as they originally planned it in the sixties. It also showed through the GAO study that the TVA rushed to complete the dam since 1973, but it is still probably more profitable not to destroy the valley by flooding it than to flood the valley and eliminate 25,000 acres of farmland, the historical and tourists resources, and so on.

Your hearings also indicated that the snail darter has no economic value, no protein value, but it served biologically and in the public interest terms as a very sensitive indicator of the quality of that habitat, which after 68 dams, 2,500 miles of impoundments, was the last undammed place in Tennessee with those qualities for human purposes as well. The snail darter, in other words, like other endangered species, have a utilitarian purpose as a canary in the coal mines that shows problems to the human environment.

Some Senators on this committee say they now know more about Tellico than they needed to know, and if this is going to happen—as you said, Mr. Chairman, if this is the tip of the iceberg, this committee doesn't want to become a trial court on the Endangered

Species Act. I am delighted to say on the record, as we see it, that will not be the case. No. 1, the precedent you have established for Tellico Dam is an honest, objective review of fact and figures, and it has established a precedent that no agency is ever going to want to bring if it can in good faith resolve the issue.

Second, as the hearing indicates, we have a thousand pages of hearings showing there never has been such a consultation that could not be resolved.

Mr. Greenwalt said there are 20,000 potential consultations. I think your question to Mr. Greenwalt was a good one, what are those consultations, because as you look at that potential number, most of those are only potential inquiries, they are not potential consultations. Under the regulations issued by Interior, it is clear that the vast majority of potential conflicts will be resolved through agency screening, without going through the formal procedure.

Finally, I note the amendments that have been offered, and your amendment which is a vehicle for discussion. I would note on this amendment, No. 1, that it may take the motivation for many agencies to comply in good faith on the present section 7 consultation.

Second, the decision would be made for the first time to consciously exterminate a species. That decision would be made by nonelected bureaucrats, instead of in those few cases where a needed decision has to be made by elected officials.

Finally, I note that the text of the draft that you have submitted does not provide for an agency specifically to review options. In the Tellico Dam case, for instance, that was the hard way, not just a little fish versus the dam, but rather the dam versus the fish and public interest options.

Senator CULVER. I think it expressly covers that point.

Mr. PLATER. I didn't see the word in there.

Senator CULVER. It talks about prudent.

Mr. PLATER. It said "feasible and prudent alternative."

Senator CULVER. "No reasonable or prudent alternative."

Mr. PLATER. My concern there, Senator, is that that is a self-defining objective. For instance, if you have a project to irrigate Death Valley, damming the Colorado River is probably the only way to do so. The feasible and prudent alternative test takes the objective which the agency set out to accomplish, and I am urging that the legislation be made specific so that not only the specific objective of the agency in setting out is considered, but all alternative courses of action to the entire agency action proposed.

Perhaps we could work on making that clear.

Finally, in conclusion, I would arge that the act, indeed, on the basis of your record, is working and working well. I would urge that no amendments be proposed unless there exists facts which indicate that amendments are necessary, and so far, the amendments that we have before us are a good faith try to cure a problem which does not exist.

Thank you very much.

Senator CULVER. Thank you, Mr. Plater. I would like to get all the statements and then perhaps have some questions.

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Mr. ZAGATA. Mr. Chairman, as one who is educated in Iowa and still has strong personal ties——

Senator CULVER. I find that every time I become a subcommittee chairman, Iowa grows. Every lobbyist is from Iowa. It is really quite remarkable. Then you can tell me your voting residence and I am supposed to quake or applaud. If you don't have an Iowa lobbyist, go out and get one. We are learning fast around here.

STATEMENT OF MICHAEL ZAGATA

Mr. ZAGATA. I am Michael Zagata, director of Federal relations for the National Audubon Society. I will try to summarize my statement.

Because this morning's hearings will focus on appropriations authorization and not oversight, I will direct my remarks to funding and to the policy which is inexorably set by funding levels. For further documentation of the National Audubon Society's views on the Endangered Species Act per se, please refer to my attached statement which was presented to this committee in July 1977.

In 1973, Congress enjoyed the accolades of citizens across the land for the foresight shown in its nearly unanimous passage of the Endangered Species Act. But, passage of a law is only the first step in the long battle to halt and reverse an alarmingly escalating rate of extinction. If the program set in motion by the act is hindered by insufficient personnel and funding authorizations and appropriations, it is doomed to failure. Without adequate personnel and funding, the act becomes useless, or worse still, sets up a malfunctioning bureaucracy fraught with problems. When this occurs, the intent of the act becomes thwarted and neither the species nor mankind benefit.

Therefore, we look to this committee for courageous leadership, both now and in the weeks ahead, by reaffirming its support for the act through reauthorization and recommendations for funding levels which will allow the program to work as it was intended.

The administration has recommended an authorization of approximately $16.5 million for the 1979 operation of the office of endangered species. This figure is woefully inadequate and in fact should be twice that much, perhaps nearer $35 million.

Many of the problems that have arisen to stir outcries against the act could have been alleviated had there been sufficient funds and manpower to administer the program. Research, designation of critical habitat, species listing, law enforcement, and consultation have had to be accomplished in a piecemeal fashion which can lead to delay. The President has recognized the need for the rapid identification of endangered species and their critical habitats where they occur on public lands, and we applaud him for expediting the process as long as the work is done in a professional and thorough manner.

The area in need of greatest boosting is the section 7 consultation requirement which became mandatory as of January 1978. This program needs an additional $5.1 million and 96 personnel ceilings.

Thorough and conscientious consultations between the Fish and Wildlife Service and agencies engaged in project planning are the key to the ultimate success of the Endangered Species Act. To date,

the Office of Endangered Species has conducted thousands of successful consultations in its attempt to insure that development and species survival are compatible. More full-time, highly qualified staff are imperative to the continued success of the often delicate consultative process. Part-time, temporary help are often not the best qualified and do not provide the continuity to ensure the long-term success of the act. We believe that as this consciousness of endangered species permeates Federal project planning agencies, those agencies will seek, if only to avoid undue delay, thorough consultation with full documentation.

Another area in need of greater funding is the portion of the program designed for critical habitat identification. President Carter, in his environmental message of last spring, placed high priority on an accelerated program for critical habitat identification. Let me emphasize that this is an important step toward identifying potential conflict at an early stage in the planning of a project, and therefore, increases the likelihood of a good-faith resolution of that conflict. To insure that the inventory is completed properly and expeditiously, nine additional personnel ceilings are needed.

It behooves both supporters and critics of the program to support both the personnel ceilings and funding levels necessary to employ and equip the most highly qualified research staff available. Without such a scientific capability, both critics and supporters of the act will lose because tradeoff decisions will more likely be based on insufficient data.

The law enforcement program for the Endangered Species Act is also understaffed and underfunded. Without a strong law enforcement arm, we undercut our role as a leading nation in the battle to stop international traffic in threatened and endangered species. This aspect of the endangered species program needs an additional $1 million and 20 personnel ceilings.

Mr. Chairman, because of the foresight of this subcommittee and the entire Congress, our Nation has taken steps to halt the devastating decline of whooping cranes, condors, and eagles, just to name a few of the endangered species. We firmly believe that with increased support through generous funding and personnel ceilings, and with the support of this subcommittee for parallel programs such as the nongame legislation and the Fish and Wildlife Coordination Act, that our Nation will maintain its rich floral and faunal diversity and endangered species list will eventually become shorter rather than longer.

The National Audubon Society looks forward to working with the subcommittee as it champions the defense of the values exemplified in the landmark Endangered Species Act, and we again thank you for this opportunity to present our views.

Senator CULVER. Thank you very much, Mr. Zagata.

STATEMENT OF TOM GARRETT

Mr. GARRETT. Mr. Chairman, I am Tom Garrett, legislative coordinator for Defenders of Wildlife. In my case, I helped lobby the act through in 1973. I have helped through the years to try to see it was decently administered and enforced.

It has been 12 years since Congress passed the Endangered Species Act of 1966. Since that time, the legislation has been twice rewritten and strengthened. Even so, this same period has been beyond doubt the most disastrous decade for wildlife in the known history of the planet. Vast tracts of forest throughout the tropics, both lowland and mountaine, with diverse populations of wildlife only a few years ago, have been utterly destroyed and the pace of destruction is intensifying.

I had occasion to fly over Montana last summer. I was absolutely shocked at the appearance of mountain backbone of the inland. I had heard that was the case, and I couldn't believe it until I saw it.

Direct pressure on wildlife has almost everywhere mounted. Poaching in Africa has reached the level of organized extermination. The situation is only a little better in Asia and Latin America. Species which seemed reasonably secure only a few years ago, such as Grevy's zebra, are facing imminent extinction, or may be already gone. God only knows, for example, if the sable antelope has survived the Angolan Civil War.

Yet even today the destruction and endangerment of wild species is being powerfully abetted by American industry, especially the fur industry. It is a striking fact that during a time when wildlife numbers are plummeting worldwide, the importation of wildlife products into this country, and the use of domestic wildlife products, is increasing dramatically. Imports of items manufactured from wildlife increased from 1.7 million in 1972 to 91 million in 1976. Imports of skins and hides rose from 910,000 in 1973 to 32.5 million. Game trophy imports rose from 2,800 in 1973 to 34,000. In these same years, the status of crocodilians throughout the world, of sea turtles throughout the world become desperate.

Just as the amounts imported have soared, the prices commanded by many such products have mounted astronomically. The House Committee on Merchant Marine heard testimony recently that the price of ivory has risen tenfold or more since 1970 to $30 or more a kilo. Prices paid for Grevy zebra hides have increased from $150 a few years ago to $2,000 today in New York. This zebra is, accordingly, facing extinction, along with Hartman's Mountain and Cape Mountain zebras.

We submit that enforcement effort must rise commensurately to the traffic it is supposed to regulate. We also submit that if enforcement is to succeed, and if actions are to prevent extirpation of species, rather than to simply react too late, as is probably the case with the zebras mentioned, we must ban the importation of entire classes of product.

Senator CULVER. Entire classes?

Mr. GARRETT. Entire classes. For example, all ivory, all crocodile products.

Senator CULVER. You say we should ban that on a unilateral basis in the absence of an international agreement?

Mr. GARRETT. The international conference has listed six turtle; we have listed three. One of the turtles that is listed is being routinely imported into this country. It is plainly illegal.

Senator CULVER. What are you saying, that the extent of effective international enforcement in some of these categories is so unsatisfactory that we have to take unilateral action, or what?

Mr. GARRETT. Obviously, the stronger action we take—we are in the market for a more number of these products.

Senator CULVER. Do you feel that the current international effort with respect to listing endangered species is sufficient? Again, that gets to be a question of subjective judgment. I mean generally.

Mr. GARRETT. The listing under the international convention is probably satisfactory. It is a question of worldwide enforcement. I might say we are behind the international convention in listing. A lot of nations—well, some nations are enforcing it, but a great many are not. And that is especially true of Third World nations, who don't have the enforcement personnel and have cash flow problems.

I estimate, conservatively, that at least 100 animal species will become extinct in the next 10 years, and that the U. S. Government, either through direct action or by its failure to take action open to it, will bear responsibility for up to half of these extinctions. I will get the draft paper to the committee I hope before you close your record.

I think I will go to section 7. Section 7 has two distinct parts. The first part imposes a positive duty on U. S. agencies to use existing programs to carry out purposes of the act, and to carry out conservation programs in consultation with the Secretary. This requirement has been sedulously ignored. No legal history has been developed for the reason while it is sometimes possible in court to enjoin agencies from clear violations of a law, it is evidently almost impossible to force them to undertake positive programs. If these requirements were to be carried out with alacrity by U. S. agencies, including AID and other international entities, this would probably save for the time being at least a considerable number of species.

Senator CULVER. You are really saying AID is not doing enough to enforce this?

Mr. GARRETT. AID is doing an enormous amount, for example, in Costa Rica.

Senator CULVER. You can give me examples for the record. Is that what you are saying?

Mr. GARRETT. Yes.

Senator CULVER. Whatever examples you can provide, I would appreciate them.

Why don't we wrap this up, Mr. Garrett, because we do have a time problem.

Mr. GARRETT. I just want to make one comment on the obscure species.

The obscure species which have figured in certain recent controversies are, in particular, part and parcel of very specific environments. Their disappearance, almost invariably, signals the functional end of the habitat in which they lived in whatever region, in whatever river system comprised their range. Their disappearance signals the end perhaps of free flowing, unpolluted water on a river, the end of inland marshes in a region. It also signals the end of any bond that it had with the land. As a species, they are, admittedly, insignificant, but in the totality of their environment, it is something else.

Now, I want to make a couple remarks about the amendment I saw. We oppose the amendment. We don't think it is necessary. We

think most of the growing pains could be gotten over administratively with certain massaging by the committee.

In any case, as I understand it, it sets up appointed heads of seven agencies, four of which are themselves neck deep in pork barrel projects, all of which are vulnerable to pressure both from each other and from authorization and appropriation committees, to sit in judgment on the existence of species. It seems to us you ought to at least require that elected officials sign the death certificate before it is finally executed.

Senator CULVER. Unfortunately, you might get too long a line ready to do that.

Mr. GARRETT. It seems to me those officials, if the committee doesn't want to handle it, ought to be the President or the Governor or Governors of the States involved.

Senator CULVER. You are saying the Governor involved in the State ought to do it?

Mr. GARRETT. Well, the President certainly.

Senator CULVER. The President ought to do it? Do you think that is better than an interagency board? Is that a preferable form?

Mr. GARRETT. It seems to me if the board makes a decision, it ought to be unanimous. It seems to me the President ought to have to sign off on it. It is a pretty irrevocable thing, extermination of a species.

If you are going to inject economic considerations into the act, you ought to do it in a creditable manner by requiring that the committee reassess the economic benefits, using realistic discount rates, and taking fully into account the probable appreciation of assets to be sacrificed. A realistic economic assessment would of itself relieve such committee of any need to look further in most cases.

If the economics of the projects now in dispute had been realistically considered in the first place, there would have been no hearing here today.

So, we urge the committee to drop the amendment from consideration and to concentrate instead on funding the act properly, and making sure that it is administered and enforced.

Senator CULVER. Thank you, Mr. Garrett.

STATEMENT OF ROBERT GOLTEN

Mr. GOLTEN. Mr. Chairman, we have prepared a thoughtful 14-page statement which I would like to submit to the committee. Essentially, we support the increase of funding levels for the Office of Endangered Species, and have asked in our statement that the committee consider elevating those funding levels for a 3-year authorization level of $75 million, $10 million for the analogous office in the Department of Commerce.

Second, we think the Endangered Species Act, as it was amended in December 1973, is working well, and we would urge the committee to leave it intact.

I would like to just briefly bring before the committee a couple of experiences we have had, and I, personally, was involved in these experiences in dealing with the Endangered Species Act, particularly section 7 as it is written. I think these instances are illustrative of the fact that the statute is operative and works well and

should be left alone, at least for the time being. We think the need for midcourse correction is not present.

We were asked in 1975 to look into a confrontation between the Federal Highway Administration and some naturalists and biologists, including the Fish and Wildlife Service, in Mississippi. At that time there were 40 birds remaining in a very endangered subspecies of the Mississippi Sandhill Crane, and the Federal Highway and State Highway Department in Mississippi were planning to run the extension of Interstate 10 rights through the remaining habitat for the birds.

We went down to Mississippi and tried to talk to the State highway department and the Federal Highway Administration, and we were unsuccessful in persuading them to reroute the highway. At this point in time there had been no court cases under the Endangered Species Act, and nobody was quite sure what Congress intended.

We were unsuccessful in trying to persuade the highway people that Congress meant what appeared on the face of the statute. So, we did have to go to court.

There was an earlier reference this morning by one of the witness to the wealth of litigation that has been generated by section 7. Indeed, in the 4½ years of the exitence of the statute, to my knowledge, there have only been three court cases. Ours was the first one, and it was the only successful court case I know of, other than the Tellico Dam case, which is pending in the Supreme Court, that has been litigated under section 7.

In that case, we went to court not to stop a highway, but simply to achieve some modification, particularly the site of an interchange. If they were going to leave the interchange where it was, which was next to the critical habitat, the spawned development would have eliminated that land. They purchased land contiguous to the interchange to protect it for the crane.

We were successful in court. The highway has been completed with some modifications that the court required. And indeed, those modifications would have been achieved administratively if the Highway Administration had really felt that Congress was serious about the Endangered Species Act; there would have been good-faith consultation if the Highway Administration knew then what they know now.

The second illustration I would bring before you is a case down in South Carolina in the Francis Marion National Forest and the 4,500-acre I'on Swamp, a habitat for the Bachman's warbler, which is a very, very rare and unique bird. There were some biologists and naturalists around the Charleston area who were concerned about the plight of this animal, and were particularly concerned that the Forest Service was planning on clearing this swamp. They asked us to come to South Carolina and intervene.

We did go to South Carolina and talked to the biologist. Then we talked to the Forest Service. We arranged to avoid a courthouse confrontation by setting up a three-member arbitration panel, with wildlife experts from the U.S. Forest Service, Fish and Wildlife Service, and the Wildlife Society.

They held hearings. They made an onsite visit to the site where the Forest Service was planning to clear, and ultimately issues a

final report for recommendation where timber harvesting should take place and where it should not. All parties are satisfied. The Endangered Species Act operated in a fashion to effectuate a result which was satisfactory to both sides.

We think that that case is especially illustrative of what has been happening, that agencies have become sensitive to congressional intent. They haven't been stopping projects. Projects that have a good deal of rationale have been modified to accommodate the existence of rare and endangered species of plants and animals.

In short, the act is working. We would urge the committee to keep the act intact.

Senator CULVER. Let me say how much I appreciate the statements that we have just experienced from this panel. I think they are very eloquent and extremely informative.

I might say that my home McGregor, Iowa, which has a population of about 900 people, and overlooks the Mississippi River, was the site of the first wildlife school in America. It was started about 1918, and it ran pretty constant until 1941. The house I live in was built to accommodate the professors and students that came mainly from Iowa colleges and universities but also from elsewhere around the United States every August for a 2-week program. It was a prototype for some of the schools which grew later in Colorado and elsewhere. My family and I actually live now in the building this program was conducted every year and where visiting lecturers and students took their meals. They taught everything from archaelogy to astronomy, Indian history, and botany. They had a very, very remarkable curriculum and some outstanding pioneers in the disciplines and fields that concern your organizations.

So, I have a special interest in the history of this movement, and I am personally reminded by the rare opportunity I have to live in such a location.

I believe I recognized in my opening statement that the consultation process, I feel very strongly, will take care of most of the conflicts that develop between projects and the Endangered Species Act, and I do believe that whatever is done, we have to make sure we have a very strong and good-faith consultation.

It does seem to me however, that there is a very real need for some kind of a safety valve for those instances, and I acknowledge they are likely to be few, but there are going to be more than have been suggested here, where the process doesn't work. I don't think anyone can guarantee there never will be irresolvable conflicts. If they are so sure there will never be any irresolvable conflicts, I don't think anyone should be against this board, since the Board can only review irresolvable conflicts.

Mr. Plater, you mentioned, if I recall correctly, in your testimony your concern with weakening the consultative process itself by the mere existence of an amendment. I think in fairness you haven't had an opportunity to review it carefully yet. And I do invite all of you to do that. We genuinely want your thoughts and criticisms, whether they are flat-out rejections, but hopefully more positive suggestions for improving it.

But as explicitly stated in this amendment no case is accepted by the Board at all unless the members are satisfied that the consulta-

tion process has been completed in good faith. That will be an essential prerequisite for them to even entertain the petition. Tellico is the flashpoint on this issue, and has, as you properly pointed out, brought home the very dramatic facts and contributed a great information and misinformation on this issue. Nevertheless, I think we should be aware that Tellico is not an abberation. According to the Fish and Wildlife Service, there are some dozen projects which appear to pose a very fundamental conflict with the act. Tellico may be first, but it ain't going to be last.

Now, in addition, we have heard that GAO suspects on the basis of preliminary inquiries that the Service is dragging its feet in some cases on listing species which could cause conflicts. They are sensitive to the politics of this situation and, it may be having a chilling effect their ability to properly implement the Act. There may be a number of instances that fall in that general category, in addition to the ones we already see taking shape on the horizon.

So it seems to me what you realistically have to contemplate, those of you who are in support of this act, is what is going to happen, who is going to choose, who is going to decide, what is going to happen here. Are we going to have political action that results in general grandfathering for all projects completed at some point before this act was originally enacted in 1973? Are we going to have specific exemptions of particular projects by Congress where the interest groups hammer it out, and special interest bring all pressure to bear from every spectrum on Congress who will make these judgments on an ad hoc basis? Are you going to have a decision by individuals other than Congress; individuals who will be subjected to even more intensive political pressures? I think it is something to consider.

For instance, there have been suggestions we ought to let the President or the Secretary of Interior make the decision as to whether a project should be exempted. We have other amendments pending that have been authored by other Members of the U.S. Senate. Let the Governor of the State involved decide; that is one that is pending. Each of the 50 Governors decides what goes on in their particular jurisdictions.

That interdependent web that Mr. Bean speaks of is somehow appreciative of the multiplicity of state jurisdictions. We have enough trouble in Africa where we haven't drawn the lines with much sense historically. Are we going to do it with the environment with greater success? I think you, Mr. Bean, have indicated what a fruitless and futile exercise that would be given the nature of the world we live in.

How are we to deal with that responsibility, or if in fact can we ever deal with it, because these mysteries have posed questions for humanity ever since the first person took a bite of the apple, or however else they got ready to think about it.

That is where we are. We are between a rock and a hard place. What I would like to elicit from all of you would be your most serious and responsible consideration of this particular proposal. What ideas do you have for improving it? It is a tentative proposal. It is a vehicle to try to get some serious discussion stimulated.

Frankly, we are very realistically going to be voting up or down on this bill before too long. We would like very much if you would be good enough to provide us with your thoughts on it.

Mr. GOLTEN. Senator Culver, I quickly read the draft. It did not appear there was a requirement of a certification from the Fish and Wildlife Service or the Secretary of Interior that consultation had been in good faith.

Senator CULVER. We require them to respond to the project agency's petition within a time certain and to give their views on whether the requirements of the consultation process described have been met. That is in the draft.

Mr. GOLTEN. I think if the Secretary were required to certify as a predicate for further——

Senator CULVER. The Secretary of Interior?

Mr. GOLTEN. The Secretary of Interior.

Senator CULVER. Why don't you take a look at this and give us some specific thoughts.

Mr. GOLTEN. The other question is it appears this amendment would go well beyond the Tellico situation, as I read it. It applies to not just projects which are substantially completed at the time there is discovered a conflict between a project and an endangered species, but it would apply to all projects, even those not begun.

Senator CULVER. That's correct.

Mr. GOLTEN. We would urge if the committee is going to think along these lines, this amendment be confined to Tellico type situations.

Senator CULVER. I have to be downtown at 1 o'clock. If we could get your thoughts for the record, we would appreciate that.

Mr. Plater, did you have something else?

Mr. PLATER. One thing I would like to submit for the record. We have noted there is no evidence on the record that the act is not working. I have three documents that I would like to put on the record. The first is a letter from Secretary Andrus requesting TVA to please consult after 5 years. The second and third are letters from TVA.

Senator CULVER. Without objection, they will be made a part of the record.

[The letters referred to follow:]

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., March 16, 1978.

Mr. LYNN SEEBER,
General Manager, Tennessee Valley Authority, Knoxville, Tenn.

DEAR MR. SEEBER: This is to request that the Tennessee Valley Authority reinitiate consultation under Section 7 of the Endangered Species Act of 1973 with respect to the Tellico Reservoir Project.[1] The purpose of such consultation would be to obtain current information on the status of the species and TVA's activities and an opinion of the Fish and Wildlife Service as to the impacts upon the snail darter and its critical habitat of undertaking the Tellico Project modifications referred to in GAO Report EMD-77-58.[2] The principal alternative envisioned by the Comptroller General—which would require the removal of a portion of the dam and the conversion of Tellico from a reservoir project to a free-flowing river-based agricultural, economic, recreational, and cultural development project—is one which has the potential of preserving the snail darter and its critical habitat while yielding a

[1] This procedure is specified at 50 CFR § 402.04(h)(1) [43 Fed. Reg 876 (January 4,1978)].

[2] Comptroller General of the United States, the Tennessee Vally Authority's Tellico Dam Project—Costs, Alternatives, and

higher economic return than a reservoir project. This alternative has not been the subject of prior consultations under Section 7 of the Endangered Species Act.

We further recommend that you promptly undertake the remaining cost and remaining benefit analysis of the Tellico Project and its alternatives which the Comptroller General recommended that you submit to the Congress. This Department is prepared to provide you its initial suggestions on the development of the alternatives, as well as to comment upon the methodologies, data bases, and resulting analyses used in the study. Only in this way can informed decisions be made on the full range of available alternatives for preserving the snail darter and recouping the investment in the affected portion of the Little Tennessee Valley.

We urgently recommend the completion of the recommended study and of Section 7 consultation. For reasons stated in the GAO Report, the Congress, the Executive, and the Supreme Court do not have a true account of the present merits of alternatives to the Tellico Reservoir Project. Furthermore, during the extended period of time it will take to prove the success or failure of snail darter transplant efforts, the present dam structure may be contributing to the demise of the population of snail darters in the Little Tennessee River. The sooner this study and further Section 7 consultation can be concluded, the sooner informed decisions can be made as to whether project economics justify the closing of the dam gates and a conscious extirpation of a species, either now, or at some point in the future when transplant success can be evaluated, or at all. In view of GAO's projections of comparatively greater economic benefits to be derived from alternatives (which would also promote darter preservation), the public interest demands that this evaluation be undertaken at this time.

I am providing the Director of the Office and Management and Budget and the Chairman of the Council on Environmental Quality a copy of this letter, in part because of the Comptroller General's recommendation that they participate in the recommended cost-benefit study. I would suggest that appropriate staff of our four offices, together with representatives of the General Accounting Office, meet at OMB on March 23, 1978, to commence formulation of the cost-benefit study.

Sincerely,

CECIL D. ANDRUS, *Secretary.*

TENNESSEE VALLEY AUTHORITY,
Knoxville, Tenn., March 31, 1978.

Hon. CECIL D. ANDRUS,
Secretary of the Interior, Washington, D.C.

DEAR MR. SECRETARY: This is in further response to your March 16 letter to Mr. Lynn Seeber, our General Manager.

We welcome the opportunity to discuss the snail darter matter. The discussions, however, should be held on a basis other than the narrow confines of your letter. They certainly should be directed to the transplantation of snail darters to other suitable rivers in an effort to assure the species' survival, and also permit the project's completion and use on the basis on which Congress has made appropriations for the project. The Senate and House Appropriations Committees' reports for 1975, 1976, and 1977 direct that the Tellico project be completed as quickly as possible in the public interest; Congress has appropriated funds to complete the Tellico project based on those reports and with full knowledge of the conflict between the project and the snail darter; and the specific provisions of the 1977 Appropriations Act (Title IV of Public Law No. 95–96, 91 Stat. 797 (1977)), make $2 million in appropriations available to TVA for transplanting endangered species "to expedite project construction." Congress is presently considering the Administration's budget which requests $1.846 million to complete Tellico. Under these circumstances, it is clear to us that TVA is not at liberty to ignore these congressional directives and abandon the Tellico project as planned and built. Consequently, we are unwilling to discuss the alternative mentioned in your letter.

We recognize, of course, that the Comptroller General's report to Congress on Tellico recommended that the project be restudied to determine whether it should be used or scrapped in favor of an alternative use of the Little Tennessee River Valley. We informed Congress that we did not think that the factual material reported by GAO supported its recommendation and that the recommendation should not be followed. We pointed out that this project was studied in 1977 by a team from OMB, CEQ, and TVA, as a part of President Carter's review of water projects, and found to have a remaining cost benefit ratio of 7:1. Congress has not acted on the GAO recommendation, and until it does, we cannot act on such a recommendation that is contrary to express congressional directives. As you may know, this report has been heavily criticized, even by one of the Congressmen who

asked for it (124 Cong. Rec. H1462 (daily ed. Feb. 23, 1978) (remarks by Rep. Duncan)).

Among other considerations, in light of Congress's action and the advanced stage of the Tellico project, it is our view that the best way to accommodate both the snail darter and the Tellico project is through transplants to other suitable habitats. Congressional action appropriating funds for construction of Tellico, and to "relocate" the darter, clearly compels this view. Accordingly, we believe that a meeting to discuss further transplants would be productive and in furtherance of the spirit of both sections 3 and 7 of the Endangered Species Act and Public Law No. 95–96.

We are puzzled by the U.S. Fish and Wildlife Service's repeated denials of our permit applications to transplant snail darters to other suitable rivers. These proposed transplants are designed to establish new populations to better assure the species' survival. Our proposals to transplant snail darters to a Holston River site previously identified by TVA and the Service as a priority transplant site, are biologically sound and are in accord with the intent of Congress, specifically Title IV of Public Law No. 95–96, 91 Stat. 797 (1977), which provides for transplants "as may be necessary to expedite project construction."

The transplants contemplated by Public Law 95–96, however, are being prevented by the Service's repeated denials of our transplant permit applications. Moreover, while the Service rebuffs all TVA attempts to establish new populations of snail darters, your Solicitor recently stated in an appendix to TVA's brief in the Supreme Court in the Tellico/snail darter case:

"Since closing the dam and filling the reservoir would immediately make transplantation efforts impossible, it follows that Congress specifically contemplated in the appropriations act itself that dam closure must await evidence of a successful transplant [at 10A]."

The Department of the Interior apparently takes the position that closure of the dam must await a successful transplant, while at the same time denying all transplant applications. Not only are these positions inconsistent, but the continuing refusal to grant the requested transplant permits is, in our opinion, a frustration of the purposes of Public Law No. 95–96.

In light of express congressional intent that transplants continue and the biological good sense of expanding the snail darter's range, we request that the Service reconsider the denial of our most recent permit application. Our people are available to provide the Service with any additional information which might be helpful in reviewing our permit application. If another application is needed, please let us know. We have asked Dr. Thomas H. Ripley, Director of TVA's Division of Forestry, Fisheries, and Wildlife Development, to arrange a meeting to discuss further transplants.

This brings us to two points of serious concern to TVA. Your Solicitor, in an appendix to TVA's brief before the Supreme Court, suggested that TVA has not consulted with your Department about the Tellico/snail darter problem as required under section 7 of the act. We have cooperated and consulted fully with the Service about the conservation of the snail darter from the very outset of this controversy and have tried our best to resolve the problem. Our efforts to conserve the snail darter began shortly after the fish's discovery and over a year before it was listed as endangered. Our efforts were coordinated with your staffs; biweekly progress reports and special reports were furnished to keep them current on all significant efforts and developments that occurred; staff consultation meetings were held at various stages to plan certain steps or resolve disagreements; and numerous other conversations, discussions, and meetings were held along the way. Dr. Williams of the Service testified that TVA had "always cooperated fully" and given the Service "any information" requested. In Mr. Greenwalt's October 12, 1976, letter to TVA, giving us the Service's biological opinion on the effects of Tellico on the snail darter, he stated that "your agency's cooperation in the consultation process on the Tellico Dam project has been appreciated." Indeed, even though TVA disagreed as to the biological desirability of the Service's plan to restock the Little Tennessee River with snail darters because the fish is unable to naturally sustain a population there, TVA assisted in those restocking operations. In short, we have consulted and cooperated with your Department in every reasonable way to conserve the snail darter short of scrapping the virtually completed Tellico project—a project which we have been directed repeatedly by Congress to complete in the public interest.

The basis given for your Solicitor's statement that TVA has not consulted is that TVA has been unwilling to discuss what he terms an "alternative" to Tellico which would allow preservation of the darter. The "alternative" suggested in the appendix to the TVA brief and in your letter to Mr. Seeber is a scenic river development which calls for the complete abandonment of the Tellico project and its major

purposes of flood control, hydroelectric power, navigation, and employment opportunities, and for the waste of over $50 million in publicly invested funds. The hydroelectric benefits cannot be denigrated by saying that they are small as compared to the whole of TVA, the Nation's largest power supplier. For example, Tellico would provide more electricity than was generated at several of TVA's dams (Chatuge, Nottely, South Holston, Watauga, Boone, Melton Hill, Tims Ford) in the year ending September 30, 1977. The Government, as well as other knowledgeable individuals and entities, is now recognizing that the country must utilize these renewable nonpolluting sources to help alleviate the increasingly acute energy problems. We simply do not think that the act contemplates the abandonment of a congressionally authorized project such as Tellico which was over three-quarters complete when the species was discovered and listed as endangered. Neither do we think that section 7 requires "consultation" about an "alternative" which requires *scrapping* the nearly completed project. As the district court expressly held:

"Completion of the dam and impoundment of the river are integral parts of a project begun almost a decade ago. TVA has been moving toward this goal since ground was first broken. When the snail darter was listed on the endangered species list in November 1975, TVA was fairly close to completion of the project which has been consistently funded by Congress since 1966.

"The nature of the project is such that there are no alternatives to impoundment of the reservoir, short of scrapping the entire project. Modifications or alternations to the project cannot be made at this time which will insure compliance with the Endangered Species Act. Requiring TVA to consult with other agencies about alternatives not reasonably available to it would be to require TVA to perform a useless gesture" [*Hill* v. *Tennessee Valley Authority,* 419 F. Supp. 753, 758 (E.D. Tenn. 1976)].

Finally, we request that you consider the cavalier manner in which the Service handled TVA's petition to delist the Little Tennessee River as critical habitat for the snail darter. By letter dated February 28, 1977, we sent you a copy of TVA's petition to delist, the original of which was mailed the same day to the Director of the Service. Because of the importance of the matter to TVA and the region, we asked for an opportunity to meet with you and discuss the matter in some detail. Your April 18 reply, signed by Jim Joseph, suggested that a meeting be deferred until the petition had been thoroughly reviewed.

On December 5, 1977, over nine months after the filing of the petition to delist and after several TVA inquiries about the petition, we were informed by letter from the Associate Director of the Service that the petition had been denied. No consultation with TVA had occurred. No notice that the petition was being reviewed had been published in the *Federal Register,* and the December 5 letter gave no reasons for the denial. In fact, the letter stated that the petition had been indirectly denied as a part of the Service's July 6, 1977, denial of TVA's application for a permit to transplant snail darters. Yet, TVA was not informed of this until December 5, 1977, over five months after the decision was apparently made. Even then, there was a great deal of confusion in the Service about the status of the petition, as several Service staff members familiar with the petition informed TVA staff in late November that a decision had not as yet been made.

We feel that a matter of this importance should receive the thorough review suggested in your letter to us rather than being denied indirectly as a part of the denial of another separate matter. The petition was supported by detailed biological evidence which, as far as we know, is essentially undisputed; and we believe that if it receives a thorough, objective review it will be granted.

Again we want to emphasize our desire to work with the Service to conserve the snail darter. Through the combined effort of our organizations and through transplants of snail darters to other suitable rivers as contemplated by Public Law No. 95–96, we believe that a successful accommodation of both the project as now built and the snail darter can be achieved.

This letter reflects the views of myself and Director Jenkins; and Director Freeman will respond separately.

Sincerely yours,

AUBREY J. WAGNER, *Chairman.*

TENNESSEE VALLEY AUTHORITY,
Knoxville, Tenn. April 6, 1978.

Hon. CECIL D. ANDRUS,
Secretary of the Interior, Washington, D.C.

DEAR MR. SECRETARY: This is my response to your letter of March 16 to TVA requesting consultation on the Tellico Project.

I am much less concerned about the snail darter than I am the people in the Tellico area who are without jobs, people whose welfare is endangered by this seemingly endless dispute. I take your letter as an offer to apply some common sense to the current impasse by fashioning a reasonable compromise that will enable the government to complete the project promptly.

In my view, such a compromise project must provide jobs for people in the area as well as other benefits for present and future generations that will maximize the government's investment.

I have made no judgment on the Tellico Project, but I have been briefed by the TVA staff. Based on that briefing, I believe such a compromise is possible under existing law. There are alternatives to the current Tellico proposal other than scrapping the project. The TVA staff is now studying such alternatives.

For example, one option would be to utilize the near completed dam as a "dry dam." Such an alternative project would provide more flood control protection in a severe flood than the existing project; would provide food from the rich bottom land valued in excess of $5 million per year, rather than a small quantity of hydropower (less than ⅛ of 1 percent of TVA's needs) with a comparable or smaller value; would maintain a free-flowing stretch of river for recreation rather than forming a lake; would preserve the ancestral home of the Cherokees as a source of tourism rather than flooding these artifacts; and would provide industrial sites and jobs comparable to the existing project.

I do not know whether such a redesigned project would be superior to the current design or not because the TVA staff studies have not been completed, and there has been little or no public discussion of the comparative benefits of the two approaches by the public. I do know that such a project is a possibility.

Another possible option for compromise would be to go ahead with the industrial development immediately and monitor the snail darters in the Hiawassee Reservoir for a period of three years, and if the fish survive, TVA would then be free to form the lake if that best served the public interest.

The choice is not the snail darter or the dam. The industrialization and other benefits to the economy can take place with or without another lake as soon as the controversy can be settled and the choice industrial sites TVA now owns can be made available with certainty.

A decision by the Supreme Court will not end this controversy because each side has stated it will carry on the fight in another forum if it loses. The current litigation and dispute can thus lead only to further delay and waste of the taxpayer's money. And contrary to the TVA position, forming a permanent lake is not vital to the Tellico project and may not even be the option with the greatest public benefits.

I therefore favor consultations to review the possible alternatives under existing law with an early deadline to hammer out a compromise that places the highest priority on benefits for people. I also favor asking the court to defer judgment on this case for a six-month period to permit the parties to work out, such a compromise in the public interest.

Sincerely,

S. DAVID FREEMAN, *Director.*

Senator CULVER. Thank you all for your participation.

The subcommittee will stand in recess until further call of the Chair.

[Whereupon, at 12:55 p.m., the subcommittee was recessed, to reconvene subject to call of the Chair.]

[Statements submitted for the record by today's witnesses follow:]

PREPARED STATEMENT FOR PRESENTATION TO THE
SUBCOMMITTEE ON RESOURCE PROTECTION OF THE SENATE ENVIRONMENT
AND PUBLIC WORKS COMMITTEE -- 13 APRIL, 1978

C.W. HART, JR.

MY NAME IS C.W. HART, JR., AND I AM AT PRESENT ASSISTANT TO THE DIRECTOR OF THE NATIONAL MUSEUM OF NATURAL HISTORY. I AM AN INVERTEBRATE ZOOLOGIST BY TRAINING, AND HAVE PUBLISHED OVER 50 PAPERS AND ONE BOOK ON THE SYSTEMATICS AND ECOLOGY OF CRUSTACEA. IN ADDITION, I HAVE PUBLISHED A BOOK ON THE POLLUTION ECOLOGY OF FRESHWATER INVERTEBRATES, AND AM CURRENTLY WORKING ON ANOTHER ON THE POLLUTION ECOLOGY OF ESTUARINE INVERTEBRATES.

FOR TWO YEARS I HAVE BEEN CHAIRMAN OF A STANDING COMMITTEE AT THE SMITHSONIAN CHARGED WITH UNDERSTANDING THE WILDLIFE LAWS AND RELATING THEM TO OUR WORK. FOR A SIMILAR TIME I HAVE BEEN A MEMBER OF THE ASSOCIATION OF SYSTEMATICS COLLECTIONS' COMMITTEE ON SYSTEMATICS AND THE LAW, A COMMITTEE WITH A SIMILAR CHARGE BUT WORKING FOR THE SYSTEMATICS COMMUNITY THROUGHOUT THE COUNTRY.

I SHOULD ALSO PREFACE THESE REMARKS WITH THE STATEMENT THAT WHAT I SAY DOES NOT NECESSARILY REPRESENT OFFICIAL SMITHSONIAN INSTITUTION POLICY. RATHER, MY REMARKS ARE BASED ON PERSONAL OBSERVATIONS AND FEARS CONCERNING THE EFFECTS, AND POTENTIAL EFFECTS, OF WILDLIFE LEGISLATION ON THE SCIENTIFIC COMMUNITY. WHILE MY OPINIONS ARE CERTAINLY NOT UNANIMOUSLY CONCURRED WITH, THEY REPRESENT THE OPINIONS OF WHAT I BELIEVE TO BE A LARGE PORTION OF THE SCIENTIFIC COMMUNITY. ALBEIT, A PORTION THAT IS NOT HEARD FROM SO OFTEN AS SOME OTHERS.

THE ENDANGERED SPECIES ACT IS ONLY ONE OF A NUMBER OF LAWS THAT ARE CAUSING PROBLEMS WITHIN THE SCIENTIFIC COMMUNITY, BUT, AS THE ENDANGERED SPECIES ACT IS THE SUBJECT UNDER DISCUSSION, I WILL LIMIT MY REMARKS TO IT. I THINK I WOULD BE CORRECT TO SAY THAT FEW SCIENTISTS QUARREL WITH WHAT THEY PERCEIVE TO BE THE ORIGINAL INTENT OF THE ENDANGERED SPECIES ACT -- "TO CONSERVE TO THE EXTENT PRACTICABLE THE VARIOUS SPECIES OF FISH OR WILDLIFE OR PLANTS FACING EXTINCTION." QUESTIONS AND PROBLEMS ARISE, HOWEVER, REGARDING THE IMPLEMENTATION OF THE ACT.

FOR EXAMPLE:

1) PERMITS TO TAKE, TRANSPORT, POSSESS, AND EVEN ENGAGE IN ACCEPTABLE HUSBANDRY PRACTICES INVOLVING ENDANGERED SPECIES REQUIRE INORDINATE AMOUNTS OF TIME AND EFFORT TO PROCURE. THIS CAN RESULT IN THE LOSS OF VALUABLE PRESERVED SPECIMENS TO THOSE COUNTRIES WHICH DO NOT MANDATE LENGTHY PERMIT PROCEDURES, AND IT CAN WORK TO THE DISADVANTAGE OF LIVING CAPTIVE BRED SPECIMENS OF ENDANGERED ANIMALS. THE ISSUANCE OF A PERMIT TO TRANSPORT OR STUDY AN ENDANGERED SPECIES IS QUITE OFTEN A MATTER OF URGENCY -- DUE TO AN ORGANISM'S SHORT REPRODUCTIVE CYCLE, THE HEALTH AND WELFARE OF AN ANIMAL, OR THE AVAILABILITY OF STUDY FUNDS. THE REQUIREMENT FOR PERMIT REQUESTS TO BE PUBLISHED IN THE FEDERAL REGISTER, THE SUBSEQUENT COMMENT PERIOD, AND OTHER ADMINISTRATIVE PROCEDURES OFTEN TAKES FOUR TO SIX MONTHS. IT OFTEN WORKS COUNTER TO THE BENEFIT OF THE SPECIES AND MAKES THE ENTIRE PROCEDURE INORDINATELY EXPENSIVE. ALSO, SPECIMENS OF ENDANGERED SPECIES MAY COME TO HAND LEGALLY WHILE A SCIENTIST IS ABROAD ON A SHORT TRIP. THERE IS NO MECHANISM FOR THE SPECIMENS TO BE SENT TO THE UNITED STATES BEFORE SECURING AN

IMPORT PERMIT, THUS REQUIRING THAT THE SPECIMEN BE SHIPPED THROUGH A BROKER AT GREAT EXPENSE.

WE APPLAUD THE RECENT INITIATIVE OF THE U.S. FISH AND WILDLIFE PERMIT OFFICE TO STREAMLINE ITS PERMIT PROCEDURES, BUT DO NOT FEEL THAT THIS IS NECESSARILY THE REMEDY NEEDED BY THE SCIENTIFIC COMMUNITY. THE IRRETRIEVABLE COSTS IN TIME AND MONEY MUST STILL BE EXPENDED, AND ONE WONDERS WHAT THE CONTROLS ON ALREADY DEAD MUSEUM SPECIMENS ACTUALLY ACCOMPLISH. THEY WILL HAVE NO EFFECT ON LIVING NATURAL POPULATIONS. THEY WILL NOT RESTORE ANYTHING TO THE WILD. NOR WILL THEY APPRECIABLY REDUCE THE NUMBER OF ORGANISMS TAKEN FROM THE WILD.

2) THE RECEIPT OF UNSOLICITED SPECIMENS OF ENDANGERED SPECIES BY A SCIENTIST PLACES HIM OR HER IN JEOPARDY, BECAUSE, EVEN THOUGH UNSOLICITED, THE FACT THAT THE SCIENTIST'S NAME APPEARS ON THE ADDRESS LABEL MAKES HIM OR HER ALLEGEDLY GUILTY OF HAVING RECEIVED THE SPECIMEN, AND ACCORDINGLY IN VIOLATION OF THE LAW.

3) THE ENDANGERED SPECIES ACT IS PRESENTLY INTERPRETED AS REQUIRING THAT ANY SPECIMEN OF A SPECIES TAKEN AFTER 28 DECEMBER, 1973 (THE DATE OF THE ACT) AND SUBSEQUENTLY DETERMINED TO BE ENDANGERED OR THREATENED, FALLS UNDER THE PURVIEW OF THE ACT. IN OTHER WORDS, SPECIMENS OF A SPECIES TAKEN SUBSEQUENT TO THE DATE OF THE ACT, BUT BEFORE THE SPECIES WAS DECLARED ENDANGERED OR THREATENED, REQUIRE ENDANGERED SPECIES PERMITS BEFORE THEY CAN BE LEGALLY TRANSPORTED -- AND WILL THUS INCREASE THE BURDEN OF PAPERWORK AND COLLECTION MANAGEMENT EVER INTO THE FUTURE.

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4) And finally, many scientists question how far down the phylogenetic scale the concept of endangered species should be taken. Few people question the premise that the protection of many endangered or threatened mammals, birds, reptiles, frogs, fishes, and plants is a justifiable aim. There is, perhaps, justification for the inclusion of some invertebrates. But there appears to be no working philosophy that considers where federal protection should stop. Where one reaches a point of diminishing ecological returns.

We recognize the lengths to which the Endangered Species Office goes in determining whether or not an organism is actually threatened or endangered, but some of us question whether large expenditures of time and money and anguish should be expended to protect certain animal groups at all.

The scientific community appreciates the wisdom of the various Acts and some of the implementing regulations which have been developed. While recognizing and agreeing with the importance of these matters, the problems raised by their inflexible application will, if not resolved, impede and obstruct the legislated functions of several Federal institutions as well as the ability to inquire -- which is the cornerstone of the scientific community as a whole.

Underlying our concerns in regard to applicable laws and regulations promulgated by the FWS is the idea that a sharp distinction should be drawn between "commercial activity" and "scientific activity." There is a vast difference between a scientist attempting to learn something about an organism's

BIOLOGY AND THE DEALER WHO IS CONTINUALLY REDUCING WILD POPULATIONS, AND POSSIBLY DISTORTING THE GENE POOLS, OF A FEW SELECTED SPECIES OVER A PROLONGED PERIOD OF TIME FOR MONETARY GAIN.

I BELIEVE THAT THE PAST YEAR HAS SEEN CONSIDERABLE PROGRESS TOWARD A MUTUAL UNDERSTANDING OF THE PROBLEMS FACED BY THE REGULATORY BODIES AND THE BIOLOGICAL COMMUNITY. THE REGULATORS HAVE THEIR PRECEIVED MANDATE; WE HAVE OURS. EACH OF US IS BEGINNING TO RECOGNIZE THE PROBLEMS FACED BY THE OTHER. PROBLEMS STILL REMAIN HOWEVER, AND THAT IS WHY I AM CONCERNED. OUR DEALINGS WITH FWS PERSONNEL INDICATE THAT THEY NOW BASICALLY UNDERSTAND OUR PROBLEMS, THEY SYMPATHIZE WITH OUR FRUSTRATION, BUT THEY APPEAR POWERLESS TO CHANGE MUCH WITHOUT LEGISLATIVE MANDATE.

THE SCIENTIFIC COMMUNITY IS COMMITTED TO OBEYING THE REGULATIONS, BUT WOULD LIKE TO WORK TOWARD THE GOAL OF SEEING THAT THE RULES DO NOT PUT UNFAIR BURDEN ON THE VERY SEGMENT OF THE COMMUNITY THAT IS NEEDED TO ACHIEVE AN UNDERSTANDING OF WHAT SPECIES ARE ENDANGERED AND HOW THEIR CHANCES FOR SURVIVAL MIGHT BE IMPROVED. I WOULD LIKE TO SUGGEST THAT MOST OF THE BASIC LEGISLATION UNDER WHICH THE MOVEMENT OF SCIENTIFIC SPECIMENS IS REGULATED CARRIES FEW EXPLICIT RESTRICTIONS APPLICABLE TO THE SCIENTIFIC COMMUNITY, AND THAT THE PERMIT REQUIREMENTS, REGULATIONS, AND RESTRICTIONS TO WHICH THE SCIENTIFIC COMMUNITY IS SUBJECTED NOT ONLY DO NOT SERVE THE OBJECTIVES OF THE LEGISLATION, BUT CONSTITUTE A DRAIN ON PUBLIC AND PRIVATE RESOURCES.

In summary, wildlife laws now require few, if any, direct costs to the museum or university. But there are hidden costs in, for example, the time required to prepare permit applications (and await their issuance), the effort expended in complying with meaningless requirements, or in defending staff members from prosecution when they inadvertently violate a regulation. Each wildlife law, in its own way, adds to the burden.

The long-term "potential opportunity" costs of such regulations to scientific research are unkown. As Spriestersbach and Farrell recently pointed out in Science[1] "Although we have difficulty measuring what regulations have done to us, we have even more difficulty envisioning what they might have kept us from doing." They fear as I do, that these kinds of federal impacts may carry with them the highest social cost of all -- "the loss of new knowledge, new creativity, and new understanding."

[1]Spriestersbach, D.C. and William J. Farrell, "Impact of Federal Regulations at a University," Science, 198 (4312): 27-30

E. J. (JAKE) GARN
UTAH

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JEFF M. BINGHAM
ADMINISTRATIVE ASSISTANT

United States Senate

WASHINGTON, D.C. 20510

COMMITTEES:
ARMED SERVICES
BANKING, HOUSING AND URBAN AFFAIRS
INTELLIGENCE

May 3, 1978

Honorable John Culver, Chairman
Resource Protection Subcommittee
Environment and Public Works Committee
4202 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Chairman:

When I testified before your subcommittee on the re-authorization of the Endangered Species Act, I requested the record remain open to accommodate an analysis of the Woundfin Recovery Team Report which I was expecting from the City of St. George, Utah. That report is now here, and I enclose a copy for inclusion in the hearing record.

Again, thank you for your kindness in this matter.

Sincerely,

Jake Garn

JG:gjm

cc: Rudger McArthur

United States Department of the Interior
FISH AND WILDLIFE SERVICE

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION:
10597 West Sixth Avenue
Lakewood, Colorado
Across From Federal Center

IN REPLY REFER TO:
FA/SE/Coop. FED--BLM--
Allen-Warner Valley
Energy Projects

APR 3 1978

MEMORANDUM

To: State Director, Bureau of Land Management
Salt Lake City, Utah

From: Regional Director, Region 6
Fish and Wildlife Service, Denver, Colorado

Subject: Formal Consultation on the Allen-Warner Valley Energy Projects

Please consider this our official biological opinion on the effects of these projects on the endangered species listed in your August 26, 1977, request for formal consultation.

The projects would not affect the Yuma clapper rail or the unarmored three-spine stickleback, which do not occur in any of the project areas. We also have concluded that the projects would not jeopardize the continued existence of the American peregrine falcon, which is not known to nest in the area. Effects on other species will be discussed for each project as follows:

Warner Valley Water Project

Following the October 18, 1977, field review, the U.S. Fish and Wildlife Service has spent considerable time reviewing the available biological and project data. It is our opinion that the Warner Valley Project as now proposed[1] will be likely to jeopardize the continued existence of the endangered woundfin by adversely modifying its present habitat in the Virgin River. This habitat is considered essential for survival of the species and has been proposed for designation as "Critical Habitat," as

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1Project features and descriptions were evaluated from the BLM Preliminary Draft Environmental Impact Statement, June 1977, and the Vaughn Hansen Associates Report, entitled, Impact of Warner Valley Water Project on Endangered Fish of the Virgin River, October 1977.

CONSERVE AMERICA'S ENERGY

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provided for by the Endangered Species Act of 1973, in the Federal Register, Vol. 42, No. 211, Wednesday, November 2, 1977.

When we evaluated the impact of this project on the woundfin, we did not attempt to determine the absolute minimal biological and physical conditions which the species could withstand without passing into extinction. Rather, we reviewed all the data to determine what conditions are needed in order to maintain a healthy population of woundfin in the Virgin River. We based our analysis on the premise that the historic conditions which have occurred in the Virgin River have provided the environmental and biological conditions for a viable self-sustaining population of the woundfin.

Although very low flow conditions have occurred in the Virgin River in past years, which undoubtedly affected the woundfin population, these did not persist for extended periods of months or years and thus did not significantly affect the long-term viability of the woundfin populations. For a short-lived minnow like the woundfin (life expectancy of 3 or 4 years), a long-term reduction of flow which adversely affects reproduction and survival of young has the potential of drastically reducing population numbers.

The primary environmental parameter the Warner Valley Project would affect is stream flow. Secondary impacts associated with stream flow alteration are changes in water quality, including temperature, and reduction of available aquatic space for both fish and other associated aquatic life. Another factor evaluated was the potential impact of the proposed Warner Reservoir as a possible source for introduction of exotic fish species into the Virgin River. Our detailed analyses of these factors are as follows:

A. Flow--The project will cause a significant reduction in flow of the Virgin River between LaVerkin Springs and the California Pacific Power Plant outflow which will reduce presently occupied woundfin habitat by approximately 1/4 mile of stream. (See additional detail under water quality).

The project will cause a significant flow reduction of the Virgin River between the Power Plant outflow and the Washington Fields Diversion. This reduction has been estimated at the Hurricane Gaging Station as up to one-half of the average flow in cubic feet per second (cfs) during winter and spring. These flow reductions during the critical spring reproduction period and the overwinter survival period will reduce the quality of this habitat for the woundfin. The reduced post-project winter and spring flows will result in a smaller, less viable woundfin population in this river section.

Conclusions for this flow-related population reduction are based upon the findings of Dr. James Deacon of the University of Nevada, Las Vegas, in the Vaughn Hansen Associates Report (1977) that the 1977 flow condition resulted in very restricted survival of young woundfins above the Virgin River Narrows. Although we recognize that post-project minimum flows are not projected to be as low as those which occurred in 1977, the stream flow/woundfin reproduction relationship suggests that low flow does affect the woundfin population. Even though low-flow conditions occur naturally, and 1976 and 1977 were both low water years, the post-project conditions would increase the frequency of these low flow conditions. Therefore, with increased occurrence of low flow in this river section, woundfin reproduction would be more frequently affected, and the overall population would be reduced. We do not know the population level at which the woundfin would face possible extinction. We do know, however, that once any species is reduced to a certain low point, the extinction process is greatly hastened. Therefore, we must view any major reduction in population numbers and in essential habitat as adverse and likely to contribute to the eventual extinction of the species.

The project will increase the frequency and duration of no-flow conditions immediately downstream of the Washington Fields Diversion for approximately 2 miles. This area is now occupied by woundfin for the 2- to 3-month period when water is available.

The project will decrease winter and spring flows in the Virgin River from Washington Fields Diversion to the Virgin River Narrows area. Average post-project flows in this area are projected to be decreased during winter and spring by one-third to one-half. These flow reductions are believed to be significant enough to affect the available habitat of the woundfin and would result in a general decrease in the woundfin population numbers above the Virgin River Narrows.

We recognize the project would have a beneficial impact during the low flow months of July through September from irrigation return flow downstream of the Washington Fields Diversion. This would, in all probability, improve conditions for woundfin during the summer months and would probably result in a larger woundfin population surviving the summer in this river section. However, this beneficial impact would be negated by the reduced habitat available during the winter and spring periods.

Impacts of the project on streamflow below the Virgin River Narrows cannot be adequately addressed because of the limited understanding of the hydrologic relationship between upstream Virgin River flow and the Littlefield Springs recharge. However, it is important for the

woundfin below the Narrows that the integrity and consistency of the spring discharge be maintained. Any action which would result in less recharge from the Littlefield Springs would adversely affect the woundfin habitat below the Virgin River Narrows.

B. Water Quality--The proposed project alteration in base flow conditions during the year may cause a change in duration and/or frequency of critical water temperature conditions. Because water temperature of the Virgin River is highly dependent upon ambient air temperature and local atmospheric conditions, it fluctuates quite extensively. Past records have indicated fluctuations of up to 14-16° C. in a 24 hour period. With less flow under post-project conditions, there is a possibility of an increased rate of temperature change. It has been reported by Lockhart (unpublished masters thesis, University of Nevada, Las Vegas) that the upper temperature limit for woundfin is near 35° C. Deacon (Vaughn Hansen Associates Report, 1977) has reported that temperatures over 30° C. are undesirable for woundfin. Lockhart also stated he did not collect woundfin in waters less than 7° C. Based upon these reports and discussions with Dr. Deacon concerning critical water temperatures for woundfin, we believe the occurrence of temperature extremes, both high and low, may increase under the project and adversely affect the woundfin. The Vaughn Hansen Associates Report (1977) concluded there was no relationship between flow and water temperature, and thus there would be no project impact on water temperature. We cannot agree with this conclusion at this time because of the questionable nature of the temperature data analyzed by the Vaughn Hansen Associates Report. These data were recorded by the U.S. Geological Survey in conjunction with the taking of sediment samples and were published in the U.S. Geological Survey Water Quality Records for Utah. Upon closer examination of the actual field data sheets, we found these U.S. Geological Survey data were unsuitable for detailed analysis and yearly comparisons because of variation in the time of day measurements were taken, which ranged from 6:00 A.M. to 10:00 P.M., and also because different people, possibly using different procedures, had taken these temperatures.

With flows in the Virgin River reduced by the project, the toxic effects of the LaVerkin Springs water will extend for a longer distance downstream. The toxicity of these springs has been reported by various researchers including Williams (1977) and Lockhart (unpublished M.S. thesis). The distribution of fishes of the Virgin River, as given in Cross (1975), shows no fish exist in close proximity to the LaVerkin Springs. If less flow is permitted past the Hurricane Diversion under post-project conditions, there will generally be less water in the Virgin River at LaVerkin Springs for dilution and moderation of the toxic chemical qualities of the spring water. Therefore, the presently occupied river section upstream of the California Pacific Power Plant outflow, approximately 1/4 mile, will be lost as available woundfin habitat.

C. Exotic Species Competition--There are numerous documented records of exotic fish species causing the reduction or extinction of native fish fauna. This has been reported by Minckley and Deacon (1968). It was concluded by biologists at a meeting in Las Vegas (Vaughn Hansen Associates Report, 1977) that exotic species will be introduced into the Virgin River drainage by the proposed Warner Valley Reservoir. The impact of this exotic fish introduction will depend upon whether the exotics can become established in the Virgin River. Because the post-project conditions, as the project is now proposed, will reduce base flows and cause the Virgin River to become more intermittent, we believe exotic species, such as green sunfish and red shiner, will become better established. This conclusion is based upon past reports which state that green sunfish and red shiner prefer river habitat of an intermittent nature including sluggish flows and no-flow conditions (Minckley, 1973 and Cross, 1967). Therefore, the Warner Valley Reservoir, in conjunction with reduced, intermittent base flows, would provide environmental conditions favoring establishment of additional exotic fish into the Virgin River system.

Recommendation:
Since the Warner Valley portion of the project as now proposed is likely to jeopardize the continued existence of the woundfin, we have provided recommendations which we believe would eliminate the adverse impacts. In order to fully understand our recommendations, we believe it is necessary to review past recommendations and what organizations or individuals made them.

Table 1 - Past Flow Recommendations for the Virgin River

Date	Organization or Individual	Flow Recommendation
2/77	Bio/West Inc. authored by J.E. Deacon and P.B. Holden (1977)	60-90 cfs for winter and summer flows
10/77	Vaughn Hansen Associates Report (1977)	
	1. Under general summary findings	40 cfs minimum
	2. R.N. Winget and R.W. Baumann section	30-40 cfs minimum
	3. J.E. Deacon section	80-100 cfs April-mid-July 60 cfs after mid-July 80-100 cfs for winter

As seen from the above table, past flow recommendations for the Virgin River have ranged from 30 to 100 cfs. Also, the point or points at which these flows are needed was not indicated except for those by Deacon in the Vaughn Hansen Associates Report.

In our analysis, we used the past flow records plus the available biological data contained in various reports. We have made our flow recommendations based upon the best data available. If and when more data become available, both hydrological and biological, we reserve the option of adjusting these recommendations.

Basic years analyzed were 1967 through 1977. Key years were: 1968—near average water year for the 10 years of record; 1973--above average water year with available biological data; 1977--below average water year with available biological data. Other flow records and additional biological data were also inspected and coordinated with the data cited above.

Our streamflow recommendations for the endangered woundfin are divided into three periods, based upon the biology of the species:

1. The fall-winter period of November through February when the adults are overwintering;

2. The spring-early summer period of March through June when spawning occurs; and

3. The summer-early fall period of July through October when growth and development of young occur.

Because of the variation in flow along the Virgin River, we have chosen a specific point, the Hurricane Gage, to which we have related our flow recommendation. This point was chosen because: the past flow records are available, it is located in good woundfin habitat, and it is only about 12 miles downstream from the Hurricane Diversion.

The following are our flow recommendations for the Hurricane Gaging Station:

November through February--110 cfs or natural flow, whichever is less.

March through June--110 cfs or natural flow, whichever is less.

July through October--70 cfs or natural flow, whichever is less.

If these flow recommendations can be maintained at the Hurricane Gaging Station, which is downstream of the diversion site, we believe the project's adverse impacts on the woundfin can be eliminated.

Our recommended flows agree quite closely with those of Deacon in the 1977 Vaughn Hansen Associates Report. They should be considered as refinements of Deacon's data, since we used additional flow records and additional years of data. Deacon's recommendations were derived from interpretation of two years of flow data, 1973 and 1977, as presented in hydrographs. He correlated this graphic flow data with the woundfin reproduction from above and below the Virgin River Narrows to make his estimates. To arrive at our recommendations, we used basically the same biological data as Deacon, but we expanded the flow data base by using tabular and actual U.S. Geological Survey daily flow records.

We have recommended 70 cfs for July through October, while Deacon recommended 60 cfs after mid-July for the summer months. The actual low flow for this period during the 1973 water year when woundfin fared well, was 64 cfs, but the 1973 mean monthly low flow for the period was approximately 70 cfs. Therefore we feel that Deacon's interpretation of the graphic data was slightly low. Our recommendation of 110 cfs, where Deacon has recommended 80-100 cfs, should not be viewed as conflicting recommendations. Deacon interpreted graphic material and presented an estimate of 80-100 cfs. We used the additional data available and refined this figure to 110 cfs. From the period of flow record, 1967-77, the most common low flow for the March-June period was 110-120 cfs. In 1968, the average water year, the mean monthly flow for the March-June period ranged from 115-406 cfs. Although in 9 out of the past 11 years flows of 91-100 cfs occurred for short periods, these lower flows usually occurred in June, a late spring month impacted significantly by irrigation diversions. Data from the winter flow period also contributed to the formulation of the final 110 cfs spring recommendation. The winter period of November to February had low minimum flows 8 out of 10 years of 101-110 cfs. Although other hydrological statistics indicated higher average winter flows we do not believe this period is as critical as the spring period, and therefore recommended 110 cfs for winter flows. Because of the spring reproduction period of the woundfin we do not believe that a flow greater than 110 cfs for the winter should be dropped just prior to spring spawning. On the contrary, winter to spring flows normally would increase or at least remain constant. Because of this we have recommended a constant flow of 110 cfs for both winter and spring.

The recommended flows of Bio/West Inc., February 2, 1977, were partially computed by Deacon. These flows were estimates and later were revised by Deacon in the Vaughn Hansen Associates Report.

We cannot accept the 40 cfs and 30-40 cfs recommended flows of Winget and Bauman in the Vaughn Hansen Associates Report. We understand these flows were estimated by indirect methods not having any real connection with the biology of the woundfin. Because the expertise of the authors is in invertebrates, much of their flow rationale is related to invertebrate production. Invertebrates differ from fish by having relatively short life cycles, with certain life stages, i.e. eggs, able to aestivate through short severe periods such as droughts. In many cases they also prefer different habitat. The river channel cross-sectional data presented to show that 40 cfs is sufficient flow is deceptive since the break-off point of 40 cfs is very arbitrary. The few cross sections of stream may or may not be representative of the actual situation. Also, the authors looked at only one year, 1977, a very low water year. We suspect that the invertebrate communities they analyzed were in a stress situation, not representative of the normal water year situation.

Harry Allen Power Plant

No endangered or threatened species occur within the immediate area of the plant site; therefore, there will be no adverse impact on these species because of construction activities.

The operation of the Harry Allen Plant will result in the emission from the stacks of an estimated 0.8 lb/day of mercury which would be approximately 292 lb/year. Other trace elements such as arsenic and selenium will also be emitted from the power plant stacks. There is presently insufficient data in the literature to determine the impacts of long-term trace element accumulation on the environment. However, because of the presence of the endangered moapa dace, the woundfin, bald eagle, and peregrine falcon in the general emission fallout area, the Fish and Wildlife Service does have concerns about the impacts of fallout from the stack emissions.

Therefore, we recommend that trace element accumulation in the soil, vegetation, water, aquatic invertebrates, and aquatic vertebrates in the fallout area be monitored. In addition, we are proposing that the project assist in sponsoring concurrent bioassay work on acute and chronic toxicity levels of the various trace elements on the different life stages of the native fishes of the fallout area. Data from fish could then be evaluated for potential impact on fish-eating birds such as eagles.

If trace element problems develop in the environment, the operation of the Harry Allen Power Plant would have to be modified to eliminate these effects.

Coal Slurry Pipeline
If the procedures which have been recommended in the Preliminary Draft Environmental Impact Statement are followed, it is our opinion there will be no adverse impact on the woundfin or other endangered species.

Power Transmission Line
If the procedures which have been recommended in the Preliminary Draft Environmental Impact Statement are followed, it is our opinion there will be no adverse impact on the woundfin. The path of the power line given in the statement is below moapa dace habitat and therefore construction of the power line would not be likely to have any effect on the moapa dace.

