



Endangered Economies

An alternative approach to compliance with the Endangered Species Act is restoring endangered fish in the Colorado and San Juan Rivers.

BY JAMES V. HANSEN

In October 2000, Congress passed and sent to the president a bill to authorize federal cost-sharing for implementation of recovery programs targeting endangered fish.¹ The bill addressed the upper Colorado River and San Juan River basins in portions of Utah, Colorado, New Mexico, and Wyoming. I introduced this bill in the House of Representatives, with bipartisan co-sponsorship from members of the House from all four states. The House Resources Committee approved the bill, also with strong bipartisan support. There was strong bipartisan support in the Senate as well.

The legislation had the strong support of the four states involved as well as power users, water us-

ers, environmentalists, and the Clinton administration.² While HR 2348 did not amend the Endangered Species Act in any way, such widespread support for a bill addressing the needs of endangered species is unprecedented. The broad support for the bill resulted from the manner in which these recovery programs work on a cooperative basis to achieve the goals of the Endangered Species Act and the goals of numerous and diverse interests.

Particulars of the Act

The Endangered Species Act was passed almost unanimously by Congress in 1973. The purposes of the act are to conserve ecosystems that threatened and endangered species depend upon, to conserve endangered and threatened

species, and to comply with treaties and conventions entered into by the United States regarding endangered and threatened species. The act declares "that all federal departments and agencies shall seek to conserve endangered and threatened species and to utilize their authorities in furtherance of the purposes of this Act."

Later amendments declared "that federal agencies shall cooperate with state and local agencies to resolve water resource issues in concert with the conservation of endangered species."

The key provisions that implement the act are Section 4, "Determination of Endangered Species and Threatened Species," which sets forth procedures for identifying and listing endangered and threatened species; Section 7, "Interagency Cooperation;" Section 9, "Prohibitive Acts;" and Section 10, "Exceptions."

Section 4 specifies the legal requirements and procedures for identifying and listing species, including responses to citizen petitions to list species. Once species are listed, all of the other provisions of the act come into play. Section 4 also requires development and implementation of recovery plans for listed species and requires a review every five years of the status of the species to determine if it should be removed from the list or should be changed in status with respect to being endangered or threatened.

The primary means of implementing the Endangered Species Act has been through Section 7, "Interagency Cooperation." This section requires the secretaries of the Interior and Commerce to utilize all programs under their purview in furtherance of the purposes

of this act. In addition, the act requires that “all other federal agencies shall...utilize their authorities in furtherance of the purposes of this Act.” Section 7 also requires each federal agency to consult with the secretary to “insure that any action authorized, funded, or carried out by such agency, is not likely to jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification” of critical habitat of the species.

Section 9, “Prohibitive Acts,” makes unlawful a number of activities that affect endangered species, including the “taking” of any such species, without a permit. Section 10, “Exceptions,” authorizes the secretary to issue permits to legalize acts prohibited by Section 9, “if such taking is incidental to, and not the purpose of, carrying out of otherwise lawful activity.” Essentially, Section 10 allows the secretary to authorize takings if appropriate mitigation can be provided. For instance, constructing a dam that would destroy critical habitat of an endangered species, and therefore would be illegal under Section 9, might be permitted under Section 10 if the endangered species affected could be successfully transplanted to a new area where the species is not found. Section 10 also provides the legal authority for the numerous plans to conserve habitat.

Tortured Implementation

In 1973, no member of Congress could envision application of the Endangered Species Act as it has evolved. The congressional vision of “endangered species” was largely limited to eagles, whooping cranes, and perhaps, grizzly

bears. There was no anticipation that the Endangered Species Act would be applied to species of flies, mussels, snails, or snakes. There was no vision that the recovery and delisting of species would be an extremely rare event. There was no vision that approximately 1,000 species would be listed as endangered within a quarter of a century, with the list still growing and no foreseeable limits on the number of species that might be listed. There was no expectation that practically every county in the western United States would either contain an endangered species or be affected by a listing.

The number of species listed, however, is not the most remarkable aspect of implementation of the Endangered Species Act. Most striking are those actions that take place after species are listed. If an endangered species resides temporarily or permanently on a person’s land, the federal government can place restrictions on the use of that land under Section 9 of the Act. In essence, the federal government acquires an ownership interest in private property through its ability to restrict actions of the owner.

In the *Sweet Home* decision,³ the Supreme Court upheld the secretary of the Interior’s position that “taking” under the Endangered Species Act includes “harm,” as stated in the act, and that harm includes “significant habitat modification or degradation,” as interpreted by the U.S. Fish and Wildlife Service.

