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The Wake of the Snail Darter: Insuring the Effectiveness of Section 7 of the Endangered Species Act

Eric Erdheim*

INTRODUCTION

Diversity of species enriches human life and culture in a number of ways, both tangible and intangible. Diversity of species provides tangible ecological benefits: it makes possible a healthy and dynamic ecosystem, while extinction of existing species may disrupt the ecosystem and destroy the natural resources on which humanity depends. Species diversity also provides tangible economic benefits. For example, various plant species are used today in making prescription drugs, supplying new sources of food, and producing hydrocarbons to replace imported oil. Further, that many species have not been evaluated for potential exploitation indicates that a great many undiscovered resources of immediate and future benefit to humans may be available.

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2. At least 90 percent of the species that have dwelt on earth have become extinct, nearly all through natural processes. Myers, supra note 1, at 25-26. Since 1960, however, the rate of extinction has soared because of man's modification of the environment. Id.

3. Id. at 26-27.

4. Id. at 29-30.

5. Id. at 30. Myers estimates that of the earth's 300,000 species of plants, only 10 percent have been screened for any purpose and only one percent have been screened for possible utility to humans. What are Species Good For?, ENVIRONMENT (Nov. 1979) at 30.
through species preservation. Reduction of a genetic resource such as species diversity may impair human ability to respond to new problems and opportunities.6

Species diversity enriches human life in less tangible ways as well. Studying the evolution of other species, for example, contributes to an understanding of the human race itself.7 Additional arguments for preservation of species diversity rest on moral and ethical concepts such as reverence for life, humane behavior toward other species, and moral responsibilities to future societies.8

Congress, reflecting a popular sentiment still strong today,9 recognized the importance of these values when it passed the Endangered Species Act of 1973 (ESA).10 ESA declares that endangered11 and threatened12 species are of "esthetic, ecological, educational, historical, recreational, and scientific value,"13 and requires that all federal agencies use their authority to conserve such species.14

ESA provides a comprehensive program for effecting the conservation of listed species. The Fish and Wildlife Service (FWS)15 and the

8. Id. at 6-8.
9. Id. at 5-6. Public Opinion on Environmental Issues: Results of a National Public Opinion Survey, Resources for the Future, quoted in Environmental Quality—The Eleventh Annual Report on the Council on Environmental Quality 401, 409 (1980). The survey found that 67% of the public in 1978 and 73% in 1980 agreed with the statement, "an endangered species should be protected even at the expense of a commercial activity." See also N.Y. Times, Jan. 13, 1981, § 4, at 23, col. 2 (noting, for instance, that a group polled in a nationwide survey, "55% opposed the principle of building an industrial plant on a marsh needed by a rare bird species, even if the plant would help solve an unemployment problem").
12. "The term 'threatened species' means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20) (Supp. III 1979). Endangered and threatened species are hereinafter referred to as "listed species."
14. Id. § 1536 (Supp. III 1979). ESA defines "conserve" to mean "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 [ESA] are no longer necessary." Id. § 1532(3) (Supp. III 1979).
15. The United States Fish and Wildlife Service was created by Pub. L. No. 93-271, 88
National Marine Fisheries Service (NMFS)\textsuperscript{16} are required to list endangered and threatened species.\textsuperscript{17} Listing is based on factors that include habitat loss, disease, and predation.\textsuperscript{18} Once a species is listed, actions such as taking, possessing, selling, and importing or exporting the species are prohibited with minor exceptions.\textsuperscript{19} FWS and NMFS (hereinafter "the Services") were empowered to promulgate regulations to ensure further the conservation of listed species,\textsuperscript{20} and criminal and civil penalties are provided for violations of the Act or of the regulations.\textsuperscript{21} ESA also provided for programs of cooperation with states\textsuperscript{22} and with other nations\textsuperscript{23} to protect listed species. Once a species is listed, it must be preserved and fostered until listing is no longer necessary.\textsuperscript{24}

Section 7\textsuperscript{25} of the Act is one of ESA's central and most controver-
sial provisions. This section, entitled "Interagency Cooperation," requires all federal agencies to use their authorities, in consultation with the Services, to further the purposes of ESA. Federal agencies are required both to take affirmative acts to conserve listed species and to refrain from acting unless they can insure that their action is not likely to jeopardize such species or their critical habitats. There has been much uncertainty, however, regarding section 7's procedural and substantive requirements. The Act failed to define certain of the section's key terms and to set forth the procedures by which federal agencies are to consult with the Services. The legislative history of ESA also does not clarify the requirements of section 7. The uncertainty regarding most of section 7 was compounded by the Services' failure to promulgate final regulations until January, 1978, over four years after the enactment of the Act.

action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

Id. § 1536(a)(1), (2) (Supp. III 1979).
26. Id. § 1536(a) (Supp. III 1979).
27. See id.
28. NATIONAL WILDLIFE LAW, supra note 10, at 386-90.
31. Nothing in the legislative history explains the procedural requirements of section 7 or indicates what substantive standard consulting agencies must meet. The 1973 House Report lists nine principal changes brought about by ESA but does not include the addition of section 7 as one of these changes. H.R. REP. No. 412, 93rd Cong., 1st Sess. 2 (1973). The entire discussion of section 7 in the Senate Report consisted of only two sentences:

All agencies, departments and other instrumentalities of the Federal government are directed to cooperate in the implementation of the goals of this Act. Each agency shall, inter alia, take steps to "insure that actions authorized, funded, or carried out" by it do not jeopardize the continued existence of any such species or result in the destruction of its habitat.


In *TVA v. Hill*, 437 U.S. 153 (1978), the Supreme Court provided an extensive discussion of the legislative history of ESA, id. at 174-88, focusing in part on section 7, id. at 181-88. However, notwithstanding the Supreme Court's conclusion that "the mandatory provisions of § 7 were not casually or inadvertently included," id. at 183, the clearest message in the legislative history may be that Congress did not consider section 7 very significant.

32. 50 C.F.R. § 402 (1980). The regulations were published in the Federal Register in January, 1978. 43 Fed. Reg. 870-76 (1978). FWS and NMFS had attempted earlier to provide guidance for agencies with section 7 responsibilities through a December 1974 joint letter to all federal agencies and a May 1975 interagency conference. 42 Fed. Reg. 4868 (1977). This guidance was apparently inadequate, however, because agencies attending the conference requested that the Services develop guidelines for implementation of section 7.

