1978

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Martha T. Eider-Orley

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THE AFFIRMATIVE DUTY OF FEDERAL DEPARTMENTS AND AGENCIES TO RESTORE ENDANGERED AND THREATENED SPECIES

Section 7 of the Endangered Species Act of 1973 (the Act) imposes an affirmative duty upon all federal departments and agencies to carry out conservation measures designed to restore endangered and threatened species of fish, wildlife, and plants to their former viability. The section provides:

The Secretary [of the Interior or of Commerce] shall review other programs administered by him and utilize such programs in furtherance of the purposes of this chapter. 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 by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 1533 of this title 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.

As administrative and judicial implementation of this relatively new law progresses, the role of federal agencies in restoring endangered and threatened species will be clarified and broadened.

2. The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary [of the Interior] to constitute a pest whose protection under the provisions of this chapter would present an overwhelming and overriding risk to man. 16 U.S.C. § 1532(4) (Supp. V 1975), as amended by Act of July 12, 1976, Pub. L. No. 94-359, 90 Stat. 911.
The purpose of the Act is to rescue endangered and threatened species from near-extinction and nurse them back to a point at which they are no longer endangered or threatened. As the Supreme Court has recently stated, "[t]he plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost."\(^6\) To accomplish this, federal agencies must focus increasingly on positive restoration efforts, in addition to mere preventive means of avoiding harm to endangered species. Such preventive measures typically involve voluntary consultation with the Department of the Interior before finalizing plans for projects that may affect endangered species. On several occasions, however, preventive injunctions have been judicially imposed as a result of citizens' suits authorized by the Act.\(^7\) With the requirement of administrative consultation on all federal actions that may adversely affect endangered species now firmly established, and a


1. Except as provided in paragraph (2) of this subsection [detailing procedural requirements] any person may commence a civil suit on his own behalf—

   (A) to enjoin any person, including the United States and any other governmental instrumentality or agency . . . who is alleged to be in violation of any provision of this chapter or regulation issued under the authority thereof; or

   (B) to compel the Secretary [of the Interior or of Commerce] to apply . . . the prohibitions set forth in or authorized pursuant to . . . this title with respect to the taking of any resident endangered species or threatened species within any State.


That § 11(g) has been invoked only infrequently testifies to the success of the § 7 consultation provision. The consultation provision is intended “to insure that the expertise of the appropriate agencies is brought to bear on environmental questions, and provides for a check against potential biases of mission-oriented agencies.” Endangered Species Act Oversight, Hearings Before the Subcomm. on Resource Protection of the Senate Comm. on Environment and Public Works, 95th Cong., 1st Sess. 97 (1977) (statement of Robert L. Herbst, Assistant Secretary of the Interior for Fish and Wildlife and Parks). As of January 1978, the Fish and Wildlife Service had handled more than 4500 § 7 consultations. Telephone interview with Robert Jacobsen, Chief, Branch of Management Operations, Office of Endangered Species, U.S. Fish and Wildlife Service, Department of the Interior (Jan. 12, 1978). See also ENDANGERED SPECIES TECH. BULL., November 1977, at 1.
foundation for judicial review of contested actions beginning to take shape, amelioration of the endangered species' plight is a real possibility. This note deals with the next step in increasing the population of endangered species: the cooperation among federal agencies necessary to implement active restoration.

RESTORATION AND CRITICAL HABITAT

A review of the legislative history of the Act and of several of its provisions indicates a congressional emphasis on restoration. The purposes of the Act are set out in section 2:

The purposes of this chapter are 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 endangered species and threatened species . . . .