Also, if electrical transmission lines less than 230 KV are constructed according to Rural Electrification Administration standards for the prevention of raptor electrocution and the 1975 publication "Suggested Practices for Raptor Protection on Power Lines," by the Raptor Research Foundation, it is our opinion that there will be no significant impact on bald eagles. The larger voltage transmission lines are not expected to cause any problems to the bald eagles.

Because of the complexity of these situations, a large volume of material was reviewed and analyzed, not all of which is included in this memorandum. However, feel free to contact us for any additional information or clarification of this opinion.

As we noted in our September 15, 1977, acknowledgement to your request for consultation, we cannot formally consult on proposed or candidate species in the project areas. Technical information on proposed plants will be supplied informally in a separate memorandum in the near future.

We appreciate your cooperation and interest in conserving endangered species.

Harvey Albaughby

cc: Area Manager, Salt Lake City
ARD, Environment
RD, Region 1
RD, Region 2

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U.S. FISH AND WILDLIFE SERVICE
region 6

78-54

Refer: Marler 303/234-3990

FOR IMMEDIATE RELEASE

BIOLOGICAL OPINION ON MULTI-STATE ALLEN-WARNER VALLEY ENERGY SYSTEM PROJECT DELIVERED TO FEDERAL AGENCY

SALT LAKE CITY--The U.S. Fish and Wildlife Service has submitted to the Bureau of Land Management (BLM) the official biological opinion of the effect on endangered species of the proposed multi-State Allen-Warner Valley Energy System project.

The project, parts of which are located in Utah, Nevada and Arizona and which also would supply power to California, consists of five main elements:

--the Warner Valley Power Plant near St. George, Utah;
--the Harry Allen Power Plant near Las Vegas, Nevada;
--a Virgin River diversion and reservoir, also near St. George;
--two coal slurry pipelines from near Bryce Canyon National Park to both power plants;
--power transmission lines from near St. George through Nevada to Victorville, California.

The Service's biological opinion, required by Congress under Section 7 of the Endangered Species Act whenever a Federally-authorized action is proposed, found that the Virgin River water diversion and reservoir would be likely to jeopardize continued existence of the endangered woundfin, a small silvery minnow known to exist only in the Virgin River system of Utah, Nevada and Arizona.

But the Fish and Wildlife Service opinion also recommended streamflow stipulations for the Virgin system that, if adopted, would eliminate adverse impacts of the project upon the woundfin habitat.

The Service found that the other elements of the project would not adversely impact the endangered species of the three state area. However, the Service recommended monitoring various trace elements in the environment from power plant stack emissions to determine whether cumulative fallout will impact upon wildlife of the area.

The Service's biological opinion was delivered to BLM's State Director at Salt Lake City.

Coal for the project would be mined south of Bryce Canyon National Park, and processed at a coal slurry preparation facility at nearby Bald Knoll, Utah.

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WATERBURY PLAZA - SUITE A
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SALT LAKE CITY, UTAH 84121
(801) 272-5263

April 21, 1978

Mr. Rudger McArthur
Director of Utilities
City of St. George
237 North Bluff
St. George, Utah 84770

Dear Rudger,

Enclosed are the comments I sent to Paul Howard. I hope they are helpful towards over ruling a miscarriage of justice being sustained by certain arrogant personel in U.S.F.&W.S.

Sincerely,

Allon C. Owen
Hydrologist

ACO/das

COPY

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April 21, 1978

Mr. Paul Howard, Director
BLM Utah State Office
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Dear Mr. Howard:

Enclosed are comments on the response to the formal opinion on the Allen-Warner Valley Energy Project by U.S. Fish and Wildlife Service to the U.S. Bureau of Land Management, April 3, 1978.

I hope the following comments will be of help to you as you consider the important instream flow requirements for the Allen-Warner Energy Project.

Sincerely,

Allon C. Owen

Allon C. Owen
Hydrologist

ACO/das

MEMORANDUM

TO: Paul Howard, Director of Utah State Office, Bureau of Land Management

FROM: Allon C. Owen, Hydrologist, Vaughn Hansen Associates

DATED: April 21, 1978

SUBJECT: Response to the formal opinion on the Allen-Warner Valley Energy Project by U.S. Fish and Wildlife Service to the U.S. Bureau of Land Management, April 3, 1978.

Results presented in the formal consultations prepared by U.S. Fish and Wildlife Service* to the Bureau of Land Management dated February 9, 1977 and April 3, 1978 on the Allen-Warner Project are based on subjective opinions while the latter consultation dated April 3rd, ignores well documented, relevant facts provided by professionally recognized experts. The April 3rd opinion relies heavily upon the work of Dr. James Deacon and his students: Cross, Lockhart, and Williams. The only references to the work of professionals other than Dr. Deacon, his students, and U.S.F.&W.S. personnel are misrepresentations. The following discussions will briefly outline some of the important facts missing or misrepresented.

Determination of Flows

The premise for flow determinations as stated in the U.S.F.&W.S. letter of April 3rd is as follows: "... that the historic

*U.S. Fish and Wildlife Service will be referred to as U.S.F.&W.S. hereafter.

conditions which have occurred in the Virgin River have provided the environmental and biological conditions for a viable self-sustaining population of the woundfin". This over-simplistic premise negates the use of any and all standard scientific methods of projecting environmental impacts caused by man. Certainly the project will depart from historic conditions. The question which should have been addressed by the April 3rd consultation and was addressed by other professionals is what flows during winter and spring are in excess of healthy, viable fish population requirements? One must keep in mind that existing woundfin populations have survived common summer conditions of intermittent flows, ambient air temperatures of more than 100°F and poorly diluted LaVerkin Spring water.

Two adverse impacts considered by U.S.F.&W.S. are in water quality namely "... temperature and reduction of available aquatic space..."

Temperature - An obvious misrepresentation of facts occurs on page 4 of the April 3, 1978 consultation. Vaughn Hansen Associates are presented as using invalid data to show that flow and temperature correlations do not exist in the Virgin River.

The relevant sequence of events showing why the analysis was undertaken by Vaughn Hansen Associates is not mentioned by U.S.F.&W.S. The events will briefly be outlined. Dr. James Deacon first used the "questionable data" to prove his thesis

that reductions in flow would increase critical temperatures during the spawning period. The reason for the analysis of the data by Vaughn Hansen Associates was to determine if a rigorous statistical analysis of the data would support the conclusion made by Dr. Deacon. Our analysis showed clearly that the data did not justify the conclusion drawn by Dr. Deacon.

The April 3rd opinion also fails to point out the following important fact concerning the temperature analysis: since water temperature does appear to be highly dependent on time of day and since temperature is more subject to diurnal variations than flow, the Vaughn Hansen Associates thesis that water temperature in the river is governed by many factors, the major factor being ambient air temperature and a minor factor being flow, is upheld by correctly using the data. Professionals trained in data analysis, hydrology and temperature dynamics will also note from the Vaughn Hansen Associates' analysis that temperatures in late spring (the first reported spawning period) are quite constant despite wide variations in flows, data collection procedures, etc. Therefore, the valid conclusion resulting from thorough analysis of data is that within the flow range to be impacted by the proposed Warner Valley Project, no significant temperature changes will occur in the Virgin River. Additional reasons for such a judgement are cited by Dr. Winget in his response to the U.S.F.&W.S. letter. Why this issue continues to be raised by biologists untrained in such analysis is uncertain.

Aquatic Space - With the passage of the Endangered Species Act of 1973, has come increased power and authority to the U.S.F.& W.S. over important municipal and industrial developments. Vaughn Hansen Associates' feels that protection of our environment is important and should be pursued. Unpopular stands will undoubtedly have to be made concerning adverse impacts of proposed developments. However, with increased power and authority comes a proportional responsibility to be unbiased, competent, rigorous and professionally disciplined. The time has come for U.S.F.&W.S. personnel to submit their biological opinions and in-stream flow requirements to rigorous and accepted scientific methods of impact analysis, leaving as little as possible to subjective opinions. The Service's initial opinion dated February 9, 1977, should be an embarrassment to all concerned. The opinion, written by biologists with no inter-disciplinary consultation contains subjective opinions on hydrology, sediment transport, food habits, habitat preference and competition from exotic species. The subsequent study initiated by Allen-Warner project leaders and performed by an inter-disciplinary team found significant errors in each of the above categories. And yet, the U.S.F.&W.S. in their April 3, 1978 consultation repeatedly ignored the results of this inter-disciplinary study which were presented in the Vaughn Hansen Associates' report dated October 1977.

The Vaughn Hansen Associates' study used two validated computer models of in-stream flows to determine flow requirements based

on biological factors to maintain a healthy viable population. The first model was used to summarize historical data and show flow conditions at several critical locations along the river.

Setting aside most of the hydrologic analysis from the model the biologists from U.S.F.&W.S. chose instead to use their own data as outlined below:

> Basic years analyzed were 1967 through 1977. Key years were: 1968-- near average water year for the 10 years of record; 1973-- above average water year with available biological data; 1977-- below average water year with available biological data.

The 1967 to 1977 period used is the second wettest 11 year period on record with 1965 to 1975 being the wettest. The 14 year drought period proceeding 1967 was ignored. The "average" year 1968 is actually 22% higher than the median. The "above average" year 1973 is the second highest flow year on record and the "below average" year 1977 is the driest year on record. One should also be aware that critical spring flow data upon which so much of U.S.F.&W.S. opinion is based compares flow during 1973 of 1,000 to 2,000 cfs with 1977 spring flows of 50 to 70 cfs. The historic premise used by the Service is hardly representative of actual historic conditions.

Another misinterpretation of hydrologic data is made on page 5 of the latest consultation and the same misinterpretation is inferred throughout the document "Therefore, the Warner Valley Reservoir, in conjunction with reduced, intermittent base flows,

would provide environmental conditions favoring establishment of additional exotic fish into the Virgin River System." The hydrologic facts, often repeated in the Vaughn Hansen Associates report, is that the project will divert during times of high flows (winter and spring) and will release stored water during summer low flow periods (see Table B-7, VHA, 1977). Therefore, the project will augment the "intermittent base flows" and will not reduce them! Another hydrologic fact is that though the project would have diverted almost no water during 1977, the project would have released stored water throughout the year thus greatly dampening the severity of the drought.

The second model is well defended by Dr. Winget in his response but will be discussed further here. The Service shrugs off the widely used and accepted analysis method with an undocumented, rhetorical comment about the method's biological indirectness and Dr. Winget's inexperience and lack of training in the field of fish habitat determination. U.S.F.&W.S should be challenged to produce evidence upholding the statement. Rhetoric has little meaning in scientific endeavors.

The model as used by Winget, is really a simple confirmed equation which relates certain hydraulic parameters with flow by use of Manning's roughness coefficient. Manning's equation is universally accepted by biologist/hydrologists as being valid. The accuracy of the model depends on the reliability of Manning's coefficient. Fortunately the U.S.G.S. has established a rating curve for a transect in the critical habitat area near

the Berry Springs station which involves measuring various flow levels at the location. Although the transect constantly changed, because of the shifting sandy bottom, Manning's coefficient of 0.031 held fairly steady as might be expected. Vaughn Hansen Associates feels that because the data collected by Dr. Winget were obtained by using standard hydrologic methods and can be correlated with several field measurements at a near by U.S.G.S. gaging station the model is sufficiently reliable to serve as a basis for the estimates made by Winget.

Information provided by the hydraulic model was then compared to the following biological information provided by Deacon to form Winget's conclusions. Deacon states that the woundfin requires a pool, riffle, run environment and prefers shallow water with surface velocities of less than 1.65 fps.

Dr. Simons, recognized international expert in sediment transport and stream hydraulics, concluded that the existing pool-riffle-run environment would be preserved contrary to the unsupported opinions expressed by the authors of the February 9th opinion.

The following table combines Deacon's biological criteria with hydraulic information from the model to present important habitat parameters.

Several Flow-Related Habitat

Parameters at the Berry Springs Station*

	Discharge of River		
	60 cfs	110 cfs	160 cfs
Surface Velocity fps	2.1	3.0	3.8
Surface Width, feet	54.0	56.0	58.0
Average water depth, feet	0.80	0.97	1.07
Total Transectional area, sq.ft.	43.2	54.3	62.1
Transectional area below 1.65 fps velocities, sq.ft.	21.1	13.6	7.95

*Hydraulic parameters were computed using results presented by Winget in the Vaughn Hansen Associates' report and basic hydraulic principles outlined in The Ecology of Running Waters, Hynes, H. Bn., 1970. Univ. of Toronto Press, pages 6-8.

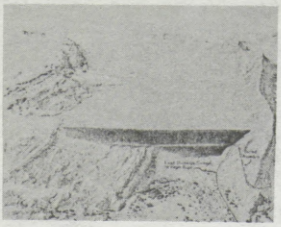
The table clearly shows that preferred flow related habitat (if Deacon's criteria is valid) is significantly decreased at higher flows because of excess depth and velocity. The Service should be reminded that Winget's habitat determination is highly dependent on Deacon's reliability which is not nearly as universally accepted as Manning's equation.

Conclusions

The Service's negation of Winget's use of widely accepted, state-of-the-art methodologies of projecting impacts and instead relying entirely on poorly analyzed and limited historical hydrologic data with a simplistic "historical flow" premise if upheld will prove a detriment to future environmental scientific endeavors. The move will replace sound judgement

based on valid scientifically derived information with a heavily subjective approach more susceptible to possible biases of U.S. F.&W.S. personnel.

Vaughn Hansen Associates urges responsible federal and state agencies to carefully consider all of the data and inter-disciplinary analysis contained in the Vaughn Hansen Associates report rather than just Deacon's portion before arriving at instream requirements. The Vaughn Hansen Associates' report clearly sets forth that discharges of 30 to 40 cfs would support viable healthy fish populations but that the project would not impact flows below 60 cfs, even during summer low flow conditions, thus assuring an adequate safety factor for the continued existence of rare Virgin River fishes.



Washington County
Water Conservancy District
237 North Bluff
St. George, Utah 84770

Chairman
Wayne Wilson

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Evan W. Woodbury

Secretary-Treasurer
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E.J. Graff
Wayne B. Nuttall
Winferd Spendlove

April 24, 1978

Paul Howard, State Director
Utah Office Bureau of Land Management
136 East South Temple
Salt Lake City, Utah 84111

Dear Paul:

We have reviewed with interest and in depth the recent (biological opinion) dated April 3, 1978 issued by United States Department of the Interior Fish and Wildlife Service. We are disappointed and concerned by the opinion because it does not conform to conversations we had with representatives of Fish and Wildlife Service and cannot be supported, in fact, by historical flow data available from USGS reports. We were advised that the report would be a biological opinion and not hydrological opinion yet the report recommends flow volume past the Hurricane Gauging Station.

The use of water from the Virgin River is allocated to the State of Utah for use within the State and the rights to this water have been permitted to various irrigation companies and the Washington County Water Conservancy District. For any agency of government to require a specific flow at any point on the river constitutes a violation of State rights to utilize the water of the river. We do not believe that Government has a legal or moral right to impose any flow requirement at any point of the river at any time that would in effect cause water that is usable in the boundaries of the State of Utah to be forced out of the State.

For several years there has been in the planning stage a project which would take water into Cedar City in Iron County, Utah from the Virgin River Drainage, provided that alternate storage could be arranged, to make water available for users currently receiving water from the Kolob storage. Any action to force a given amount of water to pass the Gauging Station at Hurricane would destroy this proposal and would interrere with the rights of the people of the State of Utah to their decreed water right. The report draws some most erroneous conclusions, some of which are so far from recorded history on the river that they render the biological opinion useless. A good example of this is the recommendation that through the month of June 110 cfs or natural flow of the river is the flow recommendation. During the ten years of recorded history of the gauging station this condition actually occurs less than 36% of the time. The recommended flow occurs less than 75% of the time during the month of October, 69% of the time during the month of November, 53% of the time during the month of April indicating that the flow data is either grouped or averaged rather than constituting a realistic approach to the actual flow condition.

The opinion indicates flow in excess of 110 cfs November through June and flows of 70 cfs July through October. We have taken the liberty of extracting information from USGS reports and invite you to review the information and observe the extended

periods of time during which these flows are never reached. We have repeatedly asked Fish and Wildlife Service to acknowledge a low flow condition on the river and they have refused to do this. We have enclosed for your review USGS records for the water years 1968 through 1977 and suggest that you look closely at the extended periods of time when the 110 cfs or 70 cfs have been obviously missing for months.

In as much as 1977 was a year in which a great deal of emphasis was placed on studying the river we invite you to review the flow data enclosed for 1976 and 1977. You will find that the flow criteria was rerely met during the summer months of these years, that during the spawning period of 1977 (March, April, May, June) the 110 cfs flow occured only 12 days of a 122 day period yet at the end of the 1977 season the conclusion by all who studied the river during the summer of 1977 was that there was an abundant population of adult fish and sufficient young of the year to maintain the minnow population in excess of 500,000. To presume a 110 cfs required flow during these months has no basis in fact.

It is evident, from the USGS reports enclosed, that the fish maintains its population and thrives on summer flows well under the recommended 70 cfs. We invite you to look at the July month of 1972 water report where the river did not reach that flow any time during the entire month and was under 60 cfs for 43 consecutive days which should have been sufficient to completly destroy the Wound Fin population had the minnow required the recommended type of flow to maintain its habitat. The 1976 and 1977 years also very clearly show that flows of the magnitude suggested in the biological opinion are neither necessary or appropriate.

All of the information that we have been able to research tells us that during the months and spawning months the water temperature is lower and the population can be maintained at flows less than those required during the summer months. With this in mind it would be appropriate then to recognize that the winter and spawning time flow could be under 60 cfs and still maintain the population of fish at a high level.

The Warner Valley Project will neither create nor prolong the duration of low flow on the Virgin River. The proposal does not require the removal of water from the river to the Warner Valley Reservoir during low flow periods and will in no way jeopardize the habitat of the Wound Fin Minnow as it has existed for the past 100 years. The opinion indicates that long term reduction of flow would adversely affect the reproduction and survival of the Wound Fin, again the project will not cause or extend the low flows as recorded on the Virgin River. It is interesting to note that only the minority opinion of the Vaughn Hansen Associates report was recognized. This opinion represents the thinking of only one person. We believe that others are as well informed and as well advised on the subject and should be heard and considered. It is our determination that the biological opinion is in error and should not be considered by Bureau of Land Management in the preparation of the Environmental Impact Statement.

Respectfully,

WASHINGTON COUNTY WATER CONSERVANCY DISTRICT

By Rudger M. McArthur
Rudger M. McArthur
Secretary-Treasurer

RMM/jf
encl

DISCHARGE IN CUBIC FEET PER SECOND

OCTOBER

DAY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
1	131	80	117	62	67	77	73	109	64	49
2	131	73	108	69	66	77	67	104	70	500
3	127	78	100	64	65	75	67	107	69	180
4	127	83	106	66	57	425	73	149	74	170
5	127	88	115	64	50	291	79	123	67	100
6	120	83	117	60	53	151	77	114	69	66
7	111	82	123	67	57	208	77	109	69	47
8	105	83	119	67	60	159	79	123	68	44
9	103	82	118	69	60	300	85	98	66	43
10	101	83	116	71	59	310	89	69	64	43
11	101	90	120	74	53	210	87	65	63	46
12	101	88	126	74	52	125	87	63	62	46
13	98	85	125	69	47	117	85	63	68	46
14	92	90	123	69	50	140	87	62	67	44
15	92	109	129	76	52	390	94	63	68	44
16	92	105	133	80	188	283	94	65	70	45
17	96	90	142	80	417	125	94	69	72	47
18	94	105	148	76	201	135	96	67	74	46
19	92	120	157	82	121	575	96	81	76	49
20	92	113	152	93	105	571	100	87	76	45
21	92	100	152	95	103	276	105	81	77	48
22	92	100	172	102	129	151	109	81	80	53
23	92	100	179	112	124	134	105	87	88	52
24	88	98	176	105	593	123	105	103	82	54
25	85	96	164	102	507	123	109	96	78	54
26	83	96	159	109	180	121	103	96	76	54
27	85	101	155	109	165	118	103	180	75	56
28	94	113	152	112	150	118	103	410	73	56
29	83	116	151	119	135	163	103	960	71	58
30	92	109	155	127	125	135	103	296	72	59
31	94	101	160	133	140	105	103	195	73	60
TOTAL	3,113	2,940	4,269	2,657	4,231	6,311	2,837	4,375	2,221	2,304
MEAN	100	94.8	138	85.7	136	204	91.5	141	71.6	74.3
MAX	131	120	179	133	593	575	109	960	88	500
MIN	83	73	109	60	47	75	67	62	62	43
AC-FT	6,170	5,830	8,470	5,270	8,390	12,520	5,630	8,680	4,410	4,570

DISCHARGE IN CUBIC FEET PER SECOND

NOVEMBER

DAY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
1	94	103	156	124	135	106	103	172	73	62
2	96	101	155	127	140	108	105	140	74	62
3	96	107	150	127	140	101	105	135	74	64
4	96	107	145	109	140	106	107	132	76	64
5	96	107	149	112	138	111	107	129	77	64
6	101	105	151	112	132	115	109	129	77	64
7	105	118	186	117	137	107	114	127	77	67
8	105	113	210	149	141	111	114	138	79	68
9	105	111	181	130	135	110	116	149	80	68
10	105	109	190	122	130	109	119	144	82	70
11	105	113	182	124	130	131	116	143	90	72
12	105	105	177	130	135	215	114	142	93	73
13	107	105	173	149	141	189	121	143	96	74
14	111	105	174	149	132	148	121	146	95	74
15	118	120	175	146	149	212	121	149	93	122
16	136	127	241	141	300	238	123	154	89	123
17	141	127	347	124	163	714	121	157	87	106
18	141	120	202	124	146	271	172	162	87	102
19	150	124	203	119	146	191	265	154	85	98
20	160	129	213	124	138	188	180	137	83	102
21	188	129	207	124	146	163	170	128	79	98
22	281	129	201	124	149	155	198	123	76	94
23	174	124	193	124	146	154	210	132	79	104
24	169	124	192	122	127	149	192	159	81	90
25	166	122	192	122	124	144	186	144	82	90
26	164	129	198	699	127	150	192	147	83	80
27	156	131	199	428	124	163	198	137	83	77
28	198	127	198	213	124	155	189	132	85	76
29	224	129	189	240	130	145	198	137	87	80
30	179	124	193	666	143	148	201	130	89	90
TOTAL	4,172	3,524	5,722	5,421	4,288	5,107	4,487	4,251	2,491	2,478
MEAN	139	117	191	181	143	170	150	142	83.0	82.8
MAX	281	131	347	699	300	714	265	172	96	123
MIN	94	101	145	109	124	101	103	123	73	62
AC-FT	8,280	6,990	11,350	10,750	8,310	10,130	8,900	8,430	4,940	4,920

DISCHARGE IN CUBIC FEET PER SECOND

DECEMBER

DAY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
1	205	136	196	293	144	151	204	140	101	91
2	179	146	192	223	131	145	210	183	121	92
3	161	142	188	200	146	134	177	255	158	95
4	161	134	190	184	143	149	164	310	124	96
5	148	139	196	169	133	311	157	334	115	97
6	136	133	212	172	134	144	164	279	116	97
7	141	137	210	169	147	144	154	146	126	96
8	136	143	209	172	146	161	157	113	128	94
9	131	141	200	175	140	157	157	103	135	96
10	116	136	200	266	143	138	154	102	116	95
11	144	139	194	181	150	139	152	100	92	96
12	141	141	201	169	154	144	152	103	89	96
13	127	128	198	155	148	145	152	107	92	97
14	138	131	197	158	153	146	152	103	113	97
15	148	141	201	163	156	137	147	107	91	97
16	177	140	196	161	154	145	144	109	94	97
17	177	140	201	163	147	152	147	116	100	98
18	164	132	207	169	154	163	147	109	101	98
19	188	120	204	161	162	170	152	107	103	99
20	199	142	205	161	168	175	137	107	100	100
21	177	153	199	175	164	180	135	109	106	103
22	151	149	213	194	181	171	144	114	111	109
23	159	145	218	175	478	170	152	116	104	110
24	169	153	200	155	572	166	157	109	101	112
25	174	169	198	152	6,160	161	164	105	101	120
26	185	189	198	155	1,440	156	162	109	103	129
27	194	172	205	163	528	156	162	121	102	132
28	199	164	207	178	361	177	154	121	103	138
29	194	158	199	166	306	193	157	130	98	140
30	185	156	203	166	257	158	152	130	98	143
31	172	153	209	155	225	147	147	125	103	145
TOTAL	5,076	4,502	6,246	5,498	13,625	4,985	4,866	4,322	3,345	3,305
MEAN	164	145	201	177	440	161	157	139	108	107
MAX	205	189	218	293	6,160	311	210	334	158	145
MIN	116	120	188	152	131	134	135	100	89	91
AC-FT	10,070	8,930	12,390	10,910	27,030	9,890	9,630	8,570	6,630	6,560

DISCHARGE IN CUBIC FEET PER SECOND

JANUARY

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	164	156	210	161	206	135	140	137	91	145
2	166	157	195	178	209	136	150	144	88	149
3	166	160	170	169	196	144	150	130	82	148
4	164	158	163	152	165	158	160	123	88	147
5	159	158	156	138	149	155	165	121	97	143
6	154	163	158	135	168	149	170	121	120	143
7	146	166	162	149	186	157	180	123	130	139
8	146	165	171	143	184	150	210	132	120	133
9	148	162	183	158	178	156	200	140	125	131
10	152	158	191	166	169	164	180	125	130	132
11	158	165	196	178	168	167	165	125	135	137
12	164	169	192	188	174	162	165	119	81	146
13	164	173	193	183	178	161	180	121	83	146
14	166	371	188	184	177	169	170	123	82	147
15	169	330	204	177	170	180	175	128	81	147
16	172	240	199	173	169	183	178	149	82	143
17	172	197	227	176	172	339	189	152	82	144
18	169	185	214	189	170	244	220	152	82	146
19	164	221	197	214	172	233	210	154	81	150
20	166	1,170	187	216	172	196	223	154	80	152
21	169	1,570	191	219	170	160	334	152	79	156
22	172	905	191	203	175	158	242	149	81	166
23	177	426	192	187	174	163	175	152	86	162
24	185	362	198	180	168	168	183	157	88	156
25	185	4,460	195	179	161	180	178	162	86	153
26	185	2,240	190	182	162	185	180	162	82	150
27	211	1,840	189	183	164	173	175	157	86	150
28	263	462	186	185	159	163	175	152	91	151
29	208	322	176	184	157	162	175	149	93	153
30	191	240	171	183	154	167	175	159	93	150
31	202	230	179	183	137	172	175	154	93	151
TOTAL	5,377	17,881	5,814	5,495	5,313	5,389	5,747	4,378	2,898	4,566
MEAN	173	577	188	177	171	174	185	141	93.5	147
MAX	263	4,460	227	219	209	339	334	162	135	166
MIN	146	156	156	135	137	135	140	119	79	131
AC-FT	10,670	35,470	11,530	10,900	10,540	10,690	11,900	8,680	5,750	9,060

29-319 O - 78 - 9

DISCHARGE IN CUBIC FEET PER SECOND

FEBRUARY

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	199	211	182	187	143	163	172	154	93	152
2	179	208	176	188	135	156	170	147	94	151
3	188	196	174	185	139	159	167	149	96	147
4	191	191	176	172	144	164	167	164	97	148
5	188	196	176	166	153	162	167	154	112	148
6	191	214	172	180	160	182	162	149	103	149
7	191	230	167	171	156	401	164	157	109	150
8	191	211	167	164	152	315	162	159	130	154
9	194	199	163	169	151	240	164	162	230	164
10	202	205	159	168	147	209	167	164	440	162
11	288	208	158	170	145	246	172	159	260	156
12	260	230	164	170	136	425	172	157	100	155
13	284	256	167	170	146	284	175	157	98	153
14	529	247	169	168	162	220	170	167	105	152
15	361	215	171	164	159	198	167	175	110	155
16	277	365	161	161	153	194	170	170	103	155
17	246	324	159	196	151	186	170	164	100	150
18	240	228	152	279	161	178	170	159	99	147
19	288	267	152	224	169	174	167	154	99	143
20	260	264	153	217	168	169	170	162	100	129
21	260	260	157	194	182	173	162	157	100	126
22	260	244	200	178	186	184	164	149	100	140
23	260	249	214	183	179	197	167	144	101	132
24	260	253	175	179	172	198	167	167	102	124
25	260	518	170	173	165	220	162	170	102	126
26	267	1,620	169	166	166	239	162	172	104	119
27	263	617	175	152	168	272	162	177	108	104
28	260	445	172	152	180	470	164	195	114	106
29	243				187				119	
TOTAL	7,280	8,871	4,750	5,046	4,615	6,378	4,675	4,514	3,628	3,997
MEAN	251	317	170	180	159	228	167	161	125	143
MAX	529	1,620	214	279	187	470	175	195	440	164
MIN	179	191	152	152	135	156	162	144	93	104
AC-FT	14,440	17,600	9,420	10,010	9,150	12,650	9,270	8,950	7,200	7,930

DISCHARGE IN CUBIC FEET PER SECOND

MARCH

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	240	497	304	160	186	413	162	223	168	103
2	243	354	529	154	167	303	223	249	114	102
3	243	385	389	155	186	266	322	204	111	103
4	240	372	290	176	229	263	198	195	100	101
5	240	317	232	175	245	286	198	180	100	103
6	253	323	242	158	226	304	239	366	104	102
7	434	289	220	155	226	314	232	282	108	103
8	390	260	218	168	207	309	210	252	110	116
9	611	258	210	172	191	241	183	210	113	97
10	413	272	214	171	197	266	167	216	110	105
11	289	273	213	179	186	264	167	282	109	121
12	288	265	181	178	169	734	164	223	108	114
13	296	272	169	188	171	442	167	223	106	98
14	314	261	170	190	175	330	167	229	108	103
15	284	266	168	162	174	294	175	216	110	97
16	288	277	165	161	154	273	170	232	104	98
17	284	368	163	156	127	311	162	223	119	99
18	260	508	160	156	124	336	155	215	117	98
19	233	565	147	154	126	349	149	216	112	93
20	211	522	139	166	126	362	149	222	110	89
21	194	543	134	162	109	408	149	234	109	86
22	185	644	128	156	101	374	137	249	108	85
23	182	761	124	157	106	417	130	231	109	85
24	185	558	119	166	103	451	149	226	109	80
25	191	492	129	154	98	431	147	234	108	82
26	208	551	125	146	95	414	147	270	108	80
27	208	676	142	152	89	468	142	261	107	78
28	214	807	118	169	94	682	116	216	108	76
29	240	871	111	147	84	523	112	159	107	66
30	288	988	117	156	79	432	109	170	107	57
31	326	1,080	115	139	73	399	121	200	108	56
TOTAL	8,475	14,875	5,885	5,038	4,623	11,659	5,218	7,108	3,429	2,876
MEAN	273	480	190	163	149	376	168	229	111	92.8
MAX	611	1,080	529	190	245	734	322	366	168	121
MIN	182	258	111	139	73	241	109	159	100	56
AC-FT	16,810	29,500	11,670	9,990	9,170	23,130	10,350	14,100	6,800	5,706

DISCHARGE IN CUBIC FEET PER SECOND

APRIL

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	370	1,130	106	124	71	423	116	180	108	59
2	500	1,260	102	103	71	342	189	159	104	62
3	476	1,290	99	92	74	287	142	149	108	59
4	307	948	104	90	73	281	149	160	105	61
5	307	1,070	96	91	78	295	152	180	105	57
6	341	1,320	102	95	81	398	128	218	105	59
7	307	958	121	104	94	523	116	198	108	66
8	299	824	119	110	95	365	112	172	110	72
9	307	886	118	106	95	384	103	164	112	73
10	341	953	123	110	94	494	107	152	120	71
11	430	1,090	134	115	104	633	107	147	140	67
12	554	1,290	129	118	125	786	105	167	140	65
13	658	1,310	115	109	113	978	105	162	135	59
14	601	1,360	113	140	127	1,040	89	144	145	64
15	616	1,310	105	157	101	803	83	137	149	62
16	658	1,100	97	157	97	734	81	140	143	69
17	595	1,040	93	168	96	854	87	162	140	67
18	480	1,160	94	191	99	936	100	128	130	65
19	444	965	93	174	106	735	112	119	190	58
20	404	1,140	95	145	110	674	109	123	210	55
21	378	1,430	93	133	96	639	87	154	230	55
22	357	1,680	97	163	92	670	96	152	245	62
23	318	1,750	95	134	89	839	103	170	250	61
24	263	1,740	88	128	95	1,010	116	172	263	59
25	240	1,420	92	114	89	1,170	114	192	275	64
26	274	1,200	94	114	86	1,260	114	183	285	65
27	318	1,070	126	101	88	1,420	112	147	225	65
28	296	1,160	181	101	81	1,610	105	137	190	62
29	337	1,310	133	96	92	1,830	103	132	205	57
30	408	1,370	121	93	98	2,010	107	135	225	54
TOTAL	12,184	36,534	3,278	3,676	2,810	24,423	3,349	4,735	5,000	1,874
MEAN	405	1,218	109	123	93.7	814	112	158	167	62.5
MAX	658	1,750	181	191	127	2,010	189	218	285	73
MIN	240	824	88	90	71	281	81	119	104	54
AC-FT	24.170	72,460	6,500	7,290	5,570	48,440	6,640	9,390	9,920	6,720

DISCHARGE IN CUBIC FEET PER SECOND

MAY

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	457	1,470	121	100	99	1,430	112	154	235	57
2	480	1,530	120	125	86	1,260	119	164	250	58
3	467	1,500	132	141	92	1,320	128	198	258	56
4	510	1,350	153	148	95	1,550	132	334	259	57
5	560	1,250	161	155	98	1,720	128	172	255	58
6	544	1,310	161	294	87	1,380	128	125	250	61
7	417	1,590	175	341	85	1,520	116	112	230	68
8	395	1,590	160	414	80	1,630	121	114	215	71
9	382	1,630	169	370	75	1,880	121	189	230	68
10	372	1,580	184	375	79	1,980	121	342	250	77
11	366	1,540	204	513	78	2,120	109	394	258	71
12	387	1,490	181	353	85	2,010	103	390	259	67
13	471	1,650	166	299	77	1,750	98	350	263	63
14	374	1,620	165	291	72	1,970	94	390	275	208
15	334	1,550	159	287	68	1,900	85	428	250	114
16	307	1,410	166	284	62	1,720	77	412	225	79
17	277	1,360	169	253	56	1,680	69	370	200	73
18	296	1,330	166	214	56	1,780	71	348	185	71
19	303	1,300	149	193	61	1,910	71	400	150	64
20	318	1,230	138	204	77	1,770	77	471	138	57
21	330	1,150	128	200	67	1,560	87	382	128	55
22	330	1,100	115	179	70	1,320	85	298	113	56
23	284	1,040	112	197	62	1,340	79	282	104	60
24	260	967	100	181	58	1,390	79	302	97	218
25	246	874	106	156	62	1,400	77	350	90	886
26	230	806	100	146	57	1,600	73	418	85	249
27	221	735	88	136	58	950	69	383	84	135
28	199	666	83	119	58	880	67	349	75	98
29	199	609	78	145	57	851	69	325	72	107
30	177	559	86	171	61	878	63	300	73	105
31	166	531	82	155	64	896	65	319	73	93
TOTAL	10,659	38,317	4,277	7,139	2,242	47,345	2,893	9,565	5,629	3,560
MEAN	344	1,236	138	230	72.3	1,527	90.8	309	182	115
MAX	560	1,650	204	513	99	2,120	132	471	275	886
MIN	166	531	78	100	56	851	63	112	72	55
AC-FT	21,140	76,000	8,480	14,160	4,450	93,910	5,740	18,970	11,170	7,060

DISCHARGE IN CUBIC FEET PER SECOND

JUNE

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	161	501	86	149	120	962	63	317	69	86
2	158	464	83	135	66	855	63	293	68	78
3	150	429	81	129	56	739	69	260	67	75
4	145	395	79	117	135	861	63	228	67	71
5	138	374	80	107	73	682	62	213	71	75
6	135	396	87	100	99	666	57	202	66	87
7	135	371	214	97	335	660	60	203	64	80
8	150	367	119	90	266	620	60	188	63	285
9	190	348	111	89	99	560	58	165	65	502
10	170	332	107	86	83	520	58	143	62	367
11	145	330	108	88	72	480	60	132	64	93
12	130	331	103	92	72	450	57	124	70	85
13	120	337	93	92	76	420	58	122	65	83
14	111	317	86	90	71	809	58	120	61	75
15	109	283	81	86	71	500	57	118	60	73
16	103	275	76	81	143	450	55	106	63	70
17	98	297	72	80	62	390	57	91	60	70
18	100	357	72	82	63	355	58	83	58	68
19	90	299	69	82	63	325	57	87	59	69
20	87	264	67	80	66	300	58	83	58	69
21	83	241	73	78	71	280	58	81	58	69
22	90	214	73	76	929	260	53	79	60	70
23	88	205	72	75	794	245	53	73	60	65
24	85	199	68	75	167	230	58	67	60	65
25	83	202	68	78	101	220	62	63	61	68
26	85	199	67	85	90	210	58	65	61	73
27	82	182	66	83	68	205	57	71	60	76
28	80	174	69	83	66	195	55	71	60	78
29	80	169	69	84	60	190	60	73	60	77
30	72	154	71	83	68	185	57	67	60	65
TOTAL	3,453	9,006	2,570	2,752	4,505	13,824	1,759	3,988	1,880	3,167
MEAN	115	300	85.7	91.7	150	461	58.6	133	62.7	106
MAX	190	501	214	149	929	962	69	317	71	502
MIN	72	154	66	75	56	185	53	63	58	65
AC-FT	6,850	17,860	5,100	5,460	8,940	27,420	3,490	7,910	3,730	6,280

DISCHARGE IN CUBIC FEET PER SECOND

JULY

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	78	138	70	80	58	175	60	62	61	68
2	87	131	71	78	56	170	58	58	61	70
3	83	124	71	78	52	160	50	60	60	73
4	82	113	84	75	49	150	48	71	60	80
5	83	116	92	75	49	142	50	71	60	209
6	88	109	104	78	50	140	52	62	61	90
7	178	105	87	80	43	135	53	63	61	78
8	103	101	104	73	41	130	60	62	62	72
9	105	98	198	74	45	123	58	60	62	66
10	85	96	208	76	46	117	57	58	62	64
11	82	98	184	74	47	110	58	56	60	67
12	83	98	83	75	45	98	55	55	58	69
13	78	96	70	76	45	122	52	54	60	71
14	80	98	72	78	47	118	53	58	75	68
15	82	88	67	78	47	107	62	62	67	68
16	80	87	67	85	44	98	65	67	66	73
17	78	94	70	77	45	103	65	73	67	82
18	78	236	112	118	47	98	62	71	68	93
19	73	224	90	90	45	113	58	63	69	86
20	73	342	82	89	45	96	167	56	65	86
21	78	282	286	120	46	98	96	56	68	85
22	85	172	224	106	44	86	239	56	62	95
23	111	433	104	96	45	81	216	56	54	537
24	152	320	133	86	45	81	121	56	105	333
25	297	202	116	84	44	80	53	61	83	90
26	224	194	77	73	47	76	42	68	77	85
27	124	166	67	72	44	73	44	68	104	69
28	98	141	64	82	49	76	46	68	107	58
29	113	146	57	85	45	92	60	1,060	420	64
30	140	146	62	88	41	75	62	684	148	61
31	240	144	57	101	43	76	119	125	328	62
TOTAL	3,421	4,938	3,233	2,600	1,439	3,399	2,341	3,600	2,821	3,172
MEAN	110	159	104	83.9	46.4	110	75.5	116	91.0	102
MAX	297	433	286	120	58	175	239	1,060	420	537
MIN	73	87	57	72	41	73	42	54	54	58
AC-FT	6,790	9,790	6,410	5,160	2,850	6,740	4,640	7,140	5,600	6,290

DISCHARGE IN CUBIC FEET PER SECOND

AUGUST

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	450	130	56	109	41	74	121	89	182	61
2	430	130	57	99	46	72	83	87	146	65
3	230	130	67	102	45	71	87	84	124	60
4	141	200	88	125	43	73	183	80	109	58
5	100	141	491	299	41	81	135	78	89	49
6	94	116	321	283	46	72	232	74	105	49
7	650	106	140	394	42	70	107	70	115	48
8	438	102	88	320	43	68	85	66	129	48
9	460	101	88	219	44	68	71	62	135	49
10	127	162	82	414	46	66	53	62	106	55
11	185	105	81	118	49	64	50	62	73	49
12	166	103	78	82	46	70	60	61	70	100
13	327	184	86	76	317	73	83	61	70	61
14	433	169	91	122	322	73	60	60	58	58
15	151	111	125	218	166	88	65	60	32	48
16	116	104	287	70	65	88	63	59	32	48
17	82	99	128	72	54	224	65	59	34	315
18	82	101	582	140	49	158	65	58	34	82
19	88	109	438	309	125	113	58	59	33	52
20	80	126	178	162	59	92	50	124	35	50
21	76	106	135	710	51	413	48	99	42	61
22	92	96	333	200	49	147	45	90	70	590
23	90	92	113	110	51	100	46	94	93	127
24	85	103	73	94	55	86	50	98	52	65
25	87	105	61	90	141	80	53	100	43	53
26	90	99	91	89	275	76	55	102	35	51
27	92	97	106	87	493	75	65	83	36	50
28	92	102	125	85	167	75	62	63	36	51
29	88	114	70	84	69	76	58	64	37	50
30	85	173	59	83	62	75	58	68	37	52
31	76	101	58	82	58	80	60	65	37	50
TOTAL	5,783	3,717	4,776	5,447	3,160	3,041	2,376	2,341	2,229	2,605
MEAN	187	120	154	176	102	98.1	76.6	75.5	71.9	84.0
MAX	650	200	582	710	493	413	232	124	182	590
MIN	76	92	56	70	41	64	45	58	32	48
AC-FT	11,470	7,370	9,470	10,800	6,270	6,030	4,710	4,640	4,420	5,170

DISCHARGE IN CUBIC FEET PER SECOND

SEPTEMBER

DAY	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
1	74	94	55	81	51	78	62	68	36	48
2	74	93	65	79	60	78	67	73	36	51
3	74	84	68	74	76	76	73	63	35	52
4	69	88	81	70	79	78	77	63	35	51
5	74	93	583	70	112	76	87	57	36	49
6	70	94	311	70	82	78	279	50	41	49
7	66	129	109	70	89	78	144	53	53	53
8	64	113	84	70	70	73	109	120	53	97
9	61	107	71	70	70	73	96	163	47	91
10	61	100	67	70	77	78	116	336	48	143
11	72	132	61	71	74	73	137	138	180	82
12	83	194	61	71	68	73	167	100	160	50
13	90	330	138	72	71	73	180	69	79	49
14	87	121	78	73	73	75	216	63	56	48
15	87	118	66	75	91	76	310	64	50	48
16	87	241	62	75	79	76	135	59	50	48
17	80	233	63	73	75	75	130	54	49	49
18	74	131	74	72	232	76	130	68	49	47
19	70	121	79	72	4,340	78	152	81	46	50
20	68	112	81	72	484	78	135	56	48	50
21	70	110	72	72	198	73	119	50	54	50
22	69	116	74	73	171	72	105	50	83	49
23	74	123	82	71	161	72	105	44	67	49
24	73	116	76	67	148	76	123	43	61	55
25	68	108	75	61	136	78	114	43	119	50
26	65	100	71	59	112	78	105	43	49	50
27	70	100	68	57	89	78	109	57	136	49
28	68	100	67	57	85	78	114	64	70	50
29	73	103	66	60	77	78	119	69	48	49
30	85	101	65	64	77	78	114	61	49	48
TOTAL	2,200	3,805	2,973	2,091	7,607	2,280	3,929	2,322	1,923	1,704
MEAN	73	127	99.1	69.7	254	76.0	131	77.4	64.1	56.8
MAX	90	330	583	81	4,340	78	310	336	180	143
MIN	61	84	55	57	51	72	62	43	35	47
AC-FT	4,360	7,550	5,900	4,150	15,090	4,520	7,790	4,610	3,810	3,380

9-4081.5 VIRGIN RIVER near HURRICANE, UTAH

LOCATION.--Lat 37°09'45", long 113°23'40", in NE¼SW¼ sec. 2, T.42S., R.14W., on left bank at downstream side of bridge on State Highway 17, 1.8 miles from Quail Creek and 6.2 miles west of Hurricane.

DRAINAGE AREA.--1,530 sq. mi., approximately.

RECORDS AVAILABLE.--March 1967 to September 1968.

GAGE.--Water-stage recorder. Altitude of gage is 2,760 feet (from topographic map).

EXTREMES.--Maximum discharge during year, 5,410 cfs Aug. 7 (gage height, 9.11 ft), from rating curve extended above 769 cfs on basis of slope-area determination at gage height 17.34 ft; minimum 53 cfs Sept. 26.

1967-68: Maximum discharge, that of Aug. 7, 1968; minimum, that of Sept. 26, 1968; maximum stage known since at least 1909, 17.34 ft. Dec. 6, 1966 (revised), from floodmarks (discharge, 20,100 cfs).

REMARKS.--Records good. Many diversions above station for irrigation. Record of water temperatures and suspended sediment loads for the water year 1968 are published in Part of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	94	205	164	199	240	370	457	161	78	450	74
2	131	96	179	166	179	243	500	480	158	87	430	74
3	127	96	161	166	188	243	476	467	150	83	230	74
4	127	96	161	164	191	240	307	510	145	82	141	69
5	127	96	148	159	188	240	307	560	138	83	100	74
6	120	101	136	154	191	253	341	544	135	88	94	70
7	111	105	141	146	191	434	307	417	135	178	650	66
8	105	105	136	146	191	390	299	395	150	103	438	64
9	103	105	131	148	194	611	307	382	190	105	460	61
10	101	105	116	152	202	413	341	372	170	85	127	61
11	101	105	144	158	288	299	430	366	145	82	185	72
12	101	105	141	164	260	288	554	387	130	83	156	83
13	98	107	127	164	284	296	658	471	120	78	327	90
14	92	111	138	166	529	314	601	374	111	80	433	87
15	92	118	148	169	361	284	616	334	109	82	151	87
16	92	136	177	172	277	288	658	307	103	80	116	87
17	96	141	177	172	246	284	595	277	98	78	92	80
18	94	141	164	169	240	250	480	296	100	78	82	74
19	92	150	188	164	288	233	444	303	90	73	88	70
20	92	160	199	166	260	211	404	318	87	73	80	68
21	92	188	177	169	260	194	378	330	83	78	76	70
22	92	281	151	172	260	185	357	330	90	85	92	69
23	92	174	159	177	260	182	318	284	88	111	90	74
24	88	169	169	185	260	185	263	260	85	152	85	73
25	85	166	174	185	260	191	240	246	83	297	87	68
26	83	164	185	185	267	208	274	230	85	224	90	65
27	85	156	194	211	263	208	318	221	82	124	92	70
28	94	198	199	263	260	214	296	199	80	98	92	68
29	83	224	194	208	243	240	337	199	80	113	88	73
30	92	179	185	191	---	288	408	177	72	140	85	85
31	94	---	172	202	---	326	---	166	---	240	76	---
TOTAL	3,113	4,172	5,076	5,377	7,280	8,475	12,184	10,659	3,453	3,421	5,783	2,200
MEAN	100	139	164	173	251	273	406	344	115	110	187	73
MAX	131	281	205	263	529	611	658	560	190	297	650	90
MIN	83	94	116	146	179	182	240	166	72	73	76	61
AC-FT	6,170	8,280	10,070	10,670	14,440	16,810	24,170	21,140	6,850	6,790	11,470	4,360

CAL YR 1967 TOTAL - MEAN - MAX - Min - AC-FT -
WTR YR 1968 TOTAL 71,193 MEAN 195 MAX 658 MIN 61 AC-FT 141,200

9-4081.5 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION-- Lat 37°09'45", long 113°23'42", in NE¼NE¼SW¼ sec. 2, T.42 S., R.14 W., Washington County, on left bank at downstream side of bridge on State Highway 17, 1.8 miles downstream from Quail Creek and 6.2 miles west of Hurricane.
DRAINAGE AREA--1,530 sq mi, approximately.
PERIOD OF RECORD--March 1967 to current year.
GAGE--Water-stage recorder. Altitude of gage is 2,760 ft (from topographic map).
EXTREMES--Current year: Miximum discharge, 12,800 cfs Jan. 25 (gage height, 14.29 ft), from rating curve extended above 1,300 cfs on basis of slope-area determination at gage height 17.34 ft; minimum, 61 cfs Oct. 1.
EXTREMES--Period of record: Maximum discharge, 12,800 cfs Jan. 25, 1969; minimum, 53 cfs Sept. 26, 1968; maximum stage known since at least 1909, 17.34 ft Dec. 6, 1966, from floodmarks (discharge, 20,100 cfs).
REMARKS--Records good. Many diversions above station for irrigation. Record of water temperatures and suspended sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	103	136	156	211	497	1,130	1,470	501	138	130	94
2	73	101	146	157	208	354	1,260	1,530	464	131	130	93
3	78	107	142	160	196	385	1,290	1,500	429	124	130	84
4	83	107	134	158	191	372	948	1,350	395	113	200	88
5	88	107	139	158	196	317	1,070	1,250	374	116	141	93
6	83	105	133	163	214	323	1,320	1,310	396	109	116	94
7	82	118	137	166	230	289	958	1,590	371	105	106	129
8	83	113	143	165	211	260	824	1,590	367	101	102	113
9	82	111	141	162	199	258	886	1,630	348	98	101	107
10	83	109	136	158	205	272	953	1,580	332	96	162	100
11	90	113	139	165	208	273	1,090	1,540	330	98	105	132
12	88	105	141	169	230	265	1,290	1,490	331	98	103	194
13	85	105	128	173	256	272	1,310	1,650	337	96	184	330
14	90	105	131	371	247	261	1,360	1,620	317	98	169	121
15	109	120	141	330	215	266	1,310	1,550	283	88	111	118
16	105	127	140	240	365	277	1,100	1,410	275	87	104	241
17	90	127	140	197	324	368	1,040	1,360	297	94	99	233
18	105	120	132	185	228	508	1,160	1,330	357	236	101	131
19	120	124	120	221	267	565	965	1,300	299	224	109	121
20	113	129	142	1,170	264	522	1,140	1,230	264	342	126	112
21	100	129	153	1,570	260	543	1,430	1,150	241	282	106	110
22	100	129	149	905	244	644	1,680	1,100	214	172	96	116
23	100	124	145	426	249	761	1,750	1,040	205	433	92	123
24	98	124	153	362	253	558	1,740	967	199	320	103	116
25	96	122	169	4,460	518	492	1,420	874	202	202	105	108
26	96	129	189	2,240	1,620	551	1,200	806	199	194	99	100
27	101	131	172	1,840	617	676	1,070	735	182	166	97	100
28	113	127	164	462	445	807	1,160	666	174	141	102	100
29	116	129	158	322	---	871	1,310	609	169	146	114	103
30	109	124	156	240	---	988	1,370	559	154	146	173	101
31	101	---	153	230	---	1,080	---	531	---	144	101	---
TOTAL	2,940	3,524	4,502	17,881	8,871	14,875	36,534	38,317	9,006	4,938	3,717	3,805
MEAN	94.8	117	145	577	317	480	1,218	1,236	300	159	120	127
MAX	120	131	189	4,460	1,620	1,080	1,750	1,650	501	433	200	330
MIN	73	101	120	156	191	258	824	531	154	87	92	84
AC-FT	5,830	6,990	8,930	35,470	17,600	29,500	72,460	76,000	17,860	9,790	7,370	7,550

CAL YR 1968 TOTAL 69,798 MEAN 191 MAX 658 MIN 61 AC-FT 138,400
WTR YR 1969 TOTAL 148,910 MEAN 408 MAX 4,460 MIN 73 AC-FT 295,400

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION--Lat 37°09'45", long 113°23'42", in NE¼NE¼SW¼ sec. 2, T. 42 S., R. 14 W., Washington County, on left bank at downstream side of bridge on State Highway 17, 1.8 miles downstream from Quail Creek and 6.2 miles west of Hurricane.

DRAINAGE AREA--1,530 sq mi, approximately.

PERIOD OF RECORD--March 1967 to current year.

GAGE--Water-stage recorder. Altitude of gage is 2,760 ft (from topographic map).

EXTREMES--Current year: Maximum discharge, 3,380 cfs Aug. 18 (gage height, 6.99 ft), from rating curve extended above 1,300 cfs on basis of slope-area determination at gage height 17.34 ft; minimum, 55 cfs Aug. 1.

EXTREMES--Period of record: Miximum discharge, 12,800 cfs Jan. 25, 1969; minimum, 53 cfs Sept. 26, 1968; maximum stage known since at least 1909, 17.34 ft Dec. 6, 1966, from floodmarks (discharge, 20,100 cfs).

REMARKS--Records good. Many diversions above station for irrigation. Record of water temperatures and suspended sidiment loads for the water year 1970 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	156	196	210	182	304	106	121	86	70	56	55
2	108	155	192	195	176	529	102	120	83	71	57	65
3	100	150	188	170	174	389	99	132	81	71	67	68
4	106	145	190	163	176	290	104	153	79	84	88	81
5	115	149	196	156	176	232	96	161	80	92	491	583
6	117	151	212	158	172	242	102	161	87	104	321	311
7	123	186	210	162	167	220	121	175	214	87	140	109
8	119	210	209	171	167	218	119	160	119	104	88	84
9	118	181	200	183	163	210	118	169	111	193	88	71
10	116	190	200	191	159	214	123	184	107	208	82	67
11	120	182	194	196	158	213	134	204	108	184	81	61
12	126	177	201	192	164	181	129	181	103	83	78	61
13	125	173	198	193	167	169	115	166	93	70	86	138
14	123	174	197	188	169	170	113	165	86	72	91	78
15	129	175	201	204	171	168	105	159	81	67	128	66
16	133	241	196	199	161	165	97	166	76	67	287	62
17	142	347	201	227	159	163	93	169	72	70	128	63
18	148	202	207	214	152	160	94	166	72	112	582	74
19	157	203	204	197	152	147	93	149	69	96	438	79
20	152	213	205	187	153	139	95	138	67	81	175	81
21	152	207	199	191	157	134	93	128	73	286	135	72
22	172	201	213	191	200	128	97	115	73	224	333	74
23	179	193	218	192	214	124	95	112	72	104	113	82
24	176	192	200	198	175	119	88	100	68	133	73	76
25	164	192	198	195	170	129	92	106	68	116	61	75
26	159	198	198	190	169	125	94	100	67	77	91	71
27	155	199	205	189	175	142	126	88	66	67	106	68
28	152	198	207	186	172	118	181	83	69	64	125	67
29	151	189	199	176	---	111	133	78	69	57	70	66
30	155	193	203	171	---	117	121	86	71	62	59	65
31	160	---	209	179	---	115	---	82	---	57	58	---
TOTAL	4,269	5,722	6,246	5,814	4,750	5,885	3,278	4,277	2,570	3,233	4,776	2,973
MEAN	138	191	201	188	170	190	109	138	85.7	104	154	99.1
MAX	179	347	218	227	214	529	181	204	214	286	582	583
MIN	100	145	188	156	152	111	88	78	66	57	56	55
AC-FT	8,470	11,350	12,390	11,530	9,420	11,670	6,500	8,480	5,100	6,410	9,470	5,900

CAL YR 1969 TOTAL 154,181 MEAN 422 MAX 4,460 MIN 84 AC-FT 305,800
WTR YR 1970 TOTAL 53,793 MEAN 147 MAX 583 MIN 55 AC-FT 106,700

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION--Lat 37 09'45", long 113 23'42", in NE¼NE¼SW¼ sec.2, T42 S., R.14 W., Washington County, on left bank at downstream side of bridge on State Highway 17, 1.8 miles downstream from Quail Creek and 6.2 miles west of Hurricane.

DRAINAGE AREA--1,530 sq mi, approximately.

PERIOD OF RECORD--March 1967 to current year.

GAGE--Water-stage recorder. Altitude of gage is 2,760 ft (from topographic map).

EXTREMES--Current year: Maximum discharge, about 6,250 cfs Aug. 21 (gage height, 9.00 ft), from rating curve extended above 1,300 cfs on basis of slope-area determination at gage height 17.34 ft; minimum, 30 cfs Aug. 17.

EXTREMES--Period of record: Maximum discharge, 12,800 cfs Jan. 25, 1969; minimum, 30 cfs Aug. 17, 1971; maximum stage known since at least 1909, 17.34 ft Dec. 6, 1966, from floodmarks (discharge, 20,100 cfs).

REMARKS--Records good. Many diversions above station for irrigation. Record of water temperatures and suspended-sediment loads for the water year 1971 will be published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	124	293	161	187	160	124	100	149	80	109	81
2	69	127	223	178	188	154	103	125	135	78	99	79
3	64	127	200	169	185	155	92	141	129	78	102	74
4	66	109	184	152	172	176	90	148	117	75	125	70
5	64	112	169	138	166	175	91	155	107	75	299	70
6	60	112	172	135	180	158	95	294	100	78	283	70
7	67	117	169	149	171	155	104	341	97	80	394	70
8	67	149	172	143	164	168	110	414	90	73	320	70
9	69	130	175	158	169	172	106	370	89	74	219	70
10	71	122	266	166	168	171	110	375	86	76	414	70
11	74	124	181	178	170	179	115	513	88	74	118	71
12	74	130	169	188	170	178	118	353	92	75	82	71
13	69	149	155	183	170	188	109	299	92	76	76	72
14	69	149	158	184	168	190	140	291	90	78	122	73
15	76	146	163	177	164	162	157	287	86	78	218	75
16	80	141	161	173	161	161	157	284	81	85	70	75
17	80	124	163	176	196	156	168	253	80	77	72	73
18	76	124	169	189	279	156	191	214	82	118	140	72
19	82	119	161	214	224	154	174	193	82	90	309	72
20	93	124	161	216	217	166	145	204	80	89	162	72
21	95	124	175	219	194	162	133	200	78	120	710	72
22	102	124	194	203	178	156	163	179	76	106	200	73
23	112	124	175	187	183	157	134	197	75	96	110	71
24	105	122	155	180	179	166	128	181	75	86	94	67
25	102	122	152	179	173	154	114	156	78	84	90	61
26	109	699	155	182	166	146	114	146	85	73	89	59
27	109	428	163	183	152	152	101	136	83	72	87	57
28	112	213	178	185	152	169	101	119	83	82	85	57
29	119	240	166	184	---	147	96	145	84	85	84	60
30	127	666	166	183	---	156	93	171	83	88	83	64
31	133	---	155	183	---	139	---	155	----	101	82	----
TOTAL	2,657	5,421	5,498	5,495	5,046	5,038	3,676	7,139	2,752	2,600	5,447	2,091
MEAN	85.7	181	177	177	180	163	123	230	91.7	83.9	176	69.7
MAX	133	699	293	219	279	190	191	513	149	120	710	81
MIN	60	109	152	135	152	139	90	100	75	72	70	57
AC-FT	5,270	10,750	10,910	10,900	10,010	9,990	7,290	14,160	5,460	5,160	10,800	4,150

CAL YR 1970 Total 51,132 Mean 140 Max 699 Min 55 AC-FT 101,400
WTR YR 1971 Total 52,860 Mean 145 Max 710 Min 57 AC-FT 104,800

VIRGIN RIVER BASIN

09408150 Virgin River near Hurricane, Utah

LOCATION.--Lat 37°09'45", long 113°23'42", in NE¼NE¼SW¼ sec. 2, T.42S., R.14W., Washington County, on left bank at downstream side of bridge on State Highway 17, 1.8 miles downstream from Quail Creek and 6.2 miles west of Hurricane.

DRAINAGE AREA.--1,530 sq. mil, approximately.

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,760 ft (from topographic map).

EXTREMES -- Current year: Maximum discharge, about 10,400 cfs Sept 19 (gage height, 11.88 ft) from rating curve extended above 1,300 cfs on basis of slope -area determination at gage height 17.34 ft' minimum, 29 cfs July 8.
Period of record: Maximum discharge, 12,800 cfs Jan. 25, 1969; minimum 29 cfs July 8, 1972; maximum stage known since at least 1909, 17.34 ft Dec 6, 1966, from floodmarks (discharge, 20,100 cfs).

REMARKS--Records good. Many diversions above station for irrigation. Record of water temperatures and suspended-sediment loads for the water year 1972 will be published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	135	144	206	143	186	71	99	120	58	41	51
2	66	140	131	209	135	167	71	86	66	56	46	60
3	65	140	146	196	139	186	74	92	56	52	45	76
4	57	140	143	165	144	229	73	95	135	49	43	79
5	50	138	133	149	153	245	78	98	73	49	41	112
6	53	132	134	168	160	226	81	87	99	50	46	82
7	57	137	147	186	156	226	94	85	335	43	42	89
8	60	141	146	184	152	207	95	80	266	41	43	70
9	60	135	140	178	151	191	95	75	99	45	44	70
10	59	130	143	169	147	197	94	79	83	46	46	77
11	53	130	150	168	145	186	104	78	72	47	49	74
12	52	135	154	174	136	169	125	85	72	45	46	68
13	47	141	148	178	146	171	113	77	76	45	317	71
14	50	132	153	177	162	175	127	72	71	47	322	73
15	52	149	156	170	159	174	101	68	71	47	166	91
16	188	300	154	169	153	154	97	62	143	44	65	79
17	417	163	147	172	151	127	96	56	62	45	54	75
18	201	146	154	170	161	124	99	56	63	47	49	232
19	121	146	162	172	169	126	106	61	63	45	125	4,340
20	105	138	168	172	168	126	110	77	66	45	59	484
21	103	146	164	170	182	109	96	67	71	46	51	198
22	129	149	181	175	186	101	92	70	929	44	49	171
23	124	146	478	174	179	106	89	62	794	45	51	161
24	593	127	572	168	172	103	95	58	167	45	55	148
25	507	124	6,160	161	165	98	89	62	101	44	141	136
26	180	127	1,440	162	166	95	86	57	90	47	275	112
27	165	124	528	164	168	89	88	58	68	44	493	89
28	150	124	361	159	180	94	81	58	66	49	167	85
29	135	130	306	157	187	84	92	57	60	45	69	77
30	125	143	257	154	----	79	98	61	68	41	62	77
31	140		225	137	----	73	----	64	----	43	58	----
TOTAL	4,231	4,288	13,625	5,313	4,615	4,623	2,810	2,242	4,505	1,439	3,160	7,607
MEAN	136	143	440	171	159	149	93.7	72.3	150	46.4	102	254
MAX	593	300	6,160	209	187	245	127	99	929	58	493	4,340
MIN	47	124	131	137	135	73	71	56	56	41	41	51
AC-FT	8,390	8,510	27,030	10,540	9,150	9,170	5,570	4,450	8,940	2,850	6,270	15,090

CAL YR 1971 TOTAL 59,433 MEAN 163 MAX 6,160 MIN 47 AC FT 117,900
WTR YR 1972 TOTAL 58,458 MEAN 160 MAX 6,160 MIN 41 AC FT 116,000

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION--Lat 37°09'45", long 113°23'42", in NE¼NE¼SW¼ sec.2, T.42 S., R.14 W., Washington County, on left bank at downstream side of bridge on State Highway 17, 1.8 miles (2.9 km) downstream from Quail Creek and 6.2 miles (10.0 km) west of Hurricane.

DRAINAGE AREA--1,530 sq mi (3,960 km^2), approximately.

PERIOD OF RECORD--March 1967 to current year.

AVERAGE DISCHARGE--6 years, 237 ft^3/s (6.712 m^3/s), 171,700 acre-ft/yr (212 hm^3/yr).

GAGE--Water-stage recorder. Altitude of gage is 2,760 ft (841 m) from topographic map.

EXTREMES--Current year: Maximum discharge, about 3,350 ft^3/s (94.9 m^3/s) May 14 (gage height, 6.36 ft or 1.939 m), from rating curve extended above 1,300 ft^3/s (36.8 m /s) on basis of slope-area determination at gage height 17.34 ft (5.285 m); minimum 63 ft^3/s (1.78 m^3/s) Aug. 11.

EXTREMES--Period of record: Maximum discharge, 12.800 $ft^3/2$ (362 m^3/s) Jan. 25, 1969; minimum 29 ft^3/s (0.82 m^3/s) July 8, 1972; maximum stage known since at least 1909, 17.34 ft (5.285 m) Dec. 6, 1966, from floodmarks, discharge 20,100 ft^3/s (569 m^3/s).

REMARKS--Records fair excpet those for periods of no gage height record, which are poor. Many diversions above station for irrigation. Record of water temperatures and suspended-sediment loads for the water year 1973 will be published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	106	151	135	163	413	423	1,430	962	175	74	78
2	77	108	145	136	156	303	342	1,260	855	170	72	78
3	75	101	134	144	159	266	287	1,320	739	160	71	76
4	425	106	149	158	164	263	281	1,550	861	150	73	78
5	291	111	311	155	162	286	295	1,720	682	142	81	76
6	151	115	144	149	182	304	398	1,380	666	140	72	78
7	208	107	144	157	401	314	523	1,520	660	135	70	78
8	159	111	161	150	315	309	365	1,630	620	130	68	73
9	300	110	157	156	240	241	384	1,880	560	123	68	73
10	310	109	138	164	209	266	494	1,980	520	117	66	78
11	210	131	139	167	246	264	633	2,120	480	110	64	73
12	125	215	144	162	425	734	786	2,010	450	98	70	73
13	117	189	145	161	284	442	978	1,750	420	122	73	73
14	140	148	146	169	220	330	1,040	1,970	809	118	73	75
15	390	212	137	180	198	294	803	1,900	500	107	88	76
16	283	238	145	183	194	273	734	1,720	450	98	88	76
17	125	714	152	339	186	311	854	1,680	390	103	224	75
18	135	271	163	244	178	336	936	1,780	355	98	158	76
19	575	191	170	233	174	349	735	1,910	325	113	113	78
20	571	188	175	196	169	362	674	1,770	300	96	92	78
21	276	163	180	160	173	408	639	1,560	280	98	413	73
22	151	155	171	158	184	374	670	1,320	260	86	147	72
23	134	154	170	163	197	417	839	1,340	245	81	100	72
24	123	149	166	168	198	451	1,010	1,390	230	81	86	76
25	123	144	161	180	220	431	1,170	1,400	220	80	80	78
26	121	150	156	185	239	414	1,260	1,600	210	76	76	78
27	118	163	156	173	272	468	1,420	950	205	73	75	78
28	118	155	177	163	470	682	1,610	880	195	76	75	78
29	163	145	193	162	---	523	1,830	851	190	92	76	78
30	135	148	158	167	---	432	2,010	878	185	75	75	78
31	105	---	147	172	---	399	-----	896	---	76	80	--
TOTAL	6,311	5,107	4,985	5,389	6,378	11,659	24,423	47,345	13,824	3,399	3,041	2,280
MEAN	204	170	161	174	228	376	814	1,527	461	110	98.1	76.0
MAX	575	714	311	339	470	734	2,010	2,120	962	175	413	78
MIN	75	101	134	135	156	241	281	851	185	73	64	72
AC-FT	12,520	10,130	9,890	10,690	12,650	23,130	48,440	93,910	27,420	6,740	6,030	4,520

CAL YR 1972 TOTAL 52,717 MEAN 144 MAX 4,340 MIN 41 AC-FT 104,600
WTR YR 1973 TOTAL 134,141 MEAN 368 MAX 2,120 MIN 64 AC-FT 266,100

VIRGIN RIVER BASIN

09408150 Virgin River near Hurricane, Utah

Location--Lat 37 09'45", long 113 23'42", in NE¼NE¼SW¼ sec. 2, T.42 S.,R.14., Washington County, on left bank at downstream side of bridge on State Highway 17,1.8 miles (2.9 km) downstream from Quail Creek and 6.2 miles (10.0 km) west of Hurricane.