Id. Implementation of the guidelines and subsequently of proposed regulations, id., was delayed by two "quality of life reviews" requested by the Office of Management and Budget. *Id.* Moreover, the value of this interim guidance was questionable. Under the proposed
This Article explores the uncertainties in the interpretation and application of section 7 and the congressional, judicial, and administrative responses to these uncertainties. The Article also considers whether these responses have resolved the uncertainties and identifies future problems to be anticipated in protecting listed species and in administering section 7.

I

RESOLVING UNCERTAINTIES IN IMPLEMENTING SECTION 7

Given the ambiguities of section 7,33 dispute as to the section's scope and import was inevitable. The most significant and highly publicized challenge to ESA and section 7 was TVA v. Hill.34 In 1967, the Tennessee Valley Authority (TVA), a federally owned corporation,35 began construction of the Tellico Dam and Reservoir Project, a multipurpose energy, flood control, and recreational development on the Little Tennessee River.36 In 1973, a scientist discovered a new species of perch, now known as the snail darter, which is only known to live in a stretch of the Little Tennessee River that would be inundated by the Reservoir.37 In 1975, the Secretary of the Interior added the snail

regulations, the consultation process was discretionary, id. at 4871, the retroactive applicability of section 7 was left to each federal agency, id., and no provision prohibited irreversible and irretrievable commitment of resources that would foreclose consideration of alternatives during the period for which consultation was required, see id. at 4868-72.

Under the regulations, federal agencies are required to review their activities and programs and to determine whether the activity or program may affect listed species or critical habitats. 50 C.F.R. § 402.04(a)(1) (1980). If such species or habitats may be affected, the agency is required to request consultation with the appropriate Service, id. § 402.04(a)(3) (1980); further, the Services can initiate consultation absent such a request by a federal agency if it appears that the agency's action may affect listed species or their critical habitats, id. § 402.04(a)(4) (1980). Once consultation is initiated, the Services are required to review available information and, within 60 days, either (1) issue a biological opinion indicating that the agency activity is or is not likely to jeopardize listed species or destroy or adversely modify their critical habitats, id. § 402.04(c) (1980), or (2) notify the federal agency that insufficient information is available to make this determination, id. § 402.04(f) (1980). Until the biological opinion is rendered, federal agencies are precluded from making "an irreversible or irretrievable commitment of resources which would foreclose the consideration of modifications or alternatives to the identified activity or program." Id. § 402.04(a)(3) (1980). Consultation must be re-initiated if new information becomes available, the activity is later modified, or a new species that may be affected by the activity becomes listed. Id. § 402.04(h) (1980). Finally, the regulations provide for the adoption of counterpart regulations which would allow federal agencies to tailor the consultation provisions to individual programs or activities, id. § 402.04(i) (1980), and a procedure for designating critical habitat, id. §§ 424.01-.20 (1980).

33. See notes 28-32 supra and accompanying text.
37. Id. at 158.
darter to the endangered species list.38 In April 1976, when the project was seventy to eighty percent complete,39 the Secretary designated the affected area a critical habitat for the snail darter.40 Despite this designation, Congress continued to appropriate money for the project's completion,41 and TVA continued construction42 until the Sixth Circuit Court of Appeals enjoined further work on the dam.43

In 1978, the Supreme Court affirmed the order enjoining completion of the dam,44 even though it recognized that TVA had spent over $100 million on the project.45 The Court held that section 7 applied to projects already in progress when ESA was enacted as well as to projects begun thereafter.46 The Court found that "Congress intended endangered species to be afforded the highest of priorities."47 "[W]ith no exception"48 and at "whatever the cost,"49 conservation of listed species was to be afforded priority even over the "primary missions" of federal agencies.50

As a result of TVA v. Hill, the snail darter and its habitat were temporarily saved.51 The Court's decision has had even broader impacts on protection of listed species generally. The decision generated

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40. 41 Fed. Reg. 13926-28 (1976); see 50 C.F.R. § 17.95(e) (1980).
42. ENDANGERED SPECIES COMMITTEE, TELLICO DAM AND RESERVOIR: STAFF REPORT viii (Jan. 19, 1979) [hereinafter TELLICO DAM STAFF REPORT].
43. Hill v. TVA, 549 F.2d 1064, 1069 (6th Cir. 1977).
44. TVA v. Hill, 437 U.S. at 195.
45. Id. at 172. Of this total, $25.5 million was spent on land costs, $14.7 million on planning and engineering, $22.5 million on dam construction, and $40.5 million on other construction such as roads and bridges. TELLICO DAM STAFF REPORT, supra note 42, at 2016.
46. TVA v. Hill, 437 U.S. at 186. In his dissenting opinion, Justice Powell argued that the majority opinion gave ESA a retroactive effect unintended by Congress. Id. at 202, 202-05 (Powell, J., dissenting). In response, the majority noted that its decision did not give an unintended effect to ESA but rather gave effect "to the plain words of the statute, namely, that section 7 affects all projects which remain to be authorized, funded or carried out." Id. at 186 n.32.
47. Id. at 174.
48. Id. at 173.
49. Id. at 184.
50. Id. at 185.
51. Section 5 of the 1978 Amendments, 16 U.S.C. § 1539 (Supp. III 1979), required the Endangered Species Committee to consider whether to exempt the Tellico Project from the requirements of section 7. On the exemption process generally, see notes 73 & 77 infra. The Committee voted 7-0 to deny an exemption, finding that there were reasonable and prudent alternatives to the project and that the benefits of the action did not clearly outweigh the benefits of alternative courses of action. [1979] 9 ENVIR. REP. (BNA) 1776.