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 chapter. 9

The terms “conserve,” “conserving,” and “conservation” as used in the Act have a special meaning. They do not signify mere preservation. Rather, they are defined in section 3:

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 at which the measures provided pursuant to this chapter 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 . . . .10

In this sense, conservation involves increasing the population of an endangered or threatened species rather than merely perpetuating

8. See, e.g., 119 CONG. REC. 25,668 (1973) (remarks of Senator Tunney): “The challenge before us now is to protect these species and their vital habitat and to restore their numbers to optimum levels.”; id. at 25,670 (remarks of Senator Tunney): “We have a duty to restore what we have endangered—for ourselves and for posterity.” See generally H.R. REP. NO. 740, 93d Cong., 1st Sess. 23 (1973).
a species in its endangered or threatened status. Conservation thus becomes synonymous with restoration, a term which embodies the purposes of the Act.11

In anticipation of successful restoration, Congress empowered the Secretary of the Interior in section 4 to review the status of an endangered species and to change its status to "threatened" when sufficiently recovered.12 This review process has been characterized as enabling

the secretary to provide a "halfway house" for those animals which have been restored to the point that they are no longer "threatened with extinction," but have not yet responded to the point at which they are ready to be completely removed from the protective umbrella . . . . This procedure can be likened to that of a hospital where the patient is transferred from the intensive care unit to the general ward until he is ready to be discharged.13

For example, the successful restoration of the greenback cutthroat trout by federal and state agencies has led to the proposed change of the fish's protection category from endangered to threatened.14 The American alligator was recently reclassified in a similar fashion since it "is making encouraging gains in population over much of its known historical range . . . ."15 The "threatened" classification is also used to protect species which have not yet become endangered.16 As of May 31, 1978, there were 175 endangered species of fish and wildlife in the United States, and only twenty-eight
threatened domestic species. Of the twenty-eight threatened species, five had been reclassified from endangered.

Availability of critical habitat is a primary factor in the rehabilitation of a species. The relationship between restoration and critical habitat has been aptly characterized by a representative of Defenders of Wildlife, a conservation organization which later became a successful plaintiff in litigation involving the Act:

[The Act's] underlying goal was not only to insure survival, but to insure to the extent possible, the restoration, I repeat, restoration, of endangered and threatened species to a point where they are no longer endangered and threatened . . . .

The Fish and Wildlife Service currently seems to be viewing critical habitat as that last ditch area in which the last five to ten animals of any species will survive. However, critical habitat relates back to the basic assumptions of the Act—to the goal of restoration . . . . Congress, in my view and in the view of many, did not intend that all endangered and threatened species would in fact be endangered or threatened forever, nor did they envision critical habitat as being that habitat of postage stamp size

17. ENDANGERED SPECIES TECH. BULL., June 1978, at 12.
19. "Critical habitat" was defined recently by the Departments of Commerce and of the Interior as 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 of the survival and recovery of a listed species and may include additional areas for reasonable population expansion.


20. The importance of protecting habitat was a major theme in the legislative history of the Act. The following remarks are typical: "[I]f we are really going to protect endangered species, there are two things the world has to do: stop the destruction of habitat, and beef up enforcement." Hearings on Endangered Species Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries, 93d Cong., 1st Sess. 225 (1973) (remarks of Nathaniel P. Reed, Assistant Secretary for Fish and Wildlife and Parks, Department of the Interior); "[I]t is ultimately immaterial whether or not an animal is deliberately molested if its habitat is not preserved. Habitat acquisition must be a major goal in this legislation." Id. at 301 (remarks of Tom Garrett, Wildlife Director, Friends of the Earth); "Man can threaten the existence of species of plants and animals in any of a number of ways . . . . The most significant of those has proven also to be the most difficult to control: the destruction of critical habitat." H.R. REP. No. 412, 93d Cong., 1st Sess. 5 (1973) (report of the House Committee on Merchant Marine and Fisheries).

necessary to continue the survival of the last handful of any species. The fact is that habitat necessary for survival and restoration must be considered critical until the agencies which are fostering and promoting development can prove that such habitat is not critical and necessary for the survival, welfare and subsequent restoration of the species. Without this, the whole meaning of section 7 . . . and the meaning of the Endangered Species Act of 1973 will be in jeopardy. The alternative presupposes an ever-expanding list of endangered and threatened species with virtually no chance for restoration.\textsuperscript{22}