DRAINAGE AREA-- 1,530 sq mi (3,960 km^2), approximately.

PERIOD OF RECORD-- March 1967 to current year.

AVERAGE DISCHARGE--7 years, 220 ft^3/s (6.230 m^3s), 159,400 acre-ft/yr (197 hm^3yr).

GAGE-- Water stage recorder. Altitude of gage is 2,760 ft (841 m) from topographic map.

EXTREMES--current year: Maximum discharge, 1,090 ft^3/s (30.9 m^3/s) Apr. 2 (gage height, 3.67 ft or 1.119 m); minimum 38 ft^3/s 1.096 m^3/s, July 26.
Period of record: Maximum discharge, 12,800 ft^3/s (362 m^3/s) Jan 25, 1969; minimum 29 ft^3/s (0.82 m^3/s) July 8, 1972; maximum stage known since at least 1909, 17.34 ft (5.285 m) Dec. 6, 1966, from floodmarks, discharge 20,100 ft^3/s (569 m^3/s).

REMARKS-- Records fair. Many diversions above station for irrigation. Record of water temperatures and suspended-sediment loads for the water year 1974 will be published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 to SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	103	204	140	172	162	116	112	63	60	121	62
2	67	105	210	150	170	223	189	119	63	58	83	67
3	67	105	177	150	167	322	142	128	69	50	87	73
4	73	107	164	160	167	198	149	132	63	48	183	77
5	79	107	157	165	167	198	152	128	62	50	135	87
6	77	109	164	170	162	239	128	128	57	52	232	279
7	77	114	154	180	164	232	116	116	60	53	107	144
8	79	114	157	210	162	210	112	121	60	60	85	109
9	85	116	157	200	164	183	103	121	58	58	71	96
10	89	119	154	180	167	167	107	121	58	57	53	116
11	87	116	152	165	172	167	107	109	60	58	50	137
12	87	114	152	165	172	164	105	103	57	55	60	167
13	85	121	152	180	175	167	105	98	58	52	83	180
14	87	121	152	170	170	167	89	94	58	53	60	216
15	94	121	147	175	167	175	83	85	57	62	65	310
16	94	123	144	178	170	170	81	77	55	65	63	135
17	94	121	147	189	170	162	87	69	57	65	65	130
18	96	172	147	220	170	155	100	71	58	62	65	130
19	96	265	152	210	167	149	112	71	57	58	58	152
20	100	180	137	223	170	149	109	77	58	167	50	135
21	105	170	135	334	162	149	87	87	58	96	48	119
22	109	198	144	242	164	137	96	85	53	239	45	105
23	105	210	152	175	167	130	103	79	53	216	46	105
24	105	192	157	183	167	149	116	79	58	121	50	123
25	109	186	164	178	162	147	114	77	62	53	53	114
26	103	192	162	180	162	147	114	73	58	42	55	105
27	103	198	152	175	162	142	112	69	57	44	65	109
28	103	189	154	175	164	116	105	67	55	46	62	114
29	103	198	157	175	---	112	103	69	60	60	58	119
30	103	201	152	175	---	109	107	63	57	62	58	114
31	103	---	147	175	---	121	---	65	---	119	60	---
TOTAL	2,837	4,487	4,856	5,747	4,675	5,218	3,349	2,893	1,759	2,341	2,376	3,929
MEAN	91.5	150	157	185	167	168	112	93.3	58.6	75.5	76.6	131
MAX	109	265	210	334	175	322	189	132	69	239	232	310
MIN	67	103	135	140	162	109	81	63	53	42	45	62
AC-FT	5,630	8,900	9,630	11,400	9,270	10,350	6,640	5,740	3,490	4,640	4,710	7,790

CAL YR 1973 TOTAL 129,918 MEAN 356 MAX 2,120 MIN 64 AC-FT 257,700
WTR YR 1974 TOTAL 44,467 MEAN 122 MAX 334 MIN 42 AC-FT 88,200

PEAK DISCHARGE (Base, 1,500 CFS). No peak above base.

VIRGIN RIVER BASIN

09408150 Virgin River near Hurricane, Utah

LOCATION--Lat 37 09'45", long 113 23'42", in NE¼NE¼SW¼ sec. 2, T.42 S., R.14 W., Washington County, on left bank at downstream side of bridge on State Highway 17, 1.8 miles (2.9 km) downstream from Quail Creek and 6.2 miles (10.0 km) west of Hurricane.

DRAINAGE AREA.--1,530 mi^2 (3,960 Km^2), approximately.

PERIOD OF RECORD.-- March 1967 to current year.

AVERAGE DISCHARGE.--8 years, 212 ft^3/s (6.038 m^3/s), 153,600 acre-ft/yr (189 hm^3/yr).

GAGE.-- Water -stage recorder. Altitude of gage is 2,760 ft (841 m) from topographic map.

EXTREMES--Current year: Maximum discharge, 7,325 ft^3/s (207 m^3/s) July 29 (gage height, 8.95 ft or 2.728 m); minimum 38 ft^3/s (1.076 m^3/s) Sept.. 25, 26.
Period of record: Maximum discharge, 12,800 ft^3/s (362 m^3/s) Jan 25, 1969; minimum 29 ft^3/s (0.82 m^3/s) July 8, 1972; maximum stage known since at least 1909, 17.34 ft (5.285 m) Dec. 6, 1966, from floodmarks, discharge 20,100 ft^3/s (569 m^3/s).

REMARKS.-- Records fair. Many diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	172	140	137	154	223	180	154	317	62	89	68
2	104	140	183	144	147	249	159	164	293	58	87	73
3	107	135	255	130	149	204	149	198	260	60	84	63
4	149	132	310	123	164	195	160	334	228	71	80	63
5	123	129	334	121	154	180	180	172	213	71	78	57
6	114	129	279	121	149	366	218	125	202	62	74	50
7	109	127	146	123	157	282	198	112	203	63	70	53
8	123	138	113	132	159	252	172	114	188	62	66	120
9	98	149	103	140	162	210	164	189	165	60	62	163
10	69	144	102	125	164	216	152	342	143	58	62	336
11	65	143	100	125	159	282	147	394	132	56	62	138
12	63	142	103	119	157	223	167	390	124	55	61	100
13	63	143	107	121	157	223	162	350	122	54	61	69
14	62	146	103	123	167	229	144	390	120	58	60	63
15	63	149	107	128	175	216	137	428	118	62	60	64
16	65	154	109	149	170	232	140	412	106	67	59	59
17	69	157	116	152	164	223	162	370	91	73	59	54
18	67	162	109	152	159	215	128	348	83	71	58	68
19	81	154	107	154	154	216	119	400	87	63	59	81
20	87	137	107	154	162	222	123	471	83	56	124	56
21	81	128	109	152	157	234	154	382	81	56	99	50
22	81	123	114	149	149	249	152	298	79	56	90	50
23	87	132	116	152	144	231	170	282	73	56	94	44
24	103	159	109	157	167	226	172	302	67	56	98	43
25	96	144	105	162	170	234	192	350	63	61	100	43
26	96	147	109	162	172	270	183	418	65	68	102	43
27	180	137	121	157	177	261	147	383	71	68	83	57
28	410	132	121	152	195	216	137	349	71	68	63	64
29	960	137	130	149	---	159	132	325	73	1,060	64	69
30	296	130	130	159	---	170	135	300	67	684	68	61
31	195	---	125	154	---	200	---	319	---	125	65	---
TOTAL	4375	4251	4322	4378	4514	7108	4735	9565	3988	3600	2341	2322
MEAN	141	142	139	141	161	229	158	309	133	116	75.5	77.4
MAX	960	172	334	162	195	366	218	471	317	1060	124	336
MIN	62	123	100	119	144	159	119	112	63	54	58	43
AC-FT	8680	8430	8570	8680	8950	14100	9390	18970	7910	7140	4640	4610

Cal YR 1974 TOTAL 45235 MEAN 124 MAX 960 MIN 42 AC-FT 89720
Wtr Yr 1975 TOTAL 55499 MEAN 152 MAX 1060 MIN 43 AC-FT 110100

Peak Discharge (Base, 1500 CFS).

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION.-- Lat 37°09'45", long 113°23'42", in NE1/4NE1/4SW1/4 sec. 2, T.42 S., R.14 W., Washington County, Hydrologic Unit 15010008, on left bank at downstream side of bredge on State Highway 17, 1.8 mi (2.9 km) downstream from Quail Creek and 6.2 mi (10.0 km) west of Hurricane.
DRAINAGE AREA.--1,530 mi^2 (3,960 km^2), approximately.
PERIOD OF RECORD.--March 1967 to current year.
GAGE.-- Water-stage recorder. Altitude of gage is 2,760 ft (841 m) from topographic map.
REMARKS.--Records fair. Many diversions for irrigation above station.
AVERAGE DISCHARGE.--9 years, 200 ft 3/s (5.664 m3/s), 144,900 acre-ft/yr (179 hm 3/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12.800 ft 3/s (362 m3/s) Jan. 25, 1969, gage height. 14.29 ft (4.356 m); minimum, 23 ft3/s (0.65 m3/s) Aug. 22, 1976.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1909 17.34 ft (5.285 m) Dec. 6, 1966, from floodmarks, discharge 20,100 ft3/s (569 m3/s).
EXTREMES FOR CURRENT YEAR.-- Peak discharges above base of 1,500 ft3/s (42.5m3/s); maximum discharge, 2064 ft3/s (58.5 m3/s) July 29, gage height, 4.96 ft (1.512 m); minimum 23 ft 3/s (0.65 m3/s) Aug 22, gage height, 1.36 ft (0.415 m).

DISCHARGE · IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	73	101	91	93	168	108	235	69	61	182	36
2	70	74	121	88	94	114	104	250	68	61	146	36
3	69	74	158	82	96	111	108	258	67	60	124	35
4	74	76	124	88	97	100	105	259	67	60	109	35
5	67	77	115	97	112	100	105	255	71	60	89	36
6	69	77	116	120	103	104	105	250	66	61	105	41
7	69	77	126	130	109	108	108	230	64	61	115	53
8	68	79	128	120	130	110	110	215	63	62	129	53
9	66	80	135	125	230	113	112	230	65	62	135	47
10	64	82	116	130	440	110	120	250	62	62	106	48
11	63	90	92	135	260	109	140	258	64	60	73	180
12	62	93	89	81	100	108	140	259	70	58	70	160
13	68	96	92	83	98	106	135	263	65	60	70	79
14	67	95	113	82	105	108	145	275	61	75	58	56
15	68	93	91	81	110	110	149	250	60	67	32	50
16	70	89	94	82	103	104	143	225	63	66	32	50
17	72	87	100	82	100	119	140	200	60	67	34	49
18	74	87	101	82	99	117	130	185	58	68	34	49
19	76	85	103	81	99	112	190	150	59	69	33	46
20	76	83	100	80	100	110	210	138	58	65	35	48
21	77	79	106	79	100	109	230	128	58	68	42	54
22	80	76	111	81	100	108	245	113	60	62	70	83
23	88	79	104	86	101	109	250	104	60	54	93	67
24	82	81	101	88	102	109	263	97	60	105	52	61
25	78	82	101	86	102	108	275	90	61	83	43	119
26	76	83	103	82	104	108	285	85	61	77	35	49
27	75	83	102	86	108	107	225	84	60	104	36	136
28	73	85	103	91	114	108	190	75	60	107	36	70
29	71	87	98	93	119	107	205	72	60	420	37	48
30	72	89	98	93	---	107	225	73	60	148	37	49
31	73	---	103	93	---	108	---	73	---	328	37	---
TOTAL	2221	2491	3345	2898	3628	3429	5000	5629	1880	2821	2229	1923
MEAN	71.6	83.0	108	93.5	125	111	167	182	62.7	91.0	71.9	64.1
MAX	88	96	158	135	440	168	285	275	71	420	182	180
MIN	62	73	89	79	93	100	104	72	58	54	32	35
AC-FT	4410	4940	6630	5750	7200	6800	9920	11170	3730	5600	4420	3810

CAL YR 1975 TOTAL 60608 MEAN 139 MAX 1060 MIN 43 AC-FT 100400
WTR YR 1976 TOTAL 37494 MEAN 102 MAX 440 MIN 32 AC-FT 74370

NOTE.-- No gage-height record, Jan 29 to May 25.

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	62	91	145	152	103	59	57	86	68	61	48
2	500	62	92	149	151	102	62	58	78	70	65	51
3	180	64	95	148	147	103	59	56	75	73	60	52
4	170	64	96	147	148	101	61	57	71	80	58	51
5	100	64	97	143	148	103	57	58	75	209	49	49
6	66	64	97	143	149	102	59	61	87	90	49	49
7	47	67	96	139	150	103	66	68	80	78	48	53
8	44	68	94	133	154	116	72	71	285	72	48	97
9	43	68	96	131	164	97	73	68	502	66	49	91
10	43	70	95	132	162	105	71	77	367	64	55	143
11	46	72	96	137	156	121	67	71	93	67	49	82
12	46	73	96	146	155	114	65	67	85	69	100	50
13	46	74	97	146	153	98	59	63	83	71	61	49
14	44	74	97	147	152	103	64	208	75	68	58	48
15	44	122	97	147	155	97	62	114	73	68	48	48
16	45	123	97	143	155	98	69	79	70	73	48	48
17	47	106	98	144	150	99	67	73	70	82	315	49
18	46	102	98	146	147	98	65	71	68	93	82	47
19	49	98	99	150	143	93	58	64	69	86	52	50
20	45	102	100	152	129	89	55	57	69	86	50	50
21	48	98	103	156	126	86	55	55	69	85	61	50
22	53	94	109	166	140	85	62	56	70	95	590	49
23	52	104	110	162	132	85	61	60	65	537	127	49
24	54	90	112	156	124	80	59	218	65	333	65	55
25	54	90	120	153	126	82	64	886	68	90	53	50
26	54	80	129	150	119	80	65	249	73	85	51	50
27	56	77	132	150	104	78	65	135	76	69	50	49
28	56	76	138	151	106	76	62	98	78	58	51	50
29	58	80	140	153	---	66	57	107	77	64	50	49
30	59	90	143	150	---	57	54	105	65	61	52	48
31	60	---	145	151	---	56	---	93	---	62	50	---
TOTAL	2,304	2,478	3,305	4,566	3,997	2,876	1,874	3,560	3,167	3,172	2,605	1,704
MEAN	74.3	82.6	107	147	143	92.8	62.5	115	106	102	84.0	56.8
MAX	500	123	145	166	164	121	73	886	502	537	590	143
MIN	43	62	91	131	104	56	54	55	65	58	48	47
AC-FT	4,570	4,920	6,560	9,060	7,930	5,700	3,720	7,060	6,280	6,290	5,170	3,380

CAL YR 1976 TOTAL 37524 MEAN 103 MAX 500 MIN 32 AC-FT 74430
WTR YR 1977 TOTAL 35608 MEAN 97.6 MAX 886 MIN 43 AC-FT 70630

COMMENTS ON U.S. FISH AND WILDLIFE OPINION ON WARNER VALLEY PROJECT.

We are in receipt of a copy of the Formal Consultation on the Allen-Warner Valley Energy Projects. Having been involved in studies pertaining to this project, we feel obligated to make the following comments:

The woundfin was placed on the endangered list, not because of an imminent threat of extinction, but rather to protect it from projects such as the one proposed at Warner Valley. The originator of this request for endangered status, Dr. James E. Deacon, has subsequently repeatedly suggested to the USF&WS organization that this represents an over-classification and that the woundfin status should be downgraded from endangered to threatened.

On February 9, 1977 a report was submitted from the Albuquerque office of USF&WS indicating that the proposed project would jeopardize the endangered species and its essential habitat. The basis for this opinion was a report produced by Drs. Deacon and Paul B. Holden and represented views which were almost totally unsupported by reliable data as required by federal regulation.

Inquiries were made by project leaders on the finalness of the February 9, 1977 opinion with a resulting response confirming the official status of the opinion and an expression of unwillingness

to support an additional fact-gathering effort. This attitude left the concerned project leaders and local citizens no recourse but to initiate a study to gather the required facts at their own expense.

On March 1, 1977 members of the Vaughn Hansen Associates staff were contacted to determine if they could assemble a technically competent study team capable of conducting an unbiased and objective study. This study team was assembled consisting of the recognized experts in numerous disciplines from the intermountain area. The understanding of all concerned was that the team would conduct an objective study and report facts fully as they were gathered with close liaison with concerned state and federal agencies.

Dr. Deacon was included as a member of this study team because of his experience on the Virgin River, and because he had access to the federal permit required to conduct a monitoring program. (A verbal request, to Dr. James Johnson of the Albuquerque office of USF&WS suggesting the need for a permit by other members of the study team was denied). The study was initiated in March and completed with the submission in December of a thorough, well-documented and substantiated data report and analysis.

During the study, an attempt was made to coordinate the effort to satisfy the data needs of all requisite state and federal agencies. Numerous meetings were held with USF&WS personnel in

Salt Lake City, Albuquerque and at various locations with the Woundfin Recovery team. Even though input was freely solicited, no recommendations of any substance were received. USF&WS did, however, acknowledge that the February 9, 1977 opinion was illegally constituted and agreed to await receipt of our study report prior to rendering a new opinion. The opinion responsibility was also shifted from Albuquerque to the Salt Lake office.

The USF&WS opinion, as submitted on April 3, 1978, almost totally ignores the substantiated data assembled by professionally recognized experts and again relies upon documented suggestions of Dr. Deacon and his associates. Errors in the original opinion could somewhat be justified by lack of data. However, since adequate data are now available for the opinion, the errors and omissions contained therein must be viewed as intentional and as an attempt by Dr. Deacons, Dr. Johnson, and other members of the USF&WS staff to stop the proposed project. This is not surprising in view of the pre-conceived anti-project philosophy held and stated by many of these individuals.

The April 3, 1978 opinion was very simply an unwarranted testimonial ascribing widespread expertise to Dr. Deacon. It contains both open and subtle attempts to build Dr. Deacon by discrediting those professional experts retained by the project to conduct an unbiased study. The April 3rd opinion contains statements made by Dr. Deacon earlier and subsequently shown clearly in the study to be in error. Facts documented in the report are almost

totally ignored.

The final draft of the Woundfin Recovery Plan as assembled by Recovery team, with Dr. Johnson as a director and Dr. Deacon as an advisor and consultant, while quoting Dr. Deacon from the Vaughn Hansen Associates report similarly ignores many facts contained therein. Their leadership must be viewed as representing an attempt to gain and maintain control over the Virgin River water resource and to perpetuate the study at increased costs to the taxpayers. This opinion is further substantiated by noting that the ignored data in the April 3rd opinion has been included, almost categorically, as tasks to be accomplished by the recovery team at a cost many times higher. Dr. Deacon's involvement in this recovery effort must be viewed as a flagrant conflict of interest, since failure to remove the woundfin from an endangered status represents a potential for him to obtain a financial gain.

Additionally the Albuquerque office culminated a long list of inappropriate activities by attempting to influence the Salt Lake office opinion and by insulting the project leaders in the St. George area in a letter from W. O. Nelson on December 12, 1977. So flagrant was the December 12th letter from the Albuquerque office of USF&WS that legal action has been sought. This letter indicated that the study, funded by the project, had identified no data which contradicted the findings in the report attached to the February 9, 1977 opinion. This was done

in spite of Dr. Deacon's acknowledgement of errors in his original report in areas including sediment control, habitat requirements, hydrology and exotic species introduction. The USF&WS opinion of April 3rd also fails to recognize these errors.

Those of us who have been closely associated with this project, and are aware of the data available, recognize the incompleteness and the inaccuracies of the April 3, 1977 opinion and are appalled that the USF&WS would permit a suppression of data. We would recommend that future studies involving threatened or endangered species be structured so as to include experts as required by law to produce an objective report and that an effort be made to work cooperatively with local officials and other agencies in an attempt to avoid the kind of antagonistic situation that has developed in connection with the woundfin minnow. This approach would seem to be more appropriate for a public service organization such as the USF&WS.

Vaughan Hansen Associates
Consultants/Engineers
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5620 South 1475 East
Salt Lake City, Utah 84121

Statement of Ival V. Goslin, Executive Director
Upper Colorado River Commission

before the

Subcommittee on Resource Protection
of the
Committee on Environment and Public Works
United States Senate

April 14, 1978

My name is Ival Goslin, I am the Executive Director of the Upper Colorado River Commission, Salt Lake City, Utah.

The Upper Colorado River Commission is an interstate administrative agency created by the Upper Colorado River Basin Compact of 1948. The Commission represents its member States, Colorado, New Mexico, Utah, and Wyoming, in matters pertaining to the conservation, utilization, and development of the water resources of the Upper Colorado River Basin.

Mr. Chairman, our Commission appreciates the opportunity to present this statement in support of amendments to the Endangered Species Act of 1973. Experience with the Act since 1973 certainly justifies the Congress having another look at it, and, especially at the manner in which it has been used. American society--human society--cannot survive under a system that effectively precludes the providing of food, clothing, and shelter for its own welfare and existence by preventing the modification of the habitats of lower forms of plant and animal life that have relatively little value to human social, economic, or environmental enhancement. It appears ridiculous to the point of perversity, and completely unreasonable to believe that the human race--especially Americans--would permit a system to exist under which a snail darter in Tennessee becomes more important than the enhancement of man's welfare; or the lousewort in Maine can prevent the production of millions of kilowatts of energy in a nation whose very existence in international relationships depends upon an expanding energy source; or a completely useless-to-man woundfin can prevent the development of a water supply and electric energy for a city and surrounding areas in Utah, Arizona, and Nevada.

Furthermore, it appears that this latter useless rascal, the woundfin, has placed the Congress in an almost grotesquely, ludicrous dilemma. In 1973 the Congress passed P.L. 93-205, The Endangered Species Act, under which, if a critical habitat is designated for the woundfin, it is claimed that the continued existence of such endangered

species may be jeopardized or may "result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical."

In 1974, the Congress passed P.L. 93-320, the Colorado River Basin Salinity Control Act, which authorized the construction and operation of the LaVerkin Springs Salinity Control Unit on the Virgin River in southern Utah, wherein is found the woundfin, as part of an over-all salinity control program in the water-deficient Colorado River Basin and for the social, economic, and environmental benefit of millions of United States citizens. We now note that the entire reach of the Virgin River from LaVerkin Springs to Lake Mead has been proposed for designation as critical habitat for the woundfin, in spite of the fact that parts of this reach are dry for six to eight months of the year. Also, the case of the woundfin raises serious doubts about the real motives of those who are acting under the guise of protecting it as an endangered species. This hardy little bundle of piscatorial energy has survived for thousands of years through many modifications of its habitat by violent natural forces, and through over 100 years of habitat modification by man's utilization of the Virgin River water supply for irrigation and domestic purposes.

Under section 7 of the Endangered Species Act, as interpreted by the courts in other cases, any modification of the habitat of the woundfin would deny the construction of a human environmental enhancement facility in the form of LaVerkin Springs Salinity Control Unit, or the storage and utilization of water in order to provide domestic water for the citizens of St. George, Utah and electric energy for those same citizens plus thousands of others in surrounding areas in three or four States. How much reasonableness is there in this situation? How much "balance" between citizen welfare, guaranteed under the United States constitution, and extreme environmentalism is demonstrated? In fact, one can legitimately enquire, "how much sense is there to permitting two Congressionally enacted laws to exist in direct conflict with each other and subject to interpretation by bureaucratic administrators who are not elected by the affected peoples?"

It is about time that the Congress critically examine the relative values to the human citizens of this country of water and energy supplies versus the critical habitat of the woundfin, as an example.

Dr. John J. McKetta, Professor at the University of Texas, has stated:

> "Many people feel that mankind is responsible for the disappearance of animal species. It is possible that in some instances man *may* hasten the disappearance of certain species. However, the evidence indicates that he has very little to do with it. About 50 species are expected to disappear during this century. It is also true that 50 species became extinct last century and 50 species the century before--and so on. Dr. T. H. Jukes of the University of California points out that about 100 million species of animal life have become extinct since life began on this planet about three billion years ago. Animals come and animals disappear. This is the essence of evolution, as Charles Darwin pointed out many years ago. Mankind is a relatively recent visitor here. . . . he has had nothing to do with the disappearance of millions of species that preceded him.
>
> "In fact, one of man's failures is that he has *not* been successful in eliminating a single insect species--in spite of his all-out war on certain undesirable ones in recent years."

It is evident that the exchange of some species of plants and animals for other species is part of the natural evolutionary processes that are inherent in the operation of the universe and the progress of human society. After all, man is part of nature, too, and the fact that he has been the only animal to successfully develop the ability and expertise to control his own habitat should not be removed from his sphere of influence or activities. After all, man hasn't done too bad a job of surviving during his relatively short history on earth when compared with the dinosaurs or trilobites. Had those endangered species along with 100,000,000 others been able to survive what chance would man have had? The so-called endangered species on earth today will be removed from earth regardless of man's a activities. The question is not "if?" but "when?"

We are not to be classified as advocates of the promiscuous destruction of truly endangered species of life forms because to retain them for so long as possible under a "balanced" concept of development and preservation is worthy for educational, social, and aesthetic reasons; but for man to be denied the things necessary for his welfare under a man-created legal concept that will not permit the modification of the habitats of lower forms of life or the replacement of those habitats with others of equal value is an act

of self-flagellation and absurdity almost beyond comprehension. The following episode illustrates this point:

Recently in a so-called consultation meeting between representatives of fish and wildlife organizations and proponents of a project that would provide power and water for several hundred thousand people and the benefits of cleaner water for millions of others, the question was asked, "If the project modifies one mile of the stream in which the little silvery fish lives for which you are proposing that a "critical habitat" be established and the project creates 20 miles of better habitat in another reach of the stream would that satisfy protection and enhancement of the environment of that fish?" The answer by the chief representative of the fish and wildlife service was an unequivocal, "No, under the Endangered Species Act you cannot even slightly modify the habitat of that one mile of stream if the modification in any way changed conditions for that fish. The fact that you would provide 20 miles of satisfactory habitat that does not now exist at another location has nothing to do with protecting the endangered species." (the quoted words are not exact, but their meaning is) Unfortunately for man both administrators and the courts have interpreted section 7 of the Endangered Species Act in this manner, and they are probably correct.

Although the law certainly can be construed to have the meaning described above, it is very difficult to believe that the Congress intended that the law should be used to prevent the maintaining and enhancement of the welfare of the citizens of the United States. The existing regulations concerned with consultation among interested entities on determination of critical habitat for endangered species do not establish specific biological criteria to be used to determine critical habitat--or, if an action will cause substantive harm to the species within the designated area. It is evident that the way has been paved for arbitrary decisions which prohibit any and all activities within an area designated as critical habitat. The question is raised: How do you *prove* an area is critical to the survival of a species? Furthermore, there are no provisions in the Act for the withdrawal of an area once it has been designated as "critical habitat." The designation of critical habitat, in the first instance, should encompass other factors as well as those that can be classified as biological. Surely there are human social and economic factors that cannot be ignored. These should also be evaluated before an area is designated as "critical habitat."

Clearly, Congress now has a duty to perform for its constituency in seriously considering the effects of implementing section 7 of the Act in its present condition on Americans, particularly in local and regional situations. It is hoped that the amendments to the Endangered Species Act that this Congress finally approves will permit a much better balance between the conservation and development of water resources for the enhancement of man's environment and welfare and the preservation in their pristine states of the habitats of lower forms of animal life than has been demonstrated in recent years.

Attached, as Exhibit I, is a resolution of the Upper Colorado River Commission, an official entity of the States of Colorado, New Mexico, Utah, and Wyoming, re: Proposed LaVerkin Springs Salinity Control Unit and Amendment of the Endangered Species Act. Although this resolution is directed primarily at the Virgin River conflict, it also illustrates the major problems associated with implementation of section 7 of the Act in a "balanced" and reasonable manner.

Mr. Chairman, for the consideration of your committee members and staff, attached, as Exhibit II, is a memorandum analysis of the Endangered Species Act of 1973, prepared by Mr. Paul L. Billhymer, General Counsel, Upper Colorado River Commission.

If our staff can be of aid to the staff of your committee in the drafting of amendments or in other ways related to problems associated with the Act, please feel free to call upon us.

Thank you for the opportunity to present these views on behalf of the Upper Colorado River Commission and its four member States.

Exhibit I

RESOLUTION

OF

UPPER COLORADO RIVER COMMISSION

re:

Proposed LaVerkin Springs Salinity Control Unit

and

Amendment of Endangered Species Act

WHEREAS, the U.S. Fish and Wildlife Service has published in the Federal Register on November 2, 1977 (42 F.R. 57329) a proposal to establish a critical habitat under the Endangered Species Act of 1973 (87 Stat. 884) for the woundfin (*Plagopterus argentissimus*, a minnow-type fish) in the Virgin River from the backwaters of Lake Mead upstream to Hurricane, Utah; and

WHEREAS, in a news release on November 3, 1977 the Fish and Wildlife Service stated, "Once critical habitat is determined no Federal agency could authorize funds or carry out any action that would jeopardize the continued existence of the species or alter its critical habitat," and by such opinion the Fish and Wildlife Service appears to have decided, prior to habitat classification, that any utilization of the waters of the Virgin River is detrimental to the woundfin; and

WHEREAS, adoption of the proposed regulations would have an adverse impact on the basinwide salinity control program for the Colorado River system as formulated, adopted, and approved by the seven Colorado River basin States and the Environmental Protection Agency by precluding the construction of two proposed salinity control projects, the LaVerkin Springs and Lower Virgin River Salinity Control Units which, when completed, would remove approximately 185,000 tons of salt annually from the river system, equivalent to a reduction in salt concentration of 19 mg/l at Imperial Dam, a significant step towards achieving the goal of maintaining salinity levels at or below those of 1972 in the lower mainstem of the Colorado River, while the basin States continue to develop their compact-apportioned waters; and

WHEREAS, the establishment of the proposed critical habitat for the woundfin would contravene the intent of the Congress as expressed in the Colorado River Basin Salinity Control Act (88 Stat. 266); and

WHEREAS, adoption of the proposed regulations may preclude further utilization of the waters of the Virgin River by preventing its storage in reservoirs and subsequent releases therefrom when needed for domestic, agricultural, municipal and industrial purposes, including the Warner Valley Water and Power Project that

would generate electrical energy for hundreds of thousands of human beings in the Pacific southwest and supply domestic water and power to the rapidly growing city of St. George, Utah; and

WHEREAS, an examination of the available literature reveals that there is a difference of opinion among authorities concerning the need for establishment of a critical habitat for the woundfin; and

WHEREAS, the Colorado River Basin Salinity Control Forum representing the seven Colorado River Basin States by letter of December 8, 1977 to the Secretary of the Interior has expressed its opposition to the proposed regulations and has stated that "--there must be alternatives which will not bring a halt to the construction of the salinity control units"; and

WHEREAS, the health, well-being, and domestic and economic welfare of millions of American human beings should be of more concern to the members of the U.S. Congress and their constituents than a species of fish that has persisted in its existence throughout over one-hundred years of water development in the Virgin River Valley:

NOW, THEREFORE, BE IT RESOLVED by the Upper Colorado River Commission at a special meeting convened at Salt Lake City, Utah on January 10, 1978 that the Secretary of the Interior is hereby requested to refrain from declaring a critical habitat in the Virgin River as described in the Federal Register (42 F.R. 57329);

BE IT FURTHER RESOLVED that prior to February 1, 1978, each of the governors of the four member States of the Upper Colorado River Commission be requested to transmit comments expressing the tenor of this resolution to the Secretary of the Interior and to the Associate Director--Federal Assistance, Fish and Wildlife Service;

BE IT FURTHER RESOLVED that the members of the Congress from the Upper Division States of the Colorado River Basin are hereby urged to seek amendments by the U. S. Congress to the Endangered Species Act (87 Stat. 884) that will clarify that law in such a manner that reasonable precedence can be given to the environment, health, and general welfare of American citizens over other forms of plant or animal species;

BE IT FURTHER RESOLVED that copies of this resolution be transmitted to the Governors and Members of the U.S. Congress of the Upper Colorado River Basin States, the Secretary of the Interior, the Director of the U.S. Fish and Wildlife Service, Commissioner of Reclamation, and other interested entities.

C E R T I F I C A T E

I, IVAL V. GOSLIN, Executive Director of the Upper Colorado River Commission, do hereby certify that the above Resolution was adopted by the Upper Colorado River Commission at the Special Meeting held in Salt Lake City, Utah on January 10, 1978.

WITNESS my hand this 13th day of January, 1978.

Ival V. Goslin

IVAL V. GOSLIN
Executive Director

Exhibit II

UPPER COLORADO RIVER COMMISSION

355 South Fourth East Street
Salt Lake City, Utah 84111

April 6, 1978

MEMORANDUM

TO: Ival V. Goslin, Executive Director

FROM: Paul L. Billhymer, General Counsel

SUBJECT: Endangered Species Act, Public Law 93-205, as amended by Public Law 94-359.

In order to focus on the real impact of the Endangered Species Act only a few of its Sections will be considered herein.[1] Basically the present law is a continuation of earlier Congressional attempts at protecting wildlife.[2]

A broad outline of the Act is as follows:

Section 2 sets forth a strong statement of Congressional purposes and policy (16 U.S.C.A. 1531). Significantly Congress indicates that one of the purposes of the Act is ". . . to provide a means whereby the ecosystem upon which endangered species and threatened species depend may be conserved . . . ." Under the policy declaration, Congress seems to announce a mandate to ". . . all Federal departments and agencies . . . to conserve endangered species and threatened species . . . ." Further the Federal establishment is told to ". . . utilize their authorities in furtherance of the purposes of this Act."

Section 3 is the definition section. In the various definitions Congress has indicated the intent to extend the Act to not only fish and wildlife species but also to plants and to the subspecies of the same (16 U.S.C.A. 1532).

Section 4 sets forth the procedure by which the determination is made for listing the endangered and threatened species. Public participation in the listing procedure is encouraged. The state wherein the species is known to occur is offered an opportunity to participate in the listing (16 U.S.C.A. 1533).

Section 5 allows the Secretary of the Interior to acquire land and water to support a program of protection and restoration of the endangered and/or threatened species (16 U.S.C.A. 1534).

Section 6 provides for a program of cooperation with States whereby States will have input into the operation of the programs looking toward carrying out the mandates of this Act (16 U.S.C.A. 1535).

Section 7 provides for federal interagency cooperation and requires Federal agencies to exercise their authorities so as to promote the purposes of the Act. This section will receive extended discussion below (16 U.S.C.A. 1536).

Section 8 provides a framework for international cooperation looking toward the protection and rehabilitation of endangered and threatened species (16 U.S.C.A. 1537).

Section 9 sets forth the activities which this Act prohibits. Fundamentally the Act automatically protects a species listed as endangered against being taken, possessed, imported, exported, transported, sold, or moved in commerce by "*any person.*" Threatened species may be given the same protection by regulation. The term "take" has been given a broad inclusive definition to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[3] "Harm" has been defined by administrative rule to include "significant environmental modification or degradation" which "significantly disrupts normal behavioral patterns, which includes, but are not limited to breeding, feeding, or sheltering."[4] (16 U.S.C.A. 1538)

Section 10 provides for some exceptions to Section 9 prohibition. Permits are authorized where the possession will be for scientific purposes or will "enhance the propagation or survival of the affected species." Certain takings by Alaska Natives are regulated under this Section 10 (16 U.S.C.A. 1539).

Section 11 provides for penalities and enforcement. Civil and criminal penalties are authorized. Citizen suit enforcement is also authorized (16 U.S.C.A. 1540).

Section 12 provides for a study of endangered plants by the Smithsonian Institution with the results to be sent to Congress within a year. (16 U.S.C.A. 1541).

Congress, through the Endangered Species Act, sought to accomplish the protection of major decline of species by regulating the two main causes of this decline; namely, (1) the sport and commercial taking of the individual species, and (2) the degradation and destruction of the habitat of the species. Congress recognized these two factors as needing special attention. In the Senate Report 93-307, at page 2, we find the following:

> "The two major causes of extinction are hunting and destruction of natural habitat."

The Act itself, in Sec. 4(a), lists as factors to be considered by the Secretary in making the determination requiring the listing the species as endangered and/or threatened:

> "(1) the present or threatened destruction, modification, or curtailment of its habitat or range;
> "(2) overutilization for commercial, sporting, scientific, or educational purposes. . . ."[5]

One other explanation should be made concerning the coverage of the Act so that its full impact can be understood. The term "species" is defined to include subspecies (Sec. 3(11)). It appears that the protective mantle of the Act will apply when one subspecies is endangered or threatened, even though there may be other subspecies of the same species in abundances.

By definition (Sec. 4(4)-(15)) "endangered" or "threatened" species protection is afforded to the listed species if such is in "danger of extinction throughout all or a *significant portion of its range* . . . ." The Fish and Wildlife Service (hereafter Service) takes the position that "localized populations" of listed species must be protected, and the position is justified by the sweep of the statute. Species can be listed by areas also, thus the species may be abundant and unlisted in one area, and listed in another where the listing criteria are found to exist. At least the statutory definition would seem to encourage such a position. This position should be considered with reference to the discussion under Section 7 infra. It enlarges the impact of Section 7.

Finally it should be observed that Congress was interested in doing more than protecting the "status quo" of the "listed species." The thrust of the Act is toward developing a program by which the "listed species" become unlisted. See, for example, the definition of "conserve" in Sec. 3(2), reading as follows:

> "(2) The terms "conserve", "conserving", and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking."

See also 50 C.F.R. 402.02, the regulations issued in connection with Interagency Cooperation required by Sec. 7 wherein the following is found:

"Recovery" means improvement in the status of listed species to the point at which listing is no longer required.

It is with this background that the following analysis is made.

The really dynamic section of this Act is seven, and it is so important that it will be quoted in full:

> *"Sec. 7. The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal departments and agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act and by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical."*

It is very likely that the full implications of this section were not realized by Congress when it was before that body. The legislative history on the section is somewhat limited, yet Congress clearly indicated by the changes that it made in the new statute, that it intended some mandatory action from Federal agencies.[6] Even the implementation by the Secretary of the Interior has been delayed. Final regulations covering Interagency Cooperation Regulations, Endangered Species Act of 1973, were issued January 4, 1978.[7] Even allowing for the two years or so that these were in the rulemaking process, it would seem that the administrative response has been somewhat delayed.

It is the second sentence of the section which requires the Federal agencies to review their activities in the light of the Endangered Species Act. The burden of this direction is three-fold, namely:

> "First, it directs them (Federal agencies) to utilize their authorities to carry out conservation programs for listed species.
>
> "Second, it requires every Federal agency to insure that its activities or programs in the United States, upon the high seas, and in foreign countries will not jeopardize the continued existence of a listed species.
>
> "(T)hird, section 7 directs all Federal agencies to insure that their activities or programs do not result in the destruction or adverse modification of critical habitat."[8]

The above is a statement of the scope of Section 7 from the viewpoint of the two agencies charged with administering the Section 7 program. It is to be noted that these regulations place the real burden upon the program directing agency to make the initial determinations of the impact of its program upon the "listed species." It does seem that

the regulations take the position that Section 7 requires a positive response from the program agency. It should be pointed out that the concern here is with domestic "listed" species.

The regulation in §402.03 clearly indicates that it is intended that

> "Section 7 applies to all activities or programs where Federal involvement or control remains which in itself could jeopardize the continued existence of a listed species or modify or destroy its critical habitat."

This construction that Section 7 covers "all" activities of all Federal agencies would seem to include all present on-going activities as well as future activities. This construction also seems to have the backing of Congressional legislative history. The language of Section 7 is not qualified by any such statement as "insofar as practicable." Note also that no qualifying language is found in Section 2(b) "purpose" and 2(c) "policy" section. One author has suggested that the 1969 Act was flawed because of the qualifying language and the change was deliberate to insure that Federal agencies would have a positive mandate to comply with the rigorous requirements of Section 7.[9]

Perhaps it would be helpful to determine what is mandated of Federal agencies by Section 7. It would appear that the first requirement is that the agency institute an internal program wherein the particular agency's basic "authorities" are used to carry out "conservation programs for listed species." Note the statutory language suggests that this program is to be done "in consultation with the Secretary." Apparently the Secretary did not think this injunction required implementing regulations because the regulations mentioned above make no provision for this type of consultation.

Actually the failure to cover this area may be due to the fact that it is probably not an enforceable requirement. Courts are not likely to involve their time in an on-going agency internal operational program. (Querry: Could NEPA (P.L. 91-190, 42 U.S.C.A. 432, et seq.) be a tool for the enforcement of this section?) It may be academic because the other provisions of Section 7 really take care of most, if not all, situations.

The second and third requirement will be considered together because one part deals with the species and the other the critical habitat of the same. Here the agency must act to insure that its authorized operations do not "jeopardize the continued existences of the listed species" or result in "modification or destruction" of critical habitat of such species. The Secretary of the Interior is required to make the determination of what is "critical habitat."[10] The Act does not spell out when a determination of "critical habitat" is to be made. In a conversation with local representatives of the Service, it was learned that in some cases the determination will be made at such time as the original listing takes place, but there is no rule that such will

occur. When the Service is called upon to evaluate a project or action, some consideration of "critical habitat" would seem to be required. The regulations issued pursuant to Section 7, above mentioned, really deal with the problems resulting from the "Second" and "Third" above-mentioned requirements.[11]

The first cut at compliance with the section must be taken by the Federal agency in charge of a program or action. It must consider and determine the impact of such activity on listed species or their habitat. It may seek advice from the Service, which is placed in charge of Interior's responsibility under the Act.[12] This advice does not take the place of consultation. If the Federal agency decides that its activity may affect the listed species or their habitat, there is a requirement for a written request for consultation.[13] 50 CFR 402.04(a)(3) The agency is responsible for furnishing all necessary information to the Service so that an evaluation can be made. This information may include specialized studies financed by the requesting agencies which the Service finds necessary for the evaluation. The agency is required not to make any irreversible or irretrievable commitment of resources which would foreclose the consideration of modification or alternatives to the identified activity or program. The Service will issue a biological opinion which will evaluate the impact of the project or activity on listed species or their habitat, including any recommended modifications. Note if the modifications are accepted further consultation may be called for.[14]

The major concern would be with a "biological opinion" which finds the project or activity in violation of the mandate of Section 7. The responsibility for final decision rests with the Federal agency proposing the action. It must evaluate its position with reference to the opinion and determine whether to proceed.[15] It would appear that it would indeed require a brave agency to proceed counter to a biological opinion. In view of the liberal citizen suit provision provided for in the Act, a citizen suit would seem to follow as a matter of course, using the biological opinion as the basic grounds for a claimed Section 7 violation.[16] Up to the present time no case has dealt with the consequence of an adverse report issued pursuant to the new regulations.

One case should be considered as giving insight as to what the Courts would likely do in this situation. That case is *National Wildlife Federation v. Coleman*, C.A. 5, 529 F.2d 359. The issue involved was an alleged violation of Section 7 of the Endangered Species Act by a highway project which, if completed, would damage the habitat of an endangered species (Mississippi Sandhill Crane). In spite of Interior's determination that unless modified the highway would violate the critical habitat of the crane, the project was recommended by the Highway Agency without the recommended modification.

The Court made some rather significant rulings in the case.

(a) Based on a review of the legislative history, the Court concluded that "Section 7 . . . imposes on federal agencies the mandatory duty to insure that their actions will not either (i) jeopardize the

existence of an endangered species, or (ii) destroy or modify critical habitat of an endangered species."

(b) There is further the requirement to consult with the Service prior to taking action, but the Secretary of the Interior has no veto power over the project if consultation has taken place. (Querry: Can the Secretary of the Interior veto a project where consultation has not taken place?) The sponsoring agency must assume the responsibility for the project and "determine whether it has taken all necessary action to insure that its actions will not jeopardize the continued existence of an endangered species or destroy or modify habitat critical to the existence of the species."

(c) Courts will review the agency's decision to determine whether "the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." (citation omitted)

(d) The National Wildlife Federation Appellants had the burden of establishing that the appellees failed to take necessary action to prevent violation of Section 7.

(e) The Court reviewed the evidence and found that the lower court's evaluation of the evidence was wrong. The lower court failed to appreciate the nature of Section 7. The Appellant's evidence indicated that proper modifications had not been made in the project to preclude a Section 7 violation. The Court's injunction in this case was unique. It delayed the highway construction until such time as the Secretary of the Interior found that necessary modifications were made to protect the crane.

The case would indicate that any federal agency planning to continue action after an adverse biological opinion had better have its case in order. It would appear that the agency would at least be required to prepare a well-articulated response to such "biological opinion." Very likely such response would be a part of the NEPA EIS.[17]

One further problem raised by this Act should be discussed, namely, its impact on Federal activities started prior to the Act. One such case has been litigated, or better is still in progress, namely, *Hill v. T.V.A.*, C.A. 6, 549 F.2d 1064, 9 ERC 1737, cert. granted, 46 L.W. 3316, Nov. 15, 1977. This case presents an unique situation. The dam in question (Tellico) was almost finished; Congress was aware of the problem, but continued to furnish money for the dam; the fish in question was unknown until 1973--only four months prior to the passages of the Endangered Species Act; the fish was added to the "list" in November 1975 over TVA's objection; suit was brought enjoining completion of the dam in February 1976; and the lower Court found that the dam closure in 1977 would probably destroy the fish, but refused to enjoin the closing. On appeal, the Sixth Circuit reversed the lower court's ruling and enjoined the closing of Tellico.

The court stated the issues as follows:

"(1) Does Tellico Dam completion violate the Endangered Species Act?

"(2) Assuming a violation, are there adequate grounds for exempting Tellico from compliance?

"(3) If no exemption is justified, is injunction the proper remedy to effectuate the purpose of the Act?"

The Court found that certainly the closing would violate the Act. The Secretary's construction of the Act as to "critical habitat" wherein the Secretary by regulation (40 Fed. Reg. 17764-17765) had ruled that any action which:

"might be expected to result in a reduction in the number or distribution of [the] species of sufficient magnitude to place the species in further jeopardy or restrict the potential and reasonable expansion or recovery of that species."

was proper. Note the lower court had found that the closing of Tellico would likely destroy the species. The Appellate Court refused to consider balancing the value of the almost complete project against the value of saving the fish. The Court suggested that the statute was to be taken to its logical extreme, and even if a species was discovered to be endangered on the day before closing, that the closing should be enjoined. The Endangered Species Act does not allow for a NEPA-type of balancing. The Court found that a NEPA balancing error would be subject to later correction, but should the Court grant an exemption here, any error could not be corrected because the species would be gone. The Court found that there were no grounds for exemption and that the injunction was the proper remedy.

Actually the Court returned the Tellico to Congress. If the project is to be completed, Congress will have to face the problem of balancing the value between the fish and Tellico. This is not unlike the Alaskan pipeline case. Congress, by amendment of the Mineral Leasing Act, did allow the construction of the pipeline after the injunction in *Wilderness Society v. Morton,* D.C. Cir., 479 F.2d 842, cert. denied, 411 U.S. 917 (1973). The Congressional exemption procedure on a case-by-case basis may be one way of solving the conflict. Such process if over-exercised would destroy the efficacy of the Endangered Species Act. It does finally depend upon the value system principles which we wish developed. One caveat should be made, *Hill* is before the Supreme Court, and the final word is still out with respect to this case.

One other Circuit Court case should be mentioned, namely, *Sierra Club v. Froehlke,* C.A. 8, 534 F.2d 1289, 8 ERC 1944, involving the Meramec Park Dam project impact of the Indiana Bat. After finding that the Endangered Species Act applied to an on-going project, the Circuit Court affirmed a lower court's refusal to enjoin the construction of the dam on the grounds that the evidences were insufficient to make out a case of substantive violation of the Act. This case really does not provide any real insights as to the court's reaction to requirements of the Endangered Species Act.

An observation is in order with respect to the possibilities of control of non-federal actions and projects which impact on the listed species. Note such impact could well amount to a "taking" which has been defined as:

> "(14) The term "take" means to harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

Section 9 enjoined taking, and as such is subject to civil and criminal penalties in addition to citizen enforcement suits. The impact of possibilities for non-federal activities control has not been fully explored in court cases. It would appear that the Act can be used to attack non-federal activities which might impact the listed species.

Summary

1. Congress in 1973 established a comprehensive method for the protection of endangered and threatened species.

2. This protective system seeks to control taking and habitat destruction of the endangered and threatened species.

3. A special obligation is placed on Federal agencies to "insure" that their actions "do not jeopardize the continued existence of or result in the destruction or modification of habitat of such species."

4. The present court construction of the Act has made the duties of the Federal agencies mandatory, and the Act's application has been broadly defined to include present programs authorized prior to the Act.

5. Courts have refused to enter into a value balancing procedure with respect to mandates of the Act as it impacts the Federal agency on-going programs.

6. The full impact of the Act has yet to be realized with respect to Federal development programs.

7. Non-federal activities would seem to be subject to the impact of this Act.

FOOTNOTES

1. The Act has received extended discussion in legal literature. See Palmer, "Endangered Species Protection: A History of Congressional Action," 4 *Envt'l Aff.* 255 (1975).

   Lachenmeier, "The Endangered Species Act of 1973; Preservation or Pandemonium," 5 *Envt'l L.* 29 (1974)

   Wood, "Section 7 of the Endangered Species Act of 1973: A Significant Restriction for All Federal Activities, 5 *ELR* 50189 (1975).

   Coggins and Hensley, "Constitutional Limits on Federal Power to Protect and Manage Wildlife: Is the Endangered Species Act Endangered?" 61 *Iowa L. Rev.* 1099 (1976).

   Note: "Obligations of Federal Agencies Under Section 7 of the Endangered Species Act of 1973," 28 *Stan. L. Rev.* 1247 (1976).

   Comment: "Implementing Section 7 of the Endangered Species Act of 1973: First Notices from the Courts," 6 *ELR* 10120 (1976).

2. See Senate Report 93-307, Public Law 89-669, Public Law 91-135.

3. See Section 3(14).

4. 50 C.F.R. 17.3.

5. Other indication of "habitat" concern is found in the purpose section of the Act, Sec. 2(b). See also Sec. 3(2) defining the term "conserve"; Sec. 5 authorizing funding for habitat acquisition; and Sec. 7 to be discussed.

6. See Wood, *supra*, Note 1 at 50199, and the Law Note from *Stanford Law Review* cited in Note 1 at pages 1254-1256 for a discussion of the legislative history. See also 2 *U.S. Code Cong. & Admin. News* 1973, 93rd Cong., 1st Session, at 2988-3008. The most compelling indication of the meaning of Section 7 is found in Congressman Dingell's statement during the debate on the Conference Report where he discusses the law as it existed prior to the 1973 Act in the context of some former Air Force bombing activities:

   > "Another important step which we have taken in this bill--and in this regard the two bills are virtually identical --is that we have substantially amplified the obligation of both agencies, and other agencies of Government as well, to take steps within their power to carry out the purposes of this act. A recent article in the Washington Post, dated December 14, illustrates the problem which might occur absent this new language in the bill. It appears that the whooping cranes of this country, perhaps the best known of our endangered species, are being threatened by Air Force bombing activities

along the gulf coast of Texas. Under existing law, the Secretary of Defense has some discretion as to whether or not he will take the necessary action to see that this threat disappears--I hasten to say that I believe that Secretary Schlesinger, who I know to be a decent and honorable man, will take the proper steps whether or not the law is amended, but the point that I wish to make is that once the bill is enacted, he or any subsequent Secretary of Defense would be required to take the proper steps." (119 Cong. Rec., p. H11857, 93rd Congress, 1st Session, December 20, 1973, daily ed.)

7. 43 Fed. Reg. 870, January 4, 1978.

8. 50 C.F.R. 402.01 - 43 Fed. Reg. 874.

9. Note: "Obligations of Federal Agencies Under Section 7 of the Endangered Species Act of 1973," 28 *Stan. L. Rev.* 1247-1253. See also Congressman Dingell's statement, 119 Cong. Rec., p. H11837, December 20, 1973 (daily edition).

10. The methods of determination of "critical habitat" are set forth in §402.05 as follows:

> (a) *Procedure.* Whenever deemed necessary and appropriate, the Director shall determine critical habitat for a listed species. After exchange of biological information, as appropriate, with the affected States and Federal agencies with jurisdiction over the lands or waters under consideration, the Director shall publish proposed and final rulemakings, accompanied by maps and/or geographical descriptions in the FEDERAL REGISTER. Comments of the scientific community and other interested persons will also be considered in promulgating final rulemakings. The modification or revocation of a critical habitat determination shall also require the publication in the FEDERAL REGISTER of a proposed and final rulemaking with an opportunity for public comment.
>
> (b) *Criteria.* The Director will consider the physiological, behavioral, ecological, and evolutionary requirements for the survival and recovery of listed species in determining what areas or parts of habitat (exclusive of those existing man-made structures or settlements which are not necessary to the survival and recovery of the species) are critical. These requirements include, but are not limited to:
>
> (1) Space for individual and population growth and for normal behavior;
>
> (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
>
> (3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing of offsprings; and generally,

(5) Habitats that are protected from disturbances or are representative of the geographical distribution of listed species.

(c) Emergency determination. Paragraphs (a) and (b) of this section notwithstanding, the Director may make an emergency determination of critical habitat if he finds that an impending action poses a significant risk to the well-being of a listed species by the destruction or adverse modification of its habitat. Emergency determinations will be published in the FEDERAL REGISTER and will remain in effect for no more than 120 days.

See also Note 12, infra.

11. A list of important definitions are as follows:

§402.02 Definitions.

"Activities or programs" means all actions of any kind authorized, funded, or carried out by Federal agencies, in whole or in part, ...

"Critical habitat" means any air, land, or water area (exclusive of those existing man-made structures or settlements which are not necessary to the survival and recovery of a listed species) and constituent elements thereof, the loss of which would appreciably decrease the likelihood or the survival and recovery of a listed species or a distinct segment of its population. . . . Critical habitat may represent any portion of the present habitat of a listed species and may include additional areas for reasonable population expansion.

"Destruction or adverse modification" means a direct or indirect alteration of critical habitat which appreciably diminishes the value of that habitat for survival and recovery of a listed species. . . . .

"Jeopardize the continued existence of" means to engage in an activity or program which reasonably would be expected to reduce the reproduction, numbers, or distribution of a listed species to such an extent as to appreciably reduce the likelihood of the survival and recovery of that species in the wild. . . .

"Recovery" means improvement in the status of listed species to the point at which listing is no longer required.

12. Note the National Marine Fisheries Service has responsibility for some administration under the Endangered Species Act, and the regulations were issued jointly. See Sec. 3(10) and Sec. 4.

13. If the Agency decides that its program does not affect the listed species or their habitat, no further action is called for unless initiated by the Service, 50 C.F.R. 402.03(a)(2).

14. See 50 C.F.R. 402.04 which sets forth the regulations on "Consultation."

15. 50 C.F.R. 402.04 (g) reads:

> (g) *Responsibilities after consultation.* Upon receipt and consideration of the biological opinion and recommendations of the Service, it is the responsibility of the Federal agency to determine whether to proceed with the activity or program as planned in light of its section 7 obligations. Where the consultation process has been consolidated with interagency cooperation required by other statutes such as the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) or the National Environmental Policy Act (42 U.S.C. 4321 et seq.), the final biological opinion and recommendations of the Service shall be stated in the documents required by those statutes.

16. Section 11(g), 16 U.S.C.A. 1540(g), outlines Citizen Suit provision, even allowing for attorney's fees.

17. See Note, 28 *Stan. L. Rev.* 1247 at 1266, et seq., for a more detailed analysis of this problem.

TESTIMONY OF

W. SAMUEL TUCKER, JR.

Manager of Environmental Affairs

Florida Power & Light Company

Before the

Subcommittee on Resource Protection

of the

United States Senate

Committee on Environment and Public Works

April 13, 1978

I am W. Samuel Tucker, Jr., Manager of Environmental Affairs for Florida Power & Light Company, whose headquarters are in Miami. I have been with the Company for over three years. Prior to my present work, I held various positions in State and local government, including that of Secretary of the Department of Administration for the State of Florida. I am also the Chairman of the Land Use/EIS Subcommittee of the Edison Electric Institute (EEI), and my comments today represent the views of the Institute. EEI is the principal national association of investor-owned electric companies. Member companies serve about 99 percent of all customers of the investor-owned segment of the electric industry and 77 percent of the nation's electric users.

The concept of protecting and conserving various plant and animal species which face extinction as a direct or indirect

result of man's activities appeals both to one's emotions and sense of moral responsibility. There is little doubt that society in general understands the intrinsic value of all forms of life and is willing to take reasonable steps to ensure that rare and endangered species are offered protection and the opportunity to propagate.

But we are also convinced that society has other values as well, and that no single value can be absolute in terms of the real-world decisions and judgements which society and the government which represents it must make. This is precisely the problem with the Endangered Species Act as it is presently written, interpreted, and enforced. The basic inflexibility of the Act has grave implications on other things society values, such as an adequate, reliable, and economic supply of electrical energy. Our purpose in testifying before you today is to present some of one company's experiences which typify the problems electric utilities across the nation are facing with the Act. We will also try to give you an idea of some of the problems we see resulting in the future, if the law remains unchanged. We would also hope that this testimony will serve to remedy the common misconception that the Endangered Species Act only impacts public works or developments of Federal agencies. The wide proliferation of environmental regulatory programs now in force effectively encompass practically every significant development by the private sector as well, by virtue of the fact that the issuance of the required Federal permits and licenses provide

the trigger to the Endangered Species Act. The broad application presently applied by the Corps of Engineers "404" Permit program is a case in point.

I do not think it is necessary to belabor the point, but I would remind the committee that the delivery of electric service requires a system of many components stretching from the generating plant down to each individual home, office, and business. This system of power plants, transmission lines, substations, switching stations, distribution lines, and so forth, covers a typical land area like a spider's web - for the very simple reason that it has to get to where people are. In such a system, flexibility in planning is very important. Any program which leads to the blanket elimination of large areas from possible use (no matter how limited), or creates for certain animals and plants values which are in essence non-negotiable and therefore infinite, is going to have unacceptable repercussions. The Endangered Species Act embodies this kind of program.

The need for flexibility in the development of electric utility systems in my own State of Florida is foreboding for other areas of the nation. Florida, because of its semi-tropical climate has a wide variety of ecosystems with many unique forms of flora and fauna. The State has a wide diversity of species, with many identified as endangered or threatened. Critical habitats have already been defined for several of these species. A map of these habitats will demonstrate that much of the State is affected.

Florida Power & Light Company's experience with one of these critical habitats, namely that established for the Everglade Kite, makes an interesting point with regard to the need for flexibility.

The Everglade Kite is the Florida population of a hawk-like bird which feeds on apple snails which exist in fresh water marshes. The present population is estimated to be about one hundred birds and has been placed on the Endangered Species list. Its Critical Habitat has been designated by the Secretary of Interior and includes a broad expanse of area in Southeast Florida. My company sought permission to cross about a mile of one corner of this habitat located in the Loxahatchee Wildlife Refuge with a transmission line, or alternatively, to arrange a land swap with Interior. The land in question contains no Kites or apple snails and is not suitable habitat for either. We offered to purchase another tract of land of equal value that would be suitable habitat and in addition provide one million dollars for its development. That amounts to ten thousand dollars per bird. Interior rejected our proposal, offering their responsibilities in protecting this Endangered Species as a principal reason for doing so, and we are presently constructing the line around the area in question at considerably greater cost to our customers. Thus, no one benefited, not even the birds.

29-319 O - 78 - 12

What is happening in Florida has happened in Tennessee and Maine and the Pacific Northwest and will happen in time in many other places across the nation. The process of designating threatened or endangered species and critical habitats has only begun and as it proceeds, first for animals and then for plants, the conflicts will spread as well throughout the country.

When we reference the need for flexibility, we are convinced that we are speaking in agreement with national environmental policy. The National Environmental Policy Act of 1969 states that it is national policy:

> "to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations..."

NEPA stresses the necessity of considering all factual aspects of a certain situation in making a decision, along with weighing costs and benefits, and analyzing alternatives. The same kind of philosophy is inherent in the Clean Air Act, the Water Pollution Control Act, the Coastal Zone Management Act, and other environmental legislation. My example of the transmission lines and the Loxahatchee Wildlife Refuge would show the Endangered Species Act to be inconsistent with this national policy.

Philosophically, it might be argued that since the full value of endangered species both now and potentially in the future is unknown, society must be absolute in protecting every identified endangered or threatened species. The reality, however,

is that we will never know enough to make absolutely risk-free judgements in difficult situations requiring tradeoffs. Risks work both ways, and the opportunities lost in a project abandoned solely because of a perceived threat to some species or its habitat, especially when there are no practical alternatives, also create risks which must be assumed by society.

We would further argue that different endangered species have different values and are subjected to different levels of stress, all of which indicate the need for flexibility and judgement. If a comprehensive ecological perspective including total potential impact of various alternatives is abandoned for the sake of a single species or habitat, then we face the possible imposition of an environmentally suboptimal alternative.

Again, we believe the transmission line example bears this out. In the real world, it is rarely, if ever, an "either-or" proposition. Creative thinking, cooperation, and good planning can mimimize conflict and even lead to a more favorable solution for all concerned, if sufficient legal flexibility exists.

We would like to take a minute to discuss some future problems resulting from the Act through the use of another illustration. The geographic isolation of South Florida, being at the end of the line so to speak, severely limits our ability to establish electrical inter-ties with other systems. This is the traditional method employed by utilities to provide an alternate

source of power in the event of the sudden loss of power from within a system. We have one transmission corridor coming in to Southeast Florida from the North, and another from Southwest Florida. The Florida Public Service Commission has directed us to construct an additional 500KV transmission line on a new corridor between Southwest and Southeast Florida in order to improve the reliability of service in that area and reduce the frequency of blackouts which have occurred in the past. The Commission has also recommended additional generation in Southeast Florida to improve reliability over the longer term.

Now, if you take the determination already made by Interior in the Loxahatchee situation that transmission lines are incompatible with the Everglade Kite Critical Habitat, look at the map showing that the Kite Critical Habitat effectively isolates Southeast Florida, and combine with that the fact that we would need a 404 permit from the Corps of Engineers - the trigger to Section 7 of the Endangered Species Act - the result becomes inescapable. We could not construct the line which is needed to protect three million people from blackouts.

How about additional generation? Several years of careful studies have identified only one suitable power plant site in Southeast Florida, our South Dade Site. It has now been enshrouded by the Critical Habitat for both the American Crocodile and the Florida Manatee. Even though the development of this 10,000 acre site would probably result in a net overall benefit to these species, we would still have a direct conflict with Section 7 of the Act

which prohibits any activity which would "jeopardize the continued existence of.../an/...endangered.../or/..threatened species or result in the destruction or modification of habitat... determined...to be critical." The words of the statute thus create an absolute priority for this provision above any and all other environmental, energy, or human considerations.

We believe that the Endangered Species Act as it now stands is counterproductive in the long run to the very goals and purposes it was designed to achieve. While fully supporting reasonable protection measures for plants and animals facing extinction, society can not long function with a total injunction against all risk to such species at any cost. The Act is in danger of being totally discredited and discarded as a result of "backlash" from current events. How long will three million people put up with blackouts and brownouts because of what someone perceives as a potential threat to a hundred birds? Complete repudiation of the Act would not do anybody or any plant or any animal any good.

In summary, the Endangered Species Act ignores practical considerations and forces foregoing of more desirable options in some cases. It flouts common sense, good judgement, and basic national environmental policy. It makes a mockery of the efforts of many people who are truly interested in preserving endangered species and not simply blocking some project. If not amended, the Endangered Species Act may ultimately be remembered as the worst enemy of the very species it purported to save.

STATEMENT OF ZYGMUNT J. B. PLATER BEFORE THE SENATE SUBCOMMITTEE ON RESOURCES PROTECTION - APRIL 13, 1978

Mr. Chairman, members of the committee, I am Zygmunt Plater, professor of law at Wayne State University, here today representing the Environmental Policy Center, the Little Tennessee River Alliance, and myself. As some members may know, I have been associated with the Tellico dam case since 1973.

Let me use this opportunity to summarize for the committee's present purposes the accomplishments of last summer's hearings as they focussed on Tellico, and subsequent occurrences in the case. The committee and its staff are to be strongly congratulated for their very professional review and investigation of a biological and administrative program that easily could have become a mere political football.

Tellico was undoubtedly the catalyst for those hearings, and (as we feared when initially our group in Tennessee had to decide whether to sit back and allow this species to be extirpated or take on the uphill task of making an agency obey the law) it has been the catalyst for a chorus of attacks on Section 7 itself.

The three-inch-long endangered species, as the newspapers reported it last year, had halted a "$100 million hydroelectric dam" at the "11th hour" in a "classic confrontation between energy needs and the environment." The facts that came out in the hearings have shown a far different story, however.

Shortly after the 6th Circuit Court of Appeals enjoined the Tellico Dam for violating the act, the General Accounting Office analyzed the TVA project. That study, reviewed by this committee, showed that deferring to the snail darter by not filling the reservoir can, even now, be more profitable to all concerned than closing the dam gates.