In 1979, however, Congress passed the Energy and Water Development Appropriation Act, Pub. L. No. 96-69, 93 Stat. 437 (1979) (codified in scattered sections of 16 & 42 U.S.C.), which exempted the Tellico Dam from the provisions of all federal law. 93 Stat. 449-50 (1979). Thus the last impediments to completion of the dam and reservoir project were eliminated. Subsequent efforts to stop completion of the project on religious grounds have
nationwide publicity for ESA\textsuperscript{52} and much commentary of section 7, most of it critical of the section.\textsuperscript{53} Some commentators suggested that the section's prohibition of construction activities had gone too far,\textsuperscript{54} and others wondered whether, in light of this extensive criticism, ESA itself was now threatened.\textsuperscript{55} Rulings by the Court of Appeals for the Sixth Circuit and by the Supreme Court in \textit{TVA v. Hill} ultimately led to Congressional moves to amend section 7.\textsuperscript{56}

Given section 7's general lack of clarity,\textsuperscript{57} its sparse legislative history,\textsuperscript{58} and the failure of FWS and NMFS to promulgate timely regulations,\textsuperscript{59} controversial judicial interpretation of ESA was probably inevitable. Although the Services promulgated regulations designed to clarify some of the provisions of section 7,\textsuperscript{60} prior to \textit{TVA v. Hill} and the publicity ESA received as a result of that decision nothing spurred Congress to clarify the section. When Congress amended the Act in 1978, however, extending its authorization for appropriation through March 1980,\textsuperscript{61} Congress also modified several substantive provisions of
the Act. Among the most significant amendments were changes in listing requirements, the addition of a process for obtaining exemptions from section 7, and the defining of the term "critical habitat." The most significant fact about the amendments, however, was that the substantive standard and basic procedural requirements of section 7 were not changed. Federal agencies were still required to use their authorities to further the purposes of the Act and to insure that their activities did not jeopardize listed species or destroy or modify their critical habitats. Further, agencies were still required to consult, in good faith, with the Services to insure that the agencies' actions were not likely to jeopardize listed species or destroy or modify their critical habitats. Finally, the congressional reports on the 1978 amendments indicated approval of the section 7 regulations except as statutorily changed, thus giving those regulations greater force.

Despite the controversy surrounding *TVA v. Hill*, two of the 1978 amendments demonstrated a congressional intent to strengthen rather than weaken the requirements of section 7. First, Congress adopted a provision from the section 7 regulations issued by NMFS and FWS which required that until agencies had complied with section 7's requirements they avoid "making an irreversible or irretrievable commitment of resources which would foreclose the consideration of modifications or alternatives" to a proposed project. This requirement should ensure that agencies assess the potential impact of proposed projects before making major commitments of resources, thus avoiding the type of problem occasioned by the expenditure of funds on the Tellico Dam prior to *TVA v. Hill*.

Second, as a means of facilitating consultation, Congress required

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64. *Id.* § 1536 (Supp. III 1979).
67. See 16 U.S.C. § 1536(a)(2) (Supp. III 1979). Although section 7 does not expressly establish a good faith requirement, such a requirement as a practical matter is imposed on consultation by the Act's provision making good faith consultation a prerequisite to eligibility for exemptions to section 7. *Id.* § 15369(g)(5)(B)(i) (Supp. III 1979).
68. S. REP. No. 874, 95th Cong., 2d Sess. 5 (1978) ("The basic premise of [the amendments] is that the integrity of the interagency consultation process designated under section 7 of the act be preserved"); C. SANDS, 2A STATUTES AND STATUTORY CONSTRUCTION § 49.09, at 256 (4th ed. 1973) ("Where a statute has received a contemporaneous and practical interpretation and the statute as interpreted is reenacted, the practical interpretation is accorded greater weight than it ordinarily receives, and is regarded as presumptively the correct interpretation of the law").
in certain instances the preparation of "biological assessments" to identify listed species and species proposed for listing likely to be affected by federal agency action and to determine the likely impact on such species. This new requirement also may be expected to facilitate early detection of potential hazards to listed species, thus preventing waste and serious interagency conflict as the project progresses.72

The amendments also established an exemption procedure73 allowing federal agencies, state governors, and permit or license applicants74 to seek exemptions from the requirements of section 7 whenever there is an "irresolvable conflict."75 Congress designed this procedure to give section 7 the flexibility that was missing when TVA v. Hill was decided.76 The exemption process is cumbersome, however; it takes more than a year to obtain an exemption.77 Moreover, the Endangered

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73. Briefly, the exemption process involves the filing of an application for exemption from the requirement, imposed by section 7(a)(2), 16 U.S.C. § 1536(a)(2) (Supp. III 1979) (discussed in Part II.D infra) that federal agencies ensure that their actions do not present certain threats to listed species. 16 U.S.C. § 1536(g)(1) (Supp. III 1979). Upon the filing of an exemption application, a review board is set up initially to consider the application. Id. § 1536(g)(3)(A) (Supp. III 1979). For the application to reach the Endangered Species Committee, the board must determine (1) that an irresolvable conflict exists, 16 U.S.C. § 1536(g)(5)(A) (Supp. III 1979); (2) the exemption applicant has carried out the consultation requirements of section 7(a)(2) in good faith, id. § 1536(g)(5)(B)(i) (Supp. III 1979); (3) a biological assessment has been conducted pursuant to section 7(c), id. § 1536(g)(5)(B)(ii) (Supp. III 1979); and (4) the applicant has refrained from making any commitment of resources prohibited by section 7(d), id. § 1536(g)(5)(B)(iii) (Supp. III 1979). The Committee can grant an exemption only if five of its members conclude (1) there are no reasonable and prudent alternatives to a proposed action, id. § 1536(h)(1)(A)(i) (Supp. III 1979); (2) the benefits of the action outweigh the costs to the listed species or critical habitat, id. § 1536(h)(1)(A)(ii) (Supp. III 1979); and (3) steps are being taken to minimize potential damage to the listed species or critical habitat, id. § 1536(h)(1)(B) (Supp. III 1979).
74. 16 U.S.C. § 1532(12) (Supp. III 1979) ("The term 'permit or license applicant' means, when used with respect to an action of a Federal agency for which exemption is sought under [section 7], any person whose application to such agency for a permit or license has been denied primarily because of the application of [section 7(a)] to such agency action").
75. 16 U.S.C. § 1536(g) (Supp. III 1979). ESA defines an "irresolvable conflict" to mean, with respect to an agency action, "a set of circumstances under which, after consultation as required in [section 7(a)], completion of such action would violate [section 7(a)(2)]." 16 U.S.C. § 1532(11).
77. An applicant has 90 days after the conclusion of the consultation process to file an application. 16 U.S.C. § 1536(g)(2)(A) (Supp. III 1979). A review board is established 30 days thereafter. Id. § 1536(g)(3) (Supp. III 1979). The review board must make certain determinations 60 days after its establishment, Id. § 1536(g)(5) (Supp. III 1979), and must then hold a hearing and submit a report within 180 days. Id. § 1536(g)(7) (Supp. III 1979). The Committee must make its determination to grant an exemption within 90 days after receiving the review board report. Id. § 1536(h)(1) (Supp. III 1979).