This means that anyone adversely modifying the habitat of an endangered species, even on one’s own property, is committing an illegal act. The practical effects are either restrictions on actions on private property or requirements

that anyone proposing such actions must obtain a permit from the Fish and Wildlife Service. Acquiring a permit often means agreeing to mitigation requirements. Mitigation requirements are normally the responsibility of the landowner and constitute an additional expense, either in land or money.

The legal act of diversion of water from a stream in any state can be made illegal if there are endangered species in the stream. If endangered species—adult, young, or larvae stages—enter the diversion, this constitutes a taking under the Endangered Species Act and is illegal without a permit. Theoretically, the driver of an automobile with an endangered fly on the windshield is in violation of the Endangered Species Act, unless some entity has obtained a permit for such a taking.

A literal reading of Section 7 implies that it only applies to actions by federal agencies, and this is still commonly misunderstood by many. But the fact remains, federal actions include permitting, funding, or otherwise allowing activities to take place that may affect endangered species. This provision results in the broad application of the Endangered Species Act to numerous land and water management activities in the West.

Practically every major river basin in the West includes threatened or endangered fish or other aquatic species. The issuance of a permit for a dam, diversion works, or other construction in or near a river or wetlands triggers Endangered Species Act compliance. This provision is coupled with a broad definition of impacts to endangered species.

The Fish and Wildlife Service,

for instance, holds that the depletion of water anywhere in the Upper Colorado River Basin will adversely affect the four endangered fish species that reside in the lower, warm-water reaches of the Upper Basin rivers. As a consequence, depletion activities far upstream of the habitat are considered to "jeopardize" the endangered species, even though endangered species habitat may be hundreds of miles downstream.

The application of the act has been expanded, and it now encompasses grazing permits issued by federal agencies to individual ranchers, federally funded conservation activities on farms, and practically all activities on lands managed by any federal agencies, including the Bureau of Land Management, the U.S. Forest Service, and the Department of Defense. The act is applied to contracts between the Bureau of Reclamation and individual water users that address water from federal projects, the annual operation of federal water and power projects, and hydroelectric power generation operations that change the flows in rivers and streams. Moreover, permits issued by the Federal Energy Regulatory Commission are subject to Endangered Species Act compliance. Almost any project to benefit American Indians on their own reservations is also subject to Endangered Species Act compliance and restrictions, since these are all normally a function of some federal activity. The vast federal land ownership in the western states also triggers application of the Endangered Species Act to countless activities.

Clearly, the Endangered Species Act can affect water users throughout the western United States,

ranging from the individual farmer, rancher, or irrigator to the largest municipalities and industries. Water development activities by American Indians are equally subject to the provisions of the Endangered Species Act.

Economics and the Act

The Endangered Species Act, as written and in practice, is virtually devoid of economic considerations. In this way it is unique in American law. Listing of species as threatened or endangered requires no consideration of the resultant economic impacts. The Fish and Wildlife Service has routinely concluded that listing a species is not subject to provision of the National Environmental Policy Act, a federal act designed to disclose the impacts of federal actions on the human environment. As a result, there is no economic or environmental review of the impacts of listing endangered species.

Critical habitat designation is subject to economic impact analysis, but these economic analyses routinely conclude that critical habitat designation does not have a significant economic impact in itself or that the impact is minimal on a national or regional scale. Thus, the federal government evades any substantive analysis of economic or environmental impacts for implementing the act.

This lax approach to economic analysis occurs despite the drastic impacts of the act in some areas and on some economic sectors. For significant examples in the Pacific Northwest, you need look no further than the spotted owl and several species of endangered salmon. In fiscal year 1997, reported federal and state expenditures for the three species of Columbia Basin

salmon totaled \$72.2 million.⁴ Expenditures for these species have occurred in the past and will continue into the foreseeable future. The economic effects on the timber industry and associated communities and on hydroelectric power production and costs are significant.

There was a previous agreement that the Bonneville Power Authority (BPA), which generates hydroelectric power in the Pacific Northwest, would expend no more than \$435 million per year, on average, on endangered species and other fish and wildlife purposes. These costs are passed on to BPA power customers. Of this total \$183 million would result from lost revenues from power generation in order to meet flow requirements for fish, and to purchase power resulting from lost generation capacity. BPA is now operating under a biological opinion recently issued by the National Marine Fisheries Service. BPA estimates it may have to spend as much as \$2.0 billion to purchase power in 2001, while operating under the biological opinion issued by National Marine Fisheries Service.⁵

Federal regulations to implement Section 7, "Interagency Cooperation," state that "reasonable and prudent alternatives" must be "economically and technologically feasible." Reasonable and prudent alternatives are alternative actions that can be implemented to avoid the likelihood of jeopardizing the listed species or the destruction or adverse modification of critical habitat. In other words, reasonable and prudent alternatives are mitigation measures for impacts on endangered species, resulting from actions of federal agencies.