The dam, it turned out, was never intended to generate electricity. Rather, it was merely one component of a TVA regional economic development project that has dammed the river system in 68 successive lakes, 22 within 60 miles of Tellico. This last dam was planned primarily to create subsidized lakefront industrial sites and a final flatwater recreation lake.

The dam itself, which TVA rushed to near completion after the discovery of the snail darter, is only a minor part of the project: $5 million worth of concrete and labor, and $17 million worth of earthworks, out of the project's total cost of $120 million. Most of the project's budget was spent to buy the valley's fertile farmlands and to improve roads and bridges in the area -- assets that are valuable without the reservoir.

The GAO report found that TVA's benefit claims for the Tellico project were completely unreliable. The value of added flatwater recreation facilities, for instance, was projected at $1.4 million annually, almost half of total project benefits. This was unrealistic, given the existence of 22 nearby reservoirs, and considering that the dam would eliminate the finest remaining trout-fishing water in the Southeast.

The interests of the snail darter, it turns out, coincide with those of other species around Tellico, including human beings. Local citizens had tried to question the project over the years through lawsuits, petitions and in several cases, shotgun threats to avoid being driven from their land. The little fish require cool, clean, flowing, big river water, with shallow cobbled shoals for spawning. It used to live throughout the eastern portion of the Tennessee river system, but, after the construction of 68 reservoirs in the valley, its remaining population now survives in the region's last such stretch of clear, flowing river.

After TVA's dam-building boom, the surrounding river valley also is unique. It contains 25,000 acres of prime agricultural land as rich as the Mississippi Delta. A dozen major Cherokee historic sites line the river bank, including Tuskegee, the village where the great Chief Sequoya was born; the Echota religious capital, and Tenassee, which gave its name to the river and the state. Colonial Ft. Loudon is on the riverbank, and near there in 1975 archaeologists discovered two of the oldest sites of continuous human settlement in America, a record of 10,000 years of valley occupation.

All these assets--the river, farmlands and historic sites--would have been buried under about 20 feet of mud and water if the dam were closed.

Development of the river valley without a reservoir, thus saving the snail darter, appears to be a profitable alternative even today, with the

dam virtually complete. TVA is moving into land-development ventures, now that it has run out of places to build dams, and the GAO study observed that the unflooded Tellico project is admirably suited for such development.

In addition to river recreation and farming--which could yield twice as much yearly revenue as the entire reservoir project--the GAO noted the valley's tourist potential. Its historic sites along the river form a path connecting the adjoining Smoky Mountains National Park (with 10 million visitors a year) with the major north-south highway, Interstate 75.

Carefully developing the valley instead of flooding it would relieve pressures on the park itself, and add a valuable tourist route for the local economy. An extra two square miles of potential industrial lands also exists in the unflooded valley, adjoining major railroad lines and arterial highways.

So the snail darter may have saved a fertile river valley threatened by a marginal federal project. It also has showed us that the bloom is off the New Deal's sweetest-smelling rose. No longer a model of state enterprise, the Tennessee Valley Authority has become a somewhat-obstinate utility company--the largest in the nation--wielding extraordinary political power in its seven-state region.

The Tellico case also showed that the "extremism" and "inflexibility" of the endangered species issue came not from the statute but from the agency here (and in only a few other cases) which consistently refused since 1973 even to discuss the possibility of modifying the project to comply with the law by protecting the species and its habitat. And I must inform the committee that TVA rejected all the recommendations and conclusions of GAO (as noted in the hearings Appendix at 984), and just last week again rejected out of hand the constructive request of the Secretary of Interior to commence consultation even at this late date, for an administrative resolution of this issue that need not burden Congress further.

I can understand that many Senators may well feel that they now know far more than they need to know about Tellico--and that if the law is going to make this committee a trial court on endangered species the

procedure should be changed.

The answer, of course, is that no flood of cases has or will come to Congress if the Tellico case is properly and objectively handled. Tellico is the exceptional case--the only project of hundreds of conflicts where an agency has consistently refused to consider administrative compliance. It is the exception that proves the rule of the Act's workability. And it is the precedent that shows other agencies that endangered species issues are to be resolved in good faith consultation, because otherwise Congress will subject the agency and its project to GAO analysis, hearings, and extensive legislative inquiries. That is not the kind of scrutiny that agencies desire. The precedent that has been set in the proceedings on Tellico is part of the solution to the fears raised by opponents of the Act.

And we remind the committee that the record shows that the attacks on Section 7 are not based in fact. Nowhere in the extensive hearings is there evidence that the Act has created impasses. On the factual record, there has never been a case arising under the Act where public development objectives could not be reconciled with species protection if the construction agency consulted in good faith. Some day it may be found that an important project will destroy a species, and no resolution is possible, so that the Act will have to be amended to allow that species to be rendered extinct. The factual record indicates that that case has not occurred and is not likely to--and in light of the values of the Tellico's ongoing review, it is clear that Tellico would be the wrong place to start such a sad precedent.

TESTIMONY OF THE NATIONAL AUDUBON SOCIETY
BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUB-COMMITTEE ON RESOURCE PROTECTION REGARDING THE ENDANGERED
SPECIES ACT OF 1973, WITH SPECIAL REFERENCE TO SECTION 7, JULY 22, 1977

Mr. Chairman, members of this Subcommittee, thank you for this opportunity to testify during these important oversight hearings on the Endangered Species Act of 1973 (P.L. 93-205).

I am Dr. Michael Zagata, Washington Rep of the NATIONAL AUDUBON SOCIETY, a non-profit conservation organization with about 370,000 members organized into 394 chapters throughout the United States. As you may know, the NATIONAL AUDUBON SOCIETY is one of the oldest, largest and most experienced membership organizations devoted to conservation in general and specifically to the protection and enhancement of wildlife populations and the ecosystems upon which those populations depend for their survival.

The NATIONAL AUDUBON SOCIETY has previously testified in support of the philosophy and concepts embodied in the Endangered Species Acts of 1966, 1969 and 1973. I am here again today to defend and support the Act and the following purposes for which it was written:

1) to provide a means whereby ecosystems upon which endangered species and threatened species may be conserved; and

2) to provide a program for the conservation of such endangered species and threatened species.

It is difficult to fault the farsighted conservation ethic displayed by Congress in drafting and passing the Act (passed the House by a 390 - 12 vote). Your action in passing this legislation echoed the sentiment of the American people who are highly cognizant of the potential losses associated with the knowing demise of a species. Indeed, Leopold expressed the rationale for this type of legislation in 1949 when he wrote:

> "Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question of whether a still higher 'standard of living' is worth its cost in things natural, wild and free. For us in the minority (no longer true) the opportunity to see geese is more important than television, and the chance to see a pasque flower is a right as inalienable as free speech."

It is a new thing for one species to mourn the death of another species or to take measures to prevent that death. Leopold stated this succinctly when he wrote:

> "The Cro-Magnon who slew the last mammoth thought only of steaks..... But we who have lost our (passenger) pigeons mourn the loss. Had the funeral been ours, the pigeons would hardly have mourned us."

From a practical standpoint, the Endangered Species Act of 1973 was written in recognition of the following facts:

1) various species of fish, wildlife and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;

2) other species of fish, wildlife and plants have been so depleted in numbers that they are in danger of or threatened with extinction; and

3) these species of fish, wildlife and plants are of esthetic, ecological, educational, historical, recreational and scientific VALUE to the nation and its people.

In recognizing the VALUES of endangered species, Congress, for the first time, established a system by which those species could be weighed against other valued resources during evaluations made in compliance with the National Environmental Policy Act of 1969 (NEPA) and the Fish and Wildlife Coordination Act of 1934 (FWCA). Indeed, some of the current dilemmas involving the Endangered Species Act of 1973 might have been avoided if the Water Resources Council, established under the Water Pollution Control Act of 1972 (P.L. 92-500) had set and adhered to vigorous, fair 'Practices and Standards', and the FWCA and NEPA had initially been complied with (TVA is exempt from FWCA).

It is vital to our well being that Congress has recognized that these often inconspicuous and, with our present knowledge, seemingly valueless plants and animals and their associated habitats do have value. In our society, which historically have had a highly exploitive relationship with nature, protection is not generally afforded species and/or communities lacking an economic value or the known potential of having an economic value.

This is unfortunate but true. I say unfortunate because this historic lack of concern for these 'valueless' resources demonstrates both the lack of an ecological ethic and of foresight.

We are only now recognizing, as the coal miners did years ago when they took a canary with them into the mines, that many of the 'innocuous' plants and animals do have or may someday have a value to mankind. We cannot fault these plants and animals for our current limitations in knowledge about their potential values. Who would have fought to save the mold Penicillium from extinction in the 1700's? If someone had risen in defense of this mold, they would have been labeled a quack -- or worse. Who among us knew of the value lichen communities would provide by indicating

various types of air pollutants (dust, sulfur dioxide)? We are only today discovering that the honey of honey bees may be used to monitor the level of heavy metals in the environment.

Besides the potential health benefits associated with plants and animals, there may be unknown economic benefits as well. The jojoba bean of our western deserts is an example. It was considered a noxious weed and treated as such until research results demonstrated that its oil had properties similar to those of the threatened sperm whale. Now the jojoba bean is receiving a good deal of positive attention.

In general, the animals threatened with extinction are not those that compose the early stages of ecological succession, often undergo populations irruptions and are regarded as weeds or pests. Instead, they tend to occupy more stable communities, have lower biotic potentials, require rather narrow, specific habitat conditions and, in the case of animals, occupy the upper rungs of the food-chain ladder. It is for these very reasons that are so valuable to man as indicators of the impacts of various forms of natural and man-induced environmental perturbations.

The bald eagle, for example, helped demonstrate to us how persistent pesticides passed through the food-chain and became magnified in concentration as they moved from link to link. Our monitoring program indicated that aquatic levels were well within the 'safe' range. The eagle proved otherwise. Who knows what lessons we may learn from two of our latest contenders for extinction -- the snail darter and Furbish's lousewort? Both are known to have rather specific habitat requirements and thus serve as indicators of slight ecological change.

From a selfish standpoint, it is to mankind's benefit to save representative ecosystems because the communities within them may contain a plant or animal of unknown value. We may recognize other values of a community and need 'working' examples of it in order to reconstruct more. Only now do we recognize the role of wetlands in purifying our water, recharging the ground-water table, buffering floods, etc. Do we know enough about these wetlands to begin to reconstruct them for man's benefit?

Over and above the health and economic justifications for protecting endangered plants and animals is the over-riding need for a conservation

ethic. For such an ethic to be effective we must look at and value ecosystems and their associated species from more than a short-term economic or man-benefiting perspective. We must value those components of the land community because they are essential to its healthy and continued functioning. During his campaign, President Carter referred to our fish, wildlife and plant resources by saying that they act as "an indicator of our environment" and that "when they have trouble surviving we should seriously examine the quality of our environment." Congress has provided the nation with a tool to facilitate that type of examination and we commend you for it.

SECTION 7

In supporting the Act, we wish to make special reference to Section 7 which states, in part, that all Federal agencies and departments shall:

> utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to Section 4 of this Act and by taking such action necessary to insure that actions authorized, funded or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical.

This Section is an integral part of the Act and in harmony with Section 2(c) Findings which states:

> It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.

The temporizing phrases of earlier Endangered Species Acts (1966,1969) which bound agencies to conserve protected species only "insofar as is practicable given the primary purposes of such agencies" have been eliminated. Congress was emphatic!

Claims have been made and schemes designed to show that Section 7 is inflexible and therefore must be amended. The record does not support these contentions. According to a statement made by Secretary Andrus at the 1977 Annual Meeting of the NATIONAL AUDUBON SOCIETY, Section 7 of the Act is working and conflicts between the Endangered Species Act and Federal projects have been over-emphasized with most problems having been resolved through negotiations among the affected agencies. In fact, in the three years since the passage of the Act there have been about 4,500 informal consultations and 124 documented consultations between the Department of Interior (Fish and Wildlife Service) and other Federal agencies.

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Of this number, only three have been unresolved via consultation and have thus been ruled upon in the courts. Of these three, two have reverted back to the agencies and one, Tellico, is being aired before Congress. It is obvious that Section 7 is working and that Congress' intent in passing the Act is being fulfilled.

The NATIONAL AUDUBON SOCIETY strongly endorses the existing mechanism for avoiding conflict with the Act and for resolving conflicts if and when they arise. We feel that the agencies involved should, in demonstrating good faith in attempting to comply with the Act be able to resolve their differences in consultation leading to research, design review, and modifications in process, design, location and timing which reconcile the competing interests.

If not, an agency may, at its discretion, proceed with an action that appears to violate the law. At this point, the judicial process may be invoked. Congress gave explicit authority in the Act to any person to file suit to enforce provisions of the Act. The courts, in hearing a case, may issue whatever order is necessary to force compliance with the law, including project modification or a moritorium.

If, after the courts have reviewed the case, no satisfactory solution can be reached then Congress should be the final decision maker. We feel that if Congress exercised its authority and judgment and called for a vigorous review of any project they are called upon to adjudicate, as it has done with Tellico, that the number of such cases would be minimal. Such a review should evaluate a project's economic and social impacts, its environmental impacts over and above any effects on endangered species, and its overall benefits.

Tellico is a good case in point. It is the first project to be in violation of the Endangered Species Act that has reached Congress. To determine why this occurred, let us examine Tellico's history with regard to NEPA. NEPA requires all Federal agencies, before taking major actions, to consider alternative actions, including actions which can only be accomplished by other Federal agencies. In good faith, an agency should take a look at the possible consequences of actions they are are about to take and examine how they might impact on the Nation's interest. Each major project is to be reviewed in terms of benefits and costs, project alternatives and environmental impacts on the species including

mitigation. It was the absence of these procedures for Tellico under NEPA, owing to the protracted cause of the TVA controversy, that has resulted in Tellico being essentially an Endangered Species Act case and not a NEPA case. In other words, the fact that TVA has demonstrated disdain for NEPA and is exempt from the FWCA has put Congress in a position of having to consider amending an Act it so overwhelmingly supported. This demonstrates agency inflexibility rather than statutory inflexibility. Because the TVA continued to pursue a program which would eliminate the snail darter despite requests from Interior, from the Governor and from conservation organizations, the Audubon Council of Tennessee joined as co-plaintiffs with the Endangered Species Committee and the Southeastern Association of Biologists in litigation against TVA. The result was a ruling by the sixth circuit court in Cinncinnati halting the Tellico project until an administrative or congressional ruling occurs.

In attempting to circumvent the issue of the dam's impact on the snail darter and the River valley, TVA is pursuing a transplant program in the Hiawasse River. It is important to note that the Act offers protection to the "endangered species in their natural habitat" and therefore prohibits the destruction of critical habitat as well as of the species themselves

(16USC 1536). This point is crucial when considering the use of transplantation as a mitigating measure. Merely accomplishing a successful transplant to another area does not satisfy the requirements of the Act. If successful over a protracted time and a wide range, however, a transplant program could enable the Secretary to determine that the species in question is no longer threatened or endangered.

The most difficult decision to be made in unresolved cases is whether or not the project's values exceed the values of a species, including its esthetic value. When referring to the demise of the passenger pigeon, Leopold eloquently expressed his concern for its loss:

> "There will always be pigeons in books and in museums, but these are effigies and images, dead to all hardships and to all delights. Book-pigeons cannot dive out of a cloud to make the deer run for cover, or clap their wings in thunderous applause of mast-laden woods. Book-pigeons cannot breakfast on new-mown wheat in Minnesota and dine on blueberries in Canada. They know no urge of seasons; they feel no kiss of sun, no lash of wind and weather. They live forever but not living at all.'

In summary, Mr. Chairman, the NATIONAL AUDUBON SOCIETY supports the Endangered Species Act as written and would strongly oppose any amendment to weaken it. We believe that man has the responsibility to take every reasonable means to ensure that his actions do not result in the extinction of any plant or animal. We

would like to see increased funding to implement all Sections of the Act (especially Section 6) and to, as President Carter requested in his 1977 Environmental Message, identify all critical habitat. Early identification of critical habitat would facilitate agency planning and the consultation process.

Overall the agencies have done well in light of the funds available to them. We would hope that the appropriation of $9 million to the TVA and other agencies to transplant endangered species is a demonstration of commitment to support and not subvert the Act. It is hard, however, to conceive of this amount of money being appropriated for a few projects when the National Marine Fisheries Service has been operating its entire endangered species program on a budget of about $300,000 per year.

In our testimony we have eluded to various kinds of values associated or potentially associated with endangered species and their habitats. The key value that is approached by this act is that of an ethic for the land and its associated resources. If I might, I would like to once more quote the late Dr. Aldo Leopold:

"The 'key-log' which must be removed to release the evolutionary process for an ethic is simply this: quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Thank you Mr. Chairman for this opportunity to testify.

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ENDANGERED SPECIES ACT OF 1973
AUTHORIZATION OF APPROPRIATIONS

STATEMENT ON BEHALF OF THE NATIONAL WILDLIFE FEDERATION BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, SUBCOMMITTEE ON RESOURCE PROTECTION, REGARDING THE AMENDMENT TO THE ENDANGERED SPECIES ACT OF 1973 TO EXTEND AND INCREASE THE AUTHORIZATION OF APPROPRIATIONS.

April 13, 1978

Ours is a nonprofit, nongovernmental organization which has independent affiliates in all 50 states, Guam, Puerto Rico, and the Virgin Islands. These affiliates, in turn, are made up of local groups and individuals who, when combined with associate members and other supporters of the Federation, number an estimated 3.5 million persons. We welcome and appreciate the opportunity to speak to you about the need to extend the authorization of appropriations for the Endangered Species Act of 1973.

The NWF is dedicated to conservation education and emphasizes the concept that wildlife is a renewable resource only as long as suitable habitat is available. We believe that the Endangered Species Act of 1973 embodies this important concept as one of the most far-sighted and comprehensive pieces of legislation ever enacted for the protection of wildlife. The Federation has urged a strong National Commitment to the passage of endangered species legislation. Today we are pleased to be urging meaningful and significant financial support necessary for its continued successful implementation.

The Federation has long been active in programs to protect and preserve species such as the prairie chickens, bald eagles and whooping cranes but without the strong unified approach that this Act represents, we were losing ground. The Act offers the necessary regulatory and statutory authority and the potential for funding needed to affect a reduction in the current high rate of extinctions.

In this Act, Congress recognized our responsibility to conserve these natural resources--both in recognition of their place in our nation's heritage and in our international commitment.

George Perkins Marsh in his very insightful book, Man and Nature, written in 1864, observed that only the government is likely to have the needed continuity and power to repair damage to the environment. With government aid, man might "become a co-worker with nature in the reconstruction of the damaged fabric which the negligence or the wantonness offormer lodgers have rendered untenable."

The Endangered Species Act of 1973, as had its legislative predecessors, focuses on the importance of habitat protection as a direct method to help prevent future extinctions. It recognized that commercial exploitation, pollution and a number of other factors can contribute to the demise of a species, but the loss of the habitat necessary for the existence of endangered wildlife and plants is by far their greatest single threat. Environmental destruction and the loss of living space due to man's activities has increased profoundly in the last few decades. The acquisition of lands for endangered or threatened species is an important element of both State and Federal efforts outlined in this Act. The Act further stresses the importance of the habitat and species protection concept, in Section 7, by encouraging conservation and habitat protection for listed species on Federal lands and in activities that are federally funded or authorized.

The Endangered Species Act recognized the importance of garnering all the available resources both to protect and to increase the populations of animals and plants that are now endangered and to make sure that no actions are taken that will contribute to the further endangerment of these vulnerable species. The various sections of the Act are all complimentary and therefore necessary to provide an effective program for ensuring that wildlife will be protected for future generations. None can stand alone. Section 7 is indeed necessary as an integral element of this expansive

effort but becomes even more important because its successful implementation serves as an enlightened, responsible example for others to follow.

The NWF recognizes that with human population increases, disturbances to species will continue and habitat will be lost. Without Section 7 of the Endangered Species Act, we will lose any hope of achieving a uniform federal conservation posture which will result in the conservation and preservation of endangered species. Section 7 was not conditioned to be interpreted only when economically advantageous to any agency or when consistent with their special interest. The Act was intended to be applied in all cases. It is an attempt to balance the concern for endangered species with the concern for economics and other special interests. The Secretary of Interior, who acts through the Fish and Wildlife Service, appropriately occupies a pivotal role in the implementation of the Act by issuance of biological standards for protecting species. But overall the success or failure of this critical endeavor depends on the achievement of voluntary compliance by other federal agencies and the participation of state agencies.

The Act does recognize that there are endangered species that are presently highly valued in the market place, but also includes all others by finding that these endangered and threatened species "of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people." Prior to this Act's inception, few arguments for these vulnerable species stood up under the great pressure to manipulate and distrupt natural environments for economic and population growth. Granted there were examples of species that in special cases received public support against unrestrained development, but overall no one felt a responsibility for representing the interest of all species. The appropriate truism is that there is rarely any responsibility shown in decision-making when those who make those deicsions do not have to suffer the consequences. <u>All</u> species are susceptible to man-made disturbances and now have a recognized value by virtue of this Act. An

example of the danger of setting of values of endangered species in the marketplace was illustrated when the state of Texas was asked how much a whooping crane was worth--the answer "not very much." They considered the value of oyster shells dredged for road building more important, even though that dredging resulted in loss of critical habitat and silting of the whooping cranes' food supplies. The value of a healthy, balanced ecosystem should be obvious, but is usually overlooked until it is too late. We are slowly realizing the value of a diversity of species.

A community's variety of butterflies is a most reliable indication of the suitability for both human and non-human existence; mayfly populations show the purity of flowing waters; types of slow growing lichens attests to the quality of unpolluted air. Many species give us early warning of deterioration---of our own potential endangerment. Seemingly unimportant life forms can contribute invaluable benefits to the living world that we all share: studies to both understand and expand physiological capabilities depend on many obscure animals; bees pollinate crops valued at over $6 billion per year as well as countless types of fruits and seeds necessary for wildlife; many potential human cancer cures are discovered in plants and animals; many anti-bodies are derived from plants; 9/10 of the world's oxygen comes from seemingly useless vegetation and weeds; many natural pest controls are insects and small fish (species of killifish protect many countries from mosquito and parasitic infective carriers of dread diseases); and wild species of plants and animals are necessary to improve domestic and cultivated strains for food sources. The examples are only limited by our imagination and the resources available for research. Conservation of these species gives us the raw materials, the genetic heritage concealed within these species. It keeps our options open for the time when our ability to recognize the specific value of a plant or animal is as advanced as our present ability to destroy habitat that result in the species extinction. The evolution of a single species is a process that may take millions of years and can never be duplicated. No logical line can be drawn as to which species would live or forever by wiped from the face of the earth. This

act subscribes to the basic belief that man's place on earth is as a tenant; of stewardship and enjoyment of the harvest of each year but not of destruction of its source. Aldo Leopold said it best: "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise."

Many Federal agencies have recognized the need to "consider" wildlife in carrying out their overall objectives. The problem is that "consideration" hasn't proved effective; a stronger mandate is needed to protect endangered species. For example, Department of Transportation Federal Highway Administration Publication, "Environmental Considerations in Transportation Planning" concluded "...transportation planner and highway engineer...must begin to identify effects early at the system planning phase. The planner and engineer must present the information to the public and the decisionmakers so that decisions on transportation facilities and services can be made in the best overall public interest. The planner must develop alternatives that present real choices in terms of environmental impacts, and most importantly, he must involve the public in the identification of environmental effects and in the making of trade-offs among alternatives. Environmental factors must be identified and studied during system planning and followed through the program and project stage." All of this nice language notwithstanding, we were obligated to come to the aid of the 40 remaining endangered Mississippi Sandhill Cranes whose existence was being jeopardized by a highway interchange planned for Interstate 10 near Gulfport, Mississippi. We (and our Mississippi affiliate) filed a complaint against the Department of Transportation not to stop the highway but only to make certain that it was built in a way compatible with the survival of the

cranes. After the court ruled the Endangered Species Act had been violated, good faith discussions of alternatives acceptable to both the Fish and Wildlife Service and Department of Transportation have begun and negotiations look promising. This could have been achieved without reliance on the courts if good faith negotiations under Section 7 of the Endangered Species Act had been conducted at an earlier stage.

On the bright side -- proving in fact the point we've just stated -- NWF was recently involved in one of the many examples of the good faith negotiations leading to the resolution of a possible endangered species conflict. It involved the endangered Bachman's warbler whose best known habitat is in the 4,500 acre I'On Swamp in the Francis Marion National Forest in South Carolina. The habitat was threatened by proposed clearcutting by the U.S. Forest Service. An NWF lawyer investigated the problem and proposed a reasonable alternative, a three person arbitration panel with wildlife experts from U.S. Forest Service, Fish and Wildlife Service, and The Wildlife Society. A moratorium was agreed upon until a recommendation was received from the panel. The guidelines agreed upon by the parties involved in the mediation have been used to reach a biological opinion under Section 7 consultation and promises again to avoid future problems.

One problem with perceptions of the Endangered Species Act is that it is looked at in isolation. But the Act does not stand alone. It is part of an overall legislative package designed to minimize natural resource depletion while still providing for future progress. This package includes many other laws, the National Environmental Policy Act of 1969 (NEPA) and the Fish and Wildlife Coordination Act. NEPA calls for a continuing policy of the federal government

"to use all practicable means and measures including financial and technical assistance, in a manner calculated to foster and promote the general welfare to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economical and other requirements of present and future generations." Prior to taking any federal action with significant effects to the environment certain procedures should be followed and these involve the consideration of alternatives to the proposed action and consultation with other federal agencies which have jurisdiction because of law or special knowledge of any environmental impact involved.

Fair consideration of alternatives is the heart of NEPA. Secondary or indirect effects are to be considered, such as development, which can be even more substantial than primary effects. Neither was done adequately in the case of Interstate 10. The Endangered Species Act of 1973 gives the Department of Interior both the resources necessary and the responsibility for response on behalf of endangered species in the NEPA process.

The Fish and Wildlife Coordination Act requires federal agencies, any time they are funding or issuing permits for modifying a water body of the U.S., to consult with the Fish and Wildlife Service and the state agency with supervisory authority over fish and wildlife, prior to taking action. Serious consideration must be given to the recommendations of these agencies for mitigation of impacts to fish and wildlife. It was the intent of Congress that some new habitat for wildlife would be acquired or improved every time an existing habitat was disturbed or destroyed by the construction of a federal dam, reservoir, canal or channel. No law in action shows more dramatically the weakness of a law calling only

for "consideration" of fish and wildlife species. Millions of acres of wetlands have been drained and filled, fish passages have been blocked, streamflows depleted, bottomland hardwoods destroyed, riverine habitat flooded out without mitigation for fish and wildlife losses. Entire states have yet to receive mitigation from any water project. If the long list of projects that have been approved and built had been done with a reasonable provision for habitat to offset what was destroyed perhaps we would now be talking about situations where a project jeopardizes the continued existence of an endangered species or results in the destruction or modification of the last bit of habitat which is critical for its existence.

In light of the above mentioned opportunities for federal decision-makers to fully consider and balance environmental factors with a reasoned choice of alternatives, let's review Tellico, the only endangered species problem unresolved by the administrative and judicial processes. Our Tennessee affiliate, the Tennessee Conservation League has shown a very reasoned response on TVA's Tellico project. They have questioned the justification for the project and specifically objected that the energy and flood control benefits were exaggerated. Because they feel the overall NEPA process has been abused they have adopted a resolution urging that Congress request a thorough study of benefits and alternatives to the impoundment. We have attached this resolution to our testimony. TVA is exempt from the Fish and Wildlife Coordination Act. If they were not exempt and had complied with mitigation requirements, the snail darter,believed once to have been common in free flowing rivers throughout Eastern Tennessee, may well not have had its

habitat reduced to such a degree through dam building and pollution. There are more than 20 large reservoirs within 100 miles of the present project.

TVA claimed it was also exempt from NEPA. The courts ruled otherwise. TVA produced an E.I.S. that reflected either inexperience or a total disregard for the intent of NEPA. The courts ruled it inadequate and required it to be rewritten. The new E.I.S. for the Tellico project was recently reviewed by the G.A.O. The report concludes that"the congress should prohibit the authority from further work on the project and should not act on the proposed legislation to exempt the project from the Endangered Species Act until more current information is received."

It further recommended that TVA complete a comprehensive river-based development plan as well as update its benefit-cost data on the existing project plan.

The TVA also contended that the Endangered Species Act did not apply to them. After receiving notice from the Department of Interior in 1974 that if the snail darter were listed, impounding the river would "jeopardize the continued existence of the fish." TVA went on to spend $50 million on the dam, much of it after the darter was finally listed in 1975. In short, in this one case which has posed what appears to be an endangered species act confrontation, the project proponent has viewed itself as an exception to the requirements of every piece of legislation which provides for consideration of wildlife needs early in the planning process.

It is our contention that sound, well-researched projects with

opportunities for adversary input and honest, complete alternative presentations would negate the need for widespread civil suits or requested congressional review under Section 7 of the Endangered Species Act. To date there has not been a project that meets these review criteria and is conflicting with the critical habitat or existence of an endangered species. If in the future such a situation develops, then a substantive review through the judicial and possibly legislative process is necessary. The project, however, should be able to stand up to a thorough evaluation, and then, and only then, should Congress have to balance the benefits to be derived for the public welfare. But the ultimate choice of life or death of a species is up to Congress -- the people we elect.

No one else is in a position sufficiently responsible to the American people to make such a decision.

Fortunately, for the preservation of endangered species, the great majority of agencies have willingly complied with the requirements of Section 7 and consulted in good faith. Through good faith consultation the intent of the Act is satisfied and potential differences resolved through negotiation. Final regulations were recently published which explain the consultation process to assist federal agencies in complying with Section 7 of the Act. This rulemaking requires Federal agencies to consult with the Service if their activities or programs may affect listed species or their habitats. After such consultation, it is the responsibility of the involved agency to decide whether or not to proceed with the proposed activity in light of its Section 7 obligations. Under the new regulations, when Fish and Wildlife Service officials receive a request for consulta-

tion from another Federal agency, it is required that they evaluate an activity's impact within 60 days. At that time, the Service can determine that the activity will have no impact on listed species, that it will actually benefit the species, or that it is likely to have a harmful effect. The Service can request that further studies be undertaken in order for it to render its final biological opinion. Of an estimated 4,500 consultations in FY 1977, before the procedure was mandatory, between federal agencies and the Fish and Wildlife Service, only 124 became "formal" procedural consultations and of these only TVA's Tellico Project, Department of Transportation's I-10 and the Corps of Engineers' Meramec Dam Project in Missouri, have not been resolved following this administrative process.

In the Meramec project, the court ruled there was insufficient evidence to prove that the project would cause a marked impact on the endangered Indiana bat but the dam has since been considered for deauthorization because of questionable project benefits.

A final problem under the Endangered Species Act is simple--money and manpower to effectuate its purposes. The U.S. Fish and Wildlife Service, for the Department of Interior, very appropriately assumed the major expansion of responsibilities that the Endangered Species Act of 1973 mandated. The intensive broadening of effort that this required was unfortunately not supported by a proportionate increase in funding or manpower commitments. There is no question but that this added to the difficulties in administering a program of this magnitude from the beginning--

from the critical and often times controversial interpretation of the many sections of the Act to the monumental endeavor involving the assessment of the status of thousands of species, subspecies and population segments of organisms worldwide. The NWF has been long and actively involved in much of this effort. We have sometimes been critical of the implementation of the Act. Recognizing the need for a comprehensive approach to providing advice on endangered species to federal agencies for both fairness to the agencies and the species we are trying to protect. In August of 1976 we petitioned the Fish and Wildlife Service to publish a rulemaking for Section 7 of the Endangered Species Act.

We are pleased to see the increase of funds proposed in the President's 1979 budget request ($3.8 million under endangered species planning and coordination) proposed for critical habitat designation and Section 7 consultation. The present administration demonstrated a commitment to natural resources and a healthy environment in the statement made by President Carter, "Environmental Protection is no longer just a legislative job, but one that requires and will now receive firm and unsparing support from the Executive Branch." Timely environmental impact statements are also requested for the improvement of NEPA. The recognition of the loss of fish and wildlife in land and water projects led President Carter to hasten the protection of endangered species by directing the Secretaries of Interior and Commerce to coordinate a government-wide effort to identify all critical habitats. The possibility that these habitats are not getting early enough consideration in project planning

was his reason. We cannot overly stress the importance of having full-time permanent endangered species personnel capable of providing timely, expert assistance at early stages, and if necessary, on site, in the planning process of federal agencies. The necessary continuity, guidance and coordination that this type of staffing provides is, unfortunately, not provided for in the President's budget. These are difficult and sensitive jobs that if handled correctly will continue to provide the successful mechanism for limiting confrontations in the increased number of consultations expected now that the Section 7 consultation is mandatory. They must discourage abuse of Section 7 by individuals and groups concerned with species preservation while encouraging compliance by federal agencies. The lack of funds for new and ongoing law enforcement authorities, both domestic and overseas ; the expeditious response to petitions to list, delist, or reclassify national and international species ; and implementing and reviewing recovery plans is a serious omission.

As important as Section 7 is to successful conservation of endangered species, we cannot overlook the need to provide the necessary funds and manpower for the continued implementation of all sections of the Act. We support an authorization level of $75 million for FY 1979-81 for the Department of Interior and $10 million for the Department of Commerce.

The necessary expertise and procedures for the implementation of endangered species activities has been carefully acquired by the Fish and Wildlife Service. They have met most of

their responsibilities to date with a very well-considered thorough appreciation of their commitment to the purpose of the Endangered Species Act. It is our hope that these hearings result in a better understanding of the difficulties in the administration of some of the far-reaching and controversial elements of this legislation. But, more importantly, we must reaffirm our commitment to the purpose of the Endangered Species Act of 1973: saving endangered species from extinction through the forthright, expeditious and well-intentioned implementation of all sections of this legislation.

RESOLUTION RELATIVE TO THE TELLICO DAM PROJECT:

WHEREAS, the Tennessee Conservation League is vitally interested in the wise use of Tennessee's natural resources and,

WHEREAS, the T.V.A.'s Tellico Dam project will destroy the last remaining free-flowing section of the Little Tennessee River, a unique river resource, and will inundate approximately 16,000 acres of prime farm and forest land, several ancient Cherokee Indian Villages, Indian mounds and two national historical sites and,

WHEREAS, the impoundment of the reservoir will destroy the habitat of the snail darter, an endangered species and,

WHEREAS, most of the benefit derived from the project is flat water recreation and industrial development and,

WHEREAS, it appears that alternate uses of the lands involved could have an equal or higher economic benefit.

NOW, THEREFORE BE IT RESOLVED that the Tennessee Conservation League through its Board of Directors, meeting May 22, 1977, hereby urges the U.S. Congress and the Tennessee Congressional Delegation to order a thorough study of the project and alternative to impoundment and to carefully study these alternatives before making any decision to exempt the Tellico project from the Endangered Species Act.

AMENDING THE ENDANGERED SPECIES ACT OF 1973

FRIDAY, APRIL 14, 1978

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON RESOURCE PROTECTION,
Washington, D.C.

The subcommittee met at 9:30 a.m., pursuant to call, in room 4200, Dirksen Senate Office Building, Hon. Kaneaster Hodges presiding.

Present: Senator Hodges.

OPENING STATEMENT OF HON. KANEASTER HODGES, U.S. SENATOR FROM THE STATE OF ARKANSAS

Senator HODGES. Good morning. I welcome each of you to this second day of hearings by the Subcommittee on Resource Protection on the Endangered Species Act of 1973.

The legislation we are considering during these hearings is S. 2899, the "Endangered Species Act Amendments of 1978." This bill extends through fiscal year 1981 the funds for administration of the act by the Secretary of the Interior and the Secretary of Commerce. A total authorization of $75 million is provided for the Interior Department, while $9 million is provided for the Commerce Department.

In addition, S. 2899 amends section 7 of the Endangered Species Act to provide a mechanism for balancing irresolvable conflicts that may arise between various types of Federal activities and endangered species. A case in point is the $116 million Tellico Dam in Tennessee, construction of which has been halted since its completion would destroy the critical habitat of the endangered snail darter. Since the legislation was introduced on Wednesday, witnesses who will testify today may not have had sufficient opportunity to review its specific provisions. The subcommittee would, therefore, like to invite you to submit for the record written comments on the measure. However, if any of you feel prepared to discuss the bill this morning, I encourage you to do so.

Let us now turn to our first witness, Mr. Jack W. Gehringer, Deputy Director of the National Marine Fisheries Service, Washington, D.C.

STATEMENT OF JACK W. GEHRINGER, DEPUTY DIRECTOR, NATIONAL MARINE FISHERIES SERVICE, ACCOMPANIED BY JOEL D. McDONALD, OFFICE OF GENERAL COUNSEL, NOAA; AND ROBERT GORRELL, OFFICE OF MARINE MAMMALS AND ENDANGERED SPECIES, NATIONAL MARINE FISHERIES SERVICE.

Mr. GEHRINGER. Thank you, Mr. Chairman. My name is Jack W. Gehringer. I am the Deputy Director of the National Marine Fisheries Service. I have with me this morning on my left Mr. Joel

McDonald, Office of General Counsel; and on my right, Mr. Bob Gorrell, of our endangered species program.

Before I begin, you just raised the opportunity to comment on the amendment you spoke of. We have not had the opportunity to review that, and I will not be commenting on that at this time. But we will be very pleased to furnish comments.

Senator HODGES. Thank you.

Mr. GEHRINGER. It is a pleasure to appear before this subcommittee to discuss the administration's proposal to extend the authorization for appropriations to carry out the Endangered Species Act of 1973.

Effective implementation of the act is vitally important to those species of fish, wildlife, and plants that are either endangered or threatened with extinction.

General authorization of appropriations under the Endangered Species Act for the Departments of Commerce and the Interior to carry out functions and responsibilities, other than financial assistance to the States under section 6, is provided for by section 15 of the act. The authorization for general appropriations is scheduled to expire on September 30, 1978. An extension of authorization for general appropriations is crucial for the Federal Government's endangered and threatened species conservation program to continue.

The Department of Commerce recommends extension of appropriations authorization to this agency in the amount of $2,263,000—$1,963,000 under section 15 and $300,000 under section 6—for fiscal year 1979 and such sums as may be necessary for fiscal year 1980. The fiscal year 1979 amount represents our budget request submitted to Congress.

The National Marine Fisheries Service is responsible for developing and maintaining conservation programs for fish, aquatic wildlife, and plant species of the marine environment. Various species of whales, seals, sea turtles, and sturgeon are presently in danger of extinction and protected as listed species. Restoration of these species as well as any additional marine species which may be listed in the future, through conservation management practices, is an important objective and impacts future marine resource management decisions.

Species restoration to viable population levels can be achieved through effective conservation management based on sound population research and implemented on State, national, and international levels.

The fiscal year 1979 budget submitted to Congress for this Department shows an increase of $680,000 over the fiscal year 1979 adjusted base of $1,583,000 for endangered species conservation.

The endangered species base program for fiscal year 1979 is summarized as follows:

Endangered species program administration, $38,000.—The program is centrally managed and coordinated in National Marine Fisheries Service headquarters here in Washington, D. C. Basic administrative functions of the program include policy development, program review and coordination, development of regulations, and review of other Federal agency actions. Costs include salaries, travel, public hearings, and printing.

Endangered species enforcement, $160,000.—Enforcement activities include investigation and control of illegal taking, including killing, capturing, and harassing protected species, as well as control over importing and exporting activities. Illegal shipments of parts and products of endangered and threatened species resulting in seizures, forfeitures, and fines have been the primary enforcement focus in recent years. Increasing the public awareness of Federal controls has also been emphasized.

Endangered Species Research.—The fiscal year 1979 base program contains $1,353,000 for research on endangered and threatened sea turtles, endangered whales, endangered seals, and the shortnose sturgeon recovery team.

The base program includes $250,000 for sea turtle research. Most sea turtle research is directed at developing a sea turtle conservation shrimp trawl to reduce incidental catch by shrimpers. Other research is conducted on population dynamics and habitat characteristics. Limited research is also conducted on turtle product trade and predator control.

The program includes a total of $1,042,000 for cetacean research. Funding is provided for research on bowhead whales to determine current population size, trends, and status. The program monitors the native harvest to acquire biological data on landed whales, conducts coordinated vessel and aerial surveys for distribution and migration patterns, and establishes counting stations along the ice leads through which the bowheads migrate. Analysis of historical commercial whaling vessel logbooks will be completed to determine virgin population size.

Research is being conducted on other species of endangered cetaceans. Included in this are whale stock assessments, intensified studies on gray and humpback whales, whaling observer studies, and studies recommended by the International Whaling Commission for the International Decade of Cetacean Research. Whale assessment data on harvests, biology—which includes age, growth, and reproduction history—and tagging enable determination of the current status of exploited stocks throughout the world. The gray and humpback whale project provided estimates of present size and distribution of stocks, migration routes, their recovery from past exploitation, and possible future vulnerability to increasing human use of marine ecosystems. The IWC whale observer program monitors compliance of Japanese landbased whalers to IWC regulations. Research on endangered cetaceans is also conducted with funds provided under the Marine Mammal Protection Act.

In addition, the base program includes $50,000 for studies on endangered seals. These studies center on determining the current population size and trends of the Hawaiian monk seal and Guadalupe fur seal. The work includes censusing behavioral studies and investigation into factors acting to limit recovery of the population. It also involves limited work on the life history and population dynamics of the northern elephant seal.

The last component of our base program for research is $11,000 for the NMFS shortnose sturgeon recovery team. NMFS established and Chairs the team which consists of non-Government sturgeon researchers. The team members exchange data, review techni-

cal reports, identify research and management needs to restore shortnose sturgeon, and contract sturgeon research.

The fiscal year 1979 adjusted base program also includes $32,000 for overhead support for all of the base program activities.

For fiscal year 1979 we are requesting an increase of $380,000 under section 15 for turtle research and development. The fiscal year 1979 increase will be used to implement fully the gear research program on sea turtles and conduct expanded sea turtle biological research consisting of stock assessments, mechanical tagging studies for migration and population estimates, and coordination with local conservationists on next relocation programs.

As you know, cooperation with the States is covered by the act's section 6 authorization. The fiscal year 1979 budget includes an increase of $300,000 to establish or augment State endangered species conservation programs in lieu of continued increases of Federal programs. Of this total, $255,000 is for grants and $45,000 is for one position and related administrative costs to administer the cooperative State-Federal agreements and grants.

In summary, our program functions are most often directly related to the animals listed on the U.S. Endangered and Threatened Wildlife List, those listed on the Endangered Species Convention Appendices, and those under consideration for possible addition to the U.S. and Convention lists. Extension of appropriation authorizations to the Department of Commerce is necessary if we are to carry out the intent of Congress.

Mr. Chairman, I will be pleased to answer any questions you may have.

Senator HODGES. I have several questions that staff feels are appropriate. Let me ask you, first, one of my own. Are you encouraged or discouraged or optimistic or pessimistic, based on the amount of money available and the research you are doing in these areas?

Mr. GEHRINGER. I am optimistic that we can make full use of the dollars available. I am realistic enough to know that if more dollars are available, they could effectively be utilized. However, we recognize that when a budget is prepared, there are a variety of priorities which must be considered, and this is the present asking of the administration.

Senator HODGES. Is this the sort of program that is one of the first that is cut? Is this sort of program considered a luxury, do you think?

Mr. GEHRINGER. It has never been cut. We just recently started receiving funds for it. Prior to receiving congressional funds, we had reprogramed dollars to enter into certain activities. Each year we have received at least the amount of money we had previously, and we have not experienced cuts. And I would not anticipate that we would reduce in this area, no, sir.

Senator HODGES. I ask this question, certainly, out of ignorance. What is done out of the information, the research, after it is, I assume, assembled and evaluated? Is it then translated into some sort of administrative action, or is it passed on to this committee, or to whom is this then given and what is the final intent or purpose of it?

Mr. GEHRINGER. The intent of this program is to learn enough about the actual numbers and status, as far as species are concerned, to determine whether they are in danger of extinction, the degree of endangerment; those that are presently listed as endangered, what possible can be done in the way of regulations, research, or mitigation which would permit them to recover in numbers sufficiently to remove them from the endangered list.

Of course, our long-range goal is to acquire enough information to learn how to either modify the environment or modify the impact of man on these species to permit them to recover to that point.

Our research, of course, enters into evaluations and recommendations for management, administration of the program. It is usually published and becomes part of the public record and part of the scientific literature.

With a number of these species, our literature is very meager, and all the information we learn, of course, supplements and complements this.

Senator HODGES. Is part of what you seek to do to determine the critical limit of a species, below which if it falls, it would not only be endangered but almost incapable of sustaining itself?

Mr. GEHRINGER. Yes. And this is a very difficult task to determine what the fewest numbers of a species and the narrowness of a geographic or local distribution that are the minimum limits for which that species can survive as a species.

The criticality here is very severe because you are dealing with numbers of animals that are relatively small at the time the petition is usually received on an animal. And the sound basic information on which to base judgments is usually not all that great. But we are called upon to make the judgments based on the best current scientific information.

Senator HODGES. Just as a matter of curiosity, do you get cooperation from other areas, other departments in the private sector for these sorts of things?

Mr. GEHRINGER. Oh, yes. There are a number of universities who have departments and individuals who are engaged in research in these areas. The National Marine Fisheries Service could not hope to be able to duplicate the research capability that is available throughout the country.

Senator HODGES. How do you avoid doing that?

Mr. GEHRINGER. Excuse me; when I say duplicate, to substitute our numbers for theirs on the numbers of people. We can't amass the amount of dollars or the amount of personnel to do it. So, hopefully, through exchange of information, communication among the scientists themselves, we hope to reduce the unnecessary duplication of effort. And this, I believe, is what you are referring to.

Senator HODGES. How do you do that? For instance, do you have a computer printout of what is being studied and where and how? Or do you simply have people that know? Because this is not so much money to do the task at hand, obviously.

Mr. GEHRINGER. That is correct. There is free interchange of information among the several scientists throughout the country that are engaged in or interested in these things. And I am sure that information exchange could be improved, but usually it very

quickly comes to our attention when we are doing something that somebody else is doing, and we can address that as appropriate, whether we should continue or whether it should be a responsibility of another group.

Senator HODGES. I will ask some of these specific questions now. With what States has the National Marine Fisheries Service signed cooperative agreements pursuant to section 6 of the Endangered Species Act?

Mr. GEHRINGER. We have not signed any. We have yet to receive funding under the cooperative agreement arrangement. We have with the State of New Jersey an indication of interest. We have an application, and we have generally agreed that their format and the kind of things that are required are there. But the States have been reluctant to come forward with their specific proposals until funds are available. We have indications of interest from other States when the dollars become available for this program.

Senator HODGES. Have you requested funding for this from OMB?

Mr. GEHRINGER. We have requested funding in the past for this particular program. We requested $1 million in 1976, which did not make it through the bill. And, of course, our request for 1979 is $300,000, which you have in the document.

Senator HODGES. Senate bill 2889 provides an authorization for the Commerce Department of $2.5 million for fiscal year 1979, $3 million for fiscal year 1980 and $3.5 million for fiscal year 1981. How do these amounts compare with your projected needs for these years?

Mr. GEHRINGER. Recognizing we are speaking in very general terms, $2.5 million for 1979, which includes the $300,000 for the cooperative agreement program, is a good estimate of what we have.

For 1980 we have estimated, recognizing that my testimony says "such figures as are appropriate at a given time," the figures I am about to give you are just planning figures for discussion within our program activity.

For 1980 we are talking about roughly $3.8 million, and for 1981 roughly $4 million. Of course, as priorities change and as we see critical things coming up, these may or may not be correct as those years approach.

Senator HODGES. Just as a matter of curiosity, since I assume the endangered species is not going to wait to extinct until the Federal budget is decided upon, how do you get flexibility in your program? And do you think you have enough now to meet specific problems?

Mr. GEHRINGER. We do have a certain amount of flexibility in our overall program funding. For example, in 1978 we reprogramed from another series of activities a couple of hundred thousand dollars to get started in the turtle program. These kinds of things can happen. When this happens, of course, the request is carried forward to Congress for a reprograming adjustment.

We think we have the flexibility with the figures the administration has asked for to accomplish it, recognizing, of course, that a crisis could hit at any time and then we are forced to look for a supplemental or budget add-on or something of that sort.

Senator HODGES. But you have not experienced sufficient problem with this in the past to ask for not unrestricted funds but funds that would be discretionary?

Mr. GEHRINGER. No, we don't have that leeway in requesting funding.

Senator HODGES. Approximately how many section 7 interagency consultations has the service undertaken since the Endangered Species Act went into effect in 1973? Can you give us examples of the types of consultations you have conducted and how many do you expect to undertake in fiscal year 1979?

Mr. GEHRINGER. I would like to just make a couple of brief comments and then to furnish material which would be more supportive.

Until recently we have not attempted to maintain that type of record. We very frequently will consult with a State or other Government agency with respect to nourishment of a beach which sea turtles may use for nesting purposes. This has happened quite frequently in the southeast where we probably have the best record. My recollection is roughly 50 in that part of the country. And we don't have good records of the other, but we are assembling.

We don't know how many we can anticipate within the current fiscal year or next.

We are working, of course, with the Department of Interior, Bureau of Land Management, consulting with respect to the offshore energy development. We consulted with them within the framework of the section 7 consultation requirement.

Senator HODGES. Apparently yesterday the Fish and Wildlife Service felt they did not have adequate personnel to carry out effectively the section 7 consultation process. Is your service in a similar situation?

Mr. GEHRINGER. My staff immediately would say we definitely don't have enough personnel. If I may say so, at the present time our Washington staff is on my immediate right, the full staff. We have a total of four positions—two vacant and one hasn't been filled. But Mr. Gorrell is my sole staff man on that.

However, we do rely not only on endangered species staff, but the scientists who are in various laboratories around the regional personnel.

Of course, we don't have sufficient numbers to do as much as we would like. But considering the priorities of all of the program areas, we are settling for what we have got.

We do have, I am reminded, a series of dredge and fill permits that we commented on to the Army Corps of Engineers.

I mentioned the Outer Continental Shelf developments and and our plant sitings, these sorts of things which we do. And some instances there is a very minor kind of discussion over the phone with few written words. On others it is quite a detailed analysis which must be made.

Senator HODGES. Thank you. That is all the questions I have. Do you have anything you or any of your staff would like to add?

Mr. GEHRINGER. No. We appreciate the opportunity to come before you. As I said before, if I were to say we were satisfied with our level of effort, I would not be entirely honest. I am sure that

we can put out more effort, do some of the things quicker than we are doing now. However, within the guidelines of our present priorities, we have made our budget request.

Senator HODGES. Thank you very much.

We will now hear from Christine Stevens, secretary, Society for Animal Protective Legislation.

STATEMENT OF CHRISTINE STEVENS, SECRETARY, SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

Ms. STEVENS. I am actually representing a number of other groups today, groups that belong to the Monitor Coalition.

Senator HODGES. If you would like to state them for the record, we would be happy to have you do so.

Ms. STEVENS. The Rare Animal Relief Effort, American Cetacean Society, International Fund for Animal Welfare, American Littoral Society, Humane Society of the United States, Let Live, the Fund for Animals, Committee To Preserve the Tule Elk, International Primate Protection League, and the Society for Animal Protective Legislation.

Mr. Chairman, may I ask that this statement go into the record in full, and then I will perhaps not read it all.

Senator HODGES. So ordered. [See p. 254.]

Ms. STEVENS. The Endangered Species Act of 1973 is, as you know, major legislation. The United States leads the world in the serious attention it has given this vitally important matter. The soundness of the law is due in no small measure to the hard work that went into it with extensive hearings in 1966, 1969, and finally in 1973 following the 3-week plenipotentiary conference held in Washington where 93 nations were represented.

It has been very, very carefully studied, and I have followed it personally myself through most of this effort, especially the 1969 and 1973 part. And for that reason I feel very strongly that the law should remain as it is and that it shouldn't be weakened in any way, even though I realize it is under attack.

This is such an important piece of legislation that I hope the committee will find a way to see that agencies deal administratively with any modifications that need to be made, rather than making an actual change in the law.

Now, I think I should correct this $205,000 to $250,000, as I just heard Commerce giving that amount for the studies for the sea turtles.

I would like to make special comment on the sea turtles. This is a very shocking article titled "The Shame of Escobilla," that deals with the killing of these species that are listed on appendix 1 of the Convention of International Trade in Endangered Species of Fauna and Flora. Yet so far the United States has not listed these turtles or, in fact, it only has two turtles listed. All the sea turtles are on appendix 1, yet we haven't even gotten ours on the threatened list. So long delays have taken place in that 4 years have passed since they were petitioned for listing under the 1973 act and 3 years since they were formally proposed by the Departments of Commerce and Interior for listing under the act.

They had even been proposed for listing under the 1969 act, and yet there has been delay after delay.

You heard about the research that is planned, but that is not going to do the turtles any good if they aren't listed. In other words, the research is desirable, but we need action. So I would urge this subcommittee to take a very strong line and ask the Commerce Department, which has been dragging its heels for such a long time, to move forward.

There is, at the moment, a reopening for public comment through Monday, April 17, but there should be no further delay after that time. The time left for several species of these turtles is so short that immediate action is essential.

A leading turtle expert, Richard Felger, states that Kemp's Ridley will be extinct this year, the Pacific Ridley will be extinct in 8 years or less, the green in 3 years or less unless the present trends are reversed. The duty of our Government is clear. Not a dollar should be allowed to leave this country to pay for any product made from these vanishing creatures.

Now, we support the amounts that are in the amendment. You are well aware of them, so I won't reiterate that. It is an increase for enforcement. We would like to see even greater increase.

One serious lack is an adequate number of inspectors to examine and refuse or accept wildlife shipments. At the present time, for example, there are only six inspectors for New York. To do an effective job, the number should be doubled or tripled.

You may recall the uncovering of a ring of international fur smugglers in 1973 when a carton marked leather goods broke open and an alert airline employee noticed spotted cat fur sticking out of the crate. Clearly Interior did not have enough inspectors then to examine shipments for accuracy, or the smuggling would have been detected in a routine inspection. Equally clearly, six inspectors for a port the size of New York is inadequate, and throughout the entire country there is only a total of 35.

At the present time there are at least 15 part-time or temporary appointments, which cause a substantial turnover among these inspectors, reducing their ability to gain experience on the job. We urge that the Congress give Interior wherewithal to do the job that needs to be done.

We hope that Interior will make the decision to ban the importation of elephant ivory. It will be cheaper and easier to enforce a total ban than a partial ban. Regardless of the final decision on the type of ban, more personnel with good training will be essential.

We earnestly hope that this distinguished subcommittee will, as we have stated before, decide to leave the Endangered Species Act intact without any weakening amendments. The consultation system carried out by the Department of the Interior has been remarkably effective in solving conflicts that have arisen. In the future, this process should become even more effective because all Federal agencies know of the act's existence and of the need for consultation before planning is completed.

Our country can surely continue to develop without rendering more species extinct. We set the moral standard for the world in this field, and it is vitally important that we not be seen to be taking any backward steps. When the next conference of the parties of the Convention on International Trade in Endangered Species of Fauna and Flora takes place in Costa Rica, we must main-

tain our leadership role so that species throughout the whole world can be effectively protected from the forces which otherwise would lead to their extinction. Records of mammal extinction for the past 2,000 years show that over half occurred within the last 60 years.

Putting it another way, during the past 150 years, the rate of extermination of mammals has increased 55 fold according to Dr. Lee Talbot, of the Council on Environmental Quality. He states that if these exterminations continue to increase at that rate, in about 30 years all the remaining 4,062 species of mammals will be gone.

In closing, Mr. Chairman, we believe that the Congress can do much to insure that endangered species are preserved through the work of the Departments of the Interior and Commerce. Endangered species need all the protection that it is possible to extend to them. The next few years will spell success or failure throughout the entire world with respect to maintaining the inestimable diversity of life forms which we are fortunate still to have with us.

All is not smooth sailing in so broad an endeavor, of course. But it would be disastrous if critics of the law's administration should succeed in weakening this landmark legislation. Or should the undoubted fact that delays have sometimes taken place in the processing of permits which were appropriate to grant cause an attack on the essential requirement for examining permit requests with care. There were some demands yesterday for changes in the law for that reason.

The Federal Wildlife Permit Office is responsible for administering the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This treaty needs to be cherished and nurtured until it grows large and strong enough to stand up internationally and bring a final halt to profiteering and smuggling in the greedy race to exterminate rare animals and plants for the sake of money. There is much work ahead. Improvements can be made administratively. At this time, this subcommittee should encourage the development, with adequate authorization for appropriations, of the Endangered Species Act.

Thank you, Mr. Chairman.

Senator HODGES. Are you familiar specifically with Senate 2899 that will be an effort to amend section 7?

Ms. STEVENS. Unfortunately, I got the Congressional Record this morning and read the statements about it by Senator Culver and Senator Baker and Senator Wallop, but I still haven't actually read the exact text.

I am very eager to do so, but I haven't been able to get my hands on it.

Senator HODGES. I was going to simply ask, if you had, whether you had any specific comment on it. And I understand you don't want any weakening of it. But I wanted to ask whether, in light of the fact that it undoubtedly is going to be amended, the amendment that had been offered by Senator Culver and in which I joined is one that could be acceptable. But if you have not read it, then——

Ms. STEVENS. I am aware there are seven agencies that could be appealed to if another agency head was unable to resolve it.

Senator HODGES. I don't want to put you on the spot. I don't know how quick a study you are. I would ask if you wish to submit some written comments, I am sure we would be very pleased to have them.

Ms. STEVENS. I would certainly want to do that. And especially since I am speaking for a number of groups, it wouldn't really be proper for me to respond fully at this time. It would be far better for us to send you a written comment.

There is one other matter that I would like to mention, because it came up in the hearings yesterday. That is about the spread of Exotic Newcastle disease. We think the way to avoid that is to actually ban the importation for sale of exotic pets. That is where Exotic Newcastle disease has come from in the past. That is what cost $100 million to eradicate at one point. That is why there are now many, many quarintine stations. And that is the answer to that particular problem.

We would urge this committee, which has jurisdiction in that area, to take a hard look at that. Perhaps I could submit this recent report called the Bird Business, about the commercial trade and the quarintine stations and smuggling, for the use of the subcommittee.

Senator HODGES. Very well. Thank you.

Ms. STEVENS. And you might want these two that are English publications that cover the same type of situation in the United Kingdom.

Senator HODGES. Thank you very much.

Now we will hear from Mr. John F. Hall, vice president, National Forest Products Association.

STATEMENT OF JOHN THOMPSON, GEORGIA PACIFIC CORP.

Mr. THOMPSON. My name is not John F. Hall. He was unavoidably delayed. My name is John Thompson. I am representing the National Forest Products Association here today. Personally, I am employed by the Georgia Pacific Corp.

NFPA does have written testimony which they will submit, [see p. 258] but I would like to confine my comments to just a few general remarks about S.2899 that was discussed yesterday.

Actually, we are tickled to death with the committee's initiative to try and resolve some of the pending problems brought by the Endangered Species Act, and we embrace the safety valve concept that the amendment speaks to.

However, the safety valve occurs pretty late in the process that you go through in listing of endangered species and identifying their critical habitat. We suggest you might want to give consideration to try and put some kind of balancing mechanism early on in the process, perhaps at the time the species are listed.

At the same time, there should be a delineation of critical habitat. Utilization of the NEPA process at that particular point in time might help serve this purpose to some extent.

It also, we believe, would be in line with the thinking of NEPA where we try to identify early on some of the problems that might be inherent in a project or a listing of species and take care of at that time, thereby not having to utilize the committees of seven

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Secretaries of very important departments to try and resolve the problem.

Although this amendment does seek to relieve some of the inevitable conflicts that arise out of Federal projects, we would hope that you would also give serious consideration to providing some kind of safety valve for private lands.

I am sure your work, Mr. Hodges, with the Preservation Society in Arkansas is showing you a program that works on sometimes voluntary cooperation where you don't have to utilize the eminent domain to carry out a good program can work. But as the act is written now, we feel there are some Tellicos on private land that are waiting in the wings and are going to come down on us quickly.

The way that happens on private land is the way the Act defines what it means to take endangered species. It means to harm or harass. When you first look at that, you think there would be purposeful harassment that is to be against the law, and certainly we concur with that. But the Office of Endangered Species has further defined harm and harass to mean disturbing the normal behavior patterns, normal feeding and reproductive patterns of a threatened or endangered species. And given the broad definition of an endangered species, recognizing it includes subspecies and even lower taxa and even populations, perhaps isolated populations of what otherwise might be a common animal in other parts of the country, I think you can see that my company, for instance, with 4.5 million acres of forest lands in the United States, are going to be faced with an awful lot of problems just by the listing of the species. And it may be that the noise of a chain saw or a falling tree, when we do harvest them, is going to be considered harassing the species.

There is no relief under it, and we suggest the committee modify the language so that on private lands the definition of the word "take" does not preclude normal cultural activities, normal land management activities.

Just at first blush in looking at the amendment—and we will submit more detailed information and analysis later—we really don't see any need for the inclusion of the subpoena and contempt authorities for the committee that is outlined in it. There is just no precedent for it, and we think perhaps the committee should take a second look.

Finally, in conclusion, we are in support of whatever staff it may take with the Office of Endangered Species to get the job done. We, too, would like to see the listing process accelerated. We would like to see it move on with the efforts, and especially if the committee does give consideration to putting some kind of balancing mechanism at the time the species are listed and the critical habitat is designated, the agency is going to need a broader range of expertise and the personnel to carry out the function.

Senator HODGES. Thank you very much. I don't know about other timber companies or other States, but when I was chairman of the Arkansas National Heritage Commission, Georgia Pacific cooperated fully.

I was always very impressed with the activities of the timber companies in Arkansas. That doesn't mean I always agreed with them, but I would say that the major thrust they made was one of

cooperation. When we would designate an area, they were not only cooperative, but they actually had a man on our commission who served with us, one of our better members. So I thank you very much for your comments.

The next witness is Mr. Kenneth Balcomb, Colorado River Basin Conservation District.

STATEMENT OF KENNETH BALCOMB, COUNSEL, COLORADO RIVER WATER CONSERVATION DISTRICT, ACCOMPANIED BY ROBERT L. McCARTY, McCARTY & NOONE, WASHINGTON, D.C.

Mr. BALCOMB. Mr. Chairman, I guess the first thing I should do—and I realize how staff will get the agenda slightly out of whack—is say it is the Colorado River Water Conservation District. It is even misapplied in my state, so I can't expect anybody here to not make a mistake with regard to it.

Now, for the record, my name is Kenneth Balcomb. I am counsel for the water conservation district, whose principal office is in Glenwood Springs, Colo.

Today I am accompanied by Mr. Robert McCarty of Washington, D.C., who is the attorney that my district uses on numerous occasions for activities requiring legal services in Washington, principally before, now, the Federal Energy Regulatory Commission, formerly the Federal Power Commission.

I have a written statement, and I would like to submit the statement for the record. [See p. 265.] And to save the time of the committee, Mr. Chairman, I will just shortcut it so that my additional remarks would make some sense.

Senator HODGES. So ordered.

Mr. BALCOMB. Copies have been given to staff.

The statement is not only made on behalf of my water conservation district, which is generally referred to, but also on behalf of the Southwestern Water Conservation District, which is represented by an attorney from Durango, Colo. by the name of Sam Manes. Mr. Manes hopes to have the opportunity to present a supplementary statement of his own during whatever period your record is kept open for that purpose.

The immediate problem that the Colorado River Water Conservation District has with the present act under consideration is the court interpretation of that act. If I correctly read *Hill* v. *TVA,* which, of course, will be argued in the U.S. Supreme Court next week, it isn't the Secretary of Interior that has the so-called veto power over projects in which other Federal agencies are involved; it is the act itself. I don't think that the Secretary has any discretion under the act to designate something as endangered when his biologists tell him or he is convinced that something is endangered; I think he has to designate it. And, of course, this protection has to designate a habitat for that endangered species so it will not perish from the face of the earth.

The problem as we view it is one of total lack of flexibility of the law. There is no way that you can temper the ridigity of the act with the human requirements. There doesn't appear to be anything in the act for that. And the Secretary, as I say, has to say this thing is endangered, then he leans back and allows the citizen

interest groups to enforce the act for him. That is how *Hill* v. *TVA* came to pass.

With that type of situation it is easy to understand why the environmental entities are so anxious to see the act remain as it is, because as far as they are concerned it is ironclad, and it reaches every activity of the United States.

Our particular example is this: In connection with the statutory obligations of our district, we have filed first with the Federal Power Commission and now, of course, pending before the FERC an application for preliminary permit, have been granted the preliminary permit to construct a dam on the Yampa River, what we call the Juniper Reservoir site, for the production of energy from the use of falling water.

It is pretty difficult to put in a hydroelectric plant without putting in a dam, I can assure you.

The Interior Department, in responding to the inquiries otherwise by law, informed FERC that "At the present time there is every likelihood that the Department would oppose construction of Project 2757"—that is our project—"based upon anticipated destruction of habitat which is considered to be critical to two endangered species."

Our problem is, No. 1, it is a little difficult for FERC to proceed, in the face of obvious prohibition, you might say, because of the Endangered Species Act, with construction of the dam.

Now, what is FERC to do? It has the obligation under law to pass upon these matters and determine that a dam is necessary in order to provide the energy, but it is blocked by this act, or they can see now it will probably be blocked by this act.

Now, we agree with the previous witness, that the designation of an endangered species or its habitat should require the same steps as are required of FERC when it must determine whether or not a dam should be built to provide the hydroelectric energy, and that is compliance with NEPA, because they have taken one of the steps by saying "this is the habitat and you can't inundate it because it will destroy the species." That is part of the NEPA process. That is what is no action, but nobody gets to determine what the result would be of action to allow the dam to be built. Everybody is foreclosed from making that decision.

Now, we have examined, only to the extent that we heard yesterday and today, the proposed amendments to the act. I can frankly say we haven't had a chance to examine the text because it wasn't published in the Congressional Record. The statements of the Senators who introduced the legislation are there, and, of course, you can get a picture of what they suggest from that. We would like the opportunity at a later date, before the record closes, to comment on the text itself. But, frankly, we have problems with setting up another level to which appeal must be made, you might say, to allow exception in the mandatory language of the act. And we would like to have the committee at least consider what, for reasons unknown to us, disappeared from the act at the time of its passage.