Congress amended section 7(g)(2) in 1979 to provide that a permit or license applicant
Species Committee, which decides whether to grant an exemption, is composed of high-level federal officials, including some Cabinet members, and deliberations over the possible extinction of a listed species might draw significant public attention. In light of the time and cost of the process and the adverse publicity that may result, few agencies, governors, or applicants are likely to seek exemptions. Instead, the hurdles of the exemption procedure may encourage early consultation and compromise on alternatives that protect the relevant species, leaving the exemption process as a last resort. Further, the prerequisites to obtaining an exemption—such as the requirements that the exemption applicant have consulted with the Services in good faith and have prepared a biological assessment—should encourage agencies to comply fully with the requirements of section 7 so as to keep open the option of seeking an exemption.

Another change came with the 1978 amendments when Congress provided a definition of "critical habitat." The new definition attempts to limit the geographical area that may be designated as critical habitat.
This limitation in the geographical scope of critical habitats, however, should not significantly hinder the protection of listed species. If an agency cannot insure that its action is not likely to destroy or adversely modify a critical habitat it also will not be able to insure that such action is not likely to jeopardize the species utilizing that habitat. Since an agency is prohibited from taking an action unless it can insure that the action is not likely to jeopardize a listed species, actions destroying or adversely modifying the habitat of listed species will run afoul of this requirement whether or not a critical habitat is designated.

The 1978 amendment that most significantly impedes efforts to protect threatened or endangered species deals with the section 4 "listing provisions." Prior to enactment of the amendments, section 4 allowed FWS and NMFS to list species without including specific habitat information. The 1978 amendments added to section 4 a requirement that to "the maximum extent prudent" critical habitats must be proposed in conjunction with proposals to list a species. This requirement will likely delay the listing process, because scientific and economic data concerning both species and their habitats must now be developed prior to listing a species.

Because of the need to extend authorization for appropriations of ESA, Congress again evaluated the Act in 1979. The 1979 amend-
ments altered section 7 by replacing the absolute "do[es] not jeopardize" standard with one requiring an agency to ensure that action "is not likely to" modify adversely a critical habitat or jeopardize a listed species. Congress changed the standard partly because of concern that FWS and NMFS might conclude that there was a violation of section 7 whenever an agency was unable to provide an absolute guarantee of protection for a species or critical habitat. The Conference Report to the 1979 amendments, however, indicates the insignificance of this amendment, stating that the amendment simply brings the Act's language into conformity with existing agency practice and with judicial decisions. FWS and NMFS are still required to issue biological opinions indicating whether agency action violates section 7, and courts will continue to give substantial weight to these opinions. Doubt must still be resolved in favor of preserving species, and affected agencies still have the burden of demonstrating that their actions will not violate section 7. According to the Conference Report, the affected agency is required to help develop adequate information on the species, and if the agency proceeds without adequate information it risks violating section 7. In the 1979 amendments, Congress thus reaffirmed the substantive protection provided by section 7 and the FWS and NMFS regulations.

The 1979 amendments added several new provisions to ESA. One new section allows any person to prepare a biological assessment of a federal agency's proposed project when the agency itself is not required

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95. 16 U.S.C. § 1536(a) (Supp. III 1979). The 1979 amendments also added a provision requiring each agency to use the best scientific and commercial data available when complying with its responsibilities under section 7. Id. § 1536(a)(2) (Supp. III 1979). This requirement is also used in other sections of ESA, id. §§ 1533(b)(1), (4), 1533(f)(2)(c)(ii), 1533(f)(4), 1536(c)(1) (1976 & Supp. III 1979), and does not appear to be a significant addition to the requirements of section 7. See notes 260-62 infra and accompanying text.


97. Id. at 12-13, reprinted in [1979] U.S. CODE CONG. & AD. NEWS at 2575-76.


100. Id. at 12-13, reprinted in [1979] U.S. CODE CONG. & AD. NEWS at 2576-77.

101. Id. Such action would be inconsistent with the statutory standard requiring that the agency insure that an agency action is not likely to jeopardize listed species or destroy or modify critical habitat. This portion of the Conference Report states that an agency may not proceed with its action in the face of information that is insufficient to allow a reasonable determination of the impact of the agency action on a species. When information is so lacking, it is impossible to insure that the action is not likely to jeopardize a species or destroy or adversely modify critical habitat. Id. at 12, reprinted in [1979] U.S. CODE CONG. & AD. NEWS 2572, 2576. For further discussion of this issue, see Part III.D.2.a infra.
to do so. The assessment is made under the supervision of the agency and in consultation with FWS and NMFS. Another provision requires federal agencies to confer with FWS and NMFS when their actions are "likely to jeopardize" species proposed for listing. This provision added to existing requirements, imposed by the section 7 regulations, that agencies consult with FWS and NMFS when their actions "may affect" listed species. The purpose of this amendment was to require that federal agencies "begin informal discussions" with the Services regarding the possible adverse impacts on species that may soon be listed under ESA. Because agencies are required to confer only when their activities are "likely to jeopardize" proposed species, however, the usefulness of this provision in identifying potential section 7 problems appears limited.