In fact, the litigation arising from section 7 has centered on the issue of critical habitat. In \textit{Sierra Club v. Froehlke},\textsuperscript{23} an Eighth Circuit case involving the endangered Indiana bat, the U.S. Army Corps of Engineers planned to construct a dam which would cause the flooding of certain caves housing the Indiana bat. The court refused to enjoin construction, finding that section 7 required only consultation and not acquiescence between the corps and the Department of the Interior,\textsuperscript{24} and that proper consultation had indeed occurred. The court then sanctioned a balancing approach between the expected benefits of the project and “the importance of an unspoiled environment.”\textsuperscript{25} According to the figures used by the court, only 207 of a total 700,000 bats faced certain doom from the expected flooding;\textsuperscript{26} therefore, the habitat involved was found not to be critical for the bat’s survival.\textsuperscript{27}

Critical habitat of the endangered Mississippi sandhill crane was the subject of litigation in \textit{National Wildlife Federation v. Coleman}.\textsuperscript{28} In that case, federally funded highway construction through
the sandhill crane's habitat was halted by the Fifth Circuit "until the Secretary of the Department of Interior determines that the necessary modifications are made in the highway project to insure that it will no longer jeopardize the continued existence of the Mississippi Sandhill Crane or destroy or modify critical habitat of the Mississippi Sandhill Crane."\textsuperscript{29} In a forward-looking attempt at compelling specific remedial restoration, the National Wildlife Federation asked the court to order acquisition of certain lands by the Federal Highway Administration (FHWA) to mitigate the loss of critical habitat that would result from the highway construction.\textsuperscript{30} The court declined to decide whether the FHWA could be so ordered, leaving resolution of the issue of land acquisition to the Secretaries of the Interior and of Transportation.\textsuperscript{31} Almost two years later, administrative settlement of this issue was still pending.\textsuperscript{32} Although the highway itself was allowed to progress, construction of a controversial interchange has been delayed pending settlement of the land acquisition dispute.\textsuperscript{33}
In TVA v. Hill, the Supreme Court affirmed a decision of the Sixth Circuit enjoining the TVA from completing the Tellico Dam and impounding a section of the Little Tennessee River, which has been designated critical habitat of the snail darter, an endangered fish. The snail darter requires clean, clear flowing river water with extensive shoals and clean gravel bottom. Impoundment would transform the river into a reservoir, destroying the required habitat. The TVA has admitted:

Most biologists aware of the situation now agree that, although the snail darter spawns in the Little Tennessee River, its young probably drift downstream through the sluice gates of the Tellico Dam into the Watts Bar Reservoir where they mature. With Tellico Dam already in place blocking upstream movement of fish, the snail darter population above the dam is sharply diminishing; and it is widely agreed that within its legal critical habitat, the snail darter will die out.

The injunction will remain in effect until Congress exempts Tellico from the Act, the snail darter is deleted from the endangered species list, or the snail darter’s critical habitat is materially redefined by the Fish and Wildlife Service. Despite the expenditure of millions of dollars of public funds, the Supreme Court rejected the balancing approach, which the Eighth Circuit followed in the Indiana bat case. The Court found it “beyond doubt that Con-

41. [T]he plain language of the Act, buttressed by its legislative history, shows clearly that Congress viewed the value of endangered species as "incalculable." Quite obviously, it would be difficult for a court to balance the loss of a sum certain—even $100 million—against a congressionally declared "incalculable" value, even assuming we had the power to engage in such a weighing process, which we emphatically do not.
42. See Sierra Club v. Froehlke, 534 F.2d 1289 (8th Cir. 1976).
gress intended endangered species to be afforded the highest of priorities."  

SECTION 7

The cases involving critical habitat have arisen under section 7, a subject of varying judicial interpretation. Although the legislative history on the duties of federal agencies is scant, section 7 has been a primary topic of scholarly commentary on the Act.

44. See text accompanying note 7 supra. In 1975, an official of the Fish and Wildlife Service appraised the potential effect of § 7 as follows:

It is quite apparent that section 7 is one of the most difficult and potentially delicate parts of the act, because of the implications of listing critical habitats. . . . [W]ith a proper array of critical habitat designations across the map of the United States, we could seriously impede, if not halt, many activities carried on either by the Federal Government or under Federal sponsorship in some fashion.