Apparently there were two or three safety valves in the act as considered, and they were not disapproved by Interior. Interior specifically testified that they could live with a provision which

effectively said that the agency that was obligated by law to make the decision must also make the decision as to whether or not the habitat is to be destroyed.

The human need is greater than that of the endangered species. But when it came out of the committees of both this body and of the House, that language without explanation had disappeared. And we suggest this is the answer, because this is what you told all those other agencies by law to do, to make the determination—the National Forest Service, to make a decision with regard to preserving timber and water supply for land below the forests; the Bureau of Land Management, utilization of other public land; National Park Service in connection with the parks; and the FERC in connection with the authorization of the construction of hydroelectric power plants. You told them to do it, and now all of a sudden the roadblock is there. I think it unfortunate that the matter has to go to the U.S. Supreme Court. They may straighten it all out by saying there is flexibility in the law and the district court was right and the court of appeals was wrong.

I want to also mention—and Mr. Manes will elaborate on this thing, but it is one of the oddest things being done, that Mr. Manes, in addition to representing the Southwest Water Conservation District, is the attorney for the Southern Ute Indian tribe in southern Colorado. The Southern Ute Indian tribe constructed all their reservations, you might say a campground, on which they hope to make a little money, and next to it a lake. And they were providing the area with a needed recreation.

It is rather close to the national forest boundary, and the Forest Service came to the Indians and said:

> Today the Indians are in good shape with the Congressional committees passing out money. Why don't you suggest you would like to go along with us in developing the ruins, Indian ruins, up there and get that cleaned up, and in connection with your fishing lake, it will expand your recreational activity.

Congress gave the forest the money. The ruins have been fixed up and are available for public viewing, except that the public access is limited by the determination of the Division of Wildlife of Colorado under the Endangered Species Act, supported by the Fish and Wildlife Service, that there are a pair of peregrine falcons who are nesting and heavy use by the public of the roads would drive the falcons away from their next, and this area is necessary for their habitat.

Well, if you take that particular example to its ultimate, the habitat of the perigrine falcon before the interference of man in the western part of our country was the entire western United States. And so I guess we just move everybody out so that 50 or 60 or 70 pair of perigrine falcons will have their normal situation.

I realize that is an exageration, but nonetheless it is possible to raise the problem under the law to point out that this is a habitat circumstance for this pair of peregrine falcons which could possibly have been planted elsewhere and not created the problem.

The endangered species that are involved at the Juniper Reservoir, at least one of them, is called a squawfish, and he is a trash fish. Every fisherman despises him, and I assume correctly he is somewhat rare and endangered. I don't quarrel with that biological conclusion. But at least the Division of Wildlife in Colorado, in

cooperation with the similar agency in the State of Utah, and I am informed likewise the Fish and Wildlife Service of the United States of America, at the time of the closure of Flaming Gorge Dam on the Green River, poisoned the river to get rid of that very trash fish and others, destroyed it so they can reintroduce into the river trout, rainbow trout. Now, that was in 1962, I believe, and now 15 years later the trout is the endangered species because the squawfish is being ignored under Flaming Gorge Reservoir. They are trying to muddy the water so it will be too warm for the trout to propagate. They are doing this so the trout can survive, but the agency is looking at raising water that will be warm enough, muddy enough that the squawfish can survive, at which time the trout won't go in this area.

Sport fishermen would gladly welcome with great happiness the expiration, as they have talked about, of the squawfish. And I don't know how you feel about it, but I believe I could carry on my conscience, I am happy to say.

We appreciate the opportunity to be here. If there is any question you would like to ask, I would be happy to answer.

Senator HODGES. Just as a matter of curiosity, do you believe as a matter of principle that there are certain species you would be willing to see extinct?

Mr. BALCOMB. I must answer that personally, yes. And I would like to call the chairman's attention to Mr. Hart's statement of yesterday, the witness from the Smithsonian Institution, who said that as a scientist he was concerned about the fact that there was a designation of so many species that the Act was becoming unworkable and wasn't scientifically sound to do this, that there were a great many items that could be designated as endangered that really had no useful human purposes. And he said he was willing to take the responsibility for taking them off the list. But there is no recourse to do that at the present time.

And, frankly, if we can't live with the squawfish in the present circumstance, the only organization who can take them off the list is Congress, the only one. And I don't believe Congress wants to deal with the species, these various endangered species, on a case-by-case basis.

Senator HODGES. The difficulty is that once something is extinct, it is gone. And then if we were shortsighted or if we took temporary passing values as our touchstone, how would you overcome that again?

Mr. BALCOMB. Well, I recognize that that is a difficulty, Mr. Chairman. I am not a biologist, but my wife is, and she has great doubts about the efficacy of the way the law is written. I forget the name of the fish, but he was totally gone, had been gone for 10 million years. He was evidenced in stone. All of a sudden they found some down in Australia and the fish is not gone at all. Since he became extinct 100 million years ago and now showed up, he ought to be on somebody's endangered species list, but I doubt he is.

Senator HODGES. The difficulty is who is to make those decisions? And if an area is the only place where an endangered species can survive, should those decisions be made by that area for the rest of us?

Mr. BALCOMB. We believe that the NEPA process will take care of this problem, because then the balance would be weighed by the agency charged with performing a primary purpose; that is, in this case, our case, FERC. And they will say that there are enough squawfish in Washington presently being poisoned, a different branch of the same family, and we feel we can do without them in the Yampa River. Let them go on the White River where they can be put.

Likewise, we think maybe this problem can be reached by the NEPA process before the critter ever gets on the list. We think it is a major Federal action. Why isn't it tested?

I say to you, to this committee, that if and when the Fish and Wildlife Service elects to try to designate the Yampa River as the only habitat of the squawfish, I am going to ask the court to direct them to return the environmental impact statement, because I think it is a major Federal action.

I hope I have answered the Chairman's question. In other words, I think you can balance this thing through the NEPA process. But you can't balance it today because there is no balance to it.

I recognize the problem. I have to make up my mind about this, that or another thing. But we are not talking about the things that grab your heart and soul, the motherhood gut issues of the sandhill crane or the bald eagle that is always mentioned. That isn't the issue. It is these totally unknowns that all of a sudden rear their ugly head to stop human endeavor. That is where the problem in the act lies.

Senator HODGES. I understand what you are saying, but you used a word which I think is significant—"unknown." You know, what we know today is not what might be significant in the chain of life 20 years from now or 40. And when you break that—that is, when you take action that will mean that forever more there will be no more of something—that is a significant step to have taken, particularly when you don't know the impact of it or the effect of it. And that is the thing that concerns me.

And as I look at it—and I am only going to be here this year, and from my remarks, I am sure you are glad I am—the concern is that I am not certain that we have sufficient knowledge to allow any species, known or unknown, to become extinct, because we don't understand the chain of life sufficiently, we don't understand the effect on it sufficiently. And if there is to be error, I am absolutely convinced the error should be on the side of preservation instead of on the side of continual exploitation. And I am not willing to take my future and entrust it to the Fish and Wildlife Service or Game and Fish Commission.

I served before I became Senator, and I resigned, on the Arkansas Game and Fish Commission. And I can tell you that agencies, as well as conservation districts, have tunnel vision. They are interested in only what affects them. You are representing them; that is your job. But the genius of the law of the Endangered Species Act is that it does come down heavily on the side of an absolute decision, that it is better to err on the side of preservation than it is to err on the side of an action that is irrevocable and irretrievable.

Mr. BALCOMB. Could I answer?

Senator HODGES. I didn't mean to get into a long—

Mr. BALCOMB. I want to point out—and I recognize what you are talking about—if the only place that the creature or species involved could survive is in a particular place in the United States of America, if that is the only place he is, then your argument is absolutely foolproof. I don't think there is any problem with that particular thing, and we are going to have to work around that circumstance.

But as our statement will indicate, if you read the recovery team's notes and minutes of their various meetings in dealing with the squawfish, we are not in that circumstance in this particular species. We got two separate Federal hatcheries to successfully rear them in the hatcheries. And I think they have probably successfully stocked them in various places. So we don't have that I-shall-wipe-you-off-the-face-of-the-earth situation on the squawfish.

Too, I think in practically everything in which human life and endeavor deals, somebody has got to make a gut decision. And if you are an attorney—and I don't know whether you are or not——

Senator HODGES. I am, was.

Mr. BALCOMB [continuing]. You are aware of the fact—and I don't know whether Arkansas has a death penalty for murder—that we ask 12 jurors to make that decision and we don't turn a hair, as lawyers, when we do it. We may not all be able to sleep at night when we do it, but there is a life and death decision to which there is no recall. They give him a chance, but in the final analysis, if the law is right, if the decision is proper, if the case was fairly tried, and the verdict is cut off his head, they cut off his head.

We don't mind asking 12 good citizens to make this decision and don't mind asking the Supreme Court to say, finally, go ahead. But you are telling me about fish I should have some reluctance. That is where I leave you.

I just don't understand. Again and again this country has made decisions about nuclear energy. They made the decision to drop the bomb at one time. These decisions are made every day and they are big decisions. But they have to be made.

All I am saying is let's put some flexibility in them all and put the responsibility where it goes, and that is the llow that insists it ought to be done.

If National Wildlife thinks that the squawfish must live over every obstacle, let them prove it.

Senator HODGES. That is what I think the amendment that is proposed is intended to do.

Mr. BALCOMB. No, sir, I don't think so. I think you put another level up here that has the final say. And it doesn't give the agency that has the statutory duty that this Congress gave them to perform an act the opportunity to do the act.

Senator HODGES. I will tell you as an individual citizen and a Senator, I am not willing to trust any single agency of this Government with my final environment.

Mr. BALCOMB. I understand you, sir, but what NEPA does is submit the matter back to the court to see if the steps taken are adequate under the law. That is what NEPA does. And if they were adequate, the decisions made, all right.

Senator HODGES. Thank you very much.

I see my good friend the Honorable Senator Jesse Helms is here. Senator Helms, I think you are to introduce Dr. Mann.

STATEMENT OF HON. JESSE HELMS, U.S. SENATOR FROM THE STATE OF NORTH CAROLINA

Senator HELMS. I have two distinguished citizens from North Carolina, Mr. Chairman. It is certainly a pleasure to see you on this beautiful April morning when all of us would like to be out fishing, particularly in Arkansas.

Senator HODGES. For the squawfish.

Senator HELMS. In the interest of time, Mr. Chairman, I am not going to go into great detail about the two North Carolinians. I am going to submit a résumé on each for the record. But suffice it to say that they are both distinguished in their fields. I have known Dr. Carroll Mann III, and I have known his distinguished father before him. Dr. Mann has publication credits in such publications as Outdoor Life, American Rifleman, National Sportsman, Friends of Wildlife, Wildlife in North Carolina. He is president and founder of the North Carolina Safari Club International.

Mr. C. Allen Foster, who is also here this morning, flew here last night from Las Vegas and must return there. His convention is in progress. I suspect they will mention that.

Now, Mr. Foster is a distinguished attorney. He is now with Kerner, Foster & Bernsley in Greensboro, N.C.

My purpose is not to describe their careers, Mr. Chairman, but simply to commend these two gentlemen as dedicated Americans and very knowledgeable on the subject to which they will address themselves. And I thank you for the courtesy in letting them appear and allowing me to present them.

Senator HODGES. It is a pleasure. It is always a delight to see you.

Senator HELMS. Thank you.

[Senator Helms' statement follows:]

STATEMENT OF HON. JESSE HELMS, U.S. SENATOR FROM THE STATE OF NORTH CAROLINA

Mr. Chairman, it is my pleasure to appear before this subcommittee today to introduce two very distinguished citizens of North Carolina, Dr. Carroll L. Mann, III and C. Allen Foster, Esq. These gentlemen are appearing before the subcommittee to testify on behalf of Safari Club International.

Dr. Mann is a long time friend and fellow-citizen of Raleigh. Indeed, I knew his daddy before him. He is now a highly-regarded neurosurgeon and currently serves as President of Safari Club International. Under his leadership, the Safari Club has been turned from a largely social organization into an effective group articulating the concerns and viewpoints of hunters and sportsmen everywhere. His appearance before the subcommittee today is evidence of the new effectiveness of Safari Club International.

Dr. Mann is also the past President of the N.C. Wildlife Federation and is a member of such diverse outdoor organizations as the Alaska Professional Hunters Association and the Society of the Conservation of Bighorn Sheep. His articles have appeared in Outdoor Life, American Rifleman, National Sportman's Digest, Friends O' Wildlife, Wildlife in North Carolina, and Safari.

Equally distinguished is Mr. C. Allen Foster, a resident of Greensboro, North Carolina. He is now a partner in the Greensboro law firm of Turner, Enochs, Foster & Burnley. Born in Monroe, Louisiana, he eventually adopted North Carolina as his home, influenced no doubt by his wife, the former Patricia Pardee of Charlotte.

Mr. Foster is a magna cum laude graduate of Harvard Law School, stood first in his class while receiving a Bachelor of Arts in Jurisprudence from Oxford University, and, slipping a bit, finished ninth in his class while receiving a Bachelor of Arts in History from Princeton University.

He is a member of the National Panel of Labor Arbitrators of the American Arbitration Association and a public member of the North Carolina Tax Review Board.

Allen Foster brings his legal knowledge and skills into good use in rendering counsel to international hunters and sportsmen in regard to the complex and delicate nature of the multitudinous game laws.

Safari Club International could not hope to have two better representatives, and I and all of North Carolina are very proud of them. It is therefore, a pleasure to present them to your subcommittee.

STATEMENT OF CARROLL MANN, PRESIDENT, SAFARI CLUB INTERNATIONAL, ACCOMPANIED BY C. ALLEN FOSTER, MANAGING DIRECTOR OF THE AMERICAN HUNTERS EDUCATIONAL AND LEGAL PROTECTION FUND

Mr. MANN. Thank you, Senator Helms.

My name is Dr. Carroll Mann of Raleigh, N.C. Professionally, I am a neurosurgeon, but I am also a wildlife biologist and president of the Safari Club International. I am appearing today on behalf of the Safari Club International, the Safari Club International Conservation Fund and the American Hunters Educational and Legal Protection Fund. Details with regard to the background of these organizations are attached as exhibit 1 to the written statement of my testimony.

With me is C. Allen Foster, an attorney from Greensboro, N.C., who is the managing director of the American Hunters Educational and Legal Protection Fund and who has prepared the legal portion of this statement.

The groups on behalf of whom I am appearing have a membership in excess of 1 million American citizens and, through their activities, represent over 60 million other Americans who are active hunters, fishermen, trappers and target shooters, these statistics being reflected in the Fish and Wildlife Service Survey on Outdoor Recreation.

These groups wish initially to express their support for the concept of wildlife management, including the full spectrum from seasonal harvest by sportsmen and others to, where necessary, short-term species protection, all leading to the maintenance of viable, balanced populations at levels consistent with available habitat. As a result, these groups supported the passage of the Endangered Species Act of 1973 and, subject to the suggested modifications of statutory language and administrative interpretation set forth in this statement, support the extension of appropriation authorization which is before this committee.

Because the groups on behalf of whom I am appearing represent sport hunters all over the world, they have probably had as much practical experience with the Endangered Species Act and the species listed thereunder as any other group. As a result, we hope that the following comments concerning the substance of the act and its implementation will be helpful to this committee.

Mr. Chairman, we have seven proposals, and for the interest of time, I will read only the first and I would like for the rest of them to be part of the record.

Senator HODGES. So ordered. [See p. 271.]

Mr. MANN. We believe that the act should be amended to exempt from its prohibitions hunting trophies which are taken by sports hunters in compliance with the laws of foreign jurisdictions in which the species in question is found. There are a number of reasons why such an exemption is both appropriate and would also further the act's goal of long-term conservation or preservation.

First, there are many people who question the propriety of Americans' determining the conservation status of species which do not occur within the boundaries of the United States. The reaction of foreign governments to the International Convention on Trade in Endangered Species would seem to indicate that our government seriously overestimated the international support for such activities. Moreover, the administrators who implement the Endangered Species Act have little or no knowledge of the local conditions peculiar to the countries of origin of the listed species. As a result, American legislation and regulation creates foreign resentment which detrimentally affects the very goals we are seeking to achieve. For example, in a recent paper presented to the 43d North American Wildlife and Natural Resources Conference on March 20, 1978, a copy of which is attached as exhibit 2, Messrs. Teer and Swank, who had been employed by the Department of Interior to conduct a status review of the leopard, stated:

> In our recent study of the leopard practically every representative of natural resources agencies that we contacted in Africa expressed the opinion that the United States was presumptive in making rules and regulations which vitally affected their internal affairs * * *. They wished to make it clearly understood that they were quite capable and surely had more knowledge of their resources than any person or government whose contact and tenure in their country was usually short and desultory.

Second, it is common knowledge, and the Endangered Species Act recognizes, that the primary forces which present danger to the survival of certain species are, one, habitat deterioration and, two, overutilization for commercial purposes. As to the former, hunters have historically been, along with Federal and State Governments, the only source of funds for habitat acquisition and improvement.

I know I need not cite to this committee the use of the Pittman-Robertson and Dingell-Johnson funds in wildlife management nor the activities of Ducks Unlimited in habitat acquisition. It is difficult to name even one group which opposes sports hunting but which has made any significant contribution to the solution of the problem of habitat deterioration.

As to commercial overutilization, it is well known that sports hunters are not involved in their activities for monetary gain; in fact, such considerations impinge upon their self-perceptions of the value and meaning of their trophies. More important from the regulatory context, the relationship of sport hunting to commercial activity becomes even more remote when one considers the almost negligible number of trophies involved annually in comparison to species populations.

For example, in the case of the African elephant, as to which a proposed threatened listing is now pending before the Office of Endangered Species, trophy hunting in 1977 comprised approxi-

mately of 577 animals or less than 0.04 of the minimum population estimate with regard to the species. The scientific evidence is that elephant populations can sustain an annual offtake of 2.6 percent to 5.7 percent, over 100 times the annual offtake by trophy hunters. The same thing is true with regard to virtually every other species which is listed as endangered or threatened under the act.

Third, the parallel regulatory framework represented by the International Convention on Trade in Endangered Species is not, in the vast majority of signatory countries, interpreted to encompass sport hunters within the prohibitions thereunder, even with regard to species which are listed as endangered. The contrary interpretation of the United States is in a tiny minority.

The organizations which I represent have urged the Department of the Interior to institute a reexamination of the U.S. position which was developed during a prior administration. And it is my understanding that such a reexamination may even be currently underway.

Fourth, even current regulations promulgated by the Secretary with regard to species listed under the act as threatened recognize sport hunting as a legitimate utilization of wildlife resources and an appropriate exception to generalized prohibitions of taking or even sale. For example, the grizzly bear, which is listed as threatened in the 48 contiguous States, can be hunted in limited numbers in certain portions of its range.

More substantially, the alligator may be hunted in portions of its range subject only to the regulations imposed by the local wildlife authorities, in this case the State of Louisiana.

We submit that this is precisely the type of exemption which should be generalized for hunting trophies under the act. Surely, the local authorities are the most able to determine population goals and levels of annual offtake.

Finally, an exemption for sports hunters would actively promote the goals of long-term species conservation. As pointed out above, sport hunting has a negligible impact on population levels. Even more important, in many cases the presence of sport hunters in remote areas helps to control illegal poaching.

As Mr. A. L. Archer of Kenya, a knowledgeable observer of the situation regarding the elephant in that country, recently commented:

> The majority of the uninformed overseas critics do not realize that many of the major elephant hunting areas offer little else other than elephants to hunt, therefore through banning elephant hunting one is playing directly into the poacher's hands by at once removing a controlling factor in the presence of the professional and his often influential and vocal overseas client. The field is thus left wide open for large scale and unreported poaching activities.

Innumerable members of Safari Club International report annually of their own personal efforts toward the control of poaching, ranging from the removal of hundreds of snares in a single day to actually chasing and apprehending the poachers themselves. Furthermore, sports hunting provides a major source of funds for the economies and wildlife programs of affected countries. A game trophy has a far greater economic value as such than any other economic utilization of the resource.

The organization which I represent have recently compiled statistics in this regard concerning trophy hunting of the the African elephant. In 1977, the approximately 577 elephants taken by sports hunters produced in excess of $750,000 in license fees and taxes, all or most of which was used in the affected countries' conservation programs, an average of $1,360 per elephant. In addition, the same approximately 577 elephants contributed a total of over $9 million to the economies of the affected countries, an average of $14,373 per elephant. Thus, the total economic value per elephant was $15,733.

I would again like to quote from the Teer and Swank paper attached to my testimony as exhibit 2.

> Many developing countries are abysmally poor in GNP and budgets for conservation are likewise very poor. Thus agencies charged with administering and managing wildlife resources have in the past earned funds to operate their programs through licensing systems and sales of animal products. Often these funds provide for an infrastructure in the capital city but almost nothing is left for program implementation through a professional field force.
>
> Funds urgently needed for conservation work have been cut off by the closure of hunting seasons and by gazetting of species such as the leopard to endangered status. Admittedly, the amount of financial loss attributable to the removal of a game species from game status may be small, but relatively speaking, it is an important loss to an agency whose budgets are already small. Moreover, it is unlikely that any money will be forthcoming from general revenue to offset this loss. The leopard can be taken legally in several countries in Africa, but its present status as an endangered species prevents it from being imported into countries which are the primary sources of hunters for safaries in Africa. In addition to economic losses to wildlife agencies in the losses of revenue to local people engaged in these commercial enterprises can be substantial.
>
> The potential economic return from many game animals provides an incentive to the private landowner to protect and manage them for commercial purposes. On the other hand, if the animal is a predator, real or imagined, of the landowner's livestock, or depredator on his crops, and if he has no way to profitably market the animal, the result is almost surely the elimination of the animal on that ranch or farm despite its status as endangered to the conservationist.
>
> In short, the marketplace can be the most important preservation technique available to conservationists when wildlife species are present on private lands. The placement of a species of economic importance on a protected list can defeat efforts to protect or save it in some contexts.

I would again emphasize that the authors of this paper were employed by the Department of the Interior to conduct a status review of the leopard, and these are their comments about the detrimental effect of banning the importation of leopards as sports hunting trophies.

Two recent comments in this regard concerning the situation of the elephant in Zambia and Botswana are particularly instructive. As for Zambia, the following telegram was received:

> U.S. Authorities dumb if elephant put on threatened list banning trophy imports from Zambia. So abundant recent UNFAO Luangua Valley Reports stated elephants causing excessive damage habitat. Advocated cropping some 1,000 annually for six years. Not implemented due to lack funds. Foreign revenue to Zambia annually exceeding $2,750,000. Ban exceeding detrimental and lost employment underprivileged rural areas. Disastrous. Ban will not affect poaching.

Similarly, a letter regarding Botswana:

> Should the bill to treat these animals as endangered be successful, it would prevent the very person who is able to generate the money which will motivate people to keep more elephant, from hunting in this country—the American sportsman. The Botswana government places great store on the foreign currency they receive from hunting licenses and in fact this easily gleaned revenue frequently offsets public pressure to put land to better use—i.e., ranching with domestic stock.

Thus, the groups which I represent submit that the Endangered Species Act should be amended to exempt from its restrictions the trophies of sportsmen who obtain the same under legal hunting licenses issued by the country of origin of the species.

Mr. Chairman, members of the committee, the groups which I represent sincerely appreciate this opportunity to present our views to your committee. I would be happy to answer any questions which you might have.

Senator HODGES. Thank you very much. The balance of your statement will be put in the record.

Senator HODGES. I would certainly like to underline that I am a member and have been for many years of Ducks Unlimited and other groups of similar import. There is no question about the good that they do. I appreciate your statements.

Did you have anything you would like to add, Mr. Foster?

Mr. FOSTER. No, thank you, sir.

Senator HODGES. I am particularly pleased to see my good friend, Jesse Helms. Thank you for bringing these fine men.

Senator HODGES. Mr. John Kane?

STATEMENT OF JOHN KANE, DIRECTOR, WILLIAM AMER CO., PHILADELPHIA, PA.

Mr. KANE. Senator Hodges, my name is John Kane. I am a small businessman employed by William Amer Co., of which I am a director. We are here today to present to the subcommittee our thoughts on the Endangered Species Act, in particular as it relates to the Australian kangaroo, three species of kangaroo.

As leather tanners, we have been in Philadelphia for 145 years. We ceased operation on January 1 of this year. We have, in fact, as tanners, become extinct. A contributing factor to that has been the long-delayed review of the situation involving three commercial species of kangaroo.

The leather tanning business is one of the oldest businesses in the world and in the United States. When I leave here, I will continue down through Tennessee to Arkansas, where you have many fine shoe manufacturers whom we count as long-time customers. We are going to acquaint them with our situation in that we no longer will be able to supply them with certain products which we furnished for many years.

Therefore, the points that I am going to try to make today—and I am not a lawyer or a lobbyist; I am an individual citizen trying to express himself—are two. We are greatly concerned that the act require prompt and timely decisionmaking by those who are charged with administration provisions of the act.

I am also going to cite my personal experience in attempting to find on file in the public record scientific evidence which supported the action of the Office of Fish and Wildlife in listing this kangaroo first as endangered and then as threatened.

If I should lose the point I am trying to make I want to make it clear in the beginning that this is what we are trying to do today.

We have submitted a letter to the subcommittee, signed by the president of William Amer Co. I will not read that. I would ask that it be entered into the record.

Senator HODGES. So ordered.

[The letter follows:]

LAIRD H. SIMONS, JR. PRESIDENT
HARRY J. KOHOUT SENIOR VICE PRESIDENT
FRANK J. BADIK VICE PRESIDENT
FRED G. EWALD SECRETARY AND TREASURER

KING KANGAROO

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April 12, 1978

Resource Protection Sub-Committee
The Honorable John Culver, Chairman
Room 4204, Dirksen Building
Washington, D. C. 20510

Mr. Chairman and Senators:

Thank you for the opportunity to appear before the Resource Protection Sub-Committee as it reviews Public Law 93-205, Endangered Species Act of 1973.

We fully support the stated purposes of the Act, which are:

1. To provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.

2. To provide a program for the conservation of such endangered species and threatened species, and

3. To take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in (subsection a of) this Act.

We compliment the authors of the Act for their clear and concise definition of the responsibilities and procedures required to carry out the purposes of the Act.

However, we are gravely concerned that nowhere does the Act require prompt and timely decision-making by those who are charged with the administration of the provisions of the Act.

We respectfully cite the following history concerning the three commercial species of the Australian Kangaroo:

Notice that certain species were proposed to be added to the endangered species list was published in the Federal Register January 15, 1973. The comment period was sixty days until March 16, 1973.

A rulemaking published in the Federal Register dated June 4, 1973 temporarily deferred action on the proposed rulemaking of January 15, 1973, pending receipt of more information.

A new proposed rulemaking was published April 4, 1974, for the purpose of reinstating the proposal of January 15, 1973 under the new statutory authority, Endangered Species Act of 1973 (87 Stat 884). Again a sixty day comment period was permitted until June 4, 1974.

On December 30, 1974 the Director, United States Fish and Wildlife Service (USFWS) published a rulemaking that classified certain species of kangaroo as threatened and set down certain prohibitions and procedures that were applicable to those species. This rule was effective on January 29, 1975, fully two years after the original proposed rulemaking.

We digress here for a moment and point out that the Act as written does not mandate that "good and sufficient evidence" be available to support a finding that a species is endangered or threatened, and that that evidence be made available to the public through the public hearing process.

Our representative came to Washington to review the scientific evidence that was supposed to support the rulemaking. He came because the final rulemaking published in the Federal Register Vol. 39 No. 251 of Monday, December 30, 1974 stated:

> "Supporting evidence...is on file with the Office of Endangered Species, United States Fish and Wildlife Service, Washington, D.C. Interested parties are invited to examine and discuss this information at the Office if they desire."

Senators, there was no evidence, scientific or otherwise, available for examination at the Office of Endangered Species. The person who was responsible for showing the evidence to the public was quite upset and even after making numerous phone calls was unable to produce even a single document.

We continue to digress on this subject because even today, more than three years after being turned away empty handed, there exists no scientific proof available to the public that the species of kangaroo in question are likely to become an endangered species within the forseeable future.

Please consider therefore our point of view, which would support an amendment to the Act that would require the Office of Endangered Species to utilize the public hearing process in order to place scientific evidence supporting their decisions on the public record.

We now return to the recitation of events which prompts us to plead for an amendment to the Act, requiring prompt and timely actions by the Department of Interior.

Commencing January 29, 1975 the imports of skins of the three species of kangaroo was unlawful; however the rulemaking stated that the Director USFWS could permit importation upon receipt from the Australian Government, certification that:

> "(1) A particular Australian State has developed an effective sustained-yield program for such wildlife and,
>
> "(2) The taking of such wildlife in that state will not be detrimental to the survival of the species or subspecies of which wildlife is a part"

Let us see what happened!

The Australian Government on April 30, 1975 provided the Director, USFWS with the required certifications from the Australian states of New South Wales and South Australia. Copies of the approved Kangaroo Conservation Programs for those two states as well as Queensland and Western Australia were also submitted.

On September 25, 1975 the Australian Department of the Environment and Conservation certified to the Chief, Office of Endangered Species, USFWS that Queensland and Western Australia had implemented satisfactory kangaroo conservation management plans and that exports of skins was permitted in accordance with those plans.

On April 28, 1976 the American Embassy in Canberra transmitted to the Secretary of State the full text of a diplomatic note from the Australian Department of Foreign Affairs on the subject of the ban on commercial importation of kangaroo products into the United States. The diplomatic note contained certification (again) that New South Wales, Queensland, and South Australia completely satisfied the requirements of both the Australian Government and the United States Government, and requested relaxation of the import ban.

A priority cable from our Secretary of State to the American Embassy, Canberra, on October 5, 1976, began with this statement: "U.S. Department of Interior officials are still reviewing Australian submissions..."(emphasis mine). An incredible admission, when you consider the resources available in Interior, to complete the review in a timely manner.

What is the situation now, in April, 1978, three years to the month after the Australians officially submitted their kangaroo conservation plans? We simply do not know. There have been no public hearings or deliberations over the adequacy of the plans (or inadequacy). There has been nothing published in the Federal Register. We have heard that the Australian Government has complained formally to our Secretary of State about the treatment they have received from our government in their attempt to resolve the kangaroo issue in a reasonable time and manner.

We understand their impatience. We are impatient too. Both a sovereign government and a small leather tanner like ourselves deserve better and fairer treatment than has been given us under the present provisions of the Endangered Species Act of 1973. Our impatience, and we presume the Australian Government's as well, is aggravated by a lack of definition of the basis on which our Government initially reached its threatened classification which it still maintains.

Thank you for considering our recommendations to improve the implementation of this Act.

Respectfully submitted,
WILLIAM AMER COMPANY

Laird H. Simons, Jr.

Laird H. Simons, Jr., President

Mr. KANE. Before I go to those two main points, I know it is on your mind, your Senate amendment 2879. I did receive a copy of that this morning from one of the gentlemen here. I would like to echo what was said by a previous witness who sought a safety valve for domestic "irresolvable conflicts" not involving Federal agencies. I would ask that you consider a safety valve for international "irresolvable conflicts." And I think I can underline the reason for doing that.

Although the issue of the kangaroo might be insignificant in comparison to all of the other issues that face all of us today, the Australian Government has had to file a formal complaint with the U.S. Government, through our Secretary of State, because of the action or inaction, if you will, taken by the Department of Interior in reviewing official management programs submitted by individual states in Australia.

Now, Mr. Simons in his letter concludes that here we are, a small leather tanner, and a sovereign government having the same complaint. I think there has to be validity to that complaint.

Therefore, as I say, if you and the other Senators might want to consider some legislation that provides a safety valve for international "irresolvable conflicts," it will be welcome.

The gentleman before me mentioned "irresolvable conflicts" between states in Africa and the Endangered Species Act. I might also point out if the Senator should consider an amendment, in that amendment I think there should be some additional definition of the relationship between our government and the treaty to which we are a party, which is the International Convention on Trade in Endangered Species. We are a signatory to that treaty. As a matter of fact, Mr. Russell Train, who is the head of EPA, was instrumental in 1969, in Kenya, in developing the concept of an International Convention on Trade in Endangered Species.

The process by which an individual American citizen can apply for relief through the mechanism of the International Convention on Trade in Endangered Species is mindboggling. I could never do it. We could never do it. There has to be some link whereby appeals on animals listed on the International Convention can be carried out some way.

I might also point out what I consider to be an abuse, (and I can document that abuse to your staff by the use of cablegrams and actual minutes) of the International Convention on Trade in Endangered Species. The Federal Register, which listed these three species of kangaroo as threatened, never mentioned a listing of these species on appendix 1 or 2 of the Convention. Yet we have correspondence and cables which continually refer to the listing on appendix 2 of these species as a prerequisite for the Director of the Office of Fish and Wildlife to take action.

I was provided the minutes of the Convention meeting in Bern, Switzerland, in 1976 and there was no record that such listing was ever discussed by any person, any official of the U.S. Government. Yet the Australian Government has been consistently told by fish and wildlife people to list the three species of kangaroo, and I have evidence right here of that. I think this is wrong. It is interference in another nation's affairs. It is telling the Australian Government,

"You don't know what you are doing in setting up rules and regulations to insure that the kangaroo does not become extinct."

I think that the relationship between our Endangered Species Act and the treaty to which we are a signatory should be considered in any amendment to the act which would attempt to resolve international "irresolvable conflicts."

We fully support the stated purposes of the act. I have taught myself a little bit about conservation. I began working in conservation in the Second World War by digging small ponds to preserve stream flow and stocking them and so forth. I consider myself a conservationist in the way Teddy Roosevelt defined it, that it is "preservation with progress." Therefore, we do support the stated purpose of the act.

We are concerned that nowhere does the act require prompt and timely decisionmaking, and we respectfully cite in our letter to the committee the history concerning the three commercial species of the kangaroo that were proposed to be added to the endangered species list in January of 1973.

A rulemaking in June of 1973, 6 months later, deferred the action pending receipt of more information. A new rulemaking was published in April 1974 for the purpose of restating the proposal under the new statutory authority, which was 87 Stat. 884.

In December of 1974, the Director of the Fish and Wildlife Service published a rulemaking that classified certain species of kangaroo as threatened, and set down certain prohibitions and procedures applicable to those species. The rule was effective on January 29, 1975, fully 2 years after the original proposed rulemaking.

And I would address and speak to testimony given by Ms. Stevens where she said that on the sea turtle she was taking the opposite side. She said the sea turtle had not been listed for 4 years despite the fact it is on appendix 1. I think the gentleman who spoke on the Marine Fisheries Service referred to money to do planned research on the sea turtle. And yet Ms. Stevens says we need action. I submit, sir—and I am about to digress on the point—we do not need action if there is no scientific evidence on the sea turtle. I don't believe the Congress intended action to be taken until scientific evidence is available.

Now, I know this conflicts with what the gentleman said before about taking action to make sure something doesn't become extinct while you are reviewing it. My own feeling is that that would not happen. So I will digress for just a moment.

Once the rulemaking on the kangaroo was published in the Federal Register, I came down here, and I went over to the Fish and Wildlife Service. That was my first trip to Washington. I asked a lady could I see this evidence. It was in Secretary Morton's press release, and in the Federal Register, that it was available and so I came. And, as stated in our letter, there was no evidence, scientific or otherwise, available for me to examine at the Office of Endangered Species.

And I would like to point out the act, in our opinion, as written, does not (1) mandate that good and sufficient evidence be available to support a species as endangered or threatened and (2) that evidence be made available to the public through the public hearing process so that we, therefore, who are nonscientists can read

what the scientists say. And if we wish to take an adversary position to what they say, we would have an opportunity to examine the public record.

But at the moment all the act allows is publication in the Federal Register. And, sir, I really think that a useful amendment would be for that evidence to come up in a public hearing process.

My own association with government has been on a local level as a township supervisor for the last 6 years. And I can say this, that the public record is most useful when arguing a point, because otherwise emotions take over so rapidly that discussion and people's time is taken up unnecessarily. So that is another thing I would like to ask the subcommittee to consider.

Three years, after being turned away empty-handed, I sit before you today and I make this statement to you that there exists no scientific proof available to the public that the species of kangaroo in question is threatened; which means "likely to become an endangered species in the foreseeable future."

I know there were questions about the kangaroo's present status submitted by the present Chief of Endangered Species to the Australian Government. If they don't have the answers to those questions in front of them now, how can they say the kangaroo is "threatened"? We are expected to prove a negative proposition.

I am not a lawyer, but I have heard discussions on negative propositions. Force of logic tells you that is an untenable position, yet that is the position we put the Australian Government in—prove the kangaroo is not "threatened."

Right now, 3 years later, there is no evidence, as I say, that the kangaroo is "threatened". As proof of that, we are asking the Australian Government to give us information that we should have had a long time ago.

And I am not blaming any individual. As a Navy quartermaster, I believed in reading the log to see what happened on the previous watch. What I am told by USFWS is, "It didn't happen on my watch, I don't have that information. I need it." That is wrong. Every time the watch changes at USFWS is there no "log"? There would be a "log" if it was on the public record and the scientific evidence was there; there would be a "log." There wouldn't be this unnecessary delay in going back and trying to dredge up information that should have been there in the first place.

On January 29, 1975, the imports of skins of the three species of kangaroo was declared unlawful; however, the rulemaking stated that the Director of the U.S. Fish and Wildlife could permit importation upon receipt of (1) Government of Australia (GOA) certification that a particular Australian state had developed an effective sustained-yield program for such wildlife and, (2) the taking of such wildlife in that state would not be detrimental to the survival of the species or subspecies of which wildlife is a part.

Let's see what happened.

The Australian Government on April 30, 1975, provided the Director, U.S. Fish and Wildlife Service with the required certifications from the Australian states of New South Wales and South Australia. Copies of the approved kangaroo conservation programs for those two states as well as Queensland and Western Australia were also submitted.

On September 25, 1975, the Australian Department of the Environment and Conservation certified to the Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, that Queensland and Western Australia had implemented satisfactory kangaroo conservation management plans and that exports of skins was permitted in accordance with those plans.

On April 28, 1976, the American Embassy in Canberra transmitted to the Secretary of State the full text of a diplomatic note from the Australian Department of Foreign Affairs on the subject of the ban on commercial importation of kangaroo products into the United States. The diplomatic note contained certification again that New South Wales, Queensland, and South Australia completely satisfied the requirements of both the Australian Government and the U.S. Government, and requested relaxation of the import ban.

A priority cable from our Secretary of State to the American Embassy, Canberra, on October 5, 1976, began with this statement: "U.S. Department of Interior officials are still reviewing Australian submissions. . . ." An incredible admission when you consider the resources available in Interior to complete the review in a timely manner.

What is the situation now, in April 1978, 3 years to the month after the Australian officials submitted their kangaroo conservation plans? We simply do not know. There have been no public hearings or deliberations over the adequacy of the plans, (or their inadequacy). There has been nothing published in the Federal Register. We have heard that the Australian Government has complained formally to our Secretary of State about the treatment they have received from our Government in their attempt to resolve the kangaroo issue in a reasonable time and manner.

I have with me here today the report by the U.S. Fish and Wildlife Service dated September 10, 1975, submitted by Dr. Spencer Smith and Dr. Ron Skoog, who was formerly the Chief of the Office of Endangered Species, who is now with the Environmental Department in Alaska. And on one occasion when I talked to him, he sat in Juneau looking out over the bay and gave thanks that as a "field scientist" he has an opportunity to work as one and is not in a "biopolitical" situation, which we contend exists within the Department of Interior.

Here is his report, and briefly he said in 1975:

> Today, benefiting from a fund of information not available 15 years ago, from the realization that more stringent management controls exist, with the knowledge that most kangaroo populations are rising again after several wet years, we can replace the hysteria with reason, confidence, and perhaps a sigh of relief. The hue and cry served a good purpose, however, because it forced the producing states to take a hard look at their management weaknesses and encouraged them to improve. The management plans of all four states have been modified and improved since 1970. The plans basically are sound, but their effectiveness will be hampered by a general lack of research and enforcement personnel. That situation is not unlike all countries so far as ability to finance personnel.
>
> In spite of that problem, however, the kangaroo will continue to survive. And one can rest assured they will receive the protective considerations needed.

As appendices to Dr. Skoog's record are the management plans submitted by the Australian Government, the points of view of the Select Committee of the Australian Parliament, which began delib-

erations in 1970, the Fund for Animals statement, Dr. Baysinger's statement, Dr. Bohlen's statements and review.

We go from there to a committee which was set up by the Fish and Wildlife Service back in November of 1975. Who were the members of this committee? Dr. Clyde Jones of the Smithsonian Institute headed up this committee and included were Sydney Anderson and John Kaufman, all experts. As a result of that committee's report, which now is the second committee, including report Dr. Skoogs', there is a memorandum to the Director of the U.S. Fish and Wildlife Service, dated January 2, 1976.

That memorandum from Mr. Keith Schreiner, Associate Director-Federal Assistance speaks directly to the kangaroo importation recommendations. In attendance were Mr. Spencer Smith, Dr. F. Eugene Hester, Mr. Harvey Nelson, Ronald Lambertson and Mr. Keith Shreiner who acted as Chairman. John Spinks, who is presently the Chief of the Office of Endangered Species and Dr. Charles Loveless were unable to attend. Dr. Clyde Jones and Dr. Ronald Skoog, acted as expert witnesses. Amos Eno and Bruce Eggers were present as observers.

In summary, the recommendation to lift the ban, subject to conditions, sent forward by this committee was approved by the director, USFWS on January 23, 1976, and I will leave this as part of the record. Lynn Greenwalt said, "I concur with these recommendations in full. Please proceed to implement them."

Senator HODGES. We will include that in the record.

[The memorandum follows:]

ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/AFA

JAN 2 1976

Memorandum:

To: Director, U.S. Fish and Wildlife Service

From: Associate Director - Federal Assistance

Subject: Kangaroo Importation Recommendations -- Committee Report

On December 16, 1975, your Committee met to discuss the subject issue and to arrive at a recommendation for your consideration. I am pleased to report that we were able to do so. Our recommendation is attached.

In attendance were Mr. Spencer Smith, Dr. F. Eugene Hester, Mr. Harvey K. Nelson, Mr. Ronald Lambertson, and myself acting as chairman. Mr. John Spinks and Dr. Charles Loveless were unable to attend. In addition, Dr. Clyde Jones and Dr. Ronald Skoog acted as advisors and expert witnesses. Messrs. Amos Eno and Bruce Eggers were present as observers.

All pertinent aspects of kangaroo life history, management, and protection were discussed for each of the three species concerned and the four Australian states under consideration. The issue of preeminent concern throughout our deliberations was the long-term viability of kangaroos in Australia. A clear consensus was reached in determining that the long-term viability of the three species in all four states is dependent upon the interaction of three independent variables: (1) the relative density of kangaroo populations; (2) the relative condition of the habitat; and (3) the reaction of private landowners to the first two variables. It is apparent that the three kangaroo species are not endangered, although certain populations are threatened. It is further apparent that the cooperation of private landowners, most of whom consider the kangaroos to be serious and debilitating competitors with domestic stock, is crucial to the survival of viable kangaroo populations. To maintain equanimity between landowners and kangaroos competing for the same habitat, we believe it is imperative that the species be managed under an optimum sustained-yield program which provides both harvestable surpluses yielding

financial rewards and evidences of control of kangaroo populations. No reasonable decision on the conservation of kangaroos could be made which did not recognize the absolute necessity of dealing realistically with the private landowners who have or will have ultimate control of the vast majority of kangaroo habitat and thus ultimate control of the kangaroo themselves.

The Committee recognized that these plain, simple, biological, and economical facts are often unacceptable to those laymen and private organizations who are protection oriented or oppose the killing of animals. We hope they will understand and accept that (1) our deliberations were careful and considered, (2) our recommendation represents the best professional wildlife management judgment we could render, and (3) that our interest in the long-term viability of kangaroos in Australia is sincere.

If our recommendations are accepted, we are confident that you will be acting in behalf of the best interests and long-term well being of kangaroo resources in Australia and fulfilling your obligations and responsibility under the Endangered Species Act of 1973. If accepted, our recommendation would be accomplished by Proposed Rulemaking and Final Rulemaking with a 60-day comment period in between. Public hearings will undoubtedly be requested, and we recommend that at least one be held.

Keith M. Schreiner

Attachment

I concur with these RECOMMENDATIONS -- in FULL -- PLEASE proceed to implement them.

Lynn A. Greenwalt
1/23/76

Recommendation to the Director

After receiving official certification from the Government of Australia (GOA) that:

(1) New South Wales[1/], South Australia[1/], Western Australia, and Queensland have developed and implemented effective optimum sustained-yield programs[2/] for red kangaroos (Megaleia rufa), Eastern gray kangaroos (Macropus giganteus), and Western gray kangaroos (Macropus fuliginosus);

(2) the taking of each of these three species in each of the four states will not be detrimental to the survival of the species concerned;

(3) these three species are removed from the vermin list in Western Australia; and

(4) all animals and parts and products of these three species will be lawfully taken in Australia and will be lawfully exported from Australia before they are shipped to the United States;

we recommend that the Director rescind the importation ban on these three species of kangaroos along with the parts and products of these animals for a period of 2 years from the effective date of final rulemaking as published in the Federal Register. Further, it should be understood that imports of these three species beyond 2 years time will be contingent upon the GOA ratifying the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and adding the three species of kangaroos on Appendix 2 of this Convention. If this is accomplished, all future imports of these three species and their parts or products will be governed by the Convention. If ratification of the Convention and placement of the three species of kangaroos on Appendix 2 is not accomplished, and if imports to the United States are to be continued, the GOA will be required to justify annually future exports to the USA with acceptable evidence that:

1/ New South Wales and South Australia are legally certified now, but we feel it would be desirable to ask for current recertification of these two states in addition to certification of Western Australia and Queensland.

2/ An "optimum sustained-yield program" means a kangaroo management regime that is designed to provide continuing supplies of harvestable surpluses, without harmful reductions in the base breeding populations of the animals, recognizing that annual yields may fluctuate markedly with weather conditions and habitat quality.

(1) Effective optimum sustained-yield management programs for all three species in each state that will be supplying kangaroos and their parts and products for export to the USA are being maintained and where possible enhanced.

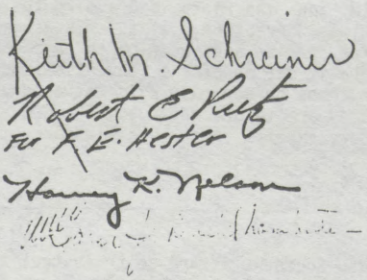
(2) The taking of these three species in concerned states was accomplished lawfully and will not be detrimental to the survival of the species.

(3) Preserves and refuges (Federal, state, and private) are adequate to maintain viable populations of all three species in habitat that is not subject to loss or adverse alteration, and that continuing efforts are being made to acquire additional preserves and refuges for these species.

(4) Adequate resources (manpower and money) are devoted to the management and protection of these species in each state concerned and that additional resources are being devoted to this cause as the occasion demands or the opportunity arises.

(5) Continuing efforts are being made to improve basic management data on population levels, habitat trend, and kill statistics, and that these data are utilized to enhance optimum sustained-yield management programs, and that;

(6) Continuing efforts are being made to educate the public, particularly landowners, to the value of kangaroos both as a valuable renewable resources and a national heritage that must be maintained in perpetuity.



Senator HODGES. Does that conclude your statement?

Mr. KANE. I know I promised I would be 5 minutes. My wife said if I could be brief it would be better. But I am not. I just have two more things, Senator.

Senator HODGES. You are in a town that no one knows how to be brief. It is catching.

Mr. KANE. I just want to go on to say that after that time, as Mr. Simons said in his letter, we know nothing. There has been some current correspondence which I think is reflective of part of the problem of some of the language that administrative agencies put into their regulations. This happens to be a cable which went out on February 1, 1977, after all these years of effort. This states, "Confusion has resulted from wording in State 43102 which paraphrased actual regulation as it appeared in December 30, 1974, Federal Register. State 43102 rendering, subsequently cited by GOA, paraphrases operative portion of regulation as: 'Upon receiving such certification from GOA for any Australian State the Director will issue a proposed rulemaking.'"

And they go on to point out to the poor Australians that the regulations didn't really say "will;" the regulations say "may." So the Australians thought when they did permit their plans and certifications, it was a "will" situation—USFWS "will" review it, "will" get back, "will" tell them if the plans and certifications were OK. The actual wording in that record is "may." I think that is so discretionary and so much more than Congress anticipated that the administrative agency could do; which is the reason we have asked for a requirement for prompt and timely response to submissions and that the scientific evidence and the submissions be made on the public record.

The other thing that is interesting is on August 10, 1977, one of my sales agents in Texas asked Senator Tower to try and let him know what the kangaroo situation was, because there is a demand for kangaroo skins for cowboy boots in the United States.

By the way, I might say between our company and the other company in the United States, we have harvested kangaroo for over 100 years. And I say harvested, because we have done just that. And any species that lasts for 100 years certainly is proof of its hardiness and resilience. And there is nobody in the industry that ever would shoot the kangaroo out of existence.

Well, the answer that Mr. Williams got from Mr. David Hales, Acting Secretary for Fish and Wildlife and Parks stated that "during recent months"—this is last August—"the Australian Government has improved its management and so advised our Department. In addition, we have been advised that the Australians plan to nominate these three species for inclusion on appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora."

Senator Hodges, those two statements are totally untrue, and this is the Acting Assistant Secretary giving information to a citizen of the United States which simply is not true.

So I conclude with a statement I made before. What we said, is we understand the Australian Government position, we understand their impatience. We are impatient, too. Both a sovereign government and a small leather tanner like ourselves deserve better and fairer treatment than has been given us under the present provisions of the Endangered Species Act of 1973. Our impatience, and we presume the Australian Government's as well, is aggravated by a lack of definition of the basis on which our Government initially reached its "threatened" classification which it still maintains on three species of kangaroo.

Thank you for considering our recommendations to improve the implementation of the act. I hope I haven't confused you.

Senator HODGES. Thank you very much, and we will find out and get a response and forward it to you on the statements and representations you have made.

Mr. KANE. If I can answer any questions——

Senator HODGES. We are just about out of time. Thank you.

Senator HODGES. Mr. Donald C. Simpson, Pacific Legal Foundation.

STATEMENT OF DONALD C. SIMPSON, PACIFIC LEGAL FOUNDATION

Mr. SIMPSON. Mr. Hodges, members of the subcommittee, thank you for the invitation to present the views of Pacific Legal Foundation on the Endangered Species Act.

Pacific Legal Foundation is a nonprofit, tax-exempt corporation organized and existing under the laws of the State of California with offices in Sacramento, Calif., and Washington, D.C. PLF was organized for the purpose of engaging in research and litigation in matters affecting the public interest. Policy for the foundation is set by a 17-member board of trustees composed of concerned citizens.

The foundation supports the concept that governmental decisions should reflect a careful assessment of benefits and costs. PLF has been monitoring the administration of the Endangered Species Act with growing concern over the failure to incorporate such assessment. Accordingly, the board of trustees authorized foundation participation in certain specific lawsuits involving the act, including the *Tellico Dam-Snail Darter* case.

The construction of the Columbia Dam on the Duck River illustrates several of the problems of particular concern. Most of the information on this project discussed below can be found in the files of the Interior Department.

The Columbia Dam project is a vital flood control and irrigation project on the upper Duck River which was entered into by four counties and the Tennessee Valley Authority. The listing of mollusks as endangered was seen by some as a key to stopping growth along stretches of the Duck and other eastern rivers. In January 1974, the Fish and Wildlife Service publicly described the Columbia Dam area as a critical habitat for mussels and snails, although the first studies commissioned by FWS would not be completed for 2½ more years. The determination to list was made by a small group of "experts." Members of the general public were not consulted. Requests by individuals for public hearings were ignored. FWS used novel and inaccurate scientific names which further limited public participation because of difficulty in conducting a literature search. Even FWS recognized that the novel nomenclature would not permit adequate comments by the affected States, but failed to change its practice. The tan riffle shell is typical of mollusks listed by this process as an endangered species.

According to the Federal Register, notice of intent to place the tan riffle shell on the endangered species list, this fresh water mussel is threatened by construction of dams on the Duck and Clinch Rivers in Tennessee. The Federal Register notice also contains the negative assessment that no environmental impact statement is needed because the listing impact on the environment. Since an EIS had been essential for the construction of the Duck River dams, it would seem that anything which stopped the construction, and thus stopped the flood control and water conservation which the dams would provide, would also exert significant impact on the environment.

Investigation established that the dam was overwhelmingly approved and desired by the people in the area. Persons in New York City, however, with a long history of concern for dams in other

people's areas, had been threatening the Tennessee Valley Authority with the strictures of the Endangered Species Act if they did not cease and desist the dam construction.

PLF believed that the people of Tennessee should not be deprived of the benefit of this public works project, and the congressional intent frustrated, without a full balancing of the risks and benefits. Accordingly, on December 6, 1977, Pacific Legal Foundation filed suit in the U.S. District Court in Columbia, Tenn., to enjoin implementation of the act and the listing of any aquatic creatures in the Duck River as endangered until such time as a full environmental impact statement, as required by the National Environmental Policy Act, has been filed by the Department of the Interior.

NEPA is a full disclosure law designed to inform the Congress, the public and the decisionmakers of the environmental consequences of agency actions. Moreover, NEPA forces the agency initiating action to consider alternatives to the action proposed. Consultation with the public is required. The procedural requirements of NEPA, if applied to the situation in the Duck River, will end the closed process now taking place. The listing of the mollusks and the available alternatives will be subjected to open discussion. The net effect will be to reduce the suspicion the public now holds for the Endangered Species Act and to permit more informed decisions regarding the resources in the Duck River.

A second problem in the Duck River is the failure to list all species believed to be endangered. Thus, several varieties of snails are waiting in the wings for their moment on center stage.

Should the tan riffle shell, the orange footed pimpleback, the Cumberland monkeyface, and the other mussels prove to be plentiful, then the snails can be marched out and listed and again the Columbia River Dam will be jeopardized. In the view of Pacific Legal Foundation, such harassing actions should not be permitted. All known species should be brought out and examined at one time so that the status of the dam can be determined expeditiously to the benefit of the public.

Much has been said about the consultation process of section 7 of the act. Frankly, the Duck River case and others show this to be only a diversion. Subsection (g)(1) of 16 U.S.C. 1540 (section 11 of the act) permits citizen suits to enjoin alleged violations of the act irrespective of whether there has been a consultation. Pursuant to this provision, individuals threatened legal actions to enjoin construction of the Columbia Dam despite its clear environmental benefits, flood control and water conservation, and despite the overwhelming support by the residents in the vicinity of this Tennessee Dam.

This pattern has been observed in many cases in which the Fish and Wildlife Service lists species as endangered and this action is promptly followed by threats of civil action from no-growth advocates outside Interior. At present, only capitulation, not consultation, will remove these threats of suit. Interior is quick to criticize TVA and other Federal agencies for what Interior describes as a failure to consult. If Interior would consult with the public in its listing process at least to the same extent that TVA consulted with

Congress, the public, and Interior concerning the snail darter, much of the criticism of the listing process might be avoided.

Did Congress, in passing the Endangered Species Act, intend to give Interior and private citizens a virtual veto power over public work projects which Congress finds to be in the public interest? Interior reads "consultation" in section 7 of the act to mean concurrence with Interior. The Sixth Circuit Court of Appeals held in the *Tellico* case that it had no choice but to enjoin a violation of the act as to any listed species and could not exercise its traditional discretionary power of withholding injunction.

Under these current interpretations and administrative practices, it is easy to target a project, identify and list an allegedly endangered species and stop the project either through the Interior's "consultation" process or by court injunction. The needs of the impoverished or unemployed, the need for flood control and water conservation along the Duck River, the needs of national defense, the need for energy development, and a multitude of other public benefits need not be considered in the termination of congressionally authorized and funded projects. The levels of agency concern for people and their needs relative to the concern for mollusks is, perhaps, best demonstrated by the memorandum statement of one biologist: "Present plans to improve economic life of the people of Appalachia—could easily destroy what little remains of this rare heritage."

Actions on the Cahaba River of Alabama demonstrate the scope of misuse of the protective statutes. Opponents of growth attempted to have EPA declare the river too polluted to permit further effluent discharges. EPA found, however, that the river was capable of accepting additional effluent without significant impact on water quality or public health. Accordingly, the no-growth proponents attempted to have the river listed as wild and scenic. This also failed—perhaps because the river passed through the center of Birmingham. Then, the no-growth proponents hit upon the Endangered Species Act. Two species are proposed for inclusion on the endangered list. It appears, however, that the only things unique about the species are their local names and their recently discovered prevalance. Recent information indicates there is now a diligent search for historic sites for preservation along the Cahaba River.

A different deficiency in the Endangered Species Act and a different method by which the public may be harassed is illustrated by the *Houston Toad* case. The inclusion of a shopping mall as part of the toad's critical habitat can, of course, be written off as simply an administrative error. The failure to reach a conclusion as to the critical habitat, however, is seriously injuring property values. A first study on the critical habitat was set aside because of error. A second study was inconclusive. A third is now underway. In the meantime, persons owning property are fearful to commit funds to its improvement for fear that they will find themselves in the Tellico-like situation of being unable to get use permits for completed projects. No one is willing to buy the property until the problem is resolved. And, so, the studies go on while the property owners are helpless. If the third study is inconclusive, can Interior undertake a fourth study and a fifth study, and so forth, until the

property owner is forced to let the property go for taxes? The Endangered Species Act places no limitation on this kind of activity by Interior.

The *Houston Toad* case is particularly irritating because it may be disappearing as a result of its own nature and not the activities of man. The toad has a significant proclivity for mating with any available species of toad, particularly the Gulf toad, to produce offspring that no longer bear the Houston toad's more significant physical characteristics. Should Interior impose its standards on the Houston toad? Should they eliminate the Gulf toad from the Houston habitat? Should the misbegotten offspring themselves be protected as the carrier of the Houston toad's recessive genetic characteristics? Similar natural evolutionary changes are occuring in other animals; for example, the interbreeding of certain species of wolves is leading to the disappearance of a protected species. A number of mollusk species in the Duck River, supposedly threatened by dam construction, have already disappeared from one of Tennessee's rivers, the Buffalo, even though this river is protected as a wild and scenic river and is free from dam construction.

Do Congress and Interior view themselves as modern King Canutes attempting to hold back the tide of evolution? The public is not served when their appointed decisionmakers allow themselves and the law to become the subject of ridicule.

The dilemma of dealing in absolutes instead of using risk-benefit analysis to arrive at a balanced public interest is easily shown. At the base of the Tellico Dam are several varieties of snails, at least one of which is threatened. If preservation of the snail darter which feeds on snails endangers the threatened snail, must preservation of the snail darter cease? What if the prime food of the threatened snail is an endangered aquatic plant?

According to recent newspaper accounts, for over 20 years mice have been a problem in the White House and steps are being taken to trap and remove them. However, after 20 years of interbreeding in an isolated location such as the White House, it is probable that unique "subspecies" or "lower taxa" have developed for which the White House is a critical habitat. Should the extermination of these unique mice be enjoined? Might not the preservation of these creatures in their national historic site serve as a continuing reminder of this country's dedication to endangered species?

On a far more serious level, what should be Interior's action when an aquatic species is found which depends for survival on acid runoff from an open strip mine or depends on the thermal discharge from power projects? At this moment five listed endangered species including the peregrine falcon, the California brown pelican and the California grey whale are known to depend, in one habitat, on the ecosystem which has developed around sludge discharge off the Pacific seacoast. The Environmental Protection Agency projects that from one-third to one-half of the biomass in the system would be eliminated if the sludge dumping is stopped. What actions are permitted to EPA under the Federal Water Pollution Control Act to deal with this sludge-based ecosystem?

The abuse of worthwhile protective laws for purposes which defeat the interests and concerns of the majority of the affected people will ultimately lead to the demise of these laws. Pacific

Legal Foundation favors a strong but reasonable Endangered Species Act which is administered for the total public interest.

Unemployment problems in Appalachia must be weighed against the value of the orange footed pimpleback. The disaster of floods must be weighed against the tan riffle shell's dislike of slow moving waters. The advantages of water storage for people must be weighed against the advantages of drought to the Cumberland monkeyback.

Interior must learn to consult with the people in listing a species if it is to be allowed to compel other agencies to consult about a listed species. Citizen suits should not be permitted before there is full public evaluation such as that NEPA provides. If the people as a whole are not brought back into the decisionmaking process concerning both the listing of the species and the identification of its critical habitat, there is risk that public reaction to the Endangered Species Act will lead to the throwing out of its good parts as well as its bad.

Thank you.

Senator HODGES. Thank you very much.

Senator Baker had a short statement which he would like introduced in the record, and I will hand this over in order for it to be done at this time.

[Senator Baker's statement follows:]

STATEMENT OF HON. HOWARD H. BAKER, JR., U.S. SENATOR FROM THE STATE OF TENNESSEE

Mr. Chairman, I noticed in yesterday's hearings that information was submitted regarding the possibility of using a dry dam as an alternative to full impoundment at the Tellico project on the Little Tennessee River.

When this option was first surfaced a few weeks ago I asked that some preliminary analysis be done concerning this alternative to the planned project.

The Tennessee Valley Authority in responding to this request has come up with the following preliminary findings. I would like to submit this information for the record. I think it will be a useful addition to the information the committee has on this issue.

From a flood control standpoint, the Tellico Dam and Reservoir project was designed and has been built to operate in conjunction with the adjoining Fort Loudoun Reservoir (by way of an interreservoir canal) and cannot in its present form be safely and effectively used as a dry dam.

Converting the existing Tellico project to a project which could be safely and effectively used as a dry dam would require a major structure addition and alterations to the existing structure that would cost in additional appropriated funds from $25 to $40 million. This is true because the required discharge capacity of the existing Tellico spillway and canal was established from studies for various alternative combinations of canal and spillway size. The combination that was constructed provides during the Tellico design flood that 135,000 cubic feet per second can be discharged over the Tellico spillway and 152,000 cubic feet per second through the canal and thence over the Fort Loudoun spillway. The canal would not be available during the design flood in the "dry dam" concept; thus, additional spillway capacity would have to be provided in Tellico greater than that now provided by the 3-bay existing Tellico spillway.

In addition, use of the project as a dry dam would result in a loss of the flood control operating flexibility made possible by being able to interchange floodwaters between Tellico and Fort Loudoun through the connecting canal, as well as loss of most of the other benefits of the project, including power, navigation, jobs, water supply, etc.

Finally, using the Tellico project as a dry dam would not save the snail darter since knowledgeable biologists now generally agree that the Little Tennessee River with the dam structures in place cannot sustain a viable, natural population of snail darters because the dam structures prevent the fish from returning from the nurs-

ery areas of the main river (where they drift as larval fish) to the spawning grounds of the Little Tennessee River.

Senator HODGES. There being nothing further, the meeting is adjourned.

[Whereupon, at 11:45 a.m., the subcommittee recessed, to reconvene subject to the call of the Chair.]

[Prepared statements submitted for the record by today's witnesses follow:]

29-319 O - 78 - 17



MONITOR

THE CONSERVATION, ENVIRONMENTAL AND ANIMAL WELFARE CONSORTIUM

1522 Connecticut Ave., N.W.
Washington, D.C. 20036

(202)234-6576

April 14, 1978

STATEMENT IN SUPPORT OF APPROPRIATIONS AUTHORIZATION FOR THE ENDANGERED SPECIES ACT THROUGH SEPTEMBER 30, 1981

The following Monitor organizations join in endorsing this statement: Rare Animal Relief Effort, American Cetacean Society, International Fund for Animal Welfare, American Littoral Society, Humane Society of the United States, Let Live, The Fund for Animals, Committee to Preserve the Tule Elk, International Primate Protection League, and the Society for Animal Protective Legislation.

The Endangered Species Act of 1973 is major legislation. The United States leads the world in the serious attention it has given this vitally important matter. The soundness of the law is due in no small measure to the hard work that went into it with extensive hearings in 1966, 1969, and finally in 1973 following the three-week plenipotentiary conference held in Washington where 93 nations were represented. Increased appropriations and authorization to make possible continuing improvement in the administration of the Act are essential.

We support the increase in the Fiscal Year 1979 budget for the National Marine Fisheries Service Endangered Species Act administration. In particular, we hope the $205,000 earmarked for sea turtle research will bring about vigorous action to prevent the extermination of these wonderful creatures.

I would like to submit for the use of the Committee an article, "The Shame of Escobilla, For 90 Million Years the Turtles Have Massed to Lay Their Eggs, This Time They Gather for Their Own Mass Murder," by Tim Cahill. The article documents shocking falsification by the so-called laboratory whose owner is more interested in putting on a show for television so he can continue to profit from the slaughter of the nesting turtles than he is in preserving the turtles into the future. This man's profits should be cut off by all civilized nations. Strict enforcement of the Act with respect to sea turtle products is essential. The shameful delays caused by the Commerce Department in making decisions about sea turtles doubtless helped this individual in the hideous

destruction he has wreaked on these magnificent creatures. The Department can make up for it now by redoubling enforcement efforts.

The first thing it should do is to complete the listing of the sea turtles. The planned research continues to be on population assessment and habitat assessment. Nothing is planned to stop this massive destruction for commercial purposes as described by Mr. Cahill.

Already almost five years have passed since the turtles were originally proposed for listing under the 1969 Endangered Species Act; four years since they were petitioned for listing under the 1973 Act; and three years since they were formally proposed by the Departments of Commerce and Interior for listing under the 1973 Act. The proposed listing was reopened for public comment through Monday, April 17. We trust there will be no further delay in listing the turtles.

The Pacific Ridley is already listed on Appendix 1 (endangered category) of the Convention on International Trade in Endangered Species of Fauna and Flora. Yet the United States has still failed even to put it into the threatened category! The leather from these turtles is shipped mainly to Italy for processing. The meat is left to rot. Until listing is completed, products from this leather can be shipped back into the United States.

The time left for several species of these turtles is so short that immediate action is essential. Mr. Chairman, I hope that you will bring home to the Department of Commerce the extreme urgency of the situation. A leading turtle expert, Richard Felger, states that Kemp's Ridley will be extinct this year. The Pacific Ridley will be extinct in eight years or less, the green in three years or less unless the present trends are reversed. The duty of our government is clear. Not another dollar should be allowed to leave this country to pay for any product made from these vanishing creatures.

We support authorization for the Department of the Interior Endangered Species Program of $23,000,000.00 for fiscal year 1979; $25,000,000.00 for fiscal year 1980; and $27,000,000.00 for fiscal year 1981.