The 1979 amendments also made two changes to section 4 that may delay the listing procedures as did the 1978 amendments to that section. First, the Services are now required to conduct species status reviews to determine whether sufficient data exists to warrant proposing to list a species. Second, public meetings must be held separately from public hearings; this may also cause a delay in the

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102. 16 U.S.C. § 1536(c)(2) (Supp. III 1979). This change was made because the preparation of a biological assessment is a prerequisite to obtaining an exemption from section 7, id. § 1536(g)(5)(B)(ii) (Supp. III 1979). See H.R. REP. No. 697, 96th Cong., 1st Sess. 13-14, reprinted in [1979] U.S. CODE CONG. & AD. NEWS 2572, 2577-78 (also stressing the importance of having a biological assessment in cases where the exemption will be permanent even as to species not identified in the assessment). Section 7(g) would have precluded the possibility of issuing an exemption except where an agency had prepared a biological assessment pursuant to section 7(c); individuals wanting to maintain the possibility of seeking an exemption can now render a biological assessment themselves, in cooperation with the Services, so as to be able to meet the requirements for an exemption application.


104. Id. § 1536(a)(3) (Supp. III 1979).


108. See text accompanying notes 90-93 supra.

109. 16 U.S.C. § 1533(b)(1) (Supp. III 1979). This section provides simply that "a review of the status of the species" must be performed; it gives no explanation of this directive. The House Conference Report states that such a review might include "communication with experts in the field . . . , professional organizations and journals, local citizens, state agencies, [and] concerned Federal agencies, such as the Environmental Protection Agency." H.R. REP. No. 697, 96th Cong., 1st Sess. 9-10, reprinted in [1979] U.S. CODE CONG. & AD. NEWS 2572, 2573-74.

listing of species.

Despite concern over the potential impact of the 1978 and 1979 amendments on section 7 and on the holding of *TVA v. Hill*, section 7 remains an effective tool for conserving listed species. In the 1978 amendments, Congress's preservation of the substantive requirements of section 7, its affirmation of the section 7 regulations, and its adoption of a cumbersome exemption process and of the provisions strengthening section 7 indicate that Congress continued to afford high priority to the protection of endangered and threatened species. The 1979 amendments further serve the goal of preserving species by encouraging early identification and resolution of potential conflicts between species protection and agency action. Amendments such as those providing for wider authorization to prepare biological assessments and for the extension of protection to species merely proposed for listing, and the amendment to reaffirm the section 7(a)(2) standard, indicate that ESA will remain an effective bulwark against agency action that threatens listed species or critical habitats.

The Supreme Court's decision in *TVA v. Hill*, together with the 1978 and 1979 amendments and the regulations implementing section 7, have clarified the procedural and substantive requirements of section 7 and have drawn both agency and private attention to the Act. These developments, in turn, have increased the effectiveness of ESA, making it less likely that the type of conflict involved in *TVA v. Hill* will be encountered in the future.

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112. See text accompanying notes 69-70 supra.
114. *Id.* § 1536(a) (Supp. III 1979). See text accompanying notes 69-72 supra.
119. See note 52 supra and accompanying text.
120. In particular, the Act's proscription of "irreversible or irretrievable commitment[s] of resources" that would foreclose alternatives to agency action, 16 U.S.C. § 1536(d) (Supp. III 1979), should help to prevent situations in which a large expenditure of funds has been made before hazards to species are addressed. See Part III.B infra for discussion of the prohibition on irreversible or irretrievable commitments. In addition, many conflicts should be averted by the amendments' provision for early consultation with the Services about section 7 problems. 16 U.S.C. § 1536(a)-(c) (Supp. III 1979).

The one situation not satisfactorily addressed and thus most likely to result in future irresolvable conflicts is that in which a problem develops, as in *TVA v. Hill*, after the activity has commenced, because the species was listed or critical habitat designated after commencement of the activity. *National Wildlife Law*, supra note 10, at 410-11. See, e.g., Colorado River Water Conservation District v. Andrus, Civil No. 78-A-1191 (D. Colo. Aug. 3, 1981), in which plaintiffs claim that water impoundment and diversion projects on the Colorado River harm the totoaba, a fish listed as an endangered species in 1979. 44 Fed.
that early, good-faith consultation will assist in the conservation of listed species while allowing federal activities and programs to proceed, albeit sometimes with modifications necessary to conserve listed species or their critical habitats. Experience to date, while limited, supports this proposition.\textsuperscript{121} The number of section 7 consultations has risen significantly,\textsuperscript{122} and this increase may indicate that federal agencies are taking more seriously their responsibilities under section 7. Statistics also seem to indicate that the 1978 amendments have not had a chilling effect on the Services' exercise of their powers.\textsuperscript{123} Although only a detailed review of these statistics can provide a totally satisfactory analysis, existing evidence indicates that the Services have continued to act aggressively in enforcing section 7. Moreover, despite the number of consultations and negative opinions issued by FWS and NMFS, only

Reg. 29,478 (1979). The projects were operating before listing of the species, but the court, citing \textit{TV4 v. Hill}, noted that section 7 applies to ongoing projects and thus set the case for trial to determine whether section 7 has been violated.


122. In fiscal year 1978, FWS conducted 1,314 formal consultations (discussed at 50 C.F.R. § 402.04(a)(1)-(4) (1980)) and informal consultations (discussed at \textit{id}. § 402.04(a)(5)). It issued 42 biological opinions indicating that a proposed agency action would jeopardize a listed species and 47 opinions stating that an action, if modified, would not jeopardize species. Personal conversation with David Wesley and Nancy Sweeney, Office of Endangered Species, Fish and Wildlife Service (Sept. 25, 1981). The corresponding figures for 1979 were 2,571 consultations, 89 jeopardy opinions, and 20 "no jeopardy if" opinions. \textit{Id}. In 1980, although there was a slight decline in the number of negative opinions, consultations again increased, to 3,715. \textit{Id}. NMFS showed a similar increase in activity. Approximate figures show that in 1978, it conducted 31 formal or informal consultations and issued 2 negative opinions; comparative figures for 1979 were 72 consultations and 4 negative opinions, for 1980, 187 consultations and 13 negative opinions, and for 1981 (through November) 280 consultations and 11 negative opinions. Personal conversation with Charles Karnella, Office of Marine Mammals and Endangered Species, National Marine Fisheries Service (Dec. 10, 1981). Negative opinions state that an agency action, unless modified, will violate section 7 either because the action is likely to jeopardize listed species or because insufficient evidence is available for the agency to insure that its action is not likely to jeopardize listed species. \textit{See} 50 C.F.R. § 402.04(e)(3) (1980).