45. The Joint Explanatory Statement of the Committee of Conference, for example, omits mention of § 7 altogether. H.R. REP. No. 740, 93d Cong., 1st Sess. 26 (1973), reprinted in [1973] U.S. CODE CONG. & AD. NEWS 3001, 3005. In 1973, in one of the few references to federal agencies and § 7, Senator Marlow Cook of Kentucky expressed frustration over his inability to prevent the Army Corps of Engineers from building a road “right smack through the nesting areas of wild turkeys.” He was assured by Douglas Wheeler, Deputy Assistant Secretary for Fish, Wildlife, and Parks “that [the counterpart in S. 1592, 93d Cong., 1st Sess., 119 CONG. REC. 12, 411 (1973), to current § 7] for the first time would prohibit another Federal agency from taking action which does jeopardize the status of endangered species.”


Under the authority of this paragraph, for example, the Director of the Park Service would be required to conform the practices of his agency to the need for protecting the rapidly dwindling stock of grizzly bears within Yellowstone Park. These bears, which may be endangered, and are undeniably threatened, should at least be protected by supplying them with carcasses from excess elk within the park, by curtailing the destruction of habitat by clearcutting National Forests surrounding the Park, and by preventing hunting until their numbers have recovered sufficiently to withstand these pressures.

H.R. REP. No. 412, 93d Cong., 1st Sess. 14 (1973). A plausible explanation for this gap in the legislative history is that proponents of § 7, recognizing its enormous potential for controversy, intentionally understated the possible extent of federal agency obligations.

46. See, e.g., Wood, Section 7 of the Endangered Species Act of 1973: A Significant Restriction for All Federal Activities, 5 ENVT'L. REP. 50,189 (1975); Note,
Yet, in the cases and other discussion, the affirmative duties imposed by this section have either been overlooked, touched on briefly, or discounted as unfeasible.

Enforcement of section 7 has only gradually gained momentum. In 1975, a spokesman for the Fish and Wildlife Service, which administers much of the Act, admitted: “In all candor, we have only recently begun to implement section 7, not because I do not consider it to be important, but because there were many other things that had to be done first.”

In 1976, Senator Wendell Ford commented: “Since the act was effective upon its date of enactment, the Departments [of Commerce and of the Interior] had essentially no lead time to gear up for these new responsibilities, and the implementation of the act has not occurred as rapidly as some would like.”

**Remedial Restoration**

Despite this slow start, implementation of section 7 is now well underway. The Fish and Wildlife Service anticipates 10,000 to 20,000 consultations by other federal agencies during fiscal 1978 on how to avoid adverse impact on endangered and threatened species. Despite the many section 7 consultations successfully

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47. See, e.g., M. Bean, supra note 46, at 405 n.121.


50. Endangered Species Oversight: Hearings Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries, 94th Cong., 1st Sess. 259 (1975) (remarks of Keith Schreiner, Associate Director, Federal Assistance, Fish and Wildlife Service, Department of the Interior). The official who offered these remarks was the subject of an article by Jack Anderson and Les Whitten in the Washington Post, March 15, 1975, reprinted in Endangered Species Oversight, supra, at 325. The article suggested that implementation of the Act was obstructed by bureaucratic submission to the hunting lobby.


52. Endangered Species Oversight: Hearings Before the Subcomm. on Resource
protected by the Service,\textsuperscript{53} it is inevitable that some harm to endangered species will be inflicted prior to administrative or judicial review, as, for example, when an endangered species is discovered in the area of a project already begun. When actions "authorized, funded, or carried out"\textsuperscript{54} by a federal agency jeopardize the existence of endangered or threatened species, that agency has violated section 7 of the Act and is subject to its sanctions. Since the purpose of the Act is restoration, the agency should then undertake remedial restoration to counteract its infractions. This restoration can be undertaken either voluntarily or under court order.