The determination of what is

“economically and technologically feasible” apparently is made by the agency having oversight responsibilities, but this has not prevented the implementation of “reasonable and prudent alternatives” that have had drastic economic effects, such as those being imposed on federal hydroelectric power operations in the Pacific Northwest. There is no evidence that the criterion that reasonable and prudent alternatives be “economically” feasible has any meaning in the application of the Endangered Species Act.

Endangered Economic Health

The Endangered Species Act is the most powerful environmental law enacted by Congress. In reality, any federal agency action affecting a listed species is subordinated to the act. Unprecedented discretion is given the two agencies implementing the act, the Fish and Wildlife Service and the National Marine Fisheries Service. There are virtually no economic constraints in implementing the act.

One of the great failures in implementation of the Endangered Species Act is the emphasis on Sections 7 and 9, which provide for enforcement of the act against citizens otherwise engaged in lawful activities. While conservation and recovery is the stated goal of the act, the emphasis is on enforcement. In fact, the cost of recovery has not even been estimated for hundreds of listed species. New species are being listed without any indication of the feasibility of recovery, much less the cost of recovery and delisting of those species.

The Endangered Species Act was last reauthorized in 1987 for a period of five years. It was due for reauthorization in 1992. Dur-

ing the last nine years, several bills have been introduced in both the House and the Senate to reauthorize the act. Some of these bills have attempted to address the problems described above. Others have attempted to reinforce the existing methods of implementing the act or to make it even more stringent. Few of these bills passed Senate or House committees, and none was enacted into law. There is no consensus by a congressional majority on what changes need to be made to the act. As a result, the existing act remains the law of the land.

Chronology of Compromise

The Upper Colorado River Basin, which is the watershed upstream of Glen Canyon Dam, includes more than 108,000 square miles (280,000 square kilometers) of drainage and thousands of miles of rivers and streams. It also includes 800 miles (1,300 kilometers) of designated critical habitat for four endangered fish species.

Water development and use in the basin supports irrigated agriculture, urban development, recreation, fisheries, wildlife, and a variety of industries. Transfer of water out of the basin also supplies municipal water for Salt Lake City, Cheyenne, Denver, Colorado Springs, Albuquerque, and other urban areas in Utah, New Mexico, and Colorado.

When the Endangered Species Act was passed in 1973, the Colorado squawfish—now the Colorado pikeminnow—and the humpback chub were “grandfathered” as original listed endangered species. Two other Colorado River basin species, the razorback sucker and the bonytail, were later added to the endangered species list. In the

late 1970s, the Bureau of Reclamation began “consulting” with the Fish and Wildlife Service on the impacts of water projects on endangered species, as required by the Endangered Species Act.

Since that time, the Fish and Wildlife Service has uniformly held that water project depletions anywhere in the Upper Colorado River Basin, including those depletions upstream of pertinent habitat, “jeopardize” the endangered fish. In the early 1980s, the Endangered Species Act was applied to nonfederal projects. In the interim, water users and the Upper Basin states began to more fully understand the implications of the Endangered Species Act; a decision of the U.S. Supreme Court brought construction of Tellico Dam—a project of the Tennessee Valley Authority—to a complete halt due to potential impacts on the snail darter, an endangered species.

In July 1983, the Fish and Wildlife Service developed a draft report stating that the only way for water projects in the Upper Colorado River Basin to avoid jeopardizing endangered fish species was to replace all depletions on a one-for-one basis. New projects would have to double storage capacity and release one-half of the depletion to the stream to offset the other one-half being used. This requirement would have made future water development infeasible. It would have deprived the Upper Basin states of water entitlements provided for under interstate compacts that had been ratified by Congress.

■ **Colorado Water Congress Special Project.** The draft report got the attention of the Upper Basin states and Upper Basin water us-

ers. In December 1983, water users in Colorado and Utah asked the Colorado Water Congress, a state-wide water users organization based in Colorado, to form the Colorado Water Congress Special Project on Threatened and Endangered Species.