123. See the figures cited in note 122 \textit{supra} concerning negative and "no jeopardy if" opinions. That both NMFS and FWS issued negative opinions to the Pittston company, see note 289 \textit{infra} and accompanying text, in the face of the likely filing of an exemption application also demonstrates the absence of a chilling effect on the Services' exercise of their consultation responsibilities.
one exemption application has been filed since passage of the 1978 amendments. This may well be because FWS and NMFS have worked with individual agencies to develop alternatives that will both protect listed species and allow agency activities to proceed, thus reducing the need to resort to the exemption process.

II

UNRESOLVED ISSUES INVOLVING SECTION 7

A. Introduction

While the outlook for effective implementation of section 7 is generally optimistic, a number of significant issues remain unresolved. These issues should be addressed as soon as possible by the Services in order to avoid additional court battles regarding section 7.

As discussed earlier, the absence of timely regulations seriously hindered effective implementation of section 7. Since the regulations were promulgated, Congress has twice amended ESA and section 7, and regulations are now needed to clarify the amended provisions. Regulations should articulate requirements governing biological assessments and define the "reasonable and prudent alternatives" that biological opinions must suggest. They should also establish procedures for conferring on actions that may affect species proposed for listing and for implementing other mandated changes in the consultation process. In addition, regulations have yet to be promulgated.

124. See generally Hemmer, The Pittston Case, 4 HARV. ENV'T'L L. REV. 415 (1980). The Pittston case is the only exemption filed to date. See note 80 supra.


126. See text accompanying note 32 supra.

127. The Services have failed to amend the regulations since the passage of the 1978 Amendments. Washington Post, Aug. 13, 1981, § A, at 27, col. 4. The regulations are now being reviewed as part of Vice President Bush's Task Force on Regulatory Relief. Id. at col. 2-4.


130. Id. § 1536(a)(3) (Supp. III 1979). See text accompanying notes 104-06 supra.

131. One author has examined in length the various advantages of rulemaking through regulatory act as opposed to adjudication. See Shapiro, The Choice of Rulemaking or Adjudication in the Development of Administrative Policy, 78 HARV. L. REV. 921 (1965). Professor Shapiro discusses the following advantages: (1) the promulgating agency, before publishing rules, can invite and receive input from outside sources as to the particular form that regulations should take, id. at 930; (2) the use of regulations allows for advanced planning in dealing with an issue rather than waiting for a lawsuit presenting the issue to arise, id. at 932-33; (3) regulatory acts avoid the problem of unfair retroactive application, id. at 933; (4) regulations promote uniform application of legal rules, while a court order, directed at one individual, results in varying application, id. at 935-36; and (5) regulations allow flexibility of procedure, id. at 936-37. Each of these rationales supports the argument that FWS
to guide interpretation of some of the original provisions of section 7.132 Regulations in these areas are needed to insure that section 7 protects listed species while avoiding the type of confrontation involved in TVA v. Hill.

The remainder of this Article will focus on four significant and difficult issues that should be addressed by the Services. The first issue concerns the provision in section 7(d) prohibiting “irreversible and irretrievable commitment of resources” during consultation. Regulations are needed to define such a commitment and the role of the Services under this section. A second issue involves the requirement of section 7(a)(1) that federal agencies, in consultation with the Services, use their authorities to further the purpose of the Act. This provision has been largely overlooked, perhaps because attention has been focused on other parts of section 7.133 A third issue involves determinations under section 7(a) of whether agencies can insure that their actions are not likely to jeopardize listed species or destroy or adversely modify critical habitats. The regulations should define these tests more precisely, including the role of cumulative effects of multiple actions on a species or habitat, and should discuss how the Services are to assess the non-biological factors involved. A final issue involves the requirement of “Federal agency action” as a prerequisite to the application of section 7(a)(2), which requires agencies to insure that their actions are not likely to jeopardize listed species or destroy or adversely modify critical habitat. A first set of questions here is whether the term “Federal agency action” encompasses actions outside the U.S., actions taken by states under federal authority, and failure of federal agencies to act. Another question involves federal projects consisting of a number of different steps, and the extent to which these steps should be considered separately for purposes of determining the relevant “agency action” under section 7.

B. “Irreversible and Irretrievable” Commitment of Resources

Section 7(d) of ESA provides that, after consultation has begun, neither the consulting federal agency nor a permit or license applicant

132. For instance, the regulations have not addressed the question, discussed at text accompanying notes 341-52 infra, of whether inaction can satisfy the “agency action” requirement of section 7 or how agencies are to comply with the requirements of section 7(a)(1) to use their authorities to further the purposes of ESA, see Part II.C infra.

133. For instance, the “jeopardy” and “critical habitat” provisions of section 7, 16 U.S.C. § 1536(a)(2) (Supp. III 1979), have received much attention. See Part III.D infra.
shall "make any irreversible or irretrievable commitment of resources . . . which has the effect of foreclosing . . . any reasonable and prudent alternative measures." This subsection was created by the 1978 amendments codifying a provision of the section 7 regulations. Neither the Act nor the regulations define "irreversible or irretrievable commitment of resources," and the legislative history of the amendment is unenlightening. The absence of congressional and agency guidance on this issue has led to litigation raising the question whether federal lease sales on the outer continental shelf constitute a prohibited commitment. In two cases, NMFS argued that the information available was inadequate to determine whether the Department of the Interior could insure that proposed lease sales were not likely to jeopardize certain whale species, and that the Department of the Interior, which was conducting the lease sales, should adopt certain precautionary measures to insure against that possibility. In addressing these claims, the cases sought to define the scope and meaning of section 7(d).