Although litigation involving the Indiana bat, the sandhill crane, and the snail darter arose under section 7, the relief sought in those cases was primarily preventive, rather than restorative. In the first two cases, judicial intervention was requested prior to execution of the contested agency action. The courts were asked to enjoin the projects in question before harm was inflicted. The issue of taking affirmative steps to restore was reached only tangentially, since the relief sought was limited to the immediate issue of restraining construction.

In the bat case,\textsuperscript{55} which sheds little light on the affirmative duty to restore, the Eighth Circuit did take note of the Army Corps of Engineers’ plans to prevent harm to the bats from activities associated with construction of the dam.\textsuperscript{56} The issue of affirmative action was raised by the National Wildlife Federation in the crane case\textsuperscript{57} when it asked the court to compel FHWA acquisition of habitat.\textsuperscript{58} In that situation, habitat acquisition was seen by the National Wildlife Federation as a \textit{sine qua non} for proceeding with the highway construction rather than as a remedy for damage already done. Nevertheless, habitat acquisition is a good example of one effective way that a federal agency can accomplish restoration of species adversely affected by its activities.

\textsuperscript{53}See note 7 supra.
\textsuperscript{55}Sierra Club v. Froehlke, 534 F.2d 1289 (8th Cir. 1976).
\textsuperscript{56}The Army Corps of Engineers submitted reports to the court indicating an awareness of the problems presented and discussing the feasibility of installing protective devices to keep explorers out of the caves. \textit{Id.} at 1296 n.22.
\textsuperscript{58}\textit{Id.} at 375.
In the case of the snail darter, however, much of the harm had been inflicted before suit was brought. Even so, plaintiffs in that case limited their request for relief to a permanent injunction preventing closure of the dam. The Court of Appeals for the Sixth Circuit, which granted the injunction, found sufficient basis in the "causal nexus" between closure of the dam and depletion of the snail darter population to trigger the affirmative action requirement of section 7.

The Supreme Court apparently agreed that granting the requested injunctive relief satisfied the section 7 requirement to insure against jeopardizing endangered or threatened species. It is nevertheless arguable that halting closure constitutes only partial section 7 action necessary to insure against harm. At best, halting closure might insure against further harm. A more comprehensive remedy in this case would have been mandatory injunctive relief compelling removal or modification of the dam as the only adequate means of eliminating interference with the breeding patterns of the snail darter. This would begin to insure that executed agency action will no longer jeopardize the endangered fish or its critical habitat.

**No-Fault Restoration**

In addition to requiring remedial restoration by federal agencies, section 7 requires that

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62. Grave harm had already resulted. See text accompanying note 38 *supra*.


64. In the court of appeals decision, Judge Celebrezze wrote: "Our responsibility under § 1540(g)(1)(A) is merely to preserve the status quo where endangered species are threatened, thereby guaranteeing the legislative or executive branches [sic] sufficient opportunity to grapple with the alternatives." Hill v. TVA, 549 F.2d 1064, 1071 (6th Cir. 1977), aff'd, 46 U.S.L.W. 4673 (U.S. June 13, 1978). Judge Celebrezze incorrectly characterized the court's responsibility as mere preservation of the status quo of endangered species. See, e.g., authorities cited notes 8-11 *supra* and accompanying text.
[The Secretary [of the Interior or of Commerce] . . . review
other programs administered by him and utilize such programs
in furtherance of the purposes of this chapter [and that] [a]ll
other Federal departments and agencies . . . utilize their au-
thorities in furtherance of the purposes of this chapter by carry-
ing out programs for the conservation of endangered species and
threatened species . . . . 65

Affirmative conservation programs, unlike remedial restoration,
need not be linked to culpability or specific conflict between
agency action and conservation. No-fault restoration involves ongo-
ing programs, rather than ad hoc measures, and is most conven-
iently carried out by land management agencies. The legislative
history indicates that this section was primarily directed toward
land management agencies. 66 Litigation arising under section 7 has
involved such agencies as the Army Corps of Engineers, 67 the
Federal Highway Administration, 68 the TVA, 69 and the Fish and
Wildlife Service. 70