For the Department of Commerce in the same period, we recommend $2,500,000.00 for fiscal year 1979; $3,000,000.00 for fiscal year 1980; and $3,500,000.00 for fiscal year 1981.

The difficulties of enforcement of the Endangered Species Act are great. One serious lack is an adequate number of inspectors to examine and refuse or accept wildlife shipments. At the present time, for example, there are only six inspectors for New York. To

do an effective job, the number should be doubled or tripled.

You may recall the uncovering of a ring of international fur smugglers in 1973 when a carton marked leather goods broke open and an alert airline employee noticed spotted cat fur sticking out of the crate. Clearly, Interior did not have enough inspectors then to examine shipments for accuracy, or the smuggling would have been detected in a routine inspection. Equally clearly, six inspectors for a port the size of New York is inadequate, and throughout the entire country there is only a total of 35.

At the present time, there are at least 15 part-time or temporary appointments which cause a substantial turnover among these inspectors, reducing their ability to gain experience in the job. We urge that the Congress give Interior the wherewithal to do the job that needs to be done.

If the authorization for the coming three years can be increased, we recommend that it be placed in enforcement.

We hope that Interior will make the decision to ban the importation of elephant ivory. It will be cheaper and easier to enforce a total ban than a partial ban. Regardless of the final decision on the type of ban, more personnel with good training will be essential.

We earnestly hope that this distinguished Subcommittee will decide to leave the Endangered Species Act intact without any weakening amendments. The consultation system carried out by the Department of the Interior has been remarkably effective in solving conflicts that have arisen. In the future, this process should become even more effective because all federal agencies know of the Act's existence and of the need for consultation before planning is completed.

Our country can surely continue to develop without rendering more species extinct. We set the moral standard for the world in this field, and it is vitally important that we not be seen to be taking any backward steps. When the next conference of the parties of the Convention on International Trade in Endangered Species of Fauna and Flora takes place in Costa Rica, we must maintain our leadership role so that species throughout the whole world can be effectively protected from the forces which otherwise would lead to their extinction. Records of mammal extinction for the past two thousand years show that over half occurred within the last sixty years. Putting it another way, during the past 150 years, the rate of extermination of mammals has increased 55 fold according to Dr. Lee Talbot of the Council on Environmental Quality. He states that if these exterminations continue to increase at that rate, in about 30 years all the

remaining 4,062 species of mammals will be gone.

In closing, Mr. Chairman, we believe that the Congress can do much to ensure that endangered species are preserved through the work of the Departments of Interior and Commerce. Endangered species need all the protection that it is possible to extend to them. The next few years will spell success or failure throughout the entire world with respect to maintaining the inestimable diversity of life forms which we are fortunate still to have with us. All is not smooth sailing in so broad an endeavor, of course. But it would be disastrous if critics of the law's administration should succeed in weakening this landmark legislation. Nor should the undoubted fact that delays have sometimes taken place in the processing of permits which were appropriate to grant cause an attack on the essential requirement for examining permit requests with care. The Federal Wildlife Permit Office is responsible for administering the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This treaty needs to be cherished and nurtured until it grows large and strong enough to stand up internationally and bring a final halt to profiteering and smuggling in the greedy race to exterminate rare animals and plants for the sake of money. There is much work ahead. Improvements can be made administratively. At this time, this Subcommittee should encourage the development, with adequate authorization for appropriations, of the Endangered Species Act.

NATIONAL FOREST PRODUCTS ASSOCIATION
1619 Massachusetts Avenue, N. W., Washington, D. C. 20036
RESOURCES

STATEMENT OF
JOHN F. HALL
OF THE
NATIONAL FOREST PRODUCTS ASSOCIATION
BEFORE THE
RESOURCE PROTECTION SUBCOMMITTEE
OF THE
SENATE ENVIRONMENT & PUBLIC WORKS COMMITTEE
ON
REAUTHORIZATION OF FUNDS AND OVERSIGHT ON THE
ENDANGERED SPECIES ACT OF 1973
APRIL 14, 1978

Mr. Chairman and Members of the Committee:

I am John Hall, Vice President, Resource and Environment, of the National Forest Products Association, headquartered in Washington, D. C. NFPA is a federation of 26 regional and wood product associations and several direct member companies. We represent timber growers and manufacturers and wholesalers of wood products throughout the country.

The forest industry is concerned with timber management on all commercial forest lands in the United States: federal, state, industrial and non-industrial private lands. We support programs and projects at all levels which lead to constructive and productive management of the nation's forest lands and which protect environmental values.

The forest industry supports the concept of preserving flora and fauna set forth in the Endangered Species Act of 1973. However, we are suggesting changes to foster better understanding, acceptance, and implementation of the Act.

Almost no one is opposed to taking necessary and reasonable actions to insure protection of our native flora and fauna. However, a rigid and absolutist interpretation of the Act will create conflicts with other uses of natural resources. On areas inhabited by endangered or threatened species, such interpretations

will lead to a system of management which has as its single goal the preservation of a listed species.

Among our concerns with the Act are: (1) ways in which the industry can play an active role in preserving endangered species, and (2) impacts the Act does and will have on the industry's ability to provide the wood products desired by the people of the United States.

One example of industry's response to the problem is the action of St. Regis Paper Company which, through a combination of donation and sale, transferred 6,000 acres of land for inclusion in the Mississippi Sand Hill Crane National Wildlife Refuge. This land increased the refuge to four times its previous size. St. Regis land managers have been praised for their concern over the crane, without which the species might long ago have disappeared. Other companies in the industry are developing management practices which will be compatible with the presence of an endangered species. International Paper Company's cutting policy in the vicinity of red-cockaded woodpecker colonies is a good example of this.

However, there are also problems. In 1975 it was proposed that about 13 million acres in the western United States be designated as critical habitat for the grizzly bear. Our concerns in this matter are severalfold. What criteria are to be used in designating critical habitat? Although the Fish and Wildlife Service proposed 13 million acres as critical, other authorities on the grizzly bear felt the data did not warrant critical habitat designation at present and opposed the action. The Forest Service determined that only about 2.5 million acres were qualified as being critical. In addition, the area included by the Fish and Wildlife Service contained areas that would never be considered as habitat, i.e., cities and towns. In essence, the Fish and Wildlife Service proposal included the entire existing range of the grizzly bear in this area. For many species, including the grizzly, it should not be necessary to set aside the entire range of the species as being critical. It would be better to select

only areas known to provide grizzly requirements as those to be afforded maximum protection as critical habitat. Will modification of habitat be taken to mean any change? Under Section 7 of the Act, any modification could be considered a violation. Changes which have positive impacts should be encouraged.

Several years of experience with the Act lead us to believe that there are changes which need to be made so as to insure the Act will continue to be a strong force in preserving our native flora and fauna.

First, we recommend that Section 7 of the Act be changed in several respects:

1. There must be some balancing of priorities among the many goals set for natural resources, of which preserving endangered species is only one.

2. Recognition should be given to national goals other than preservation of endangered species by those agencies whose principal charge is not wildlife.

3. Only those parts of the habitat truly critical to the species' continued existence should be designated as critical.

4. Agencies such as the Forest Service that have wildlife expertise should not be required to consult with the Fish and Wildlife Service as a matter of course, but consultation should be available when requested.

5. Modification of endangered species habitat should be constrained only when it has an adverse impact on the perpetuation of the species.

Second, we agree strongly that malicious activities must be prohibited, but we urge that the term "take," Section 3(14), be refined so as to not preclude normal land management practices. At present, it would be possible for a private landowner to be penalized for carrying out normal land management practices if these had even an inadvertent impact on a listed species.

Third, the term "species" has a biological meaning and so should be defined in the Act (Section 3(11)) as a group of physically similar organisms capable of interbreeding but generally incapable of producing fertile offspring through

breeding with organisms outside this group. Once this definition has been made, then there must be a decision whether or not the Act will extend protection to subspecies and smaller taxa, including populations. Extension to lower taxa will be very troublesome in that there is often disagreement amongst the experts as to the subspecies within a species. We are not against designating something less than the species over its entire range as endangered or threatened, provided this allows normal management practices over the remainder of the range and provided problems which might arise under Section 4(e), Similarity of Appearance Cases, are guarded against.

Finally, the Act should be modified so as to require an economic analysis and an environmental impact statement whenever a species is to be listed or critical habitat is to be designated. The decision, in effect, to dedicate certain areas to a single purpose should only be undertaken with a full knowledge of the economic benefits to be gained or foregone and the environmental effects to be expected and after alternatives available have been examined.

These changes will help make the Act more flexible in achieving the wide range of national goals we have set for ourselves over the years, including the preservation of threatened or endangered species.

Thank you for this opportunity to give our views on the Endangered Species Act. We offer our services in any way we can to aid efforts to refine the Act and insure its continued implementation.

The Nature Conservancy

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Release #41-77
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ST. REGIS PAPER AND NATURE CONSERVANCY MOVE
TO PROTECT ENDANGERED SPECIES IN MISSISSIPPI

Washington, D.C. --- In action that will help guarantee the future of an endangered wildlife species, the Mississippi sandhill crane, the St. Regis Paper Company has sold 5,000 acres and given the equivalent of almost 1,000 acres in Jackson County, Mississippi, to The Nature Conservancy. The land which supports the only known colony of the Mississippi sandhill crane was purchased by the Conservancy, a nonprofit conservation organization, for $3,775,000, about $700,000 less than the land's appraised fair market value.

In today's announcement of the purchase and gift, David E. Morine, who heads up the Conservancy's acquisition program, said, "The land has now been transferred to the Department of the Interior at the Conservancy's costs for inclusion in the new Mississippi Sandhill Crane National Wildlife Refuge. The St. Regis land will increase the refuge to four times its current size."

Morine continued, "St. Regis is to be congratualted for their decision to sell their holdings for inclusion in the Mississippi Sandhill Crane National Wildlife Refuge. By their action they have shown that for areas which protect rare and endangered species, conservation is often the highest and best use." Morine went on to praise St. Regis land managers whose concern over the years for the cranes was vital to the birds' survival. Morine pointed out that, "Without the foresight of the St. Regis employees, the cranes would long ago have disappeared."

Only in 1972 did researchers realize that the Mississippi sandhill crane is a distinct subspecies, Grus canadensis pulla. Protection of nesting and living areas for the 3½-foot-tall bird has been given a high priority by the Mississippi Wildlife Heritage Program. The program is an effort by the state, with the help of The Nature Conservancy, to find and protect the variety of wildlife and plants found in Mississippi.

In commenting on today's transaction, William R. Haselton, president of St. Regis Paper Company, said, "Although we have been aware of the fragile predicament of the Mississippi sandhill crane for many years and have managed this land for their protection, we were glad to cooperate with The Nature Conservancy in making this land available so that the Mississippi crane would have perpetual protection."

The purchase was endorsed by the American Land Trust, which had named the crane lands as its top preservation priority in Mississippi. The Trust, a national citizens committee of business, conservation, and civic leaders, has been involved in some 75 projects in its two-year bicentennial effort to save at least one prime natural area in each of the 50 states. The group, working in partnership with The Nature Conservancy, has sought private donations of land and funds, especially from American business.

The St. Regis addition to the Mississippi Sandhill Crane National Wildlife Refuge is the third major project for the Conservancy in the state. Last year the Conservancy worked with the Mississippi Wildlife Heritage Committee to acquire 32,000 acres along the Pascagoula River. The Conservancy was also involved in the establishment of the first unit of the sandhill crane refuge in 1974.

Nationally, the Conservancy and its 42,000 members have been responsible for the preservation of some 1.2 million acres involving about 1,880 conservation projects. The organization, given its present name in 1950, is concerned with protection of natural areas and the wide variety of plant and animal life the areas protect. Over the last four years, Conservancy researchers have worked cooperatively with nine states and the Tennessee Valley Authority to begin a series of identification programs aimed at determining rare species and where they can be protected within the states. In addition to assisting government conservation agencies, as in the sandhill crane project, the Conservancy owns and manages about 680 sanctuaries across the country. Almost all of the areas, which vary from a few acres to thousands of acres, are managed by volunteers.

St. Regis is headquartered in New York and is a fully integrated

forest-based products company whose primary lines of business are the manufacture and sale of pulp, paper, packaging and converted products, and construction products. The company operates 150 facilities in ten countries and has investments and affiliates that operate 76 plants in 23 countries.

National offices for the Conservancy are in metropolitan Washington, D.C. Regional offices are in Atlanta, Minneapolis, Boston and San Francisco.

# # #

BEFORE THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON RESOURCE PROTECTION
UNITED STATES SENATE
HONORABLE JOHN C. CULVER, CHAIRMAN
HOLDING HEARINGS ON THE ENDANGERED SPECIES ACT

STATEMENT OF KENNETH BALCOMB, ESQ.
ON BEHALF OF THE COLORADO RIVER WATER CONSERVATION DISTRICT, GLENWOOD SPRINGS, COLORADO AND THE SOUTHWESTERN WATER CONSERVATION DISTRICT, DURANGO, COLORADO

Mr. Chairman and members of the Committee:

I am Kenneth Balcomb, of the law firm of Delaney & Balcomb, Glenwood Springs, Colorado, appearing here today as counsel to the Colorado River Water Conservation District which maintains its offices in Glenwood Springs. I am accompanied by Robert L. McCarty of McCarty & Noone, 490 L'Enfant Plaza East, Washington, D.C., special counsel to the District.

We also appear today on behalf of the Southwestern Water Conservation District, Durango,Colorado. Both the Colorado River District and the Southwestern District, which together cover all of the west slope of the Continental Divide within Colorado, including all of the drainage of the Colorado River and its tributaries within the State, are greatly concerned about the effect of the Endangered Species Act as it has been administered by the Fish and Wildlife Service and the Interior Department, on the responsibilities which the two Districts have to the State under their respective Organic Acts.

The Colorado River Water Conservation District (River District or District) is a public agency of the state of Colorado and a municipality within the meaning of Section 3(7) of the Federal Power Act, 16 U.S.C. §796(7). The District was established in 1937 by Act of the Colorado State Legislature (Colo. Rev. Stat. § 37-46-101(1973) for the purpose of conserving and developing the waters of the Colorado River and its tributaries within Colorado and ". . .to safeguard for Colorado, all waters to which the state of Colorado is equitably entitled under the Colorado River Compact." The District is comprised of all of 12 and parts of three counties in western Colorado. The District is the major water policy agency of the State regarding the principal headwaters of the Colorado River. The District has a current assessed valuation of approximately $1,171,000,000 which in large part is dependent upon the availability of Colorado River water to support agricultural, municipal and industrial uses.

The Southwestern Water Conservation District (Southwestern District) is similarly a public agency of the State of Colorado, created by the State Legislature in 1941 (Colo. Rev. Stat. 37-47-101 et seq. (1973)), comprising all of six and part of three other counties in Southwestern Colorado. The Southwestern District, with a current assessed valuation of $189,000,000 was formed for the purposes of the conservation, use and development of the water resources of the San Juan and Dolores Rivers (rivers tributary to the Colorado), and their principal tributaries within the State of Colorado. The Southwestern District, pursuant to its statutory responsibilities, has been active in the planning and implementation of projects to conserve and develop for beneficial use the waters of such rivers, frequently in cooperation with the Bureau of Reclamation of the United States Department of the Interior.

Pursuant to its statutory responsibilities with respect to the waters of the Colorado River system within Colorado, the River District has applied for and received in state water court proceedings numerous decrees for the right to the beneficial use of such waters, including uses for domestic, municipal, agricultural, industrial, power, recreation and other beneficial public uses.

To this end, on August 4, 1975 the River District filed with what was then the Federal Power Commission (Federal Energy Regulatory Commission since October 1, 1977) an application for preliminary permit for its proposed Juniper-Cross Mountain project on the Yampa River, FERC Project No. 2757. The River District was issued a three year preliminary permit for this project on February 14, 1976. The preliminary permit authorizes the District to conduct studies and feasibility investigations of its proposed development on the Yampa River near Maybell, Colorado and, pursuant to statute, the District is accorded a priority if it should apply for a license to construct the proposed facilities upon termination of the study period.

The proposed project would provide approximately 1,220,000 acre feet of water storage for use for irrigation, municipal and other beneficial purposes and for the generation of 78,000 kw of hydroelectric power. The need for this storage in the critically water-short West has become obvious to almost everyone in the past two years and the need for additional electric power is well documented.

However the availability of these valuable assets could be threatened by the designation of the Colorado squawfish and humpback chub as endangered species on March 11, 1967, and the assertion that critical habitat of these species will be adversely modified by the construction of this project.

The potential loss of this water and power exists because of the prohibition in Section 7 of the 1973 Act regarding modification of critical habitat which extends to any project, public or private, which is supported by Federal funds or requires Federal approval, such as approval, by FERC of a license.

The Colorado squawfish has been commonly referred to as a "trash" fish because of its carp-like proclivities to feed upon trout and other valuable game fishes. Until recent years this fish was the subject of attempts at eradication by the Colorado Division of Wildlife. Squawfish which exist in other river systems and water bodies are the subject of similar attempts. Indeed a letter from the Department of the Interior to FPC, dated May 10, 1977, concerning FPC Project No. 935 in Washington State recognizes efforts with chemicals to eradicate squawfish populations in a reservoir there.

There has as yet been no proposed designation by FWS of critical habitat for the Colorado squawfish and humpback chub but FWS through its Squawfish Recovery Team (now Colorado River Fishes Recovery Team) has already taken the position that the river area being studied under the preliminary permit for Juniper-Cross Mountain will tolerate no development. A January 16, 1976 letter from the Department of the Interior to the FPC commenting upon the District's preliminary permit application stated:

> At the present time there is every likelihood that the Department would oppose construction of Project 2757 based upon anticipated destruction of habitat which is considered to be critical to two endangered species.

This is of much concern to the River District in light of the consultation requirements of Section 7 and the recent judicial interpretations of the Section which appear, in effect, to give the Department of the Interior veto power over Federal projects despite pronouncements by Interior itself to the contrary. This coupled with the Act's lack of standards and FWS's broad definitional rulemaking activity cast a cloud on the possibility of licensure of this Project. It also presents a dilemma which is grossly unfair: the District is required under its FERC permit to conduct expensive investigations on engineering as well as environmental feasibility while it is faced at the same time with a prejudgment on impact by an agency which can apparently kill the project. Groups like the River District trying to develop essential resources to meet human needs should not face such an expensive, dismal project.

We agree with other witnesses who have appeared before this Subcommittee and have so aptly stated that implementation of this Act should require a balancing of human needs against those of endangered species. A finding that a project could adversely affect, to some degree, the critical habitat of an endangered species should not without further consideration, result in the termination of that project.

A project should be allowed to proceed if reasonable mitigation and conservation measures can be adopted which will provide reasonable habitat for the species. Indeed, if the benefits from such a project outweigh the value of preserving the critical habitat, the agency having authority over the project should be permitted to allow the project to proceed.

We point out that Congress mandated in Section 10(a) of the Federal Power Act, 16 U. S. C. 803(a), that those hydroelectric projects which are best adapted to a comprehensive river basin plan be licensed on the condition:

> That the project adopted....shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water power development and for other beneficial public uses, including recreational purposes. . .

The Commission was authorized to require such other conditions not inconsistent with the provisions of the Act which it might find necessary to provide for various public interests to be served by the project (16 U. S. C. 803(g), 799). In addition to the necessary standard safety and engineering requirements, licenses may contain special provisions in the interest of flood control, navigation, water quality, public health, recreation, preservation of scenic beauty, or protection and development of fish and wildlife. Each application for a major license requires the filing of an environmental impact statement (Exhibit W) and specific plans for recreation (Exhibit R), and fish and wildlife protection (Exhibit S).

The Federal Power Act granted for the Commission the authority necessary to order mitigation of harmful environmental effects prior to passage of statutes such as the National Environmental Policy Act, Fish and Wildlife Coordination Act, Federal Water Pollution Act, and the Endangered Species Act. While the Commission must of course take these statutes into account, we do not believe Congress intended that they should override the statutory authority granted by Congress to the Commission under Section 10(a).

However, as a result of the recent decision of the U.S. Court of Appeals for the Sixth Circuit in Hill v. TVA (now before the Supreme Court) it appears that the Act may not recognize conservation priorities and will allow no balancing of human versus endangered species need where it is shown that there will be any adverse modification of the critical habitat of an endangered species. Section 7 is being interpreted to compel Federal agencies to subordinate all other policies or statutes to the Endangered Species Act. We submit that this could not have been intended by Congress and some further Congressional declaration is presently needed to make this clear. It is entirely possible because of the particular facts of the "Tellico" case that the Supreme Court will not reach these critical issues and this makes Congressional direction even more imperative.

While relatively few conflicts may have surfaced thus far as a result of judicial interpretations of the Act, it can be stated with certainty that there will be many in the future in view of the great and growing number of listed species, especially in light of the vast number of plant species which are currently being considered for listing. In this regard, the latest communication the District has had from FWS concerning the Juniper-Cross Mountain Project, dated January 30, 1978 voiced concern about possible impacts on rare plants in the study area, stating the likelihood that such rare plants do exist there, without any specifics.

It is just as certain that the Act has been and will again be used by those who care nothing for balancing the dictates of the Act against public needs but who simply use the Act to stop water and other projects required to serve public purposes. Even if a project is not completely stopped, it might be delayed by litigation involving this Act. It is well known that because of inflation long delays in the planning or construction of major water projects bring increased costs for which the consumer must ultimately pay.

The House and Senate Committees on Appropriations have recognized that the Act is being used by some as a roadblock to further development contrary to the intentions of Congress. In S. Rep. No. 95-301 accompanying H.R. 7553, the bill making appropriations for public works for water and power development and energy research for the fiscal year ending September 30, 1978, it is stated at page 99 with regard to further funding of TVA's Tellico and Duck River multipurpose water resource projects:

> ...A thorough balancing of the projects against their environmental consequences has been performed. These projects will

> provide needed flood control, jobs and industrial development; water supply and recreational opportunities; improved navigation in the case of Tellico; and other benefits. In addition, the Tellico project will provide an average of about 200,000,000 kilowatt hours of electricity annually. These projects are sound regional development projects which are vitally important to the people affected. This Committee has not viewed the Endangered Species Act as preventing the completion and use of these projects which were well underway at the time the affected species were listed as endangered. If the Act has such an effect, which is contrary to the Committee's understanding of the intent of Congress in enacting the Endangered Species Act, funds should be appropriated to allow these projects to be completed and their benefits realized in the public interest, the Endangered Species Act notwithstanding.

The House Committee report accompanying the same bill (H.R. Rep. No. 95-379) states at page 104 with regard to the Tellico and Duck River projects:

> ...The projects have been opposed by a few litigious individuals and groups but they are overwhelmingly supported by the people in the areas in which they are located... It is the Committee's view that the Endangered Species Act was not intended to halt projects such as these in their advanced stage of completion, and strongly recommends that these projects not be stopped because of misuse of the act.

We urge then that this Committee which has conducted extensive oversight hearings on the Act speak out now against such misuse of the Act and make clear to all that the Act did not intend that human needs be ignored but intended instead that a Federal agency's statutory aims and purposes be allowed to balance the otherwise laudatory purposes of the Endangered Species Act.

In addition we support the position of others testifying who believe that inflationary impact statements and preparation of adequate data and environmental analysis in the form of an environmental impact statement should accompany listing of, and critical habitat designations for, endangered or threatened species. In thus complying with NEPA, the agency listing an endangered species or designating its critical habit should show the redeeming human value to be served thereby.

Thank you for this opportunity to appear.

April 14, 1978

STATEMENT OF DR. CARROLL MANN

ON BEHALF OF

THE SAFARI CLUB INTERNATIONAL

SAFARI CLUB INTERNATIONAL CONSERVATION FUND

THE AMERICAN HUNTERS EDUCATIONAL AND LEGAL PROTECTION FUND

IN CONNECTION WITH

OVERSIGHT HEARINGS

ON

THE ENDANGERED SPECIES ACT OF 1973

BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

SUBCOMMITTEE ON RESOURCE PROTECTION

MR. CHAIRMAN, MEMBERS OF THE COMMITTEE:

My name is Dr. Carroll Mann of Raleigh, North Carolina. Professionally, I am a neurosurgeon, but I am also a wildlife biologist and President of the Safari Club International. I am appearing today on behalf of the Safari Club International, the Safari Club International Conservation Fund and The American Hunters Educational and Legal Protection Fund. Details with regard to the background of these organizations are attached as Exhibit 1 to the written statement of my testimony. With me is C. Allen Foster, an attorney from Greensboro, North Carolina, who is the Managing Director of The American Hunters Educational and Legal Protection Fund and who has prepared the legal portion of this statement.

The groups on behalf of whom I am appearing have a membership in excess of 1 million American citizens and, through their activities, represent over 60 million other Americans who are active hunters, fishermen, trappers and target shooters, these statistics being reflected in the Fish & Wildlife Service Survey on Outdoor Recreation.

These groups wish initially to express their support for the concept of wildlife management, including the full spectrum from seasonal harvest by sportsmen and others to, where necessary, short-term species protection, all leading to the maintenance of viable, balanced populations at levels consistent with available habitat. As a result, these groups supported the passage of the Endangered Species Act of 1973 and, subject to the suggested modifications of statutory language and administrative interpretation set forth in this statement, support the extension of appropriation authorization which is before this Committee.

Because the groups on behalf of whom I am appearing represent sport hunters all over the world, they have probably had as much practical experience with the Endangered Species Act and the species listed thereunder as any other group. As a result, we hope that the following comments concerning the substance of the Act and its implementation will be helpful to this Committee.

1. We believe that the Act should be amended to exempt from its prohibitions hunting trophies which are taken by sports hunters in compliance with the laws of foreign jurisdictions in which the species in question is found. There are a number of reasons why such an exemption is both appropriate and would also further the Act's goal of long term conservation or preservation.

First, there are many people who question the propriety of Americans' determining the conservation status of species which do not occur within the boundaries of the United States. The reaction of foreign governments to the International Convention on Trade in Endangered Species would seem to indicate that our government seriously overestimated the international support for such activities. Moreover, the administrators who implement the Endangered Species Act have little or not knowledge of the local conditions peculiar to the countries of origin of the listed species. As a result, American legislation and regulation creates foreign resentment which detrimentally affects the very goals we are seeking to achieve. For example, in a recent paper presented to the 43rd North American Wildlife and Natural Resources Conference on March 20, 1978, a copy of which is attached as Exhibit 2, Messrs. Teer and Swank, who had been employed by the Department of the Interior to conduct a status review of the leopard, stated:

> "In our recent study of the leopard practically every representative of natural resources agencies that we contacted in Africa expressed the opinion that the United States was presumptive in making rules and regulations which vitally affected their internal affairs***They wished to make it clearly understood that they were quite capable and surely had more knowledge of their resources than any person or government whose contact and tenure in their country was usually short and desultory." (Pg. 13)

Second, it is common knowledge, and the Endangered Species Act recognizes, that the primary forces which present danger to the survival of certain species are (1) habitat deterioration and (2) overutilization for commercial purposes. As to the former, hunters have historically been, along with federal and state governments,

the only source of funds for habitat acquisition and improvement. I know I need not cite to this committee the use of the Pittman-Robertson and Dingell-Johnson Funds in wildlife management nor the activities of Ducks Unlimited in habitat acquisition. It is difficult to name even one group which opposes sport hunting but which has made any significant contribution to the solution of the problem of habitat deterioration. As to commercial overutilization, it is well known that sports hunters are not involved in their activities for monetary gain; in fact, such considerations impinge upon their self-perceptions of the value and meaning of their trophies. More important from the regulatory context, the relationship of sport hunting to commercial activity becomes even more remote when one considers the almost negligible number of trophies involved annually in comparison to species populations. For example, in the case of the African elephant, as to which a proposed threatened listing is now pending before the Office of Endangered Species, trophy hunting in 1977 comprised approximately of 577 animals or less than .04 percent of the minimum population estimate with regard to the species. The scientific evidence is that elephant populations can sustain an annual offtake of 2.6% to 5.7%, over 100 times the annual offtake by trophy hunters. The same thing is true with regard to virtually every other species which is listed as endangered or threatened under the Act.

Third, the parallel regulatory framework represented by the International Convention on Trade in Endangered Species is not, in the vast majority of signatory countries, interpretated to encompass sport hunters within the prohibitions thereunder, even with regard to species which are listed as endangered. The contrary interpretation of the United States is in a tiny minority. The organizations which I represent have urged the Department of the Interior to institute a reexamination of the United States' position which was developed during a prior administration, and it is my understanding that such a

reexamination may even be currently underway.

Fourth, even current regulations promulgated by the Secretary with regard to species listed under the Act as threatened recognize sport hunting as a legitimate utilization of wildlife resources and an appropriate exception to generalized prohibitions of taking or even sale. For example, the grizzly bear which is listed as threatened in the 48 contiguous states, can be hunted in limited numbers in certain portions of its range. More substantially, the alligator may be hunted in portions of its range subject only to the regulations imposed by the local wildlife authorities, in this case the state of Louisiana. We submit that this is precisely the type of ememption which should be generalized for hunting trophies under the Act. Surely, the local authorities are the most able to determine population goals and levels of annual offtake.

Finally, an exemption for sports hunters would actively promote the goals of long-term species conservation. As pointed out above, sport hunting has a negligible impact on population levels. Even more important, in many cases the presence of sport hunters in remote areas helps to control illegal poaching. As Mr. A. L. Archer of Kenya, a knowledgeable observer of the situation regarding the elephant in that country, recently commented:

> "The majority of the uninformed overseas critics do not realize that many of the major elephant hunting areas offer little else other than elephants to hunt, therefore through banning elephant hunting one is playing directly into the poacher's hands by at once removing a controlling factor in the presence of the professional and his often influential and vocal overseas client. The field is thus left wide open for large scale and unreported poaching activities."

Innumerable members of Safari Club International report annually of their own personal efforts toward the control of poaching, ranging from the removal of hundreds of snares in a single day to actually chasing and apprehending the poachers themselves. Furthermore, sports hunting provides a major source of funds for the economies

and wildlife programs of affected countries. A game trophy has a far greater economic value as such than any other economic utilization of the resource. The organization which I represent have recently compiled statistics in this regard concerning trophy hunting of the African elephant. In 1977, the approximately 577 elephants taken by sports hunters produced in excess of $750,000.00 in license fees and taxes all or most of which was used in the affected countries' conservation programs, an average of $1,360.00 per elephant. In addition, the same approximately 577 elephants contributed a total of over $9 million dollars to the economies of the affected countries, an average of $14,373.00 per elephant. Thus, the total economic value per elephant was $15,733.00.

I would again like to quote from the Teer and Swank paper attached to my testimony as Exhibit 2,

> "Many developing countries are abysmally poor in GNP and budgets for conservation are likewise very poor. Thus agencies charged with administering and managing wildlife resources have in the past earned funds to operate their programs through licensing systems and sales of animal products. Often these funds provide for an infrastructure in the capital city but almost nothing is left for program implementation through a professional field force.
>
> "Funds urgently needed for conservation work have been cut off by the closure of hunting seasons and by gazetting of species such as the leopard to endangered status. Admittedly, the amount of financial loss attributable to the removal of a game species from game status may be small, but relatively speaking, it is an important loss to an agency whose budgets are already small. Moreover, it is unlikely that any money will be forthcoming from general revenue to off-set this loss. The leopard can be taken legally in several countries in Africa, but its present status as an endangered species prevents it from being imported into countries which are the primary sources of hunters for safaries in Africa. In addition to economic losses to wildlife agencies the losses of revenue to local people engaged in these commercial enterprises can be substantial.
>
> "The potential economic return from many game animals provides an incentive to the private landowner to protect and manage them for commercial purposes. On the other hand, if the animal is a predator, real or imagined, of the landowner's livestock, or depredator on his crops, and if he has no way to profitably market the animal, the result is almost surely the elimination of the animal on that ranch or farm despite its status as endangered to the conservationst.
>
> "In short, the market place can be the most important preservation technique available to conservationists when wildlife species are present on private lands. The place-

> ment of a species of economic importantance on a protected list can defeat efforts to protect or save it in some contexts." (Pgs. 15-16)

I would again emphasize that the authors of this paper were employed by the Department of the Interior to conduct a status review of the leopard, and these are their comments about the detrimental effect of banning the importation of leopards as sports hunting trophies.

Two recent comments in this regard concerning the situation of the elephant in Zambia and Botswana are particularly instructive. As for Zambia, the following telegram was received:

> "U. S. Authorities dumb if elephant put on threatened list banning trophy imports from Zambia. So abundant recent UNFAO Luangua Valley Reports stated elephants causing excessive damage habitat. Advocated cropping some 1,000 annually for six years. Not implemented due to lack funds. Foreign revenue to Zambia annually exceeding $2,750,000.00. Ban exceeding detrimental and lost employment underprivileged rural areas. Disasterous. Ban will not affect poaching."

Similarly, a letter regarding Botswana:

> "Should the bill to treat these animals as endangered species be successful, it would prevent the very person who is able to generate the money which will motivate people to keep more elephant, from hunting in this country---the American sportsmen. The Botswana government places great store on the foreign currency they receive from hunting licenses and in fact this easily gleaned revenue frequently offsets public pressure to put land to better use---i.e., ranching with domestic stock."

Thus, the groups which I represent submit that the Endangered Species Act should be amended to exempt from its restrictions the trophies of sportsmen who obtain the same under legal hunting licenses issued by the country of origin of the species.

2. The second primary comment which these organizations would like to present is that listings of species as endangered or threatened under the Act, have, in the past, been made in a manner which violates both the letter and the spirit of the Act. 16 U.S.C. §1533(b) (1) clearly provides that "the Secretary shall make determinations [with regard to endangered or threatened listings] on the basis of the best

scientific and commerical data available to him..." We have concrete proof that the listing of the leopard as endangered was based upon hysterical emotion instead of scientific and commercial data as required by the Act. Again citing the statement of Messrs. Teer and Swank to the 43rd North American Wildlife and Natural Resources Conference,

> "In spite of the fact that the leopard is the symbol of the rare and endangered species movement and is featured as a species brought to the verge of extinction by commercialization, our conclusion was:
>
> > The placement of the leopard on the list of endangered species of the International Union for the Conservation of Nature and the U.S. Fish and Wildlife Service, and its assignment to Appendix I of the International Convention of Trade in Endangered Species of Wild Fauna and Flora is not defensible. The leopard is not endangered under commonly used definitions that endangered status implies, and it has been improperly gazetted to that status."

Similarly, a 1976 report by Dr. Randall L. Eaton, a member of the Cat Specialist Group of the International Union for the Conservation of Nature, which report was presented to the Department of the Interior as part of a Petition to delist the leopard as endangered, concluded:

> "I was ashamed for having so readily adopted and further contributed to the now widespread belief that the leopard is endangered in Africa. Such a belief was and is scientifically unfounded, and by all present evidence, entirely false. Such action by myself and others can only foster division betweeen scientific conservation and the concerned citizens and societies whose responsibility it is to manage their wildlife resources. Scientifically based conservation has lost credibility; it cannot withstand succumbing to faultless emotionalism and its reprecussions it if is to play the necessary role it should."

The organizations which I represent submit to this Committee that there are numerous additional species which have been listed as endangered or threatened under the Endangered Species Act which did not then nor do they now fit the Act's definition of such status. It is our information and belief that numerous species have been listed as endangered or threatened without any scientific information whatsoever. I am pleased to report to this committee that, through the

efforts of Safari Club International and the American Hunters Educational and Legal Protection Fund, litigation is being instituted to compel the secretary of the Interior and his administrators to delist these species which have been listed illegally and to enjoin the Secretary from further listings in the absence of the statutorily required scientific and commercial data.

We would submit, however, that this Committee should be concerned that it became necessary for interested citizens to initiate litigation to compel governmental officials to comply with the explicit provisions of the statute under review. It is difficult for me to envision how the statute could be amended to make its commands more explicit. What is needed at the present time is a congressional insistence that the administrators in question fulfill their legal responsibilities.

We do not however, lay all the blame at the door of the Department of the Interior. There exists in this country a small but vocal minority of persons who would like to preclude any utilization of wildlife resources which includes mortality other than from natural causes. These groups have mounted well-financed and publicized campaigns not to promote habitat acquisition or scientifically controlled utilization, but instead to inflame emotions, frequently with exaggerated rumors or downright misrepresentations, leading to absolute protection measures. These groups manipulate public opinion to produce a constant and unrelenting pressure upon the Department of the Interior to make these listings which are not based upon scientific data. We submit that this Committee and the Congress can and should by resolution communicate the insistence of our citizens and their representatives that administrative action be taken pursuant to the requirements of the Act for scientific evidence and not because of baseless, albeit well-articulated, emotionalism.

I might add that the same absence of scientific data in connection with species listing has existed with respect to the International Convention on Trade in Endangered Species. Just

recently, a Working Group established under the Endangered Species Scientific Authority considered the biology and management of the bobcat, the lynx and the river otter in the face of urgent pressures from preservationist groups to move these species from Appendix II (threatened) to Appendix I (endangered) status under the Convention. The draft report of this Working Group, a copy of which is attached hereto in full as Exhibit 3, makes the following poignant points:

> "It became clear early in the deliberations of the Working Group that members felt extremely uncomfortable about their charge. This discomfort arose from the feeling that the bobcat, lynx and river otter had been placed on Appendix II from political rather than biological reasons. Furthermore, concern was voiced by several members that neither status nor recognized authorities on the status of the subject species were consulted before the inclusion of the species in Appendix II. In view of this sentiment the following resolutions were passed:
>
> > "Whereas species of Lutrinae and Felidae have been included on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and are thereby subject to regulation in international trade, and
> >
> > Whereas these taxa in the United States were listed on Appendix II without adequate consideration of the available biological information, and
> >
> > Whereas the Working Group expresses its disatisfaction with the manner in which they were listed on Appendix II, and
> >
> > Whereas the available data indicate that there are regional differences in populations of river otters and bobcats and that individual states' management programs differ markedly, and
> >
> > Whereas seven members of the Working Group believe that the river otter and bobcat are clearly not currently threatened by unregulated international export (5 abstentions; no negative votes), but 5 members believe that the lynx is clearly currently threatened by unregulated international export (seven abstentions; no negative votes)
> >
> > Now therefore be it resolved that the Working Group expresses its reservations about the appropriateness of the blanket inclusion of these species on Appendix II, and recommends that as soon as possible the management authority examine all available information pursuant to this question and re-evaluate the inclusion of these species in Appendix II. (Passed ten-zero, one abstention)

Mr. Chairman, and members of this Committee, where have we come in this country when a panel of scientists appointed by the government of the United States is forced to pass a resolution such as this criticizing the "political rather than scientific" basis for the decisions of our governmental officials?

3. A problem, parallel to the foregoing comments with regard to scientifically unfounded listings, exists in connection with the Sceretary's failure to abide by 16 USC §1533 (c) (1) which requires that

> "Each list...shall specify with respect to each such species over what portion of its range it is endangered or threatened."

The organizations which I represent submit that the Secretary has no discretion to do what has been done in the past---listing a species as endangered or threatened throughout its range when the "best scientific and commercial data available" indicates that it does not have that status except in certain areas.

We would invite the Committee to review the list of endangered and threatened wildlife contained in 50 CFR §17.11. Of the over 800 species listed as endangered or threatened, all but three are listed as having the specified status in their entire range. It is simply not intellectually comprehensible or believable that all of these species are actually endangered or threatened throughout their entire range. In his testimony before the Committee on Merchant Marine and Fisheries of the United States House of Representatives in its hearings on the elephant as a potentially endangered species, Mr. Assitant Secretary Herbst explicitly recognized the statutory requirement of limited listing:

> "The fact that there are a number of distinct populations of the elephant in Africa raises the possibility of different listings for elephants from different countries. This has been done in this country with the American alligator and the bald eagle. Elephants in some areas might be listed as endangered, those in other areas as threatened, and those in still other areas might not be listed at all. This alternative might reflect most closely the actual status of the elephant in Africa."

In the face of the clear command of the statute and the recognition of Assistant Herbst of the proper method of listing species, one can only conclude that actual listings which violate these principles are the result of administrative sloppiness, political pressure or craven desires for ease of enforcement, or some combination of the three. I have already spoken to the first two points; as to the question of ease of enforcement, the groups which I represent recognize that detailed treatment pursuant to the statutory command will potentially increase administrative workloads and make enforcement more difficult. Our government, however, should not curtail its citizens' liberties and privileges merely to make its own tasks less troublesome. When ease of administration is in the balance with individual liberties, the latter should always prevail except when the enforcement difficulties are utterly unsurmountable. And that is not the case here. The Endangered Speoies Act and the regulations thereunder, specifically 16 USC §1533(e) and 50 CFR §17.52, explicitly contemplate regulatory mechanisms to deal with similiarity of appearance cases and the enforcement problems created thereby. Again, Mr. Assistant Secretary Herbst recognized this option:

> "The Act makes provision for similiarity-of-appearance situations and allows non-endangered or non-threatened species to be listed as such to better protect the listed species."

We respectfully submit that these mechanisms can just as easily be applied when some species populations are not listed at all; at the very least, populations as to which the scientific and commerical data does not support an endangered or threatened status should be listed only under the similiarity-of-appearance provisions so that permits will be available under 50 CFR §40.52. In addition, candor compels me to say that such permits should not be accompanied by the calculated inattention and predetermined disinclinations to issue

same that have characterized permit applications under 50 CFR §17.22, e.g. permit applications for import of specimens taken for scientific research and for enhancing the propagation and survival of the species.

The only objection which I have heard voiced to the foregoing flexible approach to listing, that is, listing only within those portions of their ranges in which species are actually endangered or threatened, is that, in the absence of regulation either by the Endangered Species Act or by the International Convention, the otherwise applicable mechanisms under the Lacey Act and the Tariff Classification Act are inadequate. The allegation is that, because certain foreign governments are in complicity with the violation of their own laws, the documentation required under the Lacey and Tariff Classification Acts is not worth the paper it is printed on. The groups which I represent submit that such fears are groundless in all but a few, well-known and specific instances. In such cases, in the event that the Fish and Wildlife Service determines that the documentation is unreliable from a country in which a species has not been listed as endangered or threatened, a listing can be proposed under 16 USC §15.33(a)(1)(4) - "the inadequacy of existing regulatory mechanism". The "ham-handed" approach previously used by the Department of the Interior to list species throughout their range abandons the flexibility under the Act for distinguishing among countries based upon the effectiveness of their management schemes. It is the regulatory equivalent of using an atomic bomb to drive a nail, and results in profit to no one except our federal administrators while causing extreme detriment to millions of American sport hunters.

4. Another area in which the administration of the Act has been contrary to both its language and spirit is in the requirement that, prior to listing a species as endangered or threatened,

the Secretary shall consult with the states or countries, as the case may be "in which the species concerned is normally found...". In actual fact, there has been little, if any, communication in the ordinary bilateral sense of that word. Instead, what we have had is really a notification from Interior to the state or country that such-and-such action is being taken. A case in point is the listing of the leopard as an endangered species which was accomplished by a mere notification to the countries involved with an effective date so quickly after the notification that any meaningful exchange of views was impossible.

At the present time, the proposed listing of the elephant as threatened has been met with empassioned objections from at least four African countries in which large numbers of elephants are found. These countries, together with other commenting organizations, have furnished the Department of Interior with detailed evidence relating to the biological and commercial status of the elephant, all indicating that the elephant is neither endangered nor threatened in many countries. We all await with interest the action of the Department of the Interior from which we will know whether the statutory command of consultation has any meaning to the Department other than bare notification of unilaterial American action.

Nor is the statutory requirement of consultation merely a placebo inserted to soothe the affected countries or states; instead, it is a provision with a realistic purpose. As Messrs. Teer and Swank state in the presentation attached hereto as Exhibit 3,

> "Familiarity with the local scene and personnel can be most helpful in sorting out motives and values. It is often useful to make contracts with field and research scientists in addition to state spokesmen when positions of government are to be evaluated."

Similarily, the draft report to the Endangered Species Scientific Authority by the working group, quoted above, deals directly with the problem I am addressing here:

"Whereas U. S. diplomatic contracts between nations and to international bodies are traditionally accomplished by political appointees and career diplomats with extensive legal, economic and political experience or training; and

"Whereas those delegations often deal with conventions or agreements which affect wildlife species; and

"Whereas it is generally accepted that states possess management responsibility for resident wildlife species; and

"Whereas, U. S. National Delegations usually fail to include state representatives or even seek information and concurance from them; and

"Whereas persons with pertinent professional, biological expertise are seldom included in these delegations, and adequate biological imput is thereby not provided;

"Therefore, this working group recommends that in the future the U. S. National Delegations to conventions affecting wildlife seek adequate consultation, ensure flow of information, and invite state and/agency participation to guarantee a balanced, biologically sound, and documented presentation by the U. S. delegation. (Passed unanimously).

Throughout the Endangered Species Act, there is a theme of proposed consultation and cooperation between the Department of the Interior and affected states and countries which, as is demonstrated by the foregoing, simply has not been the case in fact. As a result, the groups which I represent recommend an amendment to the Act to substitute concurrence and consent to the part of affected states and foreign countries for the current language of conference and cooperation. Only when the respective parties are truly equal in power can there be a realistic expectation of meaningful cooperation and governmental interaction.

5. I have briefly mentioned above the total disinclination of the Department of the Interior to issue permits for importation of certain listed species, despite the clear contemplation of and provision for such permits under the act and the regulations issued thereunder. In particular, 50 CFR §17.52 contains detailed provisions for the issuance of permits for the importation of species which have

been listed as endangered or threatened due to similarity of appearance. Because of the broad-brush approach taken by the Department of the Interior in listing species as endangered or threatened throughout their range, rather than in those portions of their range in which they are actually endangered or threatened, the Department has administratively nullified this flexible provision. The effect upon sport hunters is to effectively eliminate such species from utilization even though, in certain areas, they may be no more endangered or threatened than the common housefly.

Similarly, 60 USC §15.39(a) provides that the Secretary may issue permits for otherwise prohibited acts "for scientific purposes or to enhance the propagation or survival of the affected species." While the terms "for scientific purposes" and "to enhance the propagation or survival of the affected species" are not specifically defined in the Act, 16 USC §15.32(2) does define "conservation" (which would certainly seem to be a term even more restrictive than the conditions for the issuance of a permit for scientific purposes) to include regulated taking "where population pressures within a given ecosystem cannot otherwise be relieved...". To our knowledge, however, the Secretary has never issued a permit for the importation of an endangered or threatened species under the permit provisions of 16 USC §15.39(a). As a specific case in point, one member of Safari Club International obtained a permit issued by the Mexican government for the regulated taking of a jaguar in an area where the population pressure of jaguars was in excess of the carrying capacity of the ecosystem. Such permits are issued annually by the Mexican government in order that the specimens collected may be examined and recorded to further the scant scientific information available with regard to the species as to growth rates, preferred diet, presence or absence of various disease organisms and other similar scientific inquiries. In each case, a Mexican government official and staff

biologist accompanies the permitee to gather and record the foregoing and other information. Despite the obvious scientific purposes which are the object of the permit letting and the indubitable beneficial affect upon the long range propagation and survival of the jaguar as a species, the Secretary has consistently declined to issue permits for the importation of this and other similarly situated species.

Mr. Chairman and Members of the Committee, the inaction and refusal to act on the part of the Department of Interior in these permit cases speaks loudly and clearly to the sportsmen of America. The Department is under the thumb of persons who are opposed to the scientific management of wildlife, including regulated sports hunting. The Department is the handmaiden of the few but vocal and wealthy so-called "preservationists" who look upon hunting as immoral and who would prefer to have the surplus population of a species die the painful and wasteful death of starvation rather than be usefully taken and consumed by Americans in pursuit of their traditional heritage of sport hunting. We do not think that this is the attitude that was intended by Congress when it adopted the Endangered Species Act of 1973, nor do we think that this is the attitude of Congress today or of the vast majority of the American people. We respectfully invite and urge this Committee to take whatever action may be necessary to redress the highhanded way in which the Department of the Interior is perverting the language and the spirit of the Act.

6. The groups which I represent feel that they must also bring to this Committee's attention the inconsistent, deceptive and sometimes even apparently malicious action of agents of the Fish and Wildlife Service in enforcing the Endangered Species Act. Some of the most egregious cases seem to have arisen in the case of lechwe. One hunter inquired of the Fish and Wildlife Service for a list of all

endangered or threatened for at least one year following such listing to allow the adequate dissemination of the information thereof to potentially affected persons and firms. In this way, government agencies and agents can enforce their rules and regulations consistently and fairly and the public trust of the citizen in his government can be restored.

7. Finally, the groups which I represent believe that the provisions of the Act and regulations thereunder dealing with legally held captive, self-sustaining populations do not now operate to further the purposes of the Act. Obviously, the existance of legally held captive, self-sustaining populations tends to enhance the potential for survival of a species because of the scientific research, controlled breeding and protective care available to these populations. Furthermore, the more widely distributed the captive species are, the less likely additional ones will be taken either legally or illegally from the wild. Thus, the Act and the regulations should encourage captive populations and the further dissemination thereof.

At the present time, intra-state transactions in captive, self-sustaining populations are not regulated by the Act, but inter-state transactions are. As a result, the vast majority of all transactions in species held in captive, self-sustaining populations are regulated. 50 CFR §17.33 allows a permit to be issued allowing any activity otherwise prohibited in the case of such captive, self-sustaining populations. Unfortunately, however, the permit procedure is typically involved, and delays in issuance or refusal to issue the permits are the rule rather than the exception.

As a result, we would submit that the Act should be amended to exempt captive, self-sustaining populations from its prohibitions. At the very least, the Act should be amended to exempt the progeny of captive, self-sustaining populations which existed on December 28, 1973 (the effective date of the Act) which are themselves exempted

the citizen in question was not having copies of the Federal Register shipped to him in Botswana so that he could be aware of administrative actions while he was on his hunting trip. Upon returning to the United States, this hunter imported his trophy which passed through customs and Fish and Wildlife clearance without difficulty. As the case later developed, the Fish and Wildlife agents who examined his trophy upon importation were as unaware of the addition of the lechwe to the endangered species list as the citizen was. Some time later, the sportsman was contacted by officials of the Fish and Wildlife Service who asked to see the lechwe horns to identify them. The hunter agreed after receiving a promise from the agent that it was not his intention to sieze the horns. At the appointed time, however, the agent appeared at the hunter's home with a search warrant and demanded the horns, which were confiscated. Throughout the hunter and representatives of Safari Club International had been in personal contact with the Department of the Interior under the understanding that the Department and its agents would cooperate in reaching a mutually acceptable solution. In fact, the hunter agreed that he would not contact his attorney and begin a legal proceeding under the Act because of this understanding. Needless to say, there is at least one American who is convinced that he was defrauded by his own government.

Unfortunately, I can cite you other examples of similar conduct. Government by regulation pursuant to publication in the Federal Register is offensive enough to the ordinary citizen who is constrained thereby, but when not even minimal efforts are made by the agencies in question to disseminate accurate information concerning regulations appearing in the Federal Register, it becomes intolerable. The groups which I represent submit that the Act should be amended to suspend any prohibitions resulting from listing a species as

endangered and threatened species so that he could be certain not to shoot any such species. He was provided such a list by the Los Angeles office of the Service and the list did not indicate that there were any prohibitions with regard to the lechwe. As a result, the hunter in question proceeded on his safari and, in the course of it, took a red lechwe pursuant to a valid hunting license issued by the government of Botswana. On his return, his trophy was confiscated. Upon checking, the hunter discovered that he had been sent an out-of-date endangered species list by the Fish and Wildlife Service and that the Service was still sending out such out-dated lists from their offices in Houston, Sacramento, Denver and Washington, D.C., a full year after the lechwe had been added to the endangered species list. Nor had any notice been given to potentially affected parties, such as the largest taxidermy firms in the world, of over 200 new animals which had been added to the Endangered Species list. Under these circumstances, one might have anticipated that the Service would have revised its list and would have granted permit exceptions to all hunters in the meantime. Instead, however, the Service assessed a civil penalty of $200 and insisted upon a signed acknowledgement of guilt and abandonment of the hunter's trophy. The citizen in question has been forced to pursue his rights to clear his good name in an administrative proceeding which is costing him thousands of dollars and in which the result is still not yet known.

Perhaps an even more offensive case involves a hunter from the Northeast who took a lechwe one or two days after the animal had been added to the Endangered Species list and sometime after his safari had already begun. In other words, this hunter was on safari in Africa when the lechwe was added to the list by publication in the Federal Register. I am sure I do not need to tell this Committee that

pursuant to 16 USC §15.38(b) so long as the same were not held in the course of commercial activity. We would also submit that the condition of the exemption - noncommercial holding - should be eliminated because of the beneficial effect that these captive, self-sustaining populations have upon the particular endangered or threatened species. In the event that no amendment is made, the permits available under 50 CFR §17.33 should be granted expediciously and generously, for the same reasons.

Mr. Chairman, members of the committee, the groups which I represent sincerely appreciate this opportunity to present our views to your committee. I would be happy to answer any questions which you might have.

Exhibit 1

BACKGROUND OF COMMENTING ORGANIZATIONS:

1. Safari Club International and Safari Club International Conservation Fund.

Safari Club International (SCI) is an international non-profit organization* whose purpose is to conserve wildlife and preserve sport hunting. Its headquarters are located at 5151 East Broadway, Suite 1680, Tucson, Arizona, 85711. Through regular, associate and affiliate memberships, SCI represents over 1,000,000 individuals in the United States, Canada, Europe, Asia, and Africa. The following organizations are affiliated with SCI:

American Sportsmen's Club
Arizona Wildlife Federation
California Wildlife Federation
United Sportsmen's Council of Colorado
Illinois Wildlife Federation
Indiana Sportsmen's Council
Michigan United Conservation Clubs
North Carolina Wildlife Federation
Everglades Coordinating Council
San Fernando Valley Sportsmen's Clubs
South Louisiana Gun Club
Game Conservation International
Big Game Hunters, Inc.
Shikar Safari Club International
Texas Trophy Hunters Association
Alaska Professional Hunters Association
International Professional Hunters Association
Montana Outfitters and Guides
Associated Taxidermists of North Carolina
National Taxidermy Association
Citizens Committee for the Right to Keep and Bear Arms

SCI, together with the Safari Club International Conservation Fund** (SCICF), sponsors American Wildlife Leadership Schools in

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* Qualified under Section 501(c)(4) of the Internal Revenue Code of 1954, as amended.

** A non-profit organization under Section 501(c)(3) of the Internal Revenue Code of 1954, as amended.

Wyoming and British Columbia where students, who attend on scholarships contributed by SCI members, learn survival skills, the importance and methods of wildlife conservation, and the role of the sport hunter in nature and in American historical tradition.

In addition, SCICF sponsors workshops for key state level educational administrators and teacher trainers involved in environmental education and followup workshops for secondary school teachers in cooperation with the state level administrators, the purposes being to create a core of properly trained outdoor educators and to motivate them to organize and implement outdoor education programs in the public schools.

Further, SCI makes direct grants to various local and regional conservation projects including the reintroduction of the caribou in Minnesota, the study of the impact of human population on black bears in Southern Michigan, the study of the status of the African leopard, the reintroduction of the Shiras moose in Colorado, the rescue and supplementary feeding program for stranded elk herds in Wyoming and the construction of watering facilities for desert big horn sheep in California.

Finally, SCI also provides vehicles and equipment to foreign governments to assist in game management and control of poaching, and participates through its leadership (at United States Government invitation) in both observer and delegate status in the Convention on International Trade in Endangered Species of Wild

Fauna and Flora (the "Convention") and in various committees organized under the Convention and the U.S. Endangered Species Act, 16 USC §1531, et seq.

2. American Hunters' Educational and Legal Protection Fund.

The American Hunters' Educational and Legal Protection Fund (AMHELP) is a non-profit organization for which an application for tax exempt status under Section 501(c)(3) has been filed and which, in the opinion of counsel, qualifies as a public interest law firm under Treas. Reg. 1.501(c)(3)-1. Contributions to the Fund are primarily solicited from the general public by direct mail and other means, but grants to the Fund are received from organizations supporting the purposes of the Fund. The Fund is governed by a Board of Directors, elected by its contributor/members, including both persons prominent in outdoor sports and others who, like millions of ordinary citizens, participate in such activities.

AMHELP was organized and exists to protect and preserve the right of the public to participate in and enjoy outdoor sports. As a result, its constituency includes the over 16 million Americans who purchase hunting licenses annually, approximately 28 million persons who hold fishing licenses each year, 900,000 or more licensed trappers, together with the additional 30.4 million who participate in such sports without being required to

purchase licenses*, over one million target shooters**, their family members, and the tens of millions of non-participating individuals who derive their livelihood, in whole or in part, from such activities. While the foregoing statistics may duplicate individuals in two or more categories, it is conservatively estimated that AMHELP Fund represents the interests of a majority of all Americans and is the only known organization protecting their legal rights as the same pertain to hunting, fishing, trapping, target shooting, and other similiar outdoor sports.

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* The above statistics regarding holders of hunting and fishing licenses and additional unlicensed hunters and fishermen are derived from the Fish and Wildlife Service Survey on Outdoor Recreation, published in 1978 for calendar 1976.

** Source: American Trapshooting Association and National Skeetshooting Association.

Exhibit 2

INTERNATIONAL IMPLICATIONS OF DESIGNATING SPECIES ENDANGERED OR THREATENED[1]

James G. Teer and Wendell G. Swank
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The new, vigorous thrusts to protect and restore endangered and threatened animals and plants to safe or usable numbers have presented far-reaching practical and philosophical considerations to the wildlife biologist and the administrator. New federal, state, and provincial laws and an international treaty to protect forms of life designated as rare or threatened have put conservation agencies into jurisdictions and wildlife professionals into programs where they have had little if any former roles and experience. Most have been concerned almost totally with animals of interest to sport hunting and fishing or with animals and plants which directly affect man through his health, agriculture, and industry. Moreover, relatively few conservation agencies and professional conservationists in the United States have had experience in international conservation affairs.

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[1]Presented at the 43rd North American Wildlife and Natural Resources Conference, Phoenix, Arizona, March 20, 1978

In spite of this the conservation community has pushed forward with the conviction that to wait for all of the needed information and resources may be too late for many life forms.

Non-game wildlife, rare and endangered species, and extinctions and extirpations of organisms of economic value throughout the world are now within the province and scope of these agencies. Additions of these new charges to the already over-extended agencies of government and to the practicing wildlife biologist have been accepted with mixed feelings. Those close to the program realize that too much has been expected and too few personnel and resources have been made available to carry out these new duties.

The purpose of this paper is to present information which has direct relevance to the administration of the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora and The Endangered Species Act of 1973 (U. S. Congress, 1973). The background material for this paper has been derived from information gained by a combined experience of over ten years working with wildlife and those concerned with wildlife in international circles, principally in Africa and South America. In addition more relevant and recent information was obtained from a study made of the status of the leopard (Panthera pardus) in sub-Sahara Africa in early 1977 for the Office of Endangered Species, U. S. Fish and Wildlife Service (Teer and

Swank 1977). We personally contacted and talked with about 40 chief administrators, wildlife scientists and biologists working for governments, for international conservation agencies, and private enterprise. We specifically obtained their viewpoints on the present status of the leopard, and measures needed for its perpetuation, protection and use. In addition another 30 people in conservation work were contacted by either telephone or correspondence to obtain information. People in Kenya, Tanzania, Ethiopia, Sudan, Botswana, Rhodesia, Zambia, South West Africa, Zaire, the Republic of South Africa, Uganda, Central African Empire, and Cameroon were contacted. Interviews also were held in Europe with representatives of World Wildlife Fund, International Union for Conservation of Nature, Fauna Preservation Society, and Food and Agriculture Organization of the United Nations.

In spite of the fact that the leopard is the symbol of the rare and endangered species movement and is featured as a species brought to the verge of extinction by commercialization, our conclusion was:

> "The placement of the leopard on the lists of endangered species of the International Union for the Conservation of Nature and the U. S. Fish and Wildlife Service, and its assignment to Appendix I of the International Convention on Trade in Endangered Species of Wild Fauna and Flora is not defensible. The leopard is not endangered under commonly used definitions

> that endangered status implies, and it has been improperly gazetted to that status. It is threatened as are many species of organisms of varying abundance and limits of distribution. Losses of habitat, poaching, and conflicts with man and his industries are operating against the leopard just as they are for a myriad of other forms of life and assemblages of biota in the world".

Our recommendation to the U. S. Fish and Wildlife Service was to begin proceedings to get the species in sub-Sahara Africa reduced from endangered to threatened status.

Where does the United States obtain its charter to gazette to a conservation status species that do not occur within its boundaries? It seems that the western world, the United States in particular, has a large influence on conservation of many forms of life in the world because it provides markets for animal products and other industries surrounding wildlife resources. Moreover, many countries that produce species with high market value do not have the capabilities of prohibiting illegal export of the items. Hence the international conservation community has called upon the countries that provide the major markets to control imports. Thus the leadership has passed by default from the producer nations to the consumer nations.

While it is not possible to present a complete history of the evolution of regulations in the United States which deal with rare species, it is appropriate to review some of the

legislative milestones to demonstrate how the United States came to assume this role.

The United States Congress passed its first law to protect endangered species in 1966 (U. S. Congress, 1966). This law, The Endangered Species Preservation Act, was updated by Congress in 1969 with the passage of the Endangered Species Conservation Act of 1969 (U. S. Congress, 1969). The act required the Secretary of the Interior to publish in the Federal Register and periodically to modify two lists of species of selected groups of animals threatened with extinction within the territory of the United States or threatened with worldwide extinction.

The International Union for the Conservation of Nature and Natural Resources (IUCN) was the leading international organization in promoting the developing of a treaty among nations to protect rare forms of life through control of trade of these animals and plants and their products (Department of State 1973). Drafts of a treaty or agreement were circulated in 1967, 1969 and 1971 by IUCN for comments by governments and private conservation agencies. The Congress of the United States through section 5 of the Endangered Species Act of 1969 instructed the Secretary of Interior acting through the Secretary of State to seek the enactment of an international convention on trade in endangered species. The United States assumed the leadership in this role when it agreed at the United Nations Conference on The Human

Environment to host a meeting to consumate such an agreement. After some early abortive attempts to convene the conference, the Department of State called a Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife in Washington, D. C., in February, 1973. The convention drafted a treaty, developed definitions for the status of rare forms of life, and proposed regulations for signatory countries to use in protecting the designates. Endangered and threatened were the two principal categories defined, and a great many species were assigned to Appendix I (Endangered) and Appendix II (Threatened). The assignments were done in conference by delegates. Most of the cats of the Ethiopian Realm and many others from other life zones were placed in Appendix I, purportedly because of the great numbers of spotted cat skins being marketed in world trade.

Forty-three nations are now parties to the Convention (IUCN Bull. Dec. 1977). The Convention came into effect on July 1, 1975, 90 days after the deposit of the 10th nation's instrument of ratification. Some changes were made in the listings in Appendices I and II at a formal Meeting of the Parties to the Convention in Berne, Switzerland 2-6 November, 1976. The leopard was retained in Appendix I. The United States now stations a wildlife scientist in Berne, Switzerland. Responsibilities of this scientist are to work closely with IUCN and other inter-

national conservation organizations to monitor conservation efforts and to assist in development of plans to protect endangered species.

Thus the United States by a mandate of congress is committed to world conservation efforts. The United States Government has assumed an active role and this role has been condoned by many nations. Ethics aside, the conclusion must be reached that because its citizens create markets for animals and plants, the United States has a vital role in conservation efforts to protect those forms of life which serve the markets. Moreover, world-wide the United States is recognized as a potential source of financial resources to promote conservation efforts.

In this context, it seems appropriate to examine some procedural and professional codes and some contextual problems if this role is to be successful.

GOALS MORE IDEALISTIC THAN REALISTIC

Congress, in its mandate to the Secretary of the Interior to assume a leading role in bringing about an international convention, may have overestimated worldwide support for such a convention. Wildlife administrators of some African countries were very active in pushing for the convention; however, some of these very countries have not yet ratified or acceded to the Convention. There are several reasons for the difficulty in

achieving goals of the Convention.

Eliminating world trade in wildlife products is a tremendous undertaking affecting several million people. Those affected range from people who literally live off the land and are dependent for their survival upon wildlife they can catch to those who are willing to pay a high price for something which they do not need but which serves as a status symbol. Some items, through centuries of use, have become interwoven in social customs that are not readily changed. Examples of customs which are part of tradition and culture are the use of leopard skins as a sign of nobility among some tribes in Africa, eagle feathers as a decoration and sign of status by American Indians, rhinoceros horns as an aphrodisiac in the Orient, whale bone masks by the Eskimos and Aleuts, and many others.

There are also subtle international disputes which affect traffic in wildlife products and which cannot be fully appreciated by organizations with little or no knowledge of local politics. As an example, it is contended by well informed sources in East Africa that the major illegal movement of wildlife products out of Kenya is by Somalis who are there with the sanction if not active support of the Somalia Government. The purpose, it is said, of the Somalia Government is to produce a cadre of personnel who are familiar with the country to serve in the repeated attempts by Somalia to annex northeastern Kenya which they claim

is rightfully their pre-colonial territory.

Because of the tenuous nature of governments and the low priority for wildlife conservation matters, heads of wildlife agencies change frequently in developing countries. This presents a very difficult task to conservationists interested in international or global affairs who must search for and identify the most reliable information on biological subjects. The natural resources agencies are the obvious repositories of information; however, there are often many conservation organizations in the country. Some are privately funded groups from the western world, and their professional staffs usually have considerable experience and knowledge of wildlife resources and conservation needs in the country or region. The problem for the international conservationist is to separate the problem of sourcing good information from the sure knowledge that the solutions to conservation issues are the soverign right of only the government in the country.

This matter is often compounded in countries formerly held as colonial states. In Africa and Latin America, this means practically all nations. The conservation ethic and practice were often much further advanced in colonial governments than in the newly emerging countries struggling for political identity, economic growth and stability and social justice. The history and new order of things set the stage for conflicting

philosophies to meet. The new government most often seeks development and utilization of resources. The sense of world opinion, and that of expatriots still residing in the country and who may have promoted world opinion, may be a very conservative, almost protectionist, attitude. Of course, in some cases preservation is the proper management strategy. Examples of such conflicts with which we have had experience in the past decade, aside from that of our work with the leopard, were the problems of gazetting lands to national parks in highly productive agricultural areas, the cropping of wildlife for meat, and the protection given to elephants whose ranges were no longer able to support them.