In Massachusetts v. Andrus (the Georges Bank case), the Secretary of the Interior proposed to conduct the Georges Bank lease sale, in which leases would be issued to private parties who planned oil and gas exploration. Plaintiffs argued that the lease sale constituted an irreversible commitment prohibited by section 7(d). They apparently

138. See 50 C.F.R. § 402.02 (1980).
141. In both cases the possibility of oil spills presented the major threat to endangered whales. North Slope Borough v. Andrus, 642 F.2d at 340-41; Conservation Law Foundation v. Andrus, 617 F.2d at 297.
145. Id. at 688.
146. Id. at 691.
reasoned that since the Federal Government would be unable to enforce the standards of ESA once leases were issued, the commitment made by issuing leases foreclosed alternatives in violation of section 7(d). The district court rejected this argument, finding that the case did not present as significant a commitment of resources as that made in *TVA v. Hill.* The court also reasoned that the commitment was not "irretrievable" because provisions in the lease agreement allowed the Secretary to cancel the leases. The Court of Appeals for the First Circuit affirmed the lower court's decision but on a different ground, holding instead that the commitment was not irretrievable because ESA continued to apply to actions of the Secretary after the lease sale. Since the sale required "future action" on the Secretary's part, the court reasoned, any actions of the Secretary that might violate section 7 could later be enjoined. In so holding, the court considered only the issue of whether the lease sale was irretrievable because of the alleged inability of the Federal Government to stop oil and gas exploitation upon a finding of a violation of section 7. The plaintiffs failed to argue that the expenditure of physical and financial resources by the Federal Government and by oil and gas industries was an irretrievable commitment, and the court did not decide this question.

The opinion in *North Slope Borough v. Andrus* (the Beaufort Sea case) touched on the question left open in *Georges Bank*: whether the commitment of physical and financial resources made in a lease sale and in pre-exploration activities constitutes a commitment prohibited by section 7(d). In *Beaufort Sea*, plaintiffs sought to enjoin a pro-

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147. *See id.* The court did not directly state the argument advanced by plaintiffs; it did, however, note that the plaintiffs relied on *Nebraska v. Rural Electrification Administration*, 12 ERC 1156, 1172 (D.C. Neb. 1978), where the court had suggested that an agency's contractual commitments permitting construction of a dam to begin constituted a commitment of resources that foreclosed alternatives in violation of section 7(d).


149. *Id.* The court distinguished *Nebraska v. Rural Electrification Administration*, 12 ERC 1156 (D.C. Neb. 1978), on which plaintiffs relied. See note 147 *supra.* In the *Nebraska* case, the court found that the Rural Electrification Administration (REA) had made a prohibited commitment of resources to the Grayrocks Dam. *Nebraska v. Rural Electrification Administration*, 12 ERC at 1172. The district court in the *Georges Bank* case noted that in *Nebraska* construction had begun, while here drilling was yet to be initiated. *Massachusetts v. Andrus*, 481 F. Supp. at 691.


151. *Id.*

152. *Id.* at 714-15. Since ESA applies to all prospective federal agency actions, activities can be enjoined when there is a violation of section 7 so that the argument raised by the plaintiffs was insignificant. *But see California v. Watt*, 520 F. Supp. 1359, 1386-87 (C.D. Cal. 1981) and *No Oilport v. Carter*, 520 F. Supp. 334, 364-65 (W.D. Wash. 1981).

153. This argument was raised and addressed in a case following shortly after the *Georges Bank* case. See text accompanying notes 154-66 *infra.*

posed oil and gas lease sale to be conducted by the Bureau of Land Management pursuant to the Outer Continental Shelf Lands Act (OCSLA). Defendants argued that consultation had been completed, and that section 7(d) applied only until completion of consultation. The district court rejected these contentions, holding that consultation had not been completed, and that in any case section 7(d) remains "viable"—that is, potentially applicable—beyond consultation, until the project has been completed or an exemption has been obtained. Thus the court held that if a question of harm to listed species arises at any stage of the project, either before or after consultation, irretrievable commitments are prohibited until the agency is able to insure that its action will not violate section 7(a)(2).

While finding section 7(d) applicable because neither the project nor consultation had been completed, the court rejected plaintiff's argument that there had been an irretrievable commitment of resources within the meaning of the section. In researching this conclusion, the court reasoned that Congress enacted section 7(d) "to prevent Federal agencies from 'steamrolling' activity" to complete on-going projects regardless of their impact on listed species. The court held that, in light of this purpose, section 7(d) should be interpreted to prohibit investment of large sums of money only if:

1. at the time of the investment there was a reasonable likelihood that the project, at any stage of development, would violate § 7(a)(2), and
2. that investment was not salvageable (i.e. it could not be applied to either an alternative approach to the original endeavor or to another project).

The court found that its second requirement for a finding of a sec-

155. Id. at 350. OCSLA is codified at 43 U.S.C. §§ 1331-1353 (Supp. III 1979). OCSLA divides the resource exploitation process into three segments: (1) the lease sale and pre-exploration activities, id. § 1337 (Supp. III 1979), (2) exploration activities, id. § 1340 (Supp. III 1979), and (3) production activities, id. § 1351 (Supp. III 1979). Available information was insufficient for the Department of the Interior to insure that the entire process would not be likely to jeopardize any listed species; the issue before the court was whether initiating the first of these segments therefore constituted a prohibited commitment. North Slope Borough v. Andrus, 486 F. Supp. at 350.


157. Id. at 354-55.

158. Id.

159. Id. at 355.

160. Id. at 354-55.

161. Id. at 355-57.

162. Id. at 356.

163. Id. (footnotes omitted). The court found that if committed resources are salvageable, then they are neither wasted nor irretrievably committed in violation of section 7(d). Id. at 356 n.87.

The court elaborated only briefly on the first part of its two-fold test. Id. at 356 nn.85 & 86. This portion of the test appears to be directed toward establishing a threshold level of applicability of section 7(d) to the action in question.
tion 7(d) violation was not met for two reasons. First, the court noted that money invested in research and in pre-exploration activities is not wasted, but rather provides useful information and is thus likely to be "valuable in its own right." 164 Although the court did not fully explain how this factor relates to the "steamrolling" concern, it probably meant that the initial investment in such research will not result in substantial pressure to proceed with further steps in the oil exploitation process, because gathering of useful information provides a justification for research expenditures independent of their usefulness as a preliminary step in that process. This reasoning proves too much, however. Many activities involving an otherwise prohibited commitment of resources might provide some information "valuable in its own right." When the value of such information is minimal in relation to the investment and incidental to the main purpose of the activity, however, it is not likely to provide any check on steamrolling activity; thus only when the value of the information is substantial in relation to the investment made and the prime object of the activity should it lead to the conclusion that the resource commitment is salvageable.