In *Defenders of Wildlife v. Andrus*, 71 a citizens' suit was
brought to compel the Fish and Wildlife Service to fulfill its section
7 duty to utilize its programs in furtherance of conservation. Seek-
ing declaratory judgment, Defenders of Wildlife challenged an ad-
ministrative decision of the Service permitting sport hunting of mi-
gratory game birds from one half hour before sunrise until sunset.
Plaintiffs maintained that the regulation violated the Act since pro-
tected endangered species could not readily be distinguished from
game species in the low visibility before sunrise. 72 The adminis-
trative record on which the challenged regulation was based contain-

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66. "We have lots of land management agencies who [sic] could provide for the
protection of endangered species habitat at the same time they carry out their pri-
mary mission." *Hearings on Endangered Species Before the Subcomm. on Fisheries
and Wildlife Conservation and the Environment of the House Comm. on Merchant
Marine and Fisheries*, 93d Cong., 1st Sess. 213 (1973) (remarks of Douglas Wheeler,
Deputy Assistant Secretary for Fish and Wildlife and Parks). "Our bill . . . would have the Navy . . . take on a very large responsibility as a land managing agency to
protect any endangered species on that piece of land and on any other land they
manage." *Id.* at 215 (remarks of Nathaniel P. Reed, Assistant Secretary for Fish and
Wildlife and Parks).
68. *See National Wildlife Fed’n v. Coleman*, 529 F.2d 359 (5th Cir.), *cert. de-
72. *Id.* at 168-69.
no studies of the effect of such shooting on protected species.\textsuperscript{73} Taking a stand apparently at odds with its role as champion of endangered and threatened species, the Service argued that it was required neither to carry out any such studies nor to provide a more complete administrative record.\textsuperscript{74} Its position was "that the Endangered Species Act only requires that the regulations 'do not jeopardize the continued existence of these [protected] species.' "\textsuperscript{75}

Judge Gesell rejected this argument, citing language from various sections of the Act, including section 7.\textsuperscript{76} He concluded:

> It is clear from the face of the statute that the Fish and Wildlife Service, as part of Interior, must do far more than merely avoid the elimination of protected species. It must bring these species back from the brink so that they may be removed from the protected class, and it must use all methods necessary to do so.

> Under the Endangered Species Act of 1973, the agency has an affirmative duty to increase the population of protected species.\textsuperscript{77}

He then issued a declaratory judgment that the regulations for the 1976-1977 hunting season were arbitrary and unlawful, and directed the Service to conduct current rulemaking proceedings according to its statutory obligations.\textsuperscript{78}

In so holding, Judge Gesell interpreted that part of section 7 which requires the Department of the Interior to utilize its programs "in furtherance of the purposes of this chapter."\textsuperscript{79} Section 7 further requires all other federal departments and agencies to utilize their authority similarly "in furtherance of the purposes of this chapter."\textsuperscript{80} This opinion therefore gave notice that all federal

\textsuperscript{73} Id. at 169.
\textsuperscript{74} Id.
\textsuperscript{75} Id. (brackets in original).
\textsuperscript{76} Id.
\textsuperscript{77} Id. at 170.
\textsuperscript{78} Id. Following this decision, the Fish and Wildlife Service established a § 7 administrative record, by forming and consulting with an ad hoc committee of endangered species specialists. They concluded that migratory bird hunting would not jeopardize whooping cranes and Mexican ducks within the meaning of § 7, but that the regulations did not meet the Act's requirements of active conservation since it was indeed possible that some members of endangered species might be killed. Telephone interview with a member of the Office of the Solicitor, Department of the Interior (Jan. 13, 1978) (interviewee's name withheld by request).
\textsuperscript{80} Id.
departments and agencies must affirmatively address the problem of restoration.