Moreover, the spokesman for conservation issues in a government may indeed not be the best informed or the views espoused may be self-serving at home in the political arena or even in international conservation circles. Familiarity with the local scene and personnel can be most helpful in sorting out motives and values. It is often useful to make contacts with field and research scientists in addition to state spokesmen when positions of governments are to be evaluated.

PRIORITY OF WILDLIFE IN DEVELOPING COUNTRIES

The highest priority of leaders of governments in most developing countries is to maintain their leadership; i.e.,

to remain in power. In newly formed countries the record demonstrates that power is tenuous and short-lived. The governed have not had a long history of having had the opportunity to express themselves, and their expectations have increased faster than their government's capacity to produce. Many in government have assumed tremendous responsibilities, frequently not by choice. Many also have not had the opportunity to mature through experience. Tribal ties often are stronger than alliances to a central government, and in many cases, tribal ties are of primary consideration to the well being of the individual and his family.

Most of the developing countries in Africa and in other continents as well are preoccupied with erasing vestiges of some "ism" whether it be colonialism, communism or imperialism. On the positive side, education, health and agricultural development receive highest priorities. If we apply tunnel vision conservation goals, however, this is detrimental because it increases the demand for products from the land and increases human population which in turn decreases space for wildlife.

Efforts of international conservationists to increase the proficiency level by training of people to fill key wildlife positions in developing countries have met with only partial success. People with several years of training have frequently returned to their homelands where they are appointed to positions

in other agencies of government than those devoted to conservation and management of wildlife and other natural resources. Governments have higher priorities for their services in management and administration. This demonstrates that wildlife conservation is not held in high regard by developing nations, but in fact it is the expediency of assigning capable people to the most pressing problems of the nation.

The budgeting process in developing countries, though somewhat different from that in the western world, ends up with the same result. After the more pressing problems of the nation are met, very little money is available to manage and develop the wildlife resources.

SOVEREIGNTY AND PROFESSIONAL PARTNERSHIPS

Many of the developing countries of Africa have very young conservation agencies. Some have ministeries of natural resources whose duties and responsibilities involve all activities in wildlife conservation and management, tourism, and national parks. Others have several agencies, often with conflicting charters and responsibilities, to handle these matters and resources. Most of the agencies still reflect in some degree the philosophies and operational methods of former colonial powers which recently staffed them.

Whatever the form and organization of the conservation agencies in the developing countries of Africa, they are trying to manage extensive resources with small professional staffs and inadequate funds. What they do have is a very large measure of pride - pride which has developed as a consequence of their evolution from a colonial government to independent nations.

In our recent study of the leopard practically every representative of natural resources agencies that we contacted in Africa expressed the opinion that the United States was presumptive in making rules and regulations which vitally affected their internal affairs. While these representatives did not have assigned diplomatic duties, they were representatives of their governments and were responsible for the administration and management of wildlife and other natural resources in their countries. They wished to make it clearly understood that they were quite capable and surely had more knowledge of their resources than any person or government whose contacts and tenure in their country was usually short and desultory. Resentment was evident on the part of resources personnel of one-time colonies of foreign governments. This resentment was pronounced in some cases toward international conservation organizations with offices in their countries whose headquarters were in Europe or North America and whose financial support came from abroad.

Conservation practices have lost some ground in the newly

emerging nations in their struggle for economic growth and stability, social justice, and national identity. Forests are being converted to agriculture crops, and rangelands are being opened up to settlement. The past practice of gazetting large areas to national parks has decelerated and is being questioned. The utilization of wildlife to produce food is continuously under consideration. It is obvious that some concessions will have to be made if the developing countries are just to supply food and fiber for their increasing populations. It is unrealistic to assume that present day agriculture and livestock husbandry practices can be carried on in the same areas that provide a home for free ranging elephants, buffalo and hundreds of wildebeest. Marauding lions and leopards were not tolerated by European ranchers in East Africa during the colonial period. Can we ask the Africans to react differently? World opinion, as nebulous as the source and strength of it might be, can and does affect decisions of governments in developing nations. However, developing nations are now more often than ever asking the question: What is this thing the world wishes us to do and for whom are we doing it? The question, of course, is only rhetorical; they have the answer.

ECONOMIC VALUES AND PRESERVATION

Many developing countries are abysmally poor in GNP and

budgets for conservation are likewise very poor. Thus agencies charged with administering and managing wildlife resources have in the past earned funds to operate their programs through licensing systems and sales of animal products. Often these funds provide for an infrastructure in the capital city but almost nothing is left for program implementation through a professional field force.

Funds urgently needed for conservation work have been cut off by the closure of hunting seasons and by gazetting of species such as the leopard to endangered status. Admittedly, the amount of financial loss attributable to the removal of a game species from game status may be small, but relatively speaking, it is an important loss to an agency whose budgets are already small. Moreover, it is unlikely that any money will be forthcoming from general revenue to off-set this loss. The leopard can be taken legally in several countries in Africa, but its present status as an endangered species prevents it from being imported into countries which are the primary sources of hunters for safaris in Africa. In addition to economic losses to wildlife agencies the losses of revenue to local people engaged in these commercial enterprises can be substantial.

The potential economic return from many game animals provides an incentive to the private landowner to protect and

manage them for commercial purposes. On the other hand, if the animal is a predator, real or imagined, of the landowner's livestock, or depredator on his crops, and if he has no way to profitably market the animal, the result is almost surely the elemination of the animal on that ranch or farm despite its status as endangered to the conservationist.

In short, the market place can be the most important preservation technique available to conservationists when wildlife species are present on private lands. The placement of a species of economic importance on a protected list can defeat efforts to protect or save it in some contexts.

DISPLACEMENT OF EMPHASIS IN CONSERVATION AFFAIRS

How much has the new conservation movement's preoccupation with endangered species and with all life forms been responsible for displacement of interest in those organisms of traditional economic value? This point is debated often by traditional wildlife managers and ecologists. The proper position or pragmatic answer is, in our view, that the values for whatever purpose of a group of organisms will not depreciate values of any other group used for another purpose.

The problem has little if anything to do with the ethics and morality of taking life through sport hunting or the slob hunter syndrome on which the protectionist movement has feasted

in the last few years. It is the transfer of that protectionist philosophy to all organisms that makes a serious problem for conservation. The anti-management attitudes of a large section of our society can be attributed in part to the new emphasis on protecting endangered forms of life. Unfortunately, these people fail to recognize that management to restore endangered forms of life is a strategy of almost all conservation organizations.

We see real dangers in a protectionist philosophy being developed in countries where conservation has a short history and where economic and social problems far outweigh other less immediate needs. It is just too easy for a government to develop its resources with the exclusion of consideration for wildlife and wildlands when the economics of preservation cannot be demonstrated.

REEVALUATING THE STATUS OF AN ORGANISM

A review of the operations of the Convention since its inception indicates that there is much more of an inclination to place an organism in the appendices than there is to take one off. Many species were placed in the original lists without either adequate data on their status or consideration for their biological traits contributing to their survival. We believe the leopard is a case in point.

Other animals which seem to have been struck with the same brush are some of the corcodilians of the New World, spotted cats of the World, and many herbivores of the African, South American, and Asian Continents. Among the larger mammals, the African elephant, the bobcat, and the kangaroos are now being considered for assignment to endangered or threatened status. There seems to be very serious questions about their status and proper use of them as renewable resources.

One only has to examine the procedures for reassignment of organisms or for amending the appendices that were developed at the formal Meeting of the Parties to the Convention in 1976 to see that the process is a very lengthy and demanding one. While it may be proper to make the process exacting and scientifically correct, the same process should be used to make original assignments to the lists.

The basis for assigning a species to one of the three appendices is largely biological. More specifically, numbers and populations of an organism carry the most weight in review processes. For an animal that is as shy and as widespread geographically and ecologically as the leopard, it is an almost impossible task to obtain the kinds of information needed to judge its status. Further, the review process and role of the Endangered Species Scientific Authority (ESSA), a U. S. Government review body, has

alientated many agencies, especially local and state government agencies, because they have no representation on the board. Some believe that the board is very heavily protectionist in philosophy. It will be extremely difficult for the U. S. Fish and Wildlife Service to carry out its responsibilities without the support of the states.

CONCLUSIONS AND RECOMMENDATIONS

Our experiences and studies in the international arena of conservation affairs lead us to admonish ourselves and our colleagues not to expect dramatic results in conservation programs where utility and economics are not primary targets or results of conservation measures. The historical, political, cultural, and economic contexts in which foreign governments or international conservation bodies interject themselves through programs to protect endangered species are often so fixed that conservation efforts often cannot be expected to be little more than token efforts. The western world's efforts to decrease traffic in animal products by restricting imports into countries where markets are large may be an important technique, but some adverse feedback to the countries of origin of the products can be expected.

Our recommendation is to determine the biological parameters

of any species or community of organisms before it is relegated to any status other than that imposed by the country which controls its destiny. A partnership arrangement in international efforts at the field level seems to us to be a necessity for building trust between the developed and developing nations and data banks on which delicate and correct decisions can be made. The life and times of any organism is wedded to the life and times of the people in a country, and the efforts of international groups must not fail to consider this fact. Unilateral or "big brother" decisions find little acceptance in foreign or domestic conservation circles.

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DRAFT REPORT TO THE ESSA BY THE WORKING GROUP ON BOBCAT, LYNX, AND RIVER OTTER

Exhibit 3

The Convention on International Trade in Endangered Species of Wild Fauna and Flora was negotiated and signed in February and March, 1973, and took effect on July 1, 1975, after the tenth country ratified it. The Convention establishes rules for the trade in endangered and other species of wildlife and plants between countries that are Parties.

Appendix II of the Convention was supposed to include the following:

> "(a) all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and
> (b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in sub-paragraph (a) of this paragraph may be brought under effective control."

The Convention requires federal permits for export of species included in Appendix II, and such permits can only be issued after it is determined that export "will not be detrimental to the survival of the species." The Convention includes bobcat, lynx, and river otter in Appendix II.

To insure the scientific soundness of governmental decisions concerning trade in species included in the Convention, the Endangered Species Scientific Authority (ESSA) was created by Executive Order, on April 13, 1976. The same order also designated the Secretary of the Interior as the Management Authority (MA) for the Convention.

Federal export permits cannot be issued for Appendix II species unless the ESSA finds that export "will not be detrimental to the survival of the species," Convention Article IV 2.(a). Thus, the Convention establishes a presumption against export unless the ESSA has adequate information in support of a positive finding. Although

detriment to the survival of a species is not defined in the Convention, the ESSA is obliged by Article IV 3. of the agreement to use its authority to monitor the exports of each Appendix II species and to limit their exports to maintain each species "throughout its range . . . at a level consistent with its role in the ecosystems in which it occurs and well above the level at which the species might become eligible for inclusion in Appendix I," which lists species actually threatened with extinction which are or may be affected by trade.

To assist the ESSA in judging whether international trade in Appendix II species will not be detrimental to their survival, the Executive Secretary of the ESSA selected 12 scientists expert in the biology and management of these species. Selection was primarily based on the advice of the American Society of Mammalogists, the Wildlife Society, and members of the ESSA, and included the appointment of a Chairman. The group is known as the "Working Group on Bobcat, Lynx, and River Otter," or the "Working Group."

The charge of the Working Group was to determine as specifically as possible what biological information and management programs will ensure that harvest of bobcat, lynx, and river otter is not detrimental to their survival or to the species maintaining their normal roles in their ecosystems.

The Working Group was composed of seven representatives from the academic world, four members of State conservation agencies, and one employee of the U.S. Fish and Wildlife Service. Working Group members are listed in the appendix. Observers included only representatives of the ESSA, the Management Authority, and the Office of Endangered Species. The group met in New Orleans on January 23 and 24, 1978, and prepared this draft report.

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The Working Group discussed the use of critical terminology and adopted the following definitions:

> Misunderstandings arise over the use and meaning of the terms "management," protection," and "preservation," in relation to wildlife species. With this report, and as this report relates to the implementation or amendment of listings under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, both "management" and "protection" are used to imply means to preserve species or their habitat. "Management" is understood to encompass greater flexibility, ranging from short-term total species protection to habitat manipulation or seasonal harvests as necessary to maintain viable, balanced populations at desired levels, i.e., to achieve long-term preservation. Concurrently, this Working Group understands the term "conservation," that is, the wise and proper use of our wildlife resources, to be a general goal of the management process.
>
> (Passed unanimously)

It became clear early in the deliberations of the Working Group that members felt extremely uncomfortable about their charge. This discomfort arose from the feeling that the bobcat, lynx and river otter had been placed on Appendix II for political rather than biological reasons. Furthermore, concern was voiced by several members that neither states nor recognized authorities on the status of the subject species were consulted before the inclusion of the species in Appendix II. In view of this sentiment the following resolutions were passed:

(1) WHEREAS species of Lutrinae and Felidae have been included on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and are thereby subject to regulation in international trade, and

WHEREAS members of these two taxa in the United States were listed on Appendix II without adequate consideration of the available biological information, and

WHEREAS the Working Group expresses its dissatisfaction with the manner in which they were listed on Appendix II, and

WHEREAS the available data indicate that there are regional differences in populations of river otters and bobcats and that individual states' management programs differ markedly, and

WHEREAS seven members of the Working Group believe that the river otter and bobcat are clearly not currently threatened by unregulated international export (five abstentions; no negative votes), but five members believe that the lynx is clearly currently threatened by unregulated international export (seven abstentions; no negative votes)

NOW THEREFORE BE IT RESOLVED that the Working Group expresses its reservations about the appropriateness of the blanket inclusion of these species on Appendix II, and recommends that as soon as possible the Management Authority examine all available information pertinent to this question and re-evaluate the inclusion of these species in Appendix II.

(Passed 10:0; 1 abstention)

(2) WHEREAS U.S. diplomatic contacts between nations and to international bodies are traditionally accomplished by political appointees and career diplomats with extensive legal, economic, and political experience or training, and

WHEREAS those delegations often deal with conventions or agreements which affect wildlife species, and

WHEREAS it is generally accepted that states possess management responsibility for resident wildlife species, and

WHEREAS U.S. national delegations usually fail to include state representatives or even seek information and concurrence from them, and

WHEREAS persons with pertinent professional biological expertise are seldom included in those delegations, and adequate biological input is thereby not provided,

THEREFORE this Working Group recommends that in the future the U.S. naitonal delegations to conventions affecting wildlife seek adequate prior consultation, ensure flow of information, and invite state and cross-agency participation to guarantee a balanced, biologically sound, and documented presentation by the U.S. delegation.

(Passed unanimously)

(3) WHEREAS the determination for listing of certain wildlife and plant species in the Appendices to the Convention must be based on sound scientific information,

THEREFORE, be it resolved that the Working Group recommends that the Management Authority seek the advice of recognized scientists with expertise on the individual species. (Listing in the Appendices should be by species and not by broad taxa.) This advice should be sought by the U.S. ESSA and MA from an advisory panel of scientists specifically selected for each species. The process of selecting advisory panels should be impartial and aided by professional organizations such as the Wildlife Society, American Ornithologists Union, American Society of Mammalogists, and the American Botanical Society.

(Passed unanimously)

(4) WHEREAS certain species of wildlife native to the U.S. may become threatened with extinction unless trade in such species is subject to strict regulation, and therefore are appropriately listed on Appendix II of the Convention, and are in need of intensive management, and

WHEREAS such management can generally be best achieved on a local or regional scale, and

WHEREAS states possess responsibility for resident wildlife species,

THEREFORE be it resolved that this Working Group recommends that, where appropriate, states be encouraged to form regional technical committees to consider management of Appendix II species based on similar ecological and population data.

(Passed unanimously)

(5) WHEREAS, in several states, a serious lack of research on, and management of, bobcat, lynx, and/or river otter prevails, and whereas prices for the fur of these animals have recently been high, now

THEREFORE be it resolved that each state review its research and management of the bobcat, lynx, and river otter, and seek to improve its research and management such as to insure the continued survival of these species.

(Passed 9:0; 2 abstentions)

The Group recognized that many refinements to the listing and delisting process, state participation, etc., will be necessary in the future. Perhaps workshops similar to the Boone and Crockett workshops on mountain sheep and black bears will be necessary to clarify the status of certain species. Action on the changing of species status under the Con

ecommended as [illegible]

following resolution, which we offer as an example:

> WHEREAS lynx populations in Alaska, as in the boreal forest ecosystem of much of Canada, fluctuate in a broadly synchronous "ten-year cycle" of abundance, and this cycle is imposed on the lynx population by the cyclic fluctuation of their staple food, the snowshoe hare, and
>
> WHEREAS because of the persistence of the hare cycle, which periodically generates food in superabundance for lynx; and because of the size of Alaska and the large numbers of lynx present there, as evidenced by recurrent peak harvests of between 3,000 and 9,000,
>
> THEREFORE, be it resolved that the Working Group recommends that the Management Authority should act immediately under Article XV of the Convention to amend the Convention so as to remove the lynx (Lynx canadensis) in Alaska from its present Appendix II classification.
>
> (Passed 7:0; 4 abstentions)

The Working Group then proceeded to consider recommendations it could make that might aid ESSA in establishing criteria for States to meet in order to allow exportation of species appropriately included in Appendix II. In doing so, the Group stressed that species on Appendix II by definition are not now in danger of extinction, and secondly, that its recommendations and statements do not necessarily apply to species that are endangered.

Furthermore, the Group adppted the phrase "species appropriately included in Appendix II" to indicate (1) that it does not necessarily agree that bobcat, lynx, and/or river otter are appropriately included in Appendix II, and (2) that unless otherwise specified, its recommendations apply to hypothetical species appropriately included in Appendix II.

The Working Group then recommended to the ESSA that, to help insure that harvest of species appropriately included in Appendix II not be detrimental to their survival

(1)Each state should be required to register every individual harvested of each species, and that such registration should automatically allow export. (Passed unanimously.)

(2) Each state wildlife agency should have the authority to regulate the taking of each species. (Passed unanimously)

(3) Each state should develop and impose an annual desired harvest level for each species, such level to be set to insure the continued survival of those species. (Passed 9 to 2.)

(4) The setting of harvest level objectives should consider information describing population trends, previous harvest levels, and how these harvest levels relate to the corresponding seasons or methods of harvest. Additional considerations should include the relationships of populations to available habitat and the desired population level as determined by biological and management considerations. (Passed 9:0 ; 1 abstention.)

Although the Working Group remained skeptical about inclusion of bobcat, lynx, and river otter in Appendix II, it also felt a responsibility to provide specific guidelines to ESSA regarding exportation of pelts of these species. Following are its recommendations:

(1) No pelt from any of the three species shall be allowed into international export if it was taken in a state in which the wildlife management agency does not have the authority to regulate the taking of the species.

(2) Pelts taken and tagged in any state which meets the minimum standards for biological information and management programs* shall automatically be approved for international export.

*Minimum requirements for biological information

1. Population trend information...the method of determination to be a matter of state choice.
2. Total harvest of the species.
3. Distribution of harvest.
4. Habitat evaluation.

Minimum requirements for a management program

1. Controlled harvest...methods and seasons to be a matter of state choice.

2. All pelts to be registered and marked.

3. Annual determination of harvest level objectives.

As its final item of business, the Working Group considered certain terminology included in the Convention. Article IV, Section 3 includes the following statement:

"Whenever a Scientific Authority determines that the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I, the Scientific Authority shall advise the appropriate Management Authority of suitable measures to be taken to limit the grant of export permits for specimens of that species." (Underline added by Working Group)

The meaning of the underlined phrase is critical to the ESSA in deciding when to limit export permits. However, the Working Group decided 8:0 with 2 abstentions, that this terminology was so ambiguous that it defies adequate definition.

The Working Group then adjourned after two days of deliberations.

Appendix I

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APPENDIX

STATEMENTS SUBMITTED FOR THE RECORD

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COMMITTEE ON
VETERANS' AFFAIRS

April 11, 1978

Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

I understand that the Subcommittee on Resource Protection will be conducting two days of oversight and reauthorization hearings on P.L. 93-205, the Endangered Species Act of 1973, on April 13 and 14. I would, therefore, like to convey to the Subcommittee for consideration during those hearings an issue which has seriously affected the State of Hawaii since the initial implementation of the Act.

As you know, Hawaii is geographically isolated from the continental United States by over 2300 miles of open ocean. Hawaii's natural environment has, therefore, evolved vast numbers of plant and animal species, which are truly unique to the world. In addition, Hawaii's volcanic origin has provided its natural environment with enormous ecological diversity which range from lush tropical rain forests and marsh lands, to volcanic deserts, to alpine regions similar in climate and ecological features to that found throughout other alpine regions of the world, to snow-capped mountains in the winter months.

However, due to the limited land area and the natural absence of predatory plant and animal species, Hawaii's flora and fauna have evolved into uniquely fragile ecosystems unlike that which are typically found in the continental United States. As one could, therefore, expect, many of the State's unique plant and animal species and ecosystems have undergone dramatic and often irreversible changes since the first arrival of man in Hawaii around 750 A.D.

To date, Hawaii sadly has 5 percent of the country's endangered mammal species, 45 percent of the country's endangered bird species, and 50 percent of the country's

endangered plant species. This is a total endangered species list for the State which is more than twice the total amount of endangered species of California, the State with the second largest number of endangered species in the country. For plant taxa alone, Hawaii has nearly half of the entire list of endangered, threatened, and extinct species for the country that was compiled by the Smithsonian Institution at the direction of the Endangered Species Act.

As you know, pursuant to the requirements of the Endangered Species Act, each State is required to inventory its total list of endangered plant and animal species. However, the original Act provided Federal funding only for the animal species inventory. As you can imagine, the absence of Federal funding for plant inventories under the Act and the large number of Hawaii's endangered plant species have created significant problems for the State of Hawaii in complying with the requirements of the Act. Adding to this problem is the fact that many new plant and animal species are being discovered every year in Hawaii.

I strongly believe that the burden imposed on the State of Hawaii and the State botanists by virtue of having to comply with the plant inventory requirements of the Endangered Species Act without any Federal support in recognition of Hawaii's unique disadvantage in this area is unreasonable and should, therefore, be corrected through appropriate amendments to the Act.

I respectfully request your thoughtful consideration of this important matter to the State of Hawaii and the conservation community at large during your Subcommittee oversight and reauthorization hearings on the Endangered Species Act.

Aloha and best wishes.

Sincerely,

Spark Matsunaga

Spark Matsunaga
U.S. Senator

STATEMENT

of the

HONORABLE

JOHN H. BUCHANAN, JR.

before

the

RESOURCE PROTECTION SUBCOMMITTEE

of the

SENATE COMMITTEE ON PUBLIC WORKS

and the

ENVIRONMENT

Mr. Chairman and members of the Subcommittee:

I am very pleased to have an opportunity to address problems with the implementation of the Endangered Species Act of 1973 by the United States Fish and Wildlife Service.

The Endangered Species Act of 1973 represents landmark legislation to protect the plant and animal life of this nation. I do not doubt the necessity of the Endangered Species Act. I do have serious reservations, however, about the manner in which it has been applied and implemented - particularly in a case involving the Congressional district which I have the honor of representing.

On 29 November 1977, the Department of the Interior, Fish and Wildlife Service, Office of Endangered Species, proposed the inclusion of four southeastern fish species on the endangered species list. Two of these species, the Cahaba Shiner and the Goldline Darter, are alleged to reside primarily in the Cahaba River which flows through central Alabama.

The basic thrust of the proposal was that "the section of the Cahaba River inhabited by the Cahaba Shiner (and the Goldline Darter) has been severely degraded during the past 15 years. The major problem has been the degradation of water quality due to urbanization and coal strip mining."

The Service made no effort to cite specific biological data to substantiate these assumptions, although it is required by law to base such proposals only upon the best scientific evidence available. Examination of the Service's files on these species points to the fact that this proposal is the culmination of several years of effort by Dr. James D. Williams, staff icthyologist, Office of Endangered Species. Dr. Williams is formerly Chairman of the Alabama Conservancy, a very active environmental group in my state.

In a memo to the Director of the Fish and Wildlife Service dated 21 January 1976, Dr. Williams proposed a number of species, including the Cahaba Shiner and the Goldline Darter, as candidates for inclusion on the national list of endangered species. In this memo, Dr. Williams recommends to the Director that he: 1) ask EPA to prepare a full environmental impact statement on the 201 facilities plan. 2) ask EPA to seek alternatives to putting additional treated waste into the Cahaba River. 3) ask EPA to examine the treated waste problems, including strip mine run-off, of the Cahaba River. 4) recommend a higher priority for the Cahaba Wild and Scenic River Study. 5) initiate studies to obtain status information on endangered and threatened species of fish and mollusks in the Cahaba River. The avowed purpose of these recommendations, and I quote directly from the memo, is to "relieve some of the pressures presently bearing on the Cahaba River and to establish ways whereby additional attention could be given the Cahaba in future years."

It should be noted, Mr. Chairman, that the Director did not see fit to act upon any of the recommendations of Dr. Williams, including his request for further studies on the fish and mollusks of the Cahaba River. The 29 November proposal is based solely upon Dr. Williams' "personal observations" and a single study by Dr. John Ramsey of Auburn University which was part of the publication Endangered Plants and Animal Species of Alabama, Bulletin of the Alabama Museum of Natural History, May 1976. This work notes fifty species of fish which, in Dr. Ramsey's opinion are worthy of listing as endangered, threatened, or of special concern. It should be emphasized, however, that this paper was meant to be a preliminary investigation and a catalyst for further study. Quoting directly from the publication:

> "The reader should note well the possible (if not probable) occurance of undiscovered populations elsewhere in the state. Much more collecting is needed - especially using suitable techniques - before aquatic biologists will be substantially more confident in summary statements on distribution and limitation. It is anticipated that new information will enable revisors to subtract from and add to the list of less competitive freshwater fish in Alabama."

I think any reasonable person would agree that this is a very tenuous basis for the listing of a species as endangered.

Given the extremely vague nature of the 29 November proposal and the feeling by many persons within the community that the assumptions upon which it was based were unfounded, the Environment and Economics Committee of the Birmingham Area Chamber of Commerce funded a study of these species and their habitat. This investigation was conducted by two professional icthyologists at Samford University in Birmingham, Alabama. No restrictions were placed on their work or findings. In addition, a professional consulting firm carried out an analysis of the water quality of the proposed critical habitat area using data provided by the Environmental Protections Agency.

I am furnishing the Subcommittee with copies of the water quality data, the icthyological report and addendum, and the results of a helecopter overflight of the Cahaba River. As these documents clearly illustrate, the assumptions upon which the Service has based this proposal are bankrupt.

I believe that it is unfair for the Service to base a proposal on inadequate, substandard biological dtat and expect to ram it down a communit's throat, or force them to find adequate data with which to defeat it. It is even more unfair for the Service to disregard biological data which contradicts the assumptions and substance of its proposals, as I feel they have done in this case.

Our evidence also shows that critical habitat areas can be imposed and implemented by bureaucratic fiat without adequate evidence to substantiate their validity. In our own case, we find no specific evidence to substantiate the Service's delineation of the critical habitat requirements of the species in question.

Mr. Chairman, it is past time for the Congress to tighten the reins on this bureaucracy. I urge the Subcommittee to examine ways to prevent the Service from proposing species as endangered or threatened on the basis of inadequate, substandard biological evidence. One can only surmise how many species and critical habitat designations have been railroaded onto this list in similar fashion by the Fish and Wildlife Service.

I have no quarrel with including species which are truly endangered or threatened and have been determined as such by the Service in a truly objective, reasonable manner. It is simply wrong, however, for federal bureaucrats to attempt to manipulate this act to stop or slow down development in this country. The Endangered Species Act of 1973 was not designed to be federal land use legislation and it is both unwise and improper for the Congress to allow a federal bureaucracy to delegate to itself such responsibility without legislative mandate.

JOHN H. BUCHANAN, JR.
6TH DISTRICT, ALABAMA

MEMBER:
COMMITTEE ON INTERNATIONAL RELATIONS
SUBCOMMITTEES:
INTERNATIONAL OPERATIONS
AFRICA

COMMITTEE ON EDUCATION AND LABOR
SUBCOMMITTEES:
ELEMENTARY, SECONDARY AND VOCATIONAL EDUCATION
POST-SECONDARY EDUCATION
COMPENSATION, HEALTH, AND SAFETY

COMMISSION ON SECURITY AND COOPERATION IN EUROPE

Congress of the United States
House of Representatives
Washington, D.C. 20515

ADMINISTRATIVE ASSISTANT
JAMES T. APPLE
2159 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515
202-225-4921

DISTRICT OFFICE:
CAROLYN R. GOLDEN
EXECUTIVE ASSISTANT
ROOM 105, FEDERAL BUILDING
1800 FIFTH AVENUE NORTH
BIRMINGHAM, ALABAMA 35203
205-254-1525

March 31, 1978

Mr. Lynn A. Greenwalt
Director
U.S. Fish and Wildlife Service
Department of the Interior
Washington, D.C. 20240

Dear Mr. Greenwalt:

Last November 29th, the Fish and Wildlife Service, Office of Endangered Species, proposed four southeastern fish species to be included on the national list of endangered species. These fish included the Cahaba Shiner (Notropis sp.), the Spring Pigmy Sunfish (Elassoma sp.), the Goldline Darter (Percina avrolineata), and the Pigmy Sculpin (Cottus Pigmaeus). Two of these species, the Cahaba Shiner and the Goldline Darter, are said to reside primarily in the Cahaba River, which flows through Jefferson County, Alabama. Hence, my deep interest in this proposal.

The November 29 proposal is the culmination of several years of effort on the part of Dr. James D. Williams, Staff Biologist, Office of Endangered Species. Dr. Williams is formerly Chairman of the Alabama Conservancy, a very active environmental group within our state. Since leaving Alabama, Dr. Williams has remained active with the Conservancy, serving on the Conservancy study team attempting to reverse the United States Forest Service recommendation on the Wild and Scenic River Status of the Cahaba, and most recently, agreeing to be a key speaker at the annual Conservancy meeting in Birmingham. The Alabama Conservancy, and those associated with it, are on record as being committed to maintaining the Cahaba River and the surrounding area in a wild and pristine condition.

In a memorandum to the Director, dated January 21, 1976, Dr. Williams proposed a number of species, including the Cahaba Shiner and the Goldline Darter, as candidates for inclusion on the national list of endangered species. In this memorandum, Dr. Williams notes that the "geographic setting, biological diversity, and productivity of the Cahaba River make it an extremely unique and valuable resource." He further states that "the Cahaba River harbors an interesting, diverse and sensitive fauna, much of which is intolerant of treated or untreated waste. Numerous studies by the Environmental Protection Agency and others have shown that treated waste (chlorinated) over a long period of time results in mortality for mussles, snails, fish and other aquatic

organisms." Dr. Williams makes no attempt to substantiate these statements which are somewhat misleading. While it is true that heavy levels of chlorinated waste are dangerous to some fauna, it is inaccurate to imply that all or most forms of animal life in the Cahaba are intolerant to all levels of chlorinated waste. It should be noted that the Environmental Protection Agency has given the Cahaba a Fish and Wildlife classification. No plans are underway to alter this classification to the detriment of the fauna and flora of the Cahaba.

The January 21 memorandum concludes with a list of alternatives which, in the opinion of Dr. Williams, are open to the Director. Dr. Williams states that "I would make the following recommendations to relieve some of the pressure presently bearing on the Cahaba and to establish ways whereby additional attention could be given the Cahaba in future years. 1) ask EPA to prepare a full environmental impact statement on the 201 facilities plan. 2) ask EPA to examine the treated waste problems, including strip mining run off, of the Cahaba River Basin. 4) recommend a higher priority for the Cahaba Wild and Scenic River Study. 5) initiate studies to obtain status information on endangered and threatened species of fish and mollusks in the Cahaba River."

Rather than concentrating on species which are becoming endangered or threatened, which I understand is his primary responsibility, Dr. Williams seems concerned with relieving "pressures on the Cahaba." The present proposal in question is, in my estimation, a product of the same goals on the part of Dr. Williams.

The proposed rule in the November 29 Federal Register cites a severely degraded water quality within the Cahaba during the past 15 years as a primary reason for declaring the Cahaba Shiner and the Goldline Darter as endangered. On page 60765, it is stated that "the section of the Cahaba River inhabited by the Cahaba Shiner has been severely degraded during the past 15 years. The major problem has been the degradation of water quality due to urbanization and coal strip mining. The urbanization activities in the headwaters have resulted in an increased silt load, while euthrophication has commenced in response to enrichment from newly constructed sewage treatment plants. The habitat is clearly changing and the activities which have brought about the changes are continuing."

Similar statements were made regarding the Goldline Darter. On the same page, it is stated that "the Goldine Darter is threatened in the Cahaba by pollution from domestic, industrial waste and acid drainage from strip mining. The large volume of water presently being released into the Cahaba, as well as strip mine run off, has greatly degraded the water quality in recent years. Proposals call for additional waste to be released into the Cahaba River in the near future. Any increase in the silt and nutrient load will seriously jeopardize the existence on the Cahaba population of the Goldine Darter."

In order to determine the validity of these considerations, an examination has been made of available Cahaba River water quality data (see Appendix I). Water quality from 17 stations was examined, and detailed analysis was made at sampling stations downstream, from, within, and upstream from the proposed critical habitat reaches. Examination of data presented in Table I of this study leads to the unmistakable conclusion that water quality for the Cahaba River is excellent. In fact, the study concludes that there is no evidence of "severely degrading water quality", upon which the Fish and Wildlife has based this proposal. I would urge the Fish and Wildlife Service to review this new, additional data and to respond directly to the question as to whether the water quality in the Cahaba has, or has not, been severely degraded in recent years.

The secondary basis for the proposal to list these two species is a single study by Dr. John Ramsey of Auburn University which was part of the publication Endangered Plants and Animal Species of Alabama, Bulletin of the Alabama Museum of Natural History, May 1976. This work notes 50 species of Alabama fish, including the Cahaba Shiner and the Goldline Darter, which in Dr. Ramsey's opinion, are worthy of listing as endangered, threatened or of special concern.

It should be noted, however, that this paper was meant to be a preliminary investigation and a catalyst for further study. Quoting directly from the publication:

> "The reader should note well the possible (if not probable) occurrence of undiscovered populations elsewhere in the state. Much more collecting is needed - especially using suitable techniques - before aquatic biologists will be substantially more confident in summary statements on distribution and limitation. It is anticipated that new information will enable revisors to subtract from and add to the list of less competitive freshwater fish in Alabama."

I believe that this is a very tenuous basis upon which to formulate this proposed rule. It should be noted that the Fish and Wildlife Service has made no attempt to gather further data on these species. I would appreciate being informed as to why the Service felt that this meager study was sufficient to initiate the promulgation of a proposal of such importance to the area which I represent.

Given the obvious lack of firm biological data, and the importance which this proposal has for the Birmingham area, the Birmingham Area Chamber of Commerce Environmental Economics Committee funded an independent study of the range and habitat of the Cahaba Shiner and the Goldline Darter. This study was carried out by two professional icthyologists, Doctors Mike Howell and Robert Stiles of Samford University. Both men are respected scientists and members of the Southeastern Fish Council. No limitations were put on their activities and they were under no obligation to find any specific conclusions (see Appendix II).

The Stiles and Howell report clearly illustrates the bankruptcy of the biological data upon which the Service has based this proposal. Significant, new populations of the Goldline Darter have been found in the Little Cahaba River, a stream which has had almost no impact from industrial, commercial or residential development. As stated in the report, no populations of the Cahaba Shiner were located due to the time of year of the sampling efforts. I would respectfully request the Fish and Wildlife Service to follow the Stiles/Howell recommendation regarding the Cahaba Shiner and defer any judgment on this species until later this year when suitable collection techniques can be employed in a search for viable populations of this species.

I believe that it is wrong for a group of local businessmen to be forced into funding a research project of this kind which is rightfully the job of the United States Fish and Wildlife Service. I strongly object to the Service placing this burden on my constituents. Is it the frequent policy of the Service to solicit necessary biological data in such a manner?

Another fact also disturbs me about this proposal. In the Federal Register of November 29, the maps and critical habitats of the Cahaba Shiner and the Goldline Darter were reversed. This fact was pointed out to Dr. Williams on January 23, by one of my constituents. He was told that this matter would be corrected in the issue of the Register, noting the time of the public hearing and extension of the public comment period on this proposal. As of this date, no such correction has ever been made. I am sure that you can understand the confusion which such a mistake would cause persons interested in this proposed rule. What I cannot understand, is why this matter has never been corrected by the Service. Can you enlighten me?

As the above indicates, this proposal is replete with inaccuracies, false assumptions and biological data which is weak and substandard. I sincerely hope that this is not representative of the work of the Office of Endangered Species. As you know, the Fish and Wildlife Subcommittee on the House Committee on Merchant Marine and Fisheries will soon hold oversight hearings on the implementation of the Endangered Species Act. You may be sure that I will fully inform the Committee of this unfortunate scenario in the hope that other members and their districts will be spared a recurrence.

In conclusion, I urge the Fish and Wildlife Service to withdraw this entire proposal for further study. Rather than an attempt to prevent further eradication of species which have been seriously studied and examined, this proposal seems to be a hasty attempt to save the Cahaba River Basin from further growth and development. I, and many of the people which I represent, object to the apparent misuse of a federal statute and agency in such a manner. After close and careful analysis, I am sure that you will agree.

I am looking forward to hearing from you on this matter at your earliest possible convenience.

With kind regards, I am,

Sincerely,

JOHN H. BUCHANAN, JR.
Member of Congress

JHB/mwc:k

COMMISSIONERS
JOHN C. THOMPSON, Chairman—Forest City
THOMAS A. BATES—Bellevue
JOHN C. BROPHY—Lansing
JOHN G. LINK—Burlington
CAROLYN T. LUMBARD—Des Moines
MARIAN PIKE—Whiting
HERBERT T. REED—Winterset

FRED A. PRIEWERT, Director
Wallace State Office Building, Des Moines, Iowa 50319
515/281-5145

An EQUAL OPPORTUNITY Agency

MAR 21 1978 DC

March 15, 1978

The Honorable Dick Clark
Congress of the United States
404 Russell Office Building
Washington, D.C. 20510

Dear Senator Clark:

The Iowa Conservation Commission has been extremely concerned with the development of a Mississippi River Flyway System that would ensure stability of waterfowl resources. The first Iowa Duck Stamp was sold in 1972. Since 1973, we have sent from $33,000 to $35,000 annually to Canada via Ducks Unlimited to specifically acquire and develop lands for waterfowl nesting. To date slightly over $160,000 has been provided from the Duck Stamp funding effort. The State of Iowa through this department has truly committed itself to achieve this realistic goal. In addition to the state effort, the 67,000 Iowa waterfowl hunters have provided thousands of dollars directly to the DU effort as a result of the many chapter fund raising functions and dinners.

The other area of concern which we feel needs immediate attention is the preservation of the existing wintering areas. One of the prime areas affecting the mallard in the Mississippi Flyway is the Cache River Basin. The mallard is vital to our Iowa waterfowl program. The authorized Corps of Engineers project in the Cache Basin were viewed by us as being detrimental, and we opposed the project on this basis.

In October, 1977, a task force was formed to consider alternatives to the authorized Corps of Engineers Cache River Basin Project. The task force consisted of the following representation:

1. U.S. Fish and Wildlife Service.
2. Environmental Protection Agency.
3. Arkansas Fish and Game Commission.
4. Arkansas Pollution Control and Ecology.
5. Citizens Conservation Coalition.

They reviewed six alternatives for management of the Cache Basin, including the authorized and revised Corps plan. The task force findings and recommendations were recently published in a document entitled, Cache River Basin Arkansas - A Task Force Report.

The Conservation Commission, at the March 6 meeting, voted to support the Ten-Year Leveed Floodway Plan (Plan 5) as recommended by the task force and Mississippi Flyway Council. We feel that Plan 5 addresses both the economical and environmental needs of the basin. We urge your favorable support for this vital waterfowl area.

Fred A Priewert

FRED A. PRIEWERT, DIRECTOR
IOWA CONSERVATION COMMISSION

FAP/WCB/tl

(3954 and 3955)

Cache River Basin, Arkansas - Task Force Recommended Plan

WHEREAS the following Environmental Deficiencies exist with the Corps of Engineers Authorized Plan and the Authorized Plan as Revised:

1. Net projected loss in excess of 100,000 acres of woodlands/wetlands;
2. Channelization of 156 miles of natural stream reaches;
3. Loss of 85% of the Basin's fishery resources;
4. Degradation of the water quality within the Basin and downstream in the White River;
5. Disruption and habitat losses expected to amount to 2,000 acres on three Arkansas Game and Fish Commission Wildlife Management Areas purchased and/or managed with Pittman-Robertson Funding; and
6. Inadequate environmental safeguards relative to easement estates associated with the authorized mitigation plan which is acknowledged by the Corps of Engineers to be sufficient to secure only 20,000 of the authorized 70,000 acres due to inadequate funding.

WHEREAS the Mississippi Flyway Council, recognizing that the authorized Federal project in the Cache River Basin of Arkansas is the single most damaging Corps project to migratory waterfowl in the North American Continent, endorses the ten-year Leveed Floodway Plan, Plan 5, as recommended by the Cache River Basin, Arkansas Task Force Report.

WHEREAS the major attributes of the Recommended Plan are the dedication of 116,500 acres of woodlands/wetlands subject to existing overbank flooding cycles in the Cache River Basin; and that this acreage through a combination of fee and comprehensive easement estates would present a manageable woodlands/wetlands complex in the heart of the mallard terminal wintering area.

WHEREAS additional attributes of the Recommended Plan are:

1. Provide flood control for agricultural production;
2. Provide a 2.2 to 1 benefit to cost ratio with total cost $103,000,000;
3. Would not channelize natural stream reaches;
4. Would maintain or improve existing water quality and comply with existing water quality standards through use of buffer zones and sediment retention structures;
5. Would improve fishery resources within the Basin's natural stream reaches; and
6. Would increase the acreage of woodlands/wetlands in the basin.

NOW, THEREFORE, BE IT RESOLVED that the Mississippi Flyway Council respectfully urges and requests that Congressional delegations of the represented states support and seek authorization for immediate implementation of the Recommended Plan.

Maury County
Taylor Rayburn, County Judge
Columbia, Tennessee 38401
Phone: 388-6233

April 12, 1978



"Old South Charm - New South Progress"

The Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Senate Environment and Public Works Committee
Washington, D. C. 20510

Dear Senator Culver:

We the residents of Middle Tennessee area are in the process of trying to complete the Duck River Dam project. This project was conveived during the 1960's by the Congress of the United States and has slowly but surely been funded, sometimes under funded from its very beginning.

This is one of the most beautiful areas in the entire world sometimes called by poets, "the Dimple of the Universe". It is a historic part of this nation. Tennessee has furnished three Presidents, all three of whom came from or lived in Middle Tennessee area. Two of these Presidents, James K. Polk and Andrew Johnson lived in Columbia, Tennessee where the last part of Duck River project is now being completed.

We are conservationists in this area and have great respect for this beautiful environment and all the cretures who reside here. We know that 90% of all earths creatures have long since vanished from the face of this earth. Man alone is the only creature still here in almost the same form in which he began.

We have filed environmental impact statements which have been accepted by federal courts and by all the agencies of the federal government including both houses of Congress and indeed the President. There are four counties directly involved in the Duck River Dam project and perhaps two or three more who will benefit greatly from its building. Our goals clearly state ar to eliminate a great flood problem in this entire area that has seen million of dollars in damages over the years. In addition, the State of Tennessee h condemned some 80% of our springs and wells in this area as being polluted and unfit for animal consumpation.

The dam at Columbia will bring several million tourists to this area. It will furnish recreation of all types, including fishing, boating, swimming, and all water sports. It will also bring new industry to this area, which in the next few years will need new industry, we can produce some power if it becomes necessary. As a side benefit it will allow us to keep our

children at home instead of seeking employment elsewhere.

As to the endangered species, we have successfully transplanted the mussel into other areas where it thrives and we intend to make every effort to see that no species shall be endangered.

We are putting Sixteen and two-tenths million dollars of our own money into this project which as you know is unusual.

Sir, our whole future is wrapped up in the successful completion of the Duck River Dam project. We promise you to potect every creature concerned in this project, including man.

We hope you will look at our record and the beautiful environment in which we live and join with us in this great project which the congress has seen fit to build. Two years ago, we received 377 votes to 28 against in the House of Representatives and 81 for and 5 against in the Senate. Every speaker of the house has supported from the dams inception, as has the leadership and committee of the Senate.

With your help, we can finish this beautiful and much needed project.

Thank you very much.

Respectfully,

Taylor Rayburn
Maury County Judge

TR:mjp

cc: Senator Edmund Muskie, Maine
Senator Malchom Wallop, Wyoming
Senator Howard Baker, Jr.
Senator James McClure, Idaho
Senator Kisester Hodges, Arkansas
Senator John Stennis
Senator Jim Sasser

J. A. BIGGS
Mayor

CALOWAY CRUNK
Councilman, First Ward

MAC VAUGHN
Councilman, Second Ward

M. R. BRANDON
City Judge, Recorder

City Of Lewisburg

J. L. MOSS, JR.
City Manager

A. C. SWEENEY, JR.
City Treasurer

RALPH WHITESELL
Councilman, Third Ward

JOHN C. LEONARD, M.D.
Councilman, Fourth Ward

DENNY WALKER
Councilman, Fifth Ward

STEVE BOWDEN
City Attorney

359-1544

Lewisburg, Tennessee 37091

April 10, 1978

The Honorable John C. Culver, Chairman
Subcommittee on Resources Protection
Senate Enviroment and Public Works Committee
Washington, D. C. 20510

Dear Senator Culver:

Please let these comments be apart of the Senate Subcommittee records regarding the Endangered Species Act, April 13-14, 1978.

The citizens of our area are greatly concerned with the way the ESA is being used and to a greater extent abused. The Duck River Dam Project - TVA Columbia and Normandy Dams in Middle Tennessee - was started in 1968. Presently the Project is 70% complete. We do not believe that the same Congress that authorized, and funded, this project intended for it to be halted by the inactment of the ESA.

Senator Culver, we share all peoples concern for our environment but the time has come to amend the ESA possibly with a "grandfather clause" so that the worthwhile public interest projects - like the Duck River Project; can be completed.

Sincerely,

J. L. Moss, Jr.
City Manager

JLM,Jr./pal

cc. The Honorable Howard Baker
The Honorable Jim Sasser

J. A. BIGGS
Mayor

CALOWAY CRUNK
Councilman, First Ward

MAC VAUGHN
Councilman, Second Ward

M. R. BRANDON
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J. L. MOSS, JR.
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359-1544

Lewisburg, Tennessee 37091

RALPH WHITESELL
Councilman, Third Ward

JOHN C. LEONARD, M.D.
Councilman, Fourth Ward

DENNY WALKER
Councilman, Fifth Ward

STEVE BOWDEN
City Attorney

April 11, 1978

The Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Senate Environment and Public Works Committee
Washington, D. C. 20510

Dear Sir:

The following statements on the Columbia Dam I wish to have entered into the record:

1. The Endangered Species Act was passed in December 1973 in an effort to add balance to a world where the scales had tipped in favor of economic growth and development to meet man's needs without regard to the loss of various species of fish, wildlife, and plants. The statute speaks of development "untempered by adequate concern and conservation."

2. The act, as interpreted by the Sixth Circuit Court of Appeals in the snail darter case (Hill v. TVA) which halted the Tellico project in an advanced stage of completion, has turned the statute into an absolute and inflexible command that precludes balanced decisionmaking. The needs of the species must always prevail.

3. Species preservation and the maintenance of the diversity of life are important goals; yet the other needs of man will sometimes require the development of all or a portion of the resources which a particular species inhabits. We must strive to conserve our resources as we develop them.

4. Section 7 of the act should be amended in order to restore its original purpose of providing balance between preserving endangered and threatened species and economic growth and development.

5. The inflexibility of section 7 and any other problems with the act should be corrected before legislation is enacted this year to authorize appropriations for future years. Presently, appropriations to carry out the Endangered Species Act are authorized only through September 1978. Before any reauthorization legislation is enacted, it should be modified to include the amendments to the act which are necessary to solve these problems.

The Columbia Dam portion of the Duck River project in middle Tennessee is facing a similar problem as a result of the listing of several species of mussels and snails as endangered. This project has the strong support of state and local governments, a support which includes the contribution of over $16 million of the project costs. The Normandy Dam component of the project has already been completed and work on Columbia which began in August 1973 is approximately one-fourth complete. The project will provide needed flood control, recreation, water supply, and other benefits for a growing area.

The Duck River project is considered a key element in the coordinated plan for the unified development and use of the natural resources of the four-county Upper Duck River area and is being carried out jointly by TVA and local governmental and community organizations, including the Tennessee Upper Duck River Development Agency, which was created for this purpose by the Tennessee Legislature, the Upper Duck River Development Association, and the Upper Duck River Regional Planning Commission.

When completed, the Duck River project will reduce destructive floods on urban and agricultural lands; provide a supply of water of improved quality for residential, commercial, and industrial use; create new jobs; and provide a broad range of new recreational and fish and wildlife development opportunities. On July 1, 1971, the Tennessee Upper Duck River Development Agency entered into an agreement with TVA to, among other things, repay $16,200,000 of the project's costs attributable to the water supply being made available to the four-county water system and to use its best efforts to secure $50,000,000 of non-Federal investment in approved development projects for the area. The Development Agency, in our conjunction with area cities and water systems, has already paid over $1,200,000 into a trust fund for that purpose. Local communities have also made substantial investments in the expansion of the water supply and waste water treatment systems, in the improvemnt of roads, and in other non-Federal development commitments. More than $8,500,000 has been invested in the expansion of the water supply system alone. Failure to complete the Columbia Dam portion of the project would clearly disrupt regional planning activities in the Upper Duck River project area, as well as subject the people and their homes, businesses, and farms to the ravages of floods along the Duck River. It would also restrict both the quality and quantity of their future water supply, with a resulting loss of industrial job opportunities in the area.

Yours truly,

CITY OF LEWISBURG

J. A. Biggs

J. A. Biggs
Mayor

JAB/pal

Shelbyville Water System
P. O. BOX 530
SHELBYVILLE, TENNESSEE 37160

1978 APR 17 AM 9:59

April 11, 1978

The Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Senate Environment and Public Works Committee
Washington, D.C. 20510

Re: Changes in the Endangered Species Act

The Shelbyville Board of Power, Water and Sewerage are concerned about changes in the Endangered Species Act. We think it is absolutely necessary that the Act be amended or modified to provide proper coordination with the funding of public projects. Our Board serves the City of Shelbyville and surrounding rural areas with electric power, water and sewerage services.

We are particularly concerned with the Columbia Dam now under construction by TVA as a part of the Duck River Project. This Project is threatened under the Endangered Species Act because of so-called endangered species of mussels and snails.

A water control system on Duck River is a must. It is vital to the future growth and economic development of the area. The Duck River Project is about 70% complete. Normandy Dam was completed in 1976 and Columbia is approximately 35-40% complete. A water control system on Duck River will provide flood control, stable water supply, improved water quality for residential, commercial and industrial uses, create new jobs and provide a broad range of new recreation, fish and wildlife opportunities.

Work on the Columbia Dam was started in August, 1973 before the enactment of the Endangered Species Act in December, 1973. The complete inflexibility and other problems with the Endangered Species Act should be corrected. We feel that substantial changes in the Act must be made which will allow a sensible weighing of values. We strongly recommend amendments to the Act which would coordinate the Act with the funding of Federal, State and local projects. We are convinced that it was not the intent of Congress that the Endangered Species Act impair public works projects.

I respectfully request this letter be made a part of the record.

Sincerely,

SHELBYVILLE POWER, WATER AND SEWERAGE SYSTEM

Theron A. Bracey

Theron A. Bracey, Manager

cc: Honorable Howard Baker
Honorable Jim Sassar.

AMERICAN MINING CONGRESS
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WASHINGTON
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*Honorary

April 11, 1978

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The Honorable John C. Culver
Chairman
Subcommittee on Resource Protection
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

The Endangered Species Act of 1973 should be amended. The American Mining Congress urges the Subcommittee on Resource Protection to consider amendments which will maintain the goals of the Act while providing a method for balancing the benefits of achievement of these goals with the other equally important needs of the United States. Specifically, the prohibition in Section 7 on actions by federal agencies should be removed.

A witness for the American Mining Congress, Jerry L. Haggard, testified before the Subcommittee on July 28, 1977 during the oversight hearing on the Endangered Species Act in the first session of this Congress. A copy of that statement which sets forth the concerns and recommendations of the American Mining Congress is enclosed with this letter.

We did not request an opportunity to testify at the Subcommittee's April 13 and 14 hearings on reauthorization and implementation of the Endangered Species Act of 1973. This is not indicative of a waning of interest. The problems discussed in our previous statement still need to be addressed by Congress and the American Mining Congress urges the Subcommittee to adopt the amendments recommended in that statement.

Sincerely,

J. Allen Overton, Jr.

J. Allen Overton, Jr.
President

Enclosure

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J ALLEN OVERTON, JR.
PRESIDENT

Statement of the

AMERICAN MINING CONGRESS

In Regard to the Endangered Species Act (PL 93-205)

Before the

Resource Protection Subcommittee
Public Works Committee

United States Senate

Washington, D.C.

July 28, 1977

Mr. Chairman and Members of the Subcommittee:

The American Mining Congress appreciates this opportunity to assist your Subcommittee in identifying, and considering solutions to, the severe problems which are being experienced in the operation of the Endangered Species Act of 1973. The American Mining Congress is a national trade association of United States mining companies which engage in mineral activities on the public lands of the United States to which the Endangered Species Act applies. My name is Jerry L. Haggard from the law firm of Evans, Kitchel & Jenckes, P.C., Phoenix, Arizona, and a member of the Public Lands Committee of the American Mining Congress.

As with much environmental legislation enacted in recent years, the Endangered Species Act speaks in

idealistic and absolute terms to accomplish desirable but limited goals without recognizing the necessity to balance the achievement of these goals with other equally important needs of the United States. This is the sort of legislation which receives much public and political support in the abstract but which creates extreme problems when it becomes necessary in the real world to balance those ideals with the other needs of the United States.

There has now been sufficient experience and litigation involving the Endangered Species Act that the need for amendment has been made clear. This Subcommittee is to be commended for holding these hearings in recognition of that need. The need for amendment arises from problems in the terms of the Act, in its administration, and in its judicial construction. We have attached to this statement specific proposed amendments to the Act and we will discuss generally in this statement the needs and purposes for these amendments.

In considering amendments which should be made to the Endangered Species Act, we urge this committee to recognize that, not only must a statute be designed to carry out its purpose, it must also be designed to safeguard against its purpose being abused. It is as important

for Congress to place a limit on the authority to achieve worthwhile goals as it is to provide the authority. Otherwise, as has been seen with the Endangered Species Act, advantage will be taken of the statute to accomplish other unintended purposes and the resulting backlash can destroy what could have been achieved by the statute.

Section 7 Problems.

We invite the attention of the Subcommittee first to the provisions of the statute which have created the greatest difficulties. Section 7 of the Act has been construed to require Federal agencies to subordinate all other national policy and statutes for which they are responsible to the preservation of endangered and threatened species. This section provides in part:

> "All other Federal departments and agencies shall, . . . utilize their authorities in furtherance of the purposes of this chapter . . . by taking such action necessary to insure that actions authorized, funded, or carried by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species . . ." (16 USC § 1536).

Some of the cases which have applied the provisions of this section have gained national recognition for their extreme results. Although this Subcommittee is undoubtedly aware of

these cases, a very brief review may be helpful. One of the first cases construing Section 7 enjoined the construction of a Federally subsidized highway in an area inhabited by the Mississippi Sandhill Crane which the Fish and Wildlife Service designated (one day before the trial of the case) as a 100,000 acre critical habitat. National Wildlife Federation v. Coleman, 529 F.2d 359 (5th Cir. 1976.) The case which, of course, has received the greatest notoriety because of its most extreme effect is Hill v. Tennessee Valley Authority, 549 F.2d 1064 (6th Cir. 1977). In that case, the 6th Circuit permanently enjoined further construction on the 90% completed $100 million Tellico Project. The court held that the absolute provisions of Section 7 required the project to be enjoined because, applying the prohibition of the regulations, the project:

> ". . . might be expected to result in a reduction in the number or distribution of [the snail darter] of sufficient magnitude to place the species in further jeopardy, or restrict the potential and reasonable expansion or recovery of that species." (40 Fed. Reg. 17764-17765 (1975) at page 1070.)

The court, finding that the Act requires enforcement to be taken to the logical extreme, stated:

> "So long as the snail darter remains on the endangered species list and its critical habitat comprises miles .5 through 17 of the Little Tennessee River, we have no recourse but to enjoin creation of the reservoir." at page 1074.

Other projects which are being threatened by endangered species designations include the Lukfata Dam in Oklahoma ($31.5 million) and the $1.3 billion Dickey-Lincoln Hydroelectric Project in Maine, and others. In addition to Section 7, there are other provisions of the Endangered Species Act which, if not amended, could lead to the same result.

Even before the Tellico Dam decision, the Fish and Wildlife Service had commenced applying the Endangered Species Act in a very forceful manner through regulations and policy announcements. In the proposed regulations published in the Federal Register on January 26, 1977 (42 Fed. Reg. 4868), the Fish and Wildlife Service takes the following positions:

1. Section 7 requires that every action proposed by every Federal agency which might modify a critical habitat or listed species must be presented to the Fish and Wildlife Service for advice.

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2. Section 7 requires that the Endangered Species Review procedures must be in addition to National Environmental Policy Act reviews.

3. Section 7 prohibits the exemption of advanced Federal projects from review.

4. Applying Section 7, the Fish and Wildlife Service has developed the concept of "critical habitat" to mean the present habitat of a listed species plus additional areas for expansion.

Further illustrating the inflexibility of Section 7 and the view that the Act supercedes all other national interests are the following statements of the Fish and Wildlife Service in proposing the critical habitat for the grizzly bear on November 5, 1976:

> "A Critical Habitat designation must be based solely on biological factors . . . . It would not be in accordance with the law to involve other motives; for example, . . . to reduce a delineation so that actions in the omitted area would not be subject to evaluation." (41 Fed. Reg. 48758).

Administrative Problems.

The pervasive and extreme nature of the Endangered Species Act has been extended by the administrative

system being established by the Fish and Wildlife Service. The system has developed into a multi-step process which leads toward excessive listings of species, excessive designations of critical habitats, inadequate opportunities for the expression of public opinions and excessive restrictions on land uses which may be more important than their effects on listed species.

Abuse For Other Purposes.

The first step in the system is the process for the listing of endangered or threatened species. This may begin by anyone petitioning the Secretary and providing "substantial evidence" for the listing of a species as endangered or threatened. Recognizing that many petitions are submitted to carry out the legitimate purposes of the Endangered Species Act, others are not. For example, in the Tellico Dam case, environmental groups first succeeded in stopping work temporarily on the project by suing under the National Environmental Policy Act. When that injunction ran out, some of the same interests involved in that suit caused a petition to be filed to list the snail darter as an endangered species which led to the present injunction under the Endangered Species Act. It is reasonable to conclude that the motive for this action was more to

stop the development than to save the snail darter. Similar actions are being carried out by environmental groups in other parts of the country and the probability exists that this device to halt land uses will be used with increasing frequency.

Criteria For Listing Species.

The criteria in the statute and regulations for listing endangered species or threatened species is extremely broad. The statute defines "endangered species" to mean any species which is in danger of extinction throughout all or a significant portion of its range, and a "threatened species" is any species which is likely to become an endangered species. (16 USC § 1532). These terms have been expanded by the Fish and Wildlife Service regulations through an example of the "ABC sparrow". In 50 C.F.R. § 17.50, the example is given as follows:

> "Suppose the ABC sparrow is listed as endangered in only a portion of its range. Within the meaning of the Act, the ABC sparrow is defined by geographical boundaries as a 'species'. The ABC sparrow which occurs beyond those boundaries is a different species, even though it is identical, except in location, to the listed species."

The opportunities for listing unlimited numbers of species through this device is clear. Almost every species of

plant or animal has adapted to certain climates, latitudes and altitudes, and, while abundant in their central area, their population may grade from abundance to zero in other areas. If these fringe areas are regarded as being a "significant portion" of its range, the species, although abundant in some areas, may be listed as endangered or threatened. The result is that the entire United States could be covered with separate fringe areas by species grading from abundance to zero population.

Next comes the "look-alike problem". The statute (16 USC § 1533(e)) authorizes the secretary to treat any species as an endangered or threatened species even though it is abundant, if he finds that such species resembles an endangered or threatened species. This means that, if an abundant species has undergone a sufficient mutation to create a similar but separate species, both species must be declared endangered or threatened. For example, because four endangered species of the genus Allium have been proposed for listing among the 1,700 endangered and threatened plants, the entire genus of this wild onion with its 70 species in North American might have to be placed on the endangered or threatened list.

When the Endangered Species Act was passed in 1973, it appeared that Congress had in mind that the number of animal species threatened with extinction in the United States was in the range of 100 and in the range of 300 in foreign countries. (Senate report No. 93-307, July 6, 1973, Commerce Committee.) By 1975, there were over 400 animal species listed in the United States. By 1976, 598 animals had been listed and the Fish and Wildlife Service proposed the listing of 1,700 plants. (41 Fed. Reg. 27381.) As of October, 1975, the Department had received 19 petitions requesting the listing of 23,962 species of domestic and foreign plants and animals. Now, figures in the area of 200,000 to 300,000 species worldwide are being mentioned as qualifying for threatened or endangered status. This demonstrates clearly that the Endangered Species Act must be amended to limit the number of species which may be listed as endangered or threatened.

Critical Habitat.

Once an endangered or threatened species has been listed, the approach of the Fish and Wildlife Service is that it is "both necessary and desirable, whenever and wherever possible, to designate 'critical habitats'" for those species. (40 Fed. Reg. 17765.) The FWS defines "critical habitat" to mean "any... area...the loss of which

would appreciably decrease the likelihood of the survival and recovery of a listed species...Critical habitat may represent any portion of the present habitat of a listed species and may include additional areas for reasonable population expansion." (42 Fed. Reg. 4871.)

Once the endangered species has been listed and the critical habitat has been designated, Section 7 of the Endangered Species Act applies to all Federal, or Federally assisted, actions which take place in the area and prohibits actions which jeopardize the continued existence of the endangered or threatened species or results in the modification of their habitat. The result of this prohibition has been seen in the cases mentioned above.

Administrative Procedures Preclude Meaningful Comment.

One of the difficulties which has arisen in this system established by the FWS is the staged sequence of the steps in the system. First, the listing of endangered or threatened species is proposed for public comment. The mass of the public does not have the technical ability or information to make knowledgeable comments on such proposals. Although the statute requires that there must be "substantial evidence" to warrant consideration for listing a species (16 USC § 1533(c)(2)), at least some of the

substantial evidence which has been accepted has been limited to a few cryptic notes on the occurance of the species. Further, attempts to obtain from the FWS the basis on which such proposals are made have been met with little success.

After a species has been established as endangered or threatened, the FWS establishes the critical habitat for that species. It is not until this point is reached that the communities and persons within or near the designated critical habitat realize that they have been affected by the previous listing of the species. For example, the bald eagle has been listed as an endangered species in 48 states and a threatened species in 5 others. (41 F. R. 28525.) Most of the communities and people who will be affected by such listing will not become aware of the effect of the listing and will have less reason to comment on the proposed listing until the critical habitats are designated. It is then too late to have any influence on the species listing.

Meaningful comment on proposed designations of critical habitats is precluded further by there being no way of determining what restrictions Federal agencies will choose, or will be required, to apply in these areas. For example, in the proposed designation of the grizzly bear

critical habitat, the FWS states only that "there may be many kinds of actions which can be carried out within the critical habitat of a species which would not be expected to adversely affect the species." (41 Fed. Reg. 48708). The FWS states only that it is the responsibility of the Federal agency having jurisdiction over the area to control the actions in the critical habitat. Such statements are of no assistance when the public is not advised of the kinds of activities which cannot be carried out in the critical habitat.

Excessive Power of Fish and Wildlife Service.

This leads to the final step in the system which provides the FWS with a near veto power over proposed actions by other Federal agencies based upon the sole consideration of protecting endangered species. In the January 26, 1977 edition of the F. R. (42 Fed. Register 4868), proposed provisions for "inter-agency cooperation" were published by the FWS. These regulations would require each federal agency proposing to take an action which may affect a listed species to carry out a formal consultation process with the FWS. The FWS provides biological opinions and recommendations on the effect of the proposed actions and "it will then be the responsibility of the Federal agency to determine whether and how to proceed in light of

its Section 7 obligations." The circle is completed by reference to Section 7, as noted above, which prohibits any federal agency from carrying out any action which would jeopardize the existence of the endangered species or destroy or modify the habitat of the species. Once the FWS provides its opinion that another agency's proposed action will adversely affect a listed species or its habitat, Section 7 applies to prohibit the action regardless of other national benefits the action would provide.

The Fish and Wildlife Service states assurances that it has no authority to dictate to other Federal agencies the actions necessary to comply with Section 7. Although it is true that the statute provides no such authority, the effective power of the FWS to do so has been demonstrated. In National Wildlife Federation v. Coleman, the court enjoined the Secretary of Transportation from continuing the highway project until the Secretary of the Interior (Fish and Wildlife Service) approved the project.

Furthermore, once the FWS presents negative comments on a proposed action, the citizens suit provisions of the Act (Section 11(g)) provide adequate means to halt any action of a federal agency on the basis of endangered species protection alone without any regard to other

responsibilities of the agency. The citizen suits can be brought by any citizen whether they have an interest in the species or whether their sole purpose is to stop the federal action by any means. The most recent example of this is in the Tellico Dam case, where the court observed that this was the third time in five years in which environmentalist have attempted to stop the Tellico Dam and the reservoir project. They succeeded through Section 7 of the Act.

Conclusion.

Mr. Chairman, we urge your committee to recognize the extremely serious threat which the Endangered Species Act and its administrative system pose to the United States. Although a rational system to prevent unnecessary harm to endangered or threatened species is a desirable national goal, this goal must be balanced with other equal or more important programs and goals which the United States government must carry out. We urge your Subcommittee to give serious consideration to, and adopt, the amendments we have attached to this statement.

Thank you for your attention and for the opportunity for the American Mining Congress to present to the Subcommittee these changes which should be made in the Endangered Species Act of 1973.