As a second basis for its holding, the court noted that, while pre-exploration activities are expensive, off-shore oil and gas exploitation is a high-risk business in which both industry and government have accepted risks. 165 Again, the court failed to explain the relevance of its observation. Its apparent significance is that industry and government should be willing to abandon a project in the event it presents too great a threat to listed species, and to accept the resulting losses, since they have recognized that their investment of resources may yield no return. The court apparently believed that in such a case there is little danger of the type of steamrolling activity Congress sought to prevent through enactment of section 7(d). 166

The flaw in this line of reasoning is the court's failure to distinguish different types of risk. An oil company's willingness to forego exploitation of a known oil pool is not logically compelled by its willingness to invest in research and exploration activities not knowing whether oil will be found. Moreover, even if the court had been correct

164. Id. at 357.
165. Id. The court stated that the enactment of OCSLA indicated congressional willingness to assume some of the risks of oil and gas production. Id.
166. On appeal, the Court of Appeals for the D.C. Circuit approved the district court's rationale on the issue of salvageability and its ruling on section 7(d). North Slope Borough v. Andrus, 642 F.2d 589, 610-11 (D.C. Cir. 1980). The court, however, reversed the portion of the district court opinion that prohibited the Department of the Interior from issuing leases in the Beaufort Sea because the biological opinion did not meet the requirements of section 7(b). Id. at 607. The court reasoned that the requirements of section 7(a)(2) were met because the Department of the Interior had insured that its action was not likely to jeopardize any listed species. Id. Section 7(a)(2) is discussed in detail in Part III.D infra.
in stating that the oil industry's assumption of risk signifies a willingness to abort the exploitation process upon a finding of harm to listed species, this observation would not be relevant to the court's salvageability test, which asks whether the resource commitment "could . . . be applied to either an alternative approach to the original endeavor or to another project." 167

Thus in the Beaufort Sea case, the resource commitment made by the pre-exploration activities does not appear to have been salvageable. This does not mean, however, that the commitment violated section 7(d). Whether an investment would be salvageable does not alone determine whether alternatives have been foreclosed by the commitment of resources, so as to violate section 7(d). Another inquiry is needed to determine whether a final decision has been made by a federal agency to sanction, fund, or begin taking an action that may ultimately lead to a violation of section 7(a). 168 Before this juncture, the agency still has the option of taking no harmful action, and would thus not have violated section 7(d), especially if the resources expended up to that time are salvageable.

The question of whether alternatives had been foreclosed in the Beaufort Sea case was answered by the statutory scheme of OCSLA, under which the lease sale was being carried out. As observed above, 169 OCSLA divides the oil exploitation process into separable steps, and, since ESA does not define the term agency action, it is reasonable to view each of the separate steps of OCSLA as a separate agency action for determining compliance with section 7. 170 The alternative of not proceeding with oil and gas exploration, development, and production is not eliminated by allowing the lease sale and pre-

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168. Thus in oil exploitation, for example, this point would come at the decision to develop and produce oil, since this phase of oil exploitation generally poses the greatest likelihood of harm to species. In the cases of highway or dam construction, the point at which alternatives are foreclosed would generally be that at which the decision to begin construction is made.

FWS issued a biological opinion in 1979 stating that completion of the Columbia Dam in Tennessee would jeopardize two endangered species of mussels. [1980] 11 ENVIR. REP. (BNA) 989. The Services informed the builders of the dam (the TVA) that construction could continue if a transplantation program were initiated, and the Services will inform TVA that the gates of the dam can be closed if the program is successful. Id. This action clearly violates section 7(d) by allowing the type of steamrolling the provision was designed to stop.
169. See note 155 supra.
170. The 1978 amendments to OCSLA that set forth review and evaluation procedures for oil and gas leases were intended "to separate the Federal decision to allow private industry to explore for oil and gas from the Federal decision to allow development and production to proceed if the lessee finds oil and gas." H.R. REP. NO. 590, 95th Cong., 1st Sess. 164, reprinted in [1978] U.S. CODE CONG. & AD. NEWS 1453, 1570; see also S. REP. NO. 284, 95th Cong., 1st Sess. 160 (1977). See text accompanying notes 353-73 infra.
exploration activities to proceed.\textsuperscript{171} It might be argued that the actions taken pursuant to the first step in the process foreclosed alternatives to later steps in the process—for which compliance with section 7(a)(2) had not yet been demonstrated—but this ignores the fact that the steps of OCSLA should be viewed as separate agency actions in determining compliance with section 7.\textsuperscript{172}

Determination on a case-by-case basis of the point at which a commitment becomes irretrievable and forecloses alternatives could result in confusion and would be a time-consuming task.\textsuperscript{173} The Services can obviate this confusion and consumption of time by publishing regulations detailing the application of section 7(d). Such regulations might also supplement the test established in the \textit{Beaufort Sea} case, for, as noted above,\textsuperscript{174} the court failed adequately to explain the import of the factors it considers. Timely regulations would assist federal agencies in determining how they should mold their actions so as to comply with section 7(d).\textsuperscript{175}

Although Congress did not mandate that the Services develop regulations to cover the issue of prohibited commitments, the enactment of such regulations would be consistent with the purposes of the Act. In addition, it appears from ESA that Congress intended the Services to play a significant role in determining whether prohibited commitments have been made, because the Services generally must state their view on the issue of prohibited commitments during the exemption application procedure.\textsuperscript{176} This makes sense because the Services have devel-

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\textsuperscript{171} See text accompanying notes 353-73 \textit{infra}.

\textsuperscript{172} See note 170 \textit{supra}. Arguably, the steamrolling activity feared by Congress may occur as a practical matter even where a statute segments a project into several steps. For example, once an oil company has been allowed to proceed with pre-exploration activity, and has determined that there is a high probability that oil is present in an area, the company may put great pressure on federal agencies to allow it to proceed with development and production in the area—that is, with the further steps in the multi-step process—despite any harm that may result to listed species.

While this argument points out what may be a weakness of section 7(d) as enacted, congressional concern with steamrolling activity in fact limits the actions of agencies and permit and license applicants only to the extent that Congress reduced this concern to concrete form by prohibiting certain actions. By requiring only that irreversible and irretrievable commitments not "have the effect of foreclosing . . . alternatives," Congress