One way in which federal agencies can carry out conservation programs, as well as remedial restoration, within the meaning of section 7, is through acquisition of land that can be designated and preserved as habitat of endangered and threatened species.\textsuperscript{81} Although the Secretary of the Interior was given authority to acquire land under section 5,\textsuperscript{82} lack of funds has hampered full implementation of the Act.\textsuperscript{83} In 1976, Keith Schreiner, Endangered Species Program Manager, wrote:

A hard fact about helping Endangered species to recover is that it is expensive—particularly the acquisition of habitat . . . . The initial purchase cost is only one concern in deciding what lands to acquire within our budget. We also have to consider the long-term costs. . . . Accordingly, where it is both legally permissible and agreeable to all concerned, we try to enter into arrangements whereby other Federal agencies and individual states can share or assume the management costs.\textsuperscript{84}

Since restoration of endangered and threatened species requires biologic expertise, affirmative conservation programs may be undertaken by federal agencies in cooperation with recovery teams\textsuperscript{85} organized by the Department of the Interior. In the case of remedial restoration, if the federal agency does not have the

\begin{footnotesize}
\begin{enumerate}
\item Under 23 U.S.C. § 107 (1970), for example, the Secretary of Transportation may acquire land required by a state for "right-of-way or other purposes," if the state so requests. See also the Fish and Wildlife Coordination Act, 16 U.S.C. § 662(c), 663(c) (1970), which authorizes federal agencies constructing or operating water control projects to acquire lands and make provision for such land to be used for conservation.
\item ENDANGERED SPECIES TECH. BULL., October 1976, at 1.
\item Recovery teams, composed of experts nominated by the Fish and Wildlife Service and representing federal, state and private sectors, identify actions necessary to restore a species based on the present status of the species, the need for coordinating activity by all agencies already involved in recovery work, the availability of funds, and the need for land acquisition to protect the species' habitat. Endangered Species Oversight: Hearings Before the Subcomm. on Resource Protection of the Senate Comm. on Environment and Public Works, 95th Cong., 1st Sess. 96 (1977). See also ENDANGERED SPECIES TECH. BULL., August 1976, at 2.
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requisite expertise, the cost of recovery efforts accomplished through the Office of Endangered Species could be assessed against the culpable agency.

**INJUNCTIVE REMEDIES**

The need for restoring endangered and threatened species is such that courts must fashion injunctive remedies for violations of the Act, since the civil or criminal sanctions provided in the Act are inadequate remedies for rehabilitating dwindling species. The statutory authority for fashioning injunctive remedies is found in section 11(g), the citizen suit provision. This section should be liberally construed since section 3 provides that conservation “methods and procedures include, but are not limited to,” various enumerated resource management activities.

Explicit statutory description of injunctive remedies is not a requirement for such judicial relief. The Supreme Court held in *United States v. Republic Steel Corp.* that under the Rivers and Harbors Act of 1899, appropriate injunctive remedies may be fashioned and that “detailed codes which provide for every contingency” are unnecessary. The Court upheld an injunction against the discharge of industrial waste solids into a river by the defendants’ iron mills even though the statute provided explicitly for the removal of structures only. The Court further stated: “Congress has legislated and made its purpose clear; it has provided enough federal law in § 10 from which appropriate remedies may be fashioned even though they rest on inferences. Otherwise we impute to Congress a futility inconsistent with the great design

86. Section 11 provides civil penalties which vary from not more than $1000 to not more than $10,000, depending upon whether the violation was knowingly or unknowingly committed, and whether the violation involved an endangered species or a threatened species. Willful criminal violations involve fines and imprisonment which vary similarly according to whether the species involved is endangered or threatened. 16 U.S.C. § 1540 (Supp. V 1975), as amended by Act of July 12, 1976, Pub. L. No. 94-359, 90 Stat. 911.

87. See note 7 supra.


89. 362 U.S. 482 (1960).

90. 33 U.S.C. §§ 401-426i (1970) (originally enacted as Act of March 3, 1899, ch. 425, 30 Stat. 1151). The statute was designed to prevent interference with the navigability of United States waters by bridges, dams, or other obstructions except by express permission of the United States. See id.


92. *Id.* at 491.
of this legislation.”