AMENDMENTS PROPOSED BY

THE AMERICAN MINING CONGRESS

TO THE ENDANGERED SPECIES ACT OF 1973

1. Amend the first sentence of paragraph (2) of Section 3 (16 USC § 1532(2)) to read as follows:

> "The terms 'conserve', 'conserving', and 'conservation' mean to use and the use of all methods and procedures which are consistent with other national policy and law to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary."

2. Delete the phrase, "throughout all or a significant portion of its range" in paragraphs (4) and (15) of Section 3 (16 USC § 1532(4) and (5)).

3. In paragraph (11) of Section 3, change the word "any" in the first and second lines to "all".

4. Delete the following phrase from subsection (c)(1) of Section 4 (16 USC § 1533(c)(1)):

> "and shall specify with respect to each such species over what portion of its range it is endangered or threatened."

5. Add the following phrase to the first sentence in paragraph (d) of Section 4 (16 USC § 1533(d)):

> "and which are consistent with other national policies and laws."

6. In the first sentence of paragraph (e) of Section 4 (16 USC § 1533(e)) delete the words "he deems necessary" and insert the following in lieu thereof:

> "necessary to protect endangered species or threatened species."

7. Add the following sentence to paragraph (e) of Section 4 (16 USC § 1533(e)):

> "Such species may be treated as an endangered species or threatened species only within the same range inhabited by the endangered or threatened species."

8. Add the following subparagraph (4) to paragraph (f) of Section 4 (16 USC § 1533(f):

> "Each publication in the Federal Register of a proposed listing of each endangered or threatened species shall be accompanied by the publication of proposed critical habitat designations for such species and shall also be accompanied by criteria sufficiently specific to determine the nature of actions which would and would not jeopardize the continued existence of such endangered species or threatened species."

9. Amend Section 7 (16 USC § 1536) to read as follows:

> "The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this chapter to the extent that such utilization does not conflict

with the purpose of such other programs or with other national policies and law. All other Federal departments and agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter to the extent that such consultation or utilization does not conflict with the purposes of such other authorities or with other national policies and law."

10. Delete paragraph (g) of Section 11 (16 USC § 1540(g)).

11. Add the following new section to the Endangered Species Act:

"Section 18. Notwithstanding any other provision of this Act or of any other law, an action taken by any Federal department or agency involving the designation of endangered or threatened species or of any area or areas as critical habitat of endangered or threatened species shall be deemed to be a major Federal action significantly affecting the quality of the human environment requiring the filing of an environmental impact statement under National Environmental Policy Act of 1969. Such action shall also require the preparation of an economic impact statement considering, among other things, the following categories of impact:

1. Cost impact on consumers, businesses, markets and federal, state and local governments;

2. Effect on productivity of wage earners, business, or government at any level;

3. Effect on competition;

4. Effect on supplies of important resources, products, or services."

ADVANCING VOLUNTARY LEADERSHIP IN A CHANGING WORLD

Chamber of Commerce of the United States

LEGISLATIVE ACTION VICE PRESIDENT
HILTON DAVIS

202 · 659-6140

1615 H STREET, N.W.
WASHINGTON, D.C. 20062

April 14, 1978

The Honorable John Culver, Chairman
Subcommittee on Resource Protection
Committee on Environment and Public Works
United States Senate
Washington, D. C. 20510

COPY

Dear Mr. Chairman:

Attached is a statement expressing the views and recommendations of the Chamber of Commerce of the United States on The Endangered Species Act of 1973.

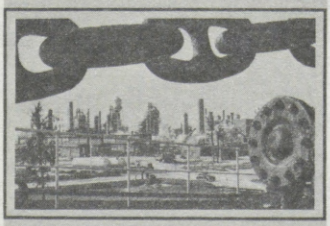
We will appreciate your consideration of these views and request that the statement be made a part of the record.

Cordially,

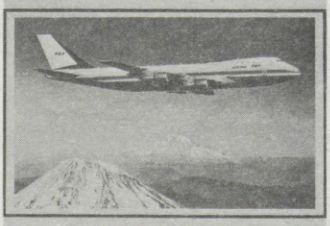
Hilton Davis
Vice President
Legislative Action

cc: Subcommittee Members
Kathleen Korpon
James Range











Statement of the

CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA

on: The Endangered Species Act of 1973

to: Subcommittee on Resource Protection, Senate Committee on Environment and Public Works

by: Linda M. Anzalone

date: April 14, 1978

STATEMENT
on
THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT OF 1973
for submission to the
RESOURCE PROTECTION SUBCOMMITTEE
of the
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
for the
CHAMBER OF COMMERCE OF THE UNITED STATES
by
Linda M. Anzalone*
April 14, 1978

The Chamber of Commerce of the United States is the largest federation of business and professional organizations in the country. The Chamber represents more than 3,700 trade and professional associations and chambers of commerce and has a direct membership of over 69,000 business firms.

We recognize the need to insure the survival of both threatened and endangered species. Protection of our vanishing flora and fauna is an important endeavor, worthy of the attention it has been given by the Congress and by this Committee.

Congress now has the opportunity to make the Act more workable. Toward this end, the Chamber has two basic recommendations. First, there should be more careful definition of the terms of the Act. Second, there should be a mechanism to resolve inevitable conflicts between this statute and other federal program objectives.

When the Endangered Species Act was passed, the public's understanding of the problem was considerably more limited than it is today. In 1973, 109 American species were listed. Congress rightly felt there was a need to increase the protection of such species as the bald eagle -- our national symbol -- the whooping crane, the black footed ferret, and the grizzly bear.

The Act further provided that private citizens could petition for the listing of other less-familiar species; consequently, by 1975, there were 24,000 plants and animals

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* Associate Manager, Resources and Environmental Quality Division, Chamber of Commerce of the United States

suggested for the threatened or endangered categories. The task of listing these species is enormous. It could take the seven scientists of the Office of Endangered Species hundreds of years to complete the effort. If you consider the nearly 100,000 insects in North America, many tiny creatures with half-acre distributions might also be eligible for listing. Noah, himself, would have found the task an impossibility.

The following are recommendations that should avoid problems in the immediate future.

Definition of Terms

It is apparent that several key terms in the Act need better definition. In particular, Congress should give further guidance as to the meaning of the terms "species," "range," "significant," "portion of range," "habitat," "critical habitat," "endangered," and "recovery." Variations in the interpretation of these key terms will hinder the effectiveness of the Act, and cause uncertainty and misunderstanding on the part of business and federal program managers faced with potential endangered species problems. To avoid unnecessary litigation and delay, clarification of these terms must be provided.

The determination of "critical habitat" is defined in the Endangered Species Technical Bulletin of August, 1976, as that area of land, water, and airspace required for the normal needs and survival of a specie. "Needs", however, is defined as that space needed for "growth, movements, and behavior; food and water; sites for breeding and rearing of offspring; cover or shelter; and other biological and physical requirements."

By prohibiting any federal agency from making any modification which would be detrimental to a given specie in any area designated as critical habitat, Section 7 becomes the Act's sharpest cutting edge. It makes the Act so inflexible that misuse is not only possible, but very probable. We recognize that critical

habitat need not be a single use of land. There may be many kinds of actions which can be carried out within the critical habitat of a species that would not be expected to result in a reduction in the numbers or distribution, or otherwise adversely affect such species. However, there is no definition of what constitutes a permissible action in an area designated as critical habitat. Without such definition, the result will be continued confusion and unequal application of the concept.

A Balancing Mechanism

One of the concepts underlying the Endangered Species Act was the fact that man has little understanding of the interlocking roles played by different species in our ecosystem. How important is a given species to man's well-being, or to that of other species? The value of a species is difficult to measure. If the value is purely esthetic, it is almost impossible to quantify. But, if part of the value lies in its support of other forms of life, then a different measurement might result. However, no method was provided in the Act for measuring the importance of the snail darter, or the furbish lousewort. We are not suggesting that a numerical standard be provided, only that a mechanism for conflict resolution be devised.

Section 7 requires that, once a critical habitat has been declared for a listed species, all federal or federally assisted action which might jeopardize the continued existence of the species is prohibited. Thus, Section 7, which has not yet been fully implemented, compels all federal agencies to subordinate all other policy or statutes to the Endangered Species Act.

While relatively few conflicts have arisen thus far, it is apparent that, as more species are listed and more critical habitats are designated, confrontations between federal agencies and federally assisted programs will increase. There are now 172 species listed as endangered or threatened. There are an additional 60 or 70 for which rules have been proposed. There are some 1700

plant species which are under notice of review by the Fish and Wildlife Service. If particular habitats were to be designated as critical for each of these species, conflicts with other program objectives are sure to arise.

How are such conflicts resolved. There is, at present, an informal negotiating process in which critical habitats are more carefully delineated, and through which certain actions can be deemed consistent with the maintenance of a habitat or a species within a habitat. However, such informal arrangements are uncertain and, perhaps, unfair for other program managers.

Therefore, there should be a formal mechanism by which the Secretary of Interior can determine that a proposed action by his department, or assisted by his department or by any other department or agency, significantly outweighs the benefit of maintaining the critical habitat. Since it is difficult, if not impossible, to quantify the benefits and values of a given species or a given habitat, any balancing mechanism should be weighted toward the maintenance of the species.

We are not proposing that a Secretarial determination be made as to whether a species is, in fact, endangered. That decision must be left to the biologists.

We are proposing that the Secretary, mindful of his role as protector of our vanishing plant and animal life, be empowered to make judgements as to whether a proposed action has sufficient social and economic benefits to outweigh significantly the need to preserve a given species in a given location where a conflict exists.

No such flexibility exists in the law today. No matter how great the proposed action, or how insignificant a species may be, the law, as currently worded, allows no exception where the proposal jeopardizes the existence of that species.

A properly considered and properly worded mechanism is needed to allow the Secretary of Interior, or the Secretary of Commerce, to make appropriate exceptions to the requirements of

Section 7 to permit federal actions or federally assisted action to occur where:

1. No reasonable alternatives to the proposed action exist.
2. The benefits of the proposed action are significantly greater than the benefits of maintaining the critical habitat.

Without such a mechanism, we foresee growing conflicts between the laudable goal of maintaining a variety of our wildlife and the need to maintain a healthy economic basis. We wish to diminish such conflict by providing a reasonable and rational means of administrative resolution.

Conclusion

Let me reiterate that the National Chamber has no quarrel with the purposes of the Endangered Species Act. We wish only to avoid the problems we foresee in its administration. We stand ready to work with the environmental community and this Committee, to help devise an appropriate method to resolve those problems equitably.

City & County Bank

OF MONROE COUNTY

DAVE CRAIG
PRESIDENT

April 7, 1978

The Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Senate Environment and Public Works Committee
Washington, D.C. 20510

Dear Mr. Culver:

Scrapping the Tellico project, which has been built at a cost well in excess of $100 million, to avoid affecting the darter doesn't make sense. There is a limit to the number of dollars taxpayers can afford to pay for species protection--let alone the vast array of federal goals and programs--and this waste is entirely unwarranted. This is a lot of money when there are children in this country who are going without adequate food, clothing, shelter, and a decent education. The act must be amended to provide for better allocation of scarce resources. With adequate planning and the addition of flexibility to this act, we can achieve a much higher level of environmental and species protection for the money spent.

The Endangered Species Act was passed in December 1973 in an effort to add balance to a world where the scales had tipped in favor of economic growth and development to meet man's needs without regard to the loss of various species of fish, wildlife, and plants. The statute speaks of development "untempered by adequate concern and conservation."

The Tellico project/snail darter controversy illustrates the basic problem with the Endangered Species Act. Congress first funded this project in 1966, and construction has been underway since March 1967. The work was over half completed when the Endangered Species Act was passed and, more importantly, nearly 80 percent completed at the time the snail darter was found to be a separate species and listed as endangered. The project has been halted even though TVA has done everything possible to reconcile the continued existence of the snail darter with the completion, including an apparently successful transplant of the 3-inch fish to the Hiwassee River. The needs of the people of east Tennessee, who have worked hard for the project and who are now on the verge of realizing its benefits, are considered secondary and unimportant under this law.

C&C

P.O. BOX 71, SWEETWATER, TENNESSEE 37874 • TELEPHONE 615/337-3571

The problem is broader than Tellico. The Columbia reservoir portion of the Duck River project may be halted because of the discovery of an endangered species of mollusk. These projects are not alone. We understand that the Tennessee-Tombigbee Waterway and the Dickey-Lincoln projects, among others, are running into trouble. On a national level, the Sixth Circuit's decision means that once a determination has been made that a Federal project, or even a private project that receives Federal funds or a Federal permit, would adversely affect any endangered or threatened species or its critical habitat in any way, the project must automatically give way. It doesn't matter whether the activity is still on the drawing board or is within hours of completion. Indeed, the continued operation of a fully completed facility that is affecting a listed species or its habitat would also appear to be vulnerable to attack under this law. The money invested, the availability or lack of alternatives, costs, and the needs of man are all irrelevant. Minnows, snails, and bugs are now more important than man.

The Endangered Species Act at present makes no distinction based on the relative importance of the species involved or the number of members affected. The inflexibility and any other problems with the act should be corrected before legislation is enacted this year to authorize appropriations for future years. Presently, appropriations to carry out the Endangered Species Act are authorized only through September, 1978. Before any reauthorization legislation is enacted, it should be modified to include the amendments to the act which are necessary to solve these problems.

The overwhelming majority of the people of the area support the Tellico project. This is shown by opinion polls (including one conducted by Representative Duncan), as well as by three joint resolutions adopted by overwhelming majorities of both houses of the Tennessee Legislature with the concurrence of the governor endorsing the project and recommending to Congress and the President that ti be completed as designed.

The people of this three-county area need decent paying jobs—opportunities to improve their lives—and not snail darters, or rafts for the leisure class to float the river. Monroe County has an unemployment rate of 12 percent, the second highest in the State of Tennessee. Industrial development creating some 6,600 jobs in an area suffering from outmigration and underemployment is the very heart of the very heart of the Tellico project. Three quarters of the nearly 20,000 persons who left the three-county area between 1950 and 1970 were the younger, potentially more productive people in the 15- to 29-year-old age group.

I would appreciate your concern for this matter.

Sincerely,

Dave Craig
President

THE GARDEN CLUB OF AMERICA
598 MADISON AVENUE, NEW YORK, N. Y. 10022
TELEPHONE PLAZA 3-8287

PRESIDENT
MRS. BENJAMIN M. BELCHER

NATIONAL AFFAIRS AND LEGISLATION COMMITTEE
CHAIRMAN
MRS. W. BOULTON KELLY, JR.
7214 BELLONA AVE.
BALTIMORE, MD 21212

APRIL 15 1978

SENATOR JOHN CULVER
CHAIRMAN, SUBCOMMITTEE ON RESOURCE PROTECTION
4204 DIRKSEN SENATE OFFICE BUILDING, WASHINGTON, D.C.

DEAR SENATOR CULVER,

I SINCERELY APPRECIATE YOUR OFFER TO ALLOW THE GARDEN CLUB OF AMERICA THE OPPORTUNITY TO PRESENT TESTIMONY BEFORE YOUR COMMITTEE. OUR ORGANIZATION IS DEEPLY CONCERNED ABOUT THE DAMAGE THAT THE PROPOSED AMENDMENTS TO SECTION 7 OF THE ENDANGERED SPECIES ACT OF 1973 WOULD INFLICT ON CARRYING OUT THE LAWS EMBODIED IN THE ACT.

FIVE YEARS OF SUCCESSFUL NEGOTIATIONS BETWEEN ANY CONFLICTING INTERESTS HAVE BEEN ACHIEVED UNDER THE PRESENT LAW. ONE PARTICULAR INTEREST SHOULD NOT BE ALLOWED TO OVERTHROW THE LAW. SOUND ECONOMIC DEVELOPMENT HAS BEEN ACCOMPLISHED WHILE ENVIRONMENTAL CONSIDERATIONS HAVE BEEN TAKEN INTO ACCOUNT. RESPONSIBLE INDUSTRY AND PROJECTS, BY RECOGNIZING CRITICAL HABITATS AND BY BEING DIRECTED BY ENVIRONMENTAL CONSIDERATIONS, IN THE END, HELP PROTECT AND CREATE A VIABLE CAPITAL BASE, THEIR OWN RESOURCES.

PROTECTION OF PLANTS, FISH, AND WILDLIFE, AND DETERMING THE BEST POSSIBLE COURSE FOR AND PURITY OF THE WATERS IN THE RIVERS SHOULD NOT BE CONSIDERED AN ALIEN FORCE TO THE CREATION OF NEW BUSINESS OR NEW PROJECTS. IT SHOULD BE AND INTEGRAL PART OF THE PLANNING AND SITING OF NEW PROJECTS., AN UNDERLYING COST FACTOR. TO OVERLOOK ECOLOGICAL CONSIDERATIONS IS AS UNREALISTIC AS OVERLOOKING THE COST OF MATERIALS AND LABOR. THE PRECIPATING CAUSE FOR THE NEW AMENDMENTS WOULD SEEM TO HAVE OVERLOOKED BOTH ECONOMIC AND ENVIRONMENTAL FACTORS. WHAT BECOMES OBVIOUS THROUGH STUDY IS THAT ANY COSTS THAT OCCUR TO A NEW PROJECT WHICH ADHERES TO ENVIRONMENTAL CONSIDERATIONS WILL BECOME PART OF A LONG TERM BENEFIT TO THE BUSINESS AND TO THE CREATION OF OTHER BUSINESSES.

EARTH IS OUR CRITICAL HABITAT. HOPEFULLY, UNLIKE THE DINOSAUR WHO WAS UNABLE TO ADJUST TO, OR RECOGNIZE, FACTORS LEADING TO HIS EXTINCTION, MAN IS BEGINNING TO BE ABLE TO RECOGNIZE SOME POSSIBLE SNOWBALLING EFFECTS THAT EXTINCTIONS OF OTHER SPECIES HAVE ON HUMAN EXISTENCE. THE ENDANGERED SPECIES ACT OF 1973 ATTESTS TO THIS FARSIGHTED RECOGNITION. IT MERELY NEEDS TO BE STRENGTHENED IN SOME AREAS.

LOCAL INTERESTS MUST MESH WITH LARGER PLANS AND WITH NATURES DEMANDS. THE LAW IMPLEMENTS THIS NICELY. CONTRIVED PROJECTS RESPECTING NEITHER THE LAWS OF MAN OR THE OLD LAWS OF NATURE OFFER HUMANS VERY LITTLE SECURITY, SINCE BOTH CAN SO EASILY BE OVERTURNED. THIS ACT SHOULD NEVER BE ALLOWED TO FOUNDER ON SUCH A LOCALIZED, ILL CONCEIVED ISSUE.

ANY FURTHER OVERVIEW OF THE ENDANGERED SPECIES ACT BY A COMMISSION MADE UP OF THE HEADS OF AGENCIES SEEMS CUMBERSOME AND WOULD CREATE ANOTHER

100% RECYCLED PAPER

DUTY FOR VASTLY OVERWORKED SECRETATIES AND CHAIRMEN OF AGENCIES WHOSE KNOWLEDGE OF THE DETAILS WOULD BE DERIVED FROM OTHERS IN ANY CASE. (MORE GOVERNMENT EMPLOYEES) THE LAW HAS ALREADY STOOD QUITE WELL ON ITS OWN.

IF MORE EMPLOYEES ARE TO BE HIREB, THEY SHOULD BE HIRED IN THE PRODUCTIVE AREA OF STUDYING PLANTS, FISH, AND WILDLIFE, OF MONITORING, AND OF DETERMINING WHERE THE CRITICAL HABITATS ARE. FUNDING FOR THE ENDANGERED SPECIES STUDY AND PROMOTION IS NEEDED. IF THESE FACTORS OF THREATENED AND ENDANGERED SPECIES ARE ADEQUATELY FUNDED, THEN COLLISIONS BETWEEN ENDANGERED AND THREATENED SPECIES AND INDUSTRY OR PROJECTS CAN BE PREVENTED. GUIDELINES CAN BE DEVELOPED THAT WILL OBVIATE CONFLICT.

PROMOTION, REGULATION, AND ENFORCEMENT OF THE NEED FOR PROTECTING CERTAIN SPECIES ALSO NEED ENCOURAGEMEMT THROUGH THE ACT. I CONFESS THAT I (3 YEARS AGO) AND SOME OF MY FELLOW GARDENERS (NOW) HAVE REMOVED SOME "SO CALLED" OVERLOOKED PLANTS IN THE WOODS AND TRANSPLANTED THEM IN WOODY AREAS IN MY GARDENS. OFTEN THEY DIE; I DID NOT KNOW ENOUGH ABOUT THEIR TOTAL ECOLOGICAL NECESSITIES; SOME MIGHT HAVE BEEN RARE. IN ANY CASE, THE POINT IS THAT THIS PRACTICE IS UBIQUITOUS. THE PUBLIC'S AWARENESS OF THE THE NEED TO PHOTOGRAPH, NOT TRANSPLANT; TO COLLECT SEEDS, NOT PLANTS; TO STUDY SOIL AND ECOLOGY BEFORE ATTEMPTING WILDFLOWERS AND FRUITS; ALL THIS NEEDS EMPHASIS. RESTRAINTS SHOULD ALSO BE PLACED ON COMMERCIAL SALES OF RARE PLANTS SUCH AS CERTAIN CACTI, WHICH HAVE GRACED EVERY COLLEGE DORMITORY ROOM FOR 6 MONTHS AND THEN DIED; MEANWHILE, A FEW OF THE SPECIES MAY BE WIPED OUT.

IN SUMMARY, THE GARDEN CLUB OF AMERICA RESPECTFULLY ASKS YOU TO CONSIDER STRENGTHENING THE ACT, NOT WEAKEN IT BY REMOVING CRITICAL HABITATS.

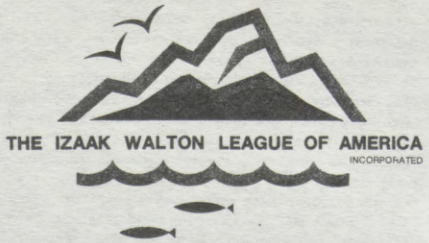
PLANTS, AFTER ALL, WERE THE REASON FOR THE "ASCENT OF MAN" (BRONOWSKI) AND THOUGH THEY ARE NOW OFTEN CONSIDERED LOWLY IN RELATION TO MANS NEWEST EFFORTS, THEY STILL MAKE UP THE ROOTS OF HUMAN EXISTENCE. PLANT CULTURE PROVIDES MANKIND WITH GOOD AIR, SOIL, SHADE, FOOD (DIRECTLY AND INDIRECTLY THROUGH FEEDING THE ANIMALS WE RAISE), PAST MEDICINAL AND DRUG BENEFITS, FUTURE HOPES FOR NEW CURES, AND LAST OF ALL AS AN UPLIFTING EXAMPLE OF BEAUTY, WHICH YOU CAN SEE IF YOU LOOK UP AT THE MOLDINGS OF YOUR VERY MEETING ROOMS.

THANK YOU FOR CONSIDERING THIS TESTIMONY,

SINCERELY

Ellen Kelly

NATIONAL AFFAIRS AND LEGISLATIVE CHAIRMAN
GARDEN CLUB OF AMERICA



Statement of

The Izaak Walton League of America

Before the Subcommittee on Resource Protection

of the

Senate Committee on Environment and Public Works

on

The Endangered Species Act of 1973

May 12, 1978

Mr. Chairman:

I am Maitland Sharpe, Director of Environmental Affairs for the Izaak Walton League of America. The League is a citizen-based conservation organization of approximately 50,000 members, dedicated to the conservation and wise use of the nation's resources.

We thank you for the opportunity to present our views on the implementation of the Endangered Species Act of 1973. We will restrict our comments to the issue of primary concern here this morning: whether or not it is necessary or desirable to amend Section 7 of the Endangered Species Act.

In passing that Act in 1973, Congress made an important advancement in endangered species protection by providing a mechanism whereby federal agencies would not knowlingly cause the extinction of an endangered species. Congress did this through Section 7 of the Act, which requires federal agencies to consult with the Fish and Wildlife Service to insure that actions authorized,

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funded, or carried out by them not jeopardize an endangered or threatened species.

Since 1973, more than 200 federal actions have been modified in some way to prevent harm to an endangered species or its habitat. It is sobering to imagine at what rate such federal projects might have impacted endangered species if the Section 7 requirement had not been in place; it is alarming to envision the impact future federal actions could have if the Section 7 requirement were removed.

Section 7 has proven itself a vital mechanism for endangered species protection; it is central to the effectiveness of the Act; and it is working well. Under Section 7, more than 4500 consultations have taken place in the past 5 years, only three cases have gone to court, and only one--the Tellico dam controversy--remains unresolved.

Out of this single, controversial case has come the impetus to amend Section 7 of the Act so that projects like Tellico--which prove resistant to compromise in the consultation process--could be completed in spite of their impacts on endangered species.

In theory, such an amendment would ease the implementation of Section 7 by providing a method for handling the rare cases that cannot be resolved by consultation. We are convinced, however, that any amendment that removes the categorical prohibition of Section 7 would greatly expand the number of seemingly unresolvable conflicts and would sharply undermine the proven effectiveness of Section 7.

We believe it is the absolute mandate of Section 7, which has forced

federal agencies into a conscientious and exhaustive consultation process to determine how they can modify their projects, that has led to the successful resolution of so many conflicts. Any amendment that establishes a post-consultation review procedure will encourage federal agencies to adopt an inflexible posture in the normal consultation process and discourage them from fully considering alternatives or modifications to their projects, because they can look forward to a possible exemption from Section 7 if and only if the conflict seems "irresolvable." Mission-oriented federal agencies, committed to their projects, will have every reason to attempt to demonstrate that the conflicts with their projects cannot be resolved through consultation, in order to gain access to the review process and the possibility of the uncompromised authority to proceed with the project as planned.

The result will be both predictable and unfortunate. Rather than solving the problem of irresolvable conflicts, the proposed amendment will enlarge it; the perceived need for a means of handling "irresolvable" conflicts will become self-fulfilling. The review process--intended to deal with only the extraordinary cases--will tend to become the standard arena for conflict resolution, while the consultation process becomes a mere preliminary procedure on the way to review. Meaningful, productive, good-faith negotiations over alternatives and modifications will tend to be postponed until the review process has been exhausted and relief has been denied. In the meanwhile, decisions will be left unmade, agency positions will harden, and delay costs will mount relentlessly.

Our fear that the potential for relief from the categorical prohibition

of Section 7 will undermine the consultation process is confirmed by the only species-project conflicts that have been handled outside of the consultation process: the Interstate 10-sandhill crane conflict and the Tellico dam-snail darter conflict. In each case, the agency supporting the project failed to exhaust the consultation process, hoping that the courts or Congress would provide relief from the Section 7 requirement.

In the case of Interstate 10, the courts failed to grant such relief, and ordered the Department of Transportation and the Department of Interior to negotiate a workable solution to the problem. The conflict was solved simply: the Department of Transportation bought up the land necessary to prevent development along the highway interchange, and the sandhill crane's critical habitat remains protected. This same result could, of course, have been achieved administratively under Section 7 without the court's intervention if complete consultation had taken place.

Similary, TVA, the agency constructing Tellico dam refused to consult to consider modifications and alternatives to the project, hoping initially for relief from the courts. However, the U.S. District Court enjoined TVA from further construction, finding that Tellico was not exempt from the mandates of Section 7. Still refusing to comply with the Department of Interior's requests for consultation, TVA is now seeking relief from the Supreme Court and from Congress. As long as TVA sees the possibility of avoiding the requirements of Section 7, it will have little incentive to follow through with the required consultation process. There is every reason to believe that alternatives that would not jeopardize the snail darter nor destroy its critical habitat will not be seriously considered

until both Congress and the courts make it clear the Tellico will in no way be granted relief from Section 7.

It is in only these two cases, where the hope of relief led the agencies to adopt inflexible negotiating positions, that we have had seemingly unresolvable conflicts under Section 7. The consultation process under Section 7 has failed to work only when the agencies refused to make it work.

Any amendment that weakens the mandate of Section 7 will invite more such intransigent behavior on the part of federal agencies. Any amendment that weakens Section 7 would undermine the consultation process, which has proven consistently effective in resolving conflicts between federal projects and endangered species. Rather than easing implementation of the Act, we are convinced that an amendment to Section 7 would aggravate the problems. If Congress makes it possible for agencies to circumvent the categorical prohibition of Section 7, more agencies will follow the path of DOT and TVA, refusing to actively consider such a compromise solution that would avoid harming a species. The very possibiility of relief will ensure that more conflicts become "irresolvable."

The Izaak Walton League of America urges the Subcommittee to retain the mandate of Section 7. The Tellico case is an aberrant one; it does not justify wholesale amendment of the Act, which would weaken protection for all endangered species. To do so would reward the intransigence of TVA and would encourage such behavior on the part of other federal agencies. We hope you will reaffirm the integrity of the consultation process embodied in Section 7 by rejecting proposals to establish a review-relief procedure. We do not hold that there will never be a case where good faith consultation will not be able to resolve a conflict between an endangered species and a federally permitted or constructed project, but we do believe that we have not yet seen such a case, and to amend Section 7 is to needlessly undermine endangered species protection efforts in this country.

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April 27, 1978

Senator John C. Culver
Chairman
Subcommittee on Resource Protection
Committee on Environment and
Public Works
United States Senate
Washington, D. C.

Re: Endangered Species Act

Dear Senator Culver:

The Colorado River Water Conservation District and the Southwestern Water Conservation District would appreciate your consideration of the following views concerning the amendment (S. 2899) proposed to the Endangered Species Act and currently being considered by your committee. These additional views will supplement the testimony of Kenneth Balcomb, Esquire who appeared on behalf of the two districts before the hearings held by you on April 14.

The amendment in our view unnecessarily complicates and confuses the existing situation. It in effect passes the present statutory responsibilities of the entire governmental structure to a super agency to make determinations which should be left to the responsible department of government. Those determinations are always subject to judicial review as well as Congressional oversight, and thus to corrective action should an agency act contrary to law or overstep its duties in some policy fashion.

As Senator Garn has noted (Release 4/13/78) ESA has been misused and applied too rigidly, adding "The situation that prevails is not what Congress intended." We concur in that view and accordingly urge the Committee to clarify the real intent that no absolute veto power is provided in ESA. Unfortunately, the amendment proposed by S. 2899 does just the contrary by assuming the existing Act to be a flat proscription where an endangered species is involved and passing the decision making process along to yet another new agency. Delay in the government decision making process is already an abiding concern for which solutions must be found. We take note for example, of the study of federal regulation recently completed by the Senate Committee on Governmental

Affairs, particularly Volume IV of that study entitled "Delay in the Regulatory Process" (S. Doc. No. 95-72). We understand that legislation has already been introduced to implement the recommendations of the report, which was unanimously approved by the Committee. To add yet another agency, a sort of super agency, with all of the trappings provided for in S. 2899, on top of the already top-heavy administrative structure, would hardly assist the Senate's efforts to provide less regulation and make that regulation more speedy and efficient.

We think the provision for a new agency particularly inappropriate in the context of the situation presented to the Committee in Mr. Balcomb's statement concerning the Colorado River District's preliminary permit from the Federal Energy Regulatory Commission for the Juniper-Cross Mountain Hydroelectric Project for which the District hopes to make application for license. If an application for a license for this project is filed with FERC public notice will be given and opportunity will be provided for petitions to intervene as well as public participation, together with any intervenors, in a full adjudicatory hearing before an Administrative Law Judge at which witnesses are examined and cross examined, subpoenas are issued as may be necessary, and all testimony and any supporting exhibits are taken under oath. The Interior Department has been a not infrequent intervenor in such proceedings before FERC. Following a consideration of the full record, the Administrative Law Judge issues an initial decision which is in turn subject to appeal to the full Commission on any exceptions which any participating party may have to the initial decision. Thus, the entire record is subject to scrutiny a second time, this time by the full five member Commission. This review process by the Commission itself frequently consumes more than a year and can require even longer as the Commission considers the myriad items which appealing parties can find in initial Administrative Law Judge decisions dealing with projects of this magnitude and complexity. When the Commission's decision is reached, it is subject to a statutory provision for rehearing which objecting parties properly avail themselves of in an effort to bring some change in whatever decision the Commission may have reached. Finally, this full process is subject to judicial review directly in the U. S. Court of Appeals. To add yet another level to this meticulous regulatory process is in our view not only unwarranted but would represent a rejection by the Congress of the regulatory processes it has established, to be conducted under the safeguards of the Administrative Procedure Act, in order that decisions may be reached taking every facet of the public interest into account. S. 2899 would simply duplicate an existing procedure, add yet another administrative level, and in effect impeach the whole purpose of regulatory control in the process.

We accordingly urge the Committee not to go down this trail. We submit that Congress was on the right track in the language of the bills it had before it in the 93rd Congress at the time of the enactment of the Endangered Species Act. The language of the several bills then under consideration, proposed by the sponsors and supported by the Administration, provided that federal agencies should utilize their authorities in furtherance of the purposes of the Act " . . . wherever practicable . . ." or " . . . insofar as is practicable and consistent with the primary purposes of such bureaus, agencies and services, . . .". While we certainly have no objection to requiring consultation with Interior in order to further the purposes of the Act we think Congress should confirm what we consider was really its intent originally, namely that agencies having responsibilities by statute to conduct programs and responsibilities required of them by the Congress should also be permitted to make the final decision they think necessary in order to implement those responsibilities even though modification of habitat of some endangered species may result. There is after all the availability of the citizen suit provisions of ESA to guard against arbitrary action and there is also always available Congressional oversight so that any pattern of wanton action by an agency can be readily detected and corrected by the Congress.

We appreciate the opportunity provided to supply these additional comments.

Respectfully,

Robert L. McCarty

Robert L. McCarty

RLM:slr



BLOUNT COUNTY, GATEWAY COUNTY TO THE GREAT SMOKY MOUNTAINS NATIONAL PARK

April 12, 1978

The Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Senate Environment and Public Works Committee
Washington, D. C. 20510

Dear Chairman Culver:

I am writing you this letter to advise you of my support for the Tellico Dam Project.

The needs of the people of East Tennessee, who have worked hard for this project and who are just now on the verge of realizing its benefits, are considered secondary and unimportant under the Endangered Species Act. As TVA has done everything possible to reconcile the existence of the snail darter it appears to me that the species in question are not in danger of extinction. Section 7 of this Act should be amended in order to restore its original purpose of providing balance between preserving endangered and threatened species and economic growth and development.

I would appreciate anything you can do in support of the Tellico Dam Project.

Very truly yours,

Clyde McMahan

Clyde McMahan
County Judge
Blount County

CM:cc

SOUTHEASTERN LEGAL FOUNDATION, INC.
1800 Century Boulevard, N.E., Suite 950, Atlanta, GA 30345 / Phone (404) 325-2255

April 14, 1978

The Honorable John C. Culver
Chairman, Subcommittee on Resource
Protection, Senate Committee on
Environment and Public Works
United States Senate
Washington, D.C. 20510

Re: The Endangered Species Act of 1973, 13 U.S.C. §1531 et seq.

Dear Senator Culver:

This comment is submitted to your Subcommittee in relation to the hearings it is conducting on the Endangered Species Act. We respectfully request that your Subcommittee consider our position in its deliberations.

The Southeastern Legal Foundation is a not-for-profit public interest law firm organized in 1976 for the purpose of representing the broad public interest. We believe the broad public interest demands that conflicts between legitimate environmental concerns and reasonable economic development be avoided where possible. Where the conflict cannot be avoided, it must be resolved in an even-handed manner. The general public has no use for absolutists who cry for environmental protection at any cost or for those who push for economic development regardless of the environmental cost. Reasonableness demands a balancing approach--an approach which may be impossible under the Endangered Species Act of 1973. Because we see this new absolutism as inimical to the broad public interest, the Foundation has participated in several cases involving endangered species during the last six months.

In January 1978, the Foundation submitted a brief amicus curiae to the United States Supreme Court in the case of Tennessee Valley Authority v. Hill, Docket No. 76-1701 (the snail darter case). In addition, the United States Fish and Wildlife Service has proposed endangered status and critical habitats for several fish in the Birmingham, Alabama, area--including the Cahaba shiner and the goldline darter. We have submitted comments to the Fish and Wildlife Service on the merits of that proposal.

The Foundation regularly monitors the status of endangered species cases and has done considerable research into the legal questions in the field. Based upon this experience we offer the following observations and suggestions for the consideration of your Subcommittee.

HOW FAR DOES THE ACT GO?

When Congress enacted the Endangered Species Act of 1973, it recognized the need for action aimed at saving many of the Earth's creatures from extinction. Over the years people had begun to realize that various fish, birds, animals and flora were going the same path trod by the dinosaur. Concern for the future of the bald eagle, the leatherback sea turtle and the humpback whale was translated by the Congress into apparently workable mechanisms which would achieve the salvation of these endangered species. Now, less than five years after the Act took effect, we are forced to ask ourselves--how far does the Act go? Perhaps more to the point, we must also ask: Can we afford to go so far?

No one can seriously dispute the wisdom of Congress in taking definite action to prevent the extermination of endangered species. And no one can seriously quarrel with the spirit and purposes of the preamble to the Act. Congress declared that

> "various species of fish, wildlife, and plants . . . have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation; . . . [that] other species of fish, wildlife and plants have been so depleted in numbers that they are in danger of or threatened with extinction; . . . [and that] these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people . . .."

16 U.S.C. (Supp. V) §1531. The Act pledged the United States, to the extent practicable, to conserve various species of fish, wildlife and plants pursuant to certain treaties and conventions.

Through the Act, Congress intended to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide a program for the conservation of such species. In connection with these purposes, all federal departments and agencies are required to conserve endangered and threatened species.

Some would assert that these declarations and purposes are meant to be read in a non-absolute manner. Such a reading leaves room for flexibility in the administration of the Act so that factors other than purely biological considerations may be weighed by those who must make decisions about the future of endangered or threatened species. This view, in certain circumstances, would accept something less than the most optimal conditions or chances of survival for such species.

Unquestionably, the TVA has accepted the flexible interpretation of the Act's requirements in dealing with the conflict between the Tellico Project and the snail darter. Taking into consideration the importance of the project, the degree of completion, and the direction from Congress that the dam be built, TVA has concluded that transplantation of the fish is a reasonable alternative which gives the species a chance for survival while at the same time permitting the project to be completed.

A similar view was adopted by the House Appropriations Committee in its report of June 2, 1977, which recommended appropriation of the full amount requested in the President's budget for the Tellico Project (H.R. Rep. No. 95-379, 95th Cong., 1st Sess. 103 (1977)). The Committee stated:

> "It is the Committee's view that the Endangered Species Act was not intended to halt projects such as these in their advanced stage of completion, and [the Committee] strongly recommends that these projects not be stopped because of misuse of the Act."

Id. at 104. The Committee went on to recommend relocation of endangered species as an alternative and specifically allocated money for such relocation.

Courts have disagreed on the scope of the Act. Lining up on the flexible view side of the fence was United States District Judge Taylor, who denied an injunction sought to halt the Tellico Project. Judge Taylor determined that the Endangered Species Act allows for a flexible approach including a balancing of non-biological factors. Thus, he found that some factual circumstances, such as the degree of completion of a federal project and the amount of money spent upon it, were relevant in determining if the Act required the cessation of the project out of deference to an endangered species. Hill v. TVA, 419 F.Supp. 753 (E.D.Tenn. 1976).

On the other side of the coin there are those who apply a stricter construction to the Act. According to their approach, the survival of the endangered species is paramount. Any factor which would interfere with or diminish the chances of survival of any endangered species is treated as irrelevant by this absolutist view. In imposing the present injunction upon the Tellico Project, the Sixth Circuit Court of Appeals disagreed with Judge Taylor by stating unequivocably that "[c]oncientious enforcement of the Act requires that it be taken to its logical extreme." Hill v. TVA, 549 F.2d 1064, 1071 (6th Cir. 1977). The United States Supreme Court is now being asked to confirm or deny the absolute position as the law of the land.

Maximum protection of endangered and threatened species would seem to require nothing less than the extreme measures consistent with an absolute and strict construction of the Act. If we hope to protect the bald eagle, does it not make sense to take that action which gives it the best chance? On the other hand, how much interference with human progress and development are we willing to accept as the price for maximum protection of just any species? The ultimate reference point for these questions is Man himself.

If Man ceased to exist one could argue that there would be no more endangered species because Man would not be around to label them as such. Likewise, if Man had time only for the collection of food for survival, he would have no time to worry about endangered species. He would be an endangered species.

Thus it is that decisions about endangered species must be made from the egocentric standpoint of Man. How will these decisions affect Man? Will they hurt or benefit him? If decisions designed to protect endangered species

are perceived as being devoid of benefit to Man they could be rejected as absurd.

The Endangered Species Act of 1973 has the potential for being carried to the ridiculous extreme. If the position taken by the Sixth Circuit Court of Appeals is accepted by the Supreme Court, the Act will be applied in the most rigid fashion. From such an application could come a decision which places the interests of a moth or fish ahead of the interests of Man.

Unfortunately we are hampered in this field by our ignorance. No one knows what effect the survival or demise of the snail darter or the Socorro isopod will have upon Man. Perhaps the mold found next year living on the launch pad for the space shuttle will hold the secret of a new penicillin.

Perceiving that we are ignorant has presented us with tough choices. The safest course is the course of inaction. If we do not know the consequences of our action we might be wise to do nothing. Thus, when confronted with a conflict between certain action and the survival of an endangered species, we would defer to the species and cease our activity. Perhaps the rashest course would be to plunge uncontrollably ahead with whatever we are doing without regard for the consequences. The middle ground involves compromises, calculated risks and an acknowledgment that, despite our ignorance of the unknown consequences of our actions, nonetheless what we do is for Man's benefit as he can best perceive the situation. Such a course would acknowledge that transplantation of a species in a given case, while not the course most likely to protect that species, is justified in view of the other interests involved.

What course will we follow? Unless the Supreme Court reverses the Sixth Circuit Court of Appeals we will follow the absolutist course--the course which translates our ignorance into inactivity. It is a course which allows for no balancing of any kind. If an oil field were discovered in an area inhabited by an endangered worm, the oil could not be extracted if to do so would further endanger the worm. Yet, much as we might value the protection and survival of that worm, might we not value even more the economic stability and energy independence the oil could produce?

Before additional funds are appropriated for the Act, Congress must consider carefully if the Act does what Congress wants it to do. Does the Act hold the promise of cutting off our nose to spite our face? We believe we should preserve our freedom to make reasoned choices between a range of options. As presently constituted, the Endangered Species Act of 1973 may not permit such freedom.

INTERAGENCY CONSULTATION PROBLEMS

Section 7 of the Endangered Species Act requires that Federal agencies consult with the Fish and Wildlife Service and the National Marine Fisheries Service in order to insure that actions that they authorize, fund, or carry out do not jeopardize the continued existence of endangered or threatened species or result in the adverse modification or destruction of their critical habitats.

Consultations have resolved most potential conflicts between federal projects and the protection of endangered species. Hearings in the Subcommittee on Resource Protection of the Senate Committee on Environment and Public Works, 95th Cong. 1st Sess. 61, 63-64, 69-70 (1977). Several conflicts have been forced into the courts, the most prominent of which is the Tellico Project case. The failure of the consultation process in that case may be attributed to at least two reasons. First, of all the conflicts meant to be resolved through consultation, the Tellico Project case presented the respective federal agencies with a truly irreconcilable problem. TVA officials charged with the responsibility of completing the project knocked heads against Department of Interior officials charged with the responsibility of protecting endangered species. Neither side could acknowledge any room for compromise. Indeed, for the project to be fully completed the reservoir had to be filled, while to fully protect the snail darter the reservoir could not be filled. There was no room to maneuver. While each side of the controversy might be accused of inflexibility and intransigence, in fact it is reasonable to conclude that both the TVA and the Department of Interior were actually fulfilling their separate and conflicting responsibilities. In such situations the consultation requirement of the Act will fail to serve its intended purpose.

Recognizing that there are problems in the consultation process, the United States Fish and Wildlife Service, and the National Marine Fisheries Service promulgated regulations earlier this year designed to correct these problems. 43 Fed.Reg. 870 (1978). While these agencies should be commended for this effort, it points to the second reason why consultation failed in the Tellico Project case.

From these regulations we can perceive that the absolutist, rigid interpretation of the Act has been adopted by the Fish and Wildlife Service and the National Marine Fisheries Service. These agencies specifically rejected suggestions that non-biological factors be considered in the determination of critical habitats. Refusing to grant relevance to socio-economic factors, the agencies decided that the entire focus should be on the biological and ecological needs of the listed species. Although these regulations were finally adopted in 1978, there can be little doubt that the absolutist position prevailed at the Fish and Wildlife Service during the consultation period with TVA over the Tellico Project. This position unquestionably is an honest attempt to deliver maximum conservation of species, but presents serious problems when other agencies have different interpretations of the Act's requirements. Thus it was that consultation with TVA over the Tellico Project achieved no satisfactory conclusion.

While we understand the position of the Fish and Wildlife Service in the context of achieving maximum protection for species, we wonder if there exists an unwritten policy of expediency guiding the agency in certain situations. No agency can maintain its effectiveness if its credibility is undermined by decisions which are regarded as irrational, unworkable and most importantly, unpopular. The positions of the Food and Drug Administration on saccharin and laetrile have certainly weakened that agency's credibility with the people. Obviously, unpopular decisions must be made, but we would be blind to believe that credibility questions are never considered by federal agencies.

A source of our wonderment is the Fish and Wildlife Services handling of the Houston toad case. Widely reported by the news media, this case dealt with the designation of critical habitat for the Houston toad. When originally proposed, the designation included several areas in and around Houston, Texas. 42 Fed.Reg. 27009 (1977). After the public was told through the media that parts of this designation included parking lots where toads presumably lived in potholes, the final designation of critical habitat was issued, minus highly developed urban areas. 43 Fed.Reg. 4022 (1978). Insufficient data and lack of records of toads were given as the reasons for limiting the area of critical habitat.

Undoubtedly, designating sections of Houston as critical habitat would have met with intense opposition and would have caused major problems for the public and private instrumentalities in that area. The growth of Houston would have been threatened by the proposed designation.

We can certainly understand if the Fish and Wildlife Service realized that discretion was the better part of valor when it came to the Houston toad designation. There will no doubt be more Houston toad cases in the future with all their attendant pressures. Should the Fish and Wildlife Service be forced to make decisions having such dramatic socio-economic impact? Is that what Congress intended when it enacted the Endangered Species Act of 1973?

We believe that the Congress should reexamine the impact of the Act upon the affected agencies. We believe that the present state of affairs has the potential for creating serious conflicts in the future. While apparently ignoring socio-economic factors, agencies are making decisions with major socio-economic consequences. This situation must be corrected. In those cases where conflicts are irreconcilable, perhaps the best forum for resolution is the Congress itself. At present such conflicts end up in court. Since it is Congress which must make the hard choices about protecting endangered species, perhaps it should be Congress that decides those cases which the executive and judicial branches cannot resolve.

THE SPECTRE OF SECTION 9

Section 9 of the Endangered Species Act of 1973 holds the potential for much litigation and interference in the lives of private citizens. That section provides that it is unlawful for any person to "take" an endangered species of fish or wildlife. 16 U.S.C. §1538. "Taking" is defined by 16 U.S.C. §1532 to mean "harass, harm, pursue, hurt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The term "harm" has been defined admininistratively to include "significant environmental modification or degradation" which "significantly disrupts normal behavioral patterns, which include, but are not limited to breeding, feeding or sheltering. The Fish and Wildlife Service has indicated that the word "taking" should be defined in broad terms to include any action by anyone which significantly disrupts the normal behavioral patterns of an endangered species.

Little imagination is required to conceive of the way in which Section 9 could be used and the havoc it could wreak.

Citizen suits to enforce Section 9, as provided for by 16 U.S.C. §1540(g)(1), could easily be instituted. These suits would go far beyond conflicts between federal agencies and the protection of endangered species. Every private citizen in this nation could be subject to endangered species litigation. All private business activity, churches, community organizations, sports teams and the like could become defendants if their activities interfered in any way with an endangered species.

Any number of extreme situations can be imagined. Whether the Act would be taken to extremes we cannot say, but it is not unlikely. The private ownership, use and enjoyment of property as well as various freedoms of activity stand subject to the Act. In our efforts to avoid "taking" endangered species, we may be taking even more from ourselves.

We urge this Subcommittee and through it, the Congress, to consider how far it wishes to go in protecting endangered species and to make appropriate changes in the Endangered Species Act of 1973 in order to guarantee a rational approach to this subject.

Sincerely yours,

Wayne T. Elliott

Allen R. Hirons

Attorneys for Southeastern Legal Foundation

HONORABLE MEMBERS OF SUBCOMMITTEE ON RESOURCE PROTECTION
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

U. S. Senate Office Building
Washington, D. C. 20510

STATEMENT URGING CHANGES IN ENDANGERED SPECIES ACT SO THAT IT WILL CO-ORDINATE WITH AND NOT DISRUPT FEDERAL FUNDED PROJECTS

BY: LON P. MACFARLAND

FOR

UPPER DUCK RIVER DEVELOPMENT ASSOCIATION

UPPER DUCK RIVER AGENCY

UPPER DUCK RIVER PLANNING COMMISSION

April 13-14, 1978

STATEMENT OF LON P. MacFARLAND ON BEHALF OF THE UPPER DUCK RIVER DEVELOPMENT ASSOCIATION, THE UPPER DUCK RIVER AGENCY AND THE UPPER DUCK RIVER PLANNING COMMISSION

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I represent the Upper Duck River Development Agency and the Upper Duck River Planning Commission which are agencies created by the State of Tennessee for the development of the Upper Duck River. The Upper Duck River flows through Bedford, Coffee, Marshall and Maury Counties, Tennessee, on its way to the Tennessee River.

From about 1960, many people in this area have worked with TVA to develop this project. It is a very necessary one, and is the key to the development of the area since it will provide flood control, improve water quality, expand recreational facilities, afford a very necessary water supply, and will enhance the job opportunity in this area.

The Duck River is one of extremes. There are frequent floodings and in the dry season the flow is very small which results in a very questionable water supply for the area. The wells throughout the area are more than 80% contaminated and unfit for use. The Normandy Dam and reservoir was completed in 1976. The Columbia Dam was started in 1973, and is now more than 35 to 40% complete with the concrete work on the dam practically finished, so that it is contemplated that water will flow over the concrete structure in 1978 when the present river diversion channel is removed. The entire project is approximately 50+% complete. Numerous tracts of land have been purchased for the Columbia reservoir, approximately 8,000 acres out of 27,500 acres total. The project has had wholehearted local support and the support of the Conservation Commissioner, the Governor, the Legislature, Senators Sasser and Baker, Congressmen Beard and Gore, and many others.

The water systems of the five cities in the area have entered into a contract with the Agency and TVA to repay to TVA and the government $16,200,000 as a local contributor to water supply. To accomplish this, the five water distributors in

the area have charged 5 cents per 1,000 gallons of water sold and pay these funds monthly into a trust fund for the repayment of the $16,200,000. Under the contract between the Agency, TVA and the five cities approximately $1,600,000 has already been paid into the trust fund. At the same time another contract was signed between the Agency and TVA under which the Agency was obligated to promote $50,000,000 in non-federal area development projects. In this connection the local and private sector have demonstrated their good faith in the Duck River project and already the water system expansion amounts to $9 million; waste water system expansion $3.38 million; new and improved roads more than $13 million; and private industry development in excess of $48 million, for a total of more than 60 million dollars. Testimony has been presented before Appropriation Congressional Committees relative to the appropriation for the fiscal year 1979, and the President has recommended in the 1979 budget additional expenditures for the project.

It is our understanding that Senator Culver's Subcommittee on Resource Protection, Senate Environmental and Public Works Committee, will on the 13th and 14th of April consider further appropriations for funding of the Endangered Species Act.

It is our further understanding that the "Tellico" case, TVA v. Hill, et al, No. 76-1701, will probably be argued in the United States Supreme Court on April 18. Whatever the Court's decision in that case it is obvious that the Endangered Species Act needs amending to make common sense which the public can understand.

A problem facing this project is the application of the Endangered Species Act, USC Title 16, Section 1531, et seq. This Act passed in 1973, long after the project started, allows the Secretary of Interior, after consulting with affected States, interested parties and organizations, to determine endangered species. Although we are interested parties and organizations, we have never been consulted in this regard. Mussels and several snails, etc., have been put on the endangered list. The mussel is a subspecies of many mussels. We are advised that as to the species listed one is no longer in the reservoir, another has been successfully transplanted below the impounded area, and all exist in other streams. There is no evidence that the mussels or snails are of significant consequence. We respectfully suggest that the Endangered Species Act needs substantial revision because the Act as it has been construed by the Court gives no consideration as to whether or not the species is of value or consequence and the construction given the Act does not provide for any weight

to be given to the economic and other effects of putting species on the endangered list. Yet, the Fish and Wildlife Service of the Department of Interior in the administration of the Act, can put an inconsequential species, such as the snail darter, on the endangered species list, declare a critical habitat and this will have the capability of stopping any project, no matter how worthwhile or beneficial, as was the result at the TVA-Tellico project.

We likewise respectfully suggest that the placing of a species on the endangered species list and the subsequent declaration of a critical habitat is a "substantial federal action". Under NEPA, a "substantial federal action" which will affect the human environment requires an Environmental Impact Statement to be filed. An Environmental Impact statement was required before the Duck River project could be started. Certainly an Environmental Impact Statement is required when an endangered species is listed and a critical habitat is declared; since if the effect of this is to stop a major federal project, it unquestionably is a substantial federal action affecting the human environment. A suit, Pacific Legal Foundation et al v. Cecil D. Andrus et al, No. 77-1054-C-CV, is pending in the U. S. District Court for the Middle District of Tennessee. This suit questions the legality of placing species on the endangered list without a NEPA statement.

The Endangered Species Act, as it has been interpreted by the Sixth Circuit Court of Appeals in the snail darter case (Hill v. TVA) has turned the statute into an absolute and inflexible command that precludes balanced decisionmaking. This interpretation places the need of the species always above the needs of man which sometimes requires development of all or a portion of the resources which a particular species inhabits. We are concerned that the important Duck River project could be halted because of the listing of insignificant species.

We respectfully suggest that there should be, and must be, substantial revision to the Endangered Species Act, which will allow a sensible weighing of values. We do not suggest that the Act be done away with, but do suggest that the administration of the Act as it has been construed and administered does not reflect the true intent which Congress had at the time of enactment. So as to bring order and common sense out of the chaos which now exist, we suggest that amendments to the Act which would co-ordinate the Act with the funding of federal projects is very badly needed, because we do not believe that Congress ever intended the Endangered Species Act to have the disruptive and chaotic effect on federal

funding of projects that it now has. Section 7 of the Act should be amended in order to restore its original purpose of providing balance between preserving endangered species and economic growth and development. The complete inflexibility of Section 7 and other problems of the Act should be corrected before legislation is enacted this year. We believe that such amendments could be done in a number of ways, such as

1) The Alaskan pipeline exemption.

2) An amendment to Section 7 of the Act, 16 USC §1536 (Interagency Cooperation) by inserting after the word "action" and before the word "necessary" in the eighth line "to the maximum extent practical and consistent with the agency's statutory goals".

3) Specific exemptions.

4) Exemptions of projects started before the enactment of the Endangered Species Act, and numerous others.

We therefore urge that Congress give serious consideration to amendments to the Act so that it will be co-ordinated with and will not disrupt federal funded projects, including the Columbia dam and reservoir, as well as projects throughout the Nation.

Respectfully submitted,

Lon P. MacFarland

April 7, 1978

PRESIDENT
John W. Ray

VICE PRESIDENT
W. H. Coble, Sr.

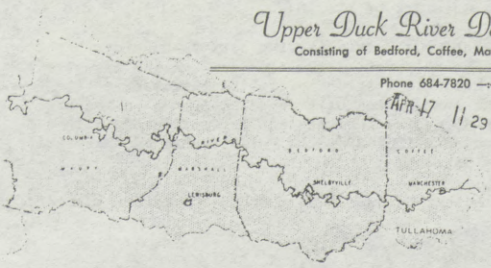
SECRETARY
Bob Davidson

TREASURER
Taylor Rayburn

EXECUTIVE DIRECTOR
Claybourne Ross

Upper Duck River Development Agency
Consisting of Bedford, Coffee, Marshall and Maury Counties

Phone 684-7820 —+— Courthouse —+— Shelbyville, Tennessee 37160



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April 10, 1978

The Honorable John C. Culver, Chairman
Subcommittee on Resource Protection
Senate Environment & Public Works Committee
Washington, D. C. 20510

Dear Mr. Culver:

Subject: Changes in the Endangered Species Act so that it will Coordinate with and not Disrupt Federal Funded Projects

On behalf of the 130,000 people residing the the Upper Duck River Watershed, we wish to submit to you the following comments:

It is the general consensus -- a snail is a snail, a mussel is a mussel, and we have no concern for them as endangered specie. These endangered specie have no economic value. The public's understanding of the Endangered Species Act was to protect the bald eagle, the hooping crane and some of the cats, species that have had a significant role in our heritage. It is evident that this was recognized by the fact that the Endangered Species Act provides that species may be killed or destroyed by man in the case of self-defense. It appears to the public that these insignificant species are being found where there are Public Works Projects.

We wish to call to your attention that our phosphate deposits were at one time marine animals which are extinct. Our coal deposits are plants many of which are extinct; perhaps it is intended that specie become extinct in the plan of the Universe.

Our public are concerned about a stable water supply, flood control and our future economic development. We are concerned for the wellbeing of humans. The listing of insignificant and publicly unknown specie of the Duck River Watershed as endangered specie provides for a possible consultation; Endangered Specie versus Duck River Project (Normandy and Columbia Dams).

Those who take extreme measures to protect the least of God's Creatures, such as fish, mussels and snails, somehow forget or neglect the wellbeing of the Lord's most remarkable Creature of all, Man.

We, therefore, respectfully urge that your Committee give serious consideration to amendments to the Endangered Species Act, such as the Alaskan Pipeline exemption, specific exemptions, exemption of Projects started before the enactment of the Endangered Species Act, or before the designation of Endangered Specie in the area of the projects. The changes should require that the Act be coordinated with and will not disrupt Federal funded projects including the Columbia Dam and Reservoir, as well as projects throughout the Nation.

It is further requested that this letter be made a part of the Committee's record.

Sincerely,

Clayborne Ross
Executive Secretary

CR/mas

cc: Senator Howard Baker, Jr.
Senator Jim Sasser
Senator Edmond S. Muskey
Senator Malcolm Wallop
Senator James McClure
Senator Kisester Hodges
Mr. Lon MacFarland



the WATERWAYS JOURNAL
Weekly
SINCE 1887

319 North Fourth St.
666 Security Bldg.
St. Louis, Mo. 63102
314-241-7354

April 11, 1978

The Honorable Jennings Randolph
of West Virginia
Chairman
Committee on Environment and Public Works
Senate Office Building
Washington, D. C. 20510

Dear Senator Randolph:

We understand that there will be an oversight hearing held by your committee sometime in April on the Endangered Species Act.

We have been continually concerned about what this Act is doing to commerce and industry and we would appreciate it if this letter was entered into the record of this hearing.

We appreciate your consideration of this request and we would be glad to furnish you and the Committee with additional information and background.

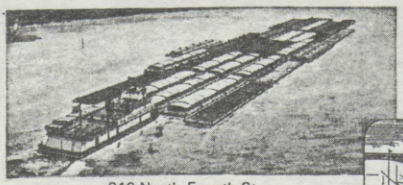
Sincerely,

James V. Swift
Vice President

JVS/kbw

Enclosures

P. S. I understand that the Fish and Wildlife Service is now including the water moccasin in the endangered species list.



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April 11, 1978

Statement Presented at the
Oversight Hearing on the Endangered Species Act
April, 1978, Before the Committee on Environment and Public Works

We are sure that the Congress was correct when it approved the Endangered Species Act several years ago. However, during the time of its implementation there is evidence that the Act has been used unnecessarily, we believe, to stop water projects and industrial and commercial expansion which are vital to the welfare of the American people.

"Endangered species" have been found at the sites of dams, channel improvement projects, ports and harbor improvements, and other projects of vital concern to the continued well-being of the American people.

We feel that the time has now come for Congress to investigate the implementation and regulation of the Endangered Species Act to see whether or not the U. S. Fish and Wildlife Service, which has authority under the Endangered Species Act, has been working with special groups such as the Sierra Club, the National Environmental Protection

Fund, and other environmental organizations in an attempt to stop projects these environmental organizations do not like.

We must emphasize that these environmental organizations are indeed special interest organizations with considerable budgets and staffs in Washington who are attempting to influence Congress through lobbying. We feel, then, that these organizations should be placed on the same level as other persons who are interested in specific projects.

We would point out that the American taxpayer is losing millions of dollars because the implementation of the Endangered Species Act has stopped projects which in some cases were nearly complete, such as the Tellico Dam in Tennessee, and we cannot believe that such action is in the best interest of the American people.

We have seen other effects of the Endangered Species Act which to us are incongruous. Such examples are:

The alligator was placed on the endangered species list even though there were many alligator farms in the south, particularly in Florida, where thousands of baby 'gators were hatched every year. Because the alligator was not allowed to be killed we understand that they were eating livestock, dogs, and cats and even ducks in zoos in the south, including New Orleans. A man who was losing pets because of the predatory alligator had a difficult time getting a permit to destroy the reptile.

Because wolves were on the endangered species list in Minnesota they were allowed to destroy livestock, even going into barns

to kill and eat cows and calves. But, because of the endangered species category of these animals, farmers could not destroy them but had to call on state agencies to trap and transport the wolves out of the area.

We believe that the time has come for Congress to take a good and hard look at the Endangered Species Act to see whether or not it is acutally in the best interest of the American people. We further believe that no additional funds should be allocated for the implementation of this Act until a balanced and valid program is set up by the U. S. Fish and Wildlife Service which would protect the American people from abuse by those persons who are more concerned about nature than their own species, homo sapiens.

Respectfully submitted,

James V. Swift
Vice President

STATEMENT OF
GLOVER WILKINS, ADMINISTRATOR
TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT AUTHORITY
BEFORE THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
WASHINGTON, D.C.
APRIL 13-14, 1978

Mr. Chairman, distinguished members of the Committee, my name is Glover Wilkins, administrator of the Tennessee-Tombigbee Waterway Development Authority, a five-state compact composed of the states of Alabama, Florida, Kentucky, Mississippi and Tennessee.

I appreciate this opportunity to present a statement of behalf of the Tennessee-Tombigbee Waterway Authority.

The Tennessee-Tombigbee Waterway is the first waterway developed under the National Environmental Policy Act (NEPA). Initial funding of this waterway came almost simultaneously with the nation's increasing environmental awareness and recognition of the importance of preserving and protecting our natural resources.

This project has been the subject of extensive environmental studies and significant efforts and dollars have been expended to produce a waterway that will be a model for future development.

The environmental studies, as well as various aspects of project design, have been fully coordinated with local, state and federal agencies. Consultation with these agencies has led to many refinements, at a cost of many millions of dollars, in the interest of environmental quality.

Examples of this concern is demonstrated in numerous major structural changes in the originally-designed waterway. We re-designed and

moved a $46 million lock and dam so as not to inundate Plymouth Bluff, a rare archeological site. We changed the crest of a spillway at Gainesville, Ala. in order to provide higher dissolved oxygen content.

We completely re-designed a 45-mile section of the waterway from a perched canal to a chain of lakes concept that is more aesthetic and environmentally sound. Just this year, we delayed full impoundment of Gainesville Lake to aid in spawning of fish.

We are carefully planning this waterway to insure that it will be a recreation paradise in an area that has very few water-related recreation facilities. We coordinate planning with all agencies in five states and the Federal Government to insure orderly and sound development of our resources.

There are no state or federally designated wilderness areas or scenic rivers that would be affected by the waterway.

More importantly, we have not identified any rare or endangered species designated by federal agencies that will be affected by this project. There are also no areas designated as critical habitat for federally-designated rare or endangered species.

We firmly believe the Tennessee-Tombigbee Waterway will offer many environmental advantages.

Although several years away from completion, this Waterway is already serving as an economic stimulus for a previously economically depressed region of the United States -- giving this area of the South economic confidence where, previously, little existed.

This era of increasing economic stability would be severely weakened by any major setbacks in water resource development..

The Endangered Species Act, when carried beyond its original intent, could bring water resources development to a halt. Too strigent environmental regulations, in addition to erecting new legal, political and public opinion obstacles, also drive up the costs of developing and maintaining a strong natural waterway system.

Development of waterway projects contribute immensely to the future welfare of citizens in this nation by providing much needed jobs, electric energy, water supply, flood protection and recreation. Such projects also stimulate commerce, creating new employment opportunities.

In matters relating to economic growth balanced against environmental needs, emphasis should be focused on real environmental issues and alternatives, with all citizens having a voice.

The Tennessee-Tombigbee Waterway Development Authority represents a broad spectrum of citizens from a five-state area who are vitally concerned and whose very livelihoods are closely linked to continued water resource development.

At the same time, our citizens believe environmental quality and sustained growth can be simultaneously attained with wise, careful and thoughtful planning. Legislation must allow for responsible balancing of all factors relevant to man's environment, including his economic and social needs, as well as important ecological concerns.

We urge that the Endangered Species Act of 1973 be amended to provide for balancing conservation interests with the social and economic needs of the people and to allow for completion and use of projects that are already under construction.

Statement
to the
Subcommittee of Resources Protection
of the
Senate Committee on Environment and Public Works

Submitted
1 May 1978

Dr. Thomas E. Lovejoy
Program Director
World Wildlife Fund
Washington, D. C.

Implementation of the Endangered Species Act has raised the spectre of important public works being prevented by seemingly obscure and esoteric forms of life, many of which are new to a biologically unsophisticated public. To many the problem is perceived as a choice between biological trivia and significant public benefits. As one critic asked me with respect to a potential conflict with a nuclear power plant, can a clam generate electricity?

Leaving aside the electrical systems of clam ganglia which have furthered our understanding of the functioning of our own nervous systems, the important point to which I would like to bring the committee's attention is that we never really know what we are losing when a species becomes extinct.

The importance then of the biota to Man has been too little explored to sensibly contemplate casting any species away, and it is fundamentally disturbing to contemplate any extinction. With each reduction in natural diversity the planet's capacity to support Man is diminished. Given this, the question of an amendment to Section 7 of the Act becomes a matter of whether and to whom society should delegate the Godlike---actually anti-Godlike---power to decide which species should go extinct.

How many of us would not be here had a moldy cantelope been tossed away and anti-biotics not discovered?

○