The Colorado Water Congress Special Project's objectives were to resolve potential conflicts with the Endangered Species Act in a manner that respected state water law, recognized interstate water compacts, and equitably distributed the cost of any solution. Negotiations to resolve the potential conflicts began in 1984 and involved the Fish and Wildlife Service; the Bureau of Reclamation; the states of Colorado, Wyoming, and Utah; the Colorado Water Congress Special Project; environmentalists; and, later, the Western Area Power Administration.

In May 1985, the Colorado Water Congress Special Project proposed that the endangered fish species be recovered and delisted. The special project also proposed that actions taken to recover the species be used as mitigation to offset the effects of water development and management activities under the Endangered Species Act. The water users' rationale was that the only way to solve the problem in the long term was to recover and delist the species. Otherwise, there would be an endless series of "consultations" and, eventually, limitations would be placed upon depletions in the Upper Colorado River Basin. The special project proposal was followed by two additional years of intense, but successful, negotiation.

■ **Recovery program.** In January 1988, the secretary of the Interior, the administrator of the Western

Area Power Administration, and the governors of Colorado, Wyoming, and Utah signed a cooperative agreement establishing the Upper Colorado River Endangered Fish Recovery Program. The objective of this program is to recover four endangered fish species in the Upper Colorado River Basin while water development proceeds in compliance with the Endangered Species Act, state law, interstate compacts, and Supreme Court decrees allocating water among the states.

A governing committee was established that includes water users, environmentalists, and representatives of the Fish and Wildlife Service, the Bureau of Reclamation, the Western Area Power Administration, and the states of Colorado, Utah, and Wyoming. The governing committee operates by unanimous consensus.

Technical committees were established with the same institutional representation. The Colorado River Energy Distributors Association and the National Park Service were added as voting members in September 2000. The Colorado River Energy Distributors Association represents 130 organizations in six states that purchase power from federal hydroelectric projects at Bureau of Reclamation dams in the Colorado River Basin.

Dearth of Information

In 1989, very little was known about the biology and habitat requirements of the endangered fish in the Colorado River Basin. Less was known about the actual numbers of fish present. The information available at that time indicated that the numbers of endangered fish had declined sharply

over the decades; the bonytail was virtually extinct in the Upper Basin, and the razorback sucker was continuing to decline and near extinction. The recovery program initiated wide-ranging research and monitoring programs to fill the huge information gaps regarding the needs of these species and to establish the actual numbers present. The intent of the research was to lay the groundwork for management actions to recover the endangered fish.

Major recovery program activities have been in the areas of habitat restoration and instream flow protection, nonnative fish management, stocking, propagation and genetics management, research and monitoring, information and education, and the associated program management. To date, flooded bottomlands habitat has been acquired for the endangered species. Propagation facilities have been constructed. Major stocking programs are underway. Water needed for endangered fish habitat is being acquired in accordance with state law.⁶ Instream flows for endangered fish are being protected under state law. Reservoir operations are being modified consistent with state law to benefit endangered species downstream. Improvements in irrigation systems are being constructed, with the conserved water being used in accordance with state law to enhance flows for endangered fish.

From 1989 through 2000, a total of \$81.7 million has been expended on the Upper Basin recovery program. These funds include \$49.7 million in congressional appropriations to the Bureau of Reclamation and the Fish and Wildlife Service; power revenues of \$22.9 million; \$7.2 mil-

lion from Colorado, Wyoming, and Utah; and \$1.9 million from water users.

The recovery program provides mitigation for impacts of water projects on the endangered fish. In the 12-year history of the program, the Fish and Wildlife Service has found more than 600 water projects, depleting 1,700,000 acre-feet (2 billion cubic meters) per year, to be in compliance with the Endangered Species Act. Not one lawsuit challenging these findings has been filed by any party.

The San Juan River Basin Recovery Implementation Program has been on a similar track. The program was instituted in 1992 to provide for recovery of two of the four endangered species, the pikeminnow and razorback sucker. The San Juan basin covers portions of southwestern Colorado, southeastern Utah, and northwestern New Mexico.

Since inception of the San Juan recovery program, about \$12 million has been expended. The program provides Endangered Species Act compliance for approximately 800,000 acre-feet per year of depletions in the San Juan River basin, including depletions for water projects benefitting the Navajo Nation, Ute Mountain Ute Tribe, Southern Ute Tribe, and Jicarilla Apache Tribe.

Federal Authorizing Legislation

In the mid-1990s, participants in the Upper Colorado River Endangered Fish Recovery Program began requesting congressional appropriations in the range of \$5 million to \$7 million per year to develop the capital facilities—hatcheries, fish passages, reservoir modifications—needed to recover the fish. Congress asked program

participants to define overall needs and to come up with additional cost sharing to implement these projects. These questions also applied to the San Juan River Basin Recovery Implementation Program.

As a result, HR 2348 was introduced in the House in 1999 to provide continued funding for the Upper Colorado and San Juan recovery programs. The bill authorizes capital project funding of \$46 million in congressionally appropriated funds and recognizes \$17 million in funds contributed by the four Upper Basin states and \$17 million contributed by power users benefitting from the hydroelectric projects in the Colorado River basin. In addition, the legislation recognizes in-kind contributions of \$15 million by power users—in the form of lost power that hydroelectric projects would have generated if it had not been for the fish—and \$5 million by the Colorado River Water Conservation District for water to benefit endangered fish from Wolford Mountain Reservoir. These funds will be used to continue operation and maintenance of the capital projects and to continue monitoring fish populations. Funding may be continued after that point for those purposes, but only after Congress reviews the recovery programs' accomplishments.

Power Generators Ante up

Revenues from the hydroelectric power projects have played a significant role in financing the Upper Basin Recovery Program to date and will play a significant role in the future. Moreover, power users have continued to support legislation authorizing use of power revenues, for a number of reasons.

First, there is a cap on the amount of money that will be devoted to the program. Second, the manner in which the power revenues will be applied does not affect rates. Third, Congress receives reports on the recovery program on an annual basis as congressional appropriations are requested. And fourth, there will be an overall congressional review of any continued expenditures of power revenues in 2010. The checks and balances on use of power revenues provided in HR 2348 stand in stark contrast to the apparently unlimited use of power revenues to support Endangered Species Act activities in the Columbia River Basin.

The House of Representatives passed funding legislation for the bill in July 2000. The Senate passed the measure in October, and the bill was signed into law on October 30, 2000. This legislation was made possible by strong support from all recovery program participants, including the administration, environmentalists, water users, power users, and the Upper Basin states. The federal funding legislation will ensure continued funding for the recovery programs in the Upper Colorado River and San Juan River basins with congressional oversight.

Program Successes

The recovery implementation programs are working for water users in Utah, Colorado, Wyoming, and New Mexico. Endangered Species Act compliance has been provided on 2.5 million acre-feet per year of depletions, with no litigation. Endangered fish are on the road to recovery. There has been no taking of water by the Fish and Wildlife Service for endangered species. Instead, water for the species is

being provided in accordance with state law and interstate compacts.

Equitable and mutually agreeable funding arrangements were negotiated by the programs' participants. All the participants have made long-term commitments to the recovery programs and have supported legislation to provide continued funding. A broad range of activities is being carried out to recover the endangered fish, and the endangered fish are beginning to respond to those actions. Colorado pikeminnow populations are increasing. The razorback sucker was near extinction. Stocked razorback sucker are now appearing at spawning locations. Humpback chub populations are stable. Bonytail are being reintroduced. The long-term prognosis is that the endangered fish will be recovered in the foreseeable future. One

major benefit of the programs is that delisting is a realistic goal.

The Upper Basin and San Juan recovery programs are not without flaws, but they are achieving the goals of the Endangered Species Act while avoiding conflicts with other federal and state laws. This is a truly remarkable achievement. Indeed, Congress and the federal agencies could benefit by considering these programs as examples of how the Endangered Species Act should be implemented. ■

*The Honorable James V. Hansen is a member of the United States Congress. He is the representative of Utah's First District.*⁷

NOTES

1. Enacted as P.L. 106-392.
2. S. 2239, introduced by Senator Allard

(R-CO), is the corresponding Senate bill.

3. See *Secretary of the Interior v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995).

4. Federal and State Species Expenditures, Fiscal Year 1997; Bruce Babbitt, Secretary of the Interior, August 30, 1999.

5. Personal communication, Mark Walker, Director of Public Affairs, Northwest Power Planning Council.

6. There is no condemnation of water rights under the program.

7. The author wishes to recognize the contributions of Tom Pitts and Allen Freemyer to the development of this article. Tom Pitts, principal of Water Consult, Engineering and Planning Consultants, Loveland, Colorado, represents Utah, New Mexico, Colorado, and Wyoming water users on the Upper Basin and San Juan recovery implementation programs. Allen Freemyer is Majority Staff Director, National Parks and Public Lands Subcommittee, House Resources Committee, U.S. House of Representatives.