The Court followed the same reasoning in Wyandotte Transportation Co. v. United States, a Government suit against the owner of a sunken barge to recover the costs of removal. The Court expressed its disbelief “that Congress intended to withhold from the Government a remedy that ensures the full effectiveness of the Act.”

The jurisdiction of federal district courts to issue mandatory injunctions has been upheld in a group of cases decided by the Fifth and Ninth Circuits involving restoration under the Rivers and Harbors Act. In an unrelated case, the Fifth Circuit reversed that part of a district court decision which refused to order restoration by a municipality of the condition of natural drainage on a landowner’s property which was adversely affected by the city’s pumping of water into an adjacent catchment area. The appellate court held that the landowner must be given a proper opportunity to submit evidence supporting his claim for mandatory injunctive relief. The tool of mandatory injunctions can thus be effectively used in environmental litigation even without a statutory basis for it. Under section 11 of the Endangered Species Act of 1973, as under section 12 of the Rivers and Harbors Act, there is a

93. Id. at 492.
95. Id. at 193. A consolidated case, United States v. Cargill, Inc., in which the Government asked that parties responsible for the sinking of a vessel be declared responsible for its removal, was also decided in the Government’s favor. Id. at 194.
96. Id. at 204.
97. See, e.g., United States v. Joseph G. Moretti, Inc., 478 F.2d 418 (5th Cir. 1973) (remanded to district court for administrative proceedings to determine whether injunction to restore topography affected by illegal dredging should be issued); “[W]e have no doubt that the issuance of a mandatory injunction requiring extensive restoration operations at very large expense to the developers is entirely within the Court’s power as expressly mandated by the statute.” Id. at 430-31. See also Weiszmann v. District Eng’r, U.S. Army Corps of Eng’rs, 526 F.2d 1302 (5th Cir. 1976) (remanded to district court for further proceedings to determine whether injunction to undo effects of illegal dredging should be issued); United States v. Sexton Cove Estates, Inc., 526 F.2d 1293 (5th Cir. 1976) (remanded to district court for further proceedings to determine whether injunction to fill canals illegally constructed should be issued); United States v. Sunset Cove, Inc., 514 F.2d 1089 (9th Cir. 1975) (required modification of injunction to restore shoreline which was illegally filled and elevated).
98. Fox v. City of West Palm Beach, 383 F.2d 189, 194-95 (5th Cir. 1967). For cases in which state courts have mandated restoration, see cases cited note 63 supra.
99. Fox v. City of West Palm Beach, 383 F.2d 189, 194-95 (5th Cir. 1967).
100. See note 7 supra.
101. “[T]he removal of any structures or parts of structures erected in violation
statutory basis for such relief, and mandatory injunctions can be important remedies of unique effectiveness.

CONCLUSION

Although the Endangered Species Act of 1973 is administered by the Department of the Interior, the potential for other federal agencies and departments to aid in restoration should not be overlooked. Not only does the Department of the Interior have an ever-increasing workload, but it has conflicting responsibilities. Critics have charged, for example, that involvement in "energy production, mineral leasing, and the exploitation of nonliving resources" is incompatible with protection of endangered species. The active involvement of other agencies is not only desirable but necessary.

In *Defenders of Wildlife*, Judge Gesell criticized the rulemaking procedures of the Fish and Wildlife Service itself, finding that insufficient consideration had been given to restoration. Although his admonitions were directed to the Service itself, the policy involved is equally applicable to other agencies: The Endangered Species Act of 1973 imposes an affirmative duty on all federal departments and agencies to increase the population of protected species.

Although litigation involving section 7 has dealt primarily with its precautionary aspects, and has not squarely raised the issue of restoration, the courts have in varying degree acknowledged the affirmative obligations of federal agencies. As industrialization and general development proceed, and environmentalists take increas-
ing advantage of the Act's citizen suit provision, litigation involving federal agencies and restoration is certain. To enforce federal agency restoration of endangered species as envisioned in the Act, the courts must be prepared to fashion injunctive remedies when necessary. The citizen suit provision of the Act provides for such injunctive relief, and it is this remedy which is of potentially major importance in redressing violations of the Act.

Martha T. Eider-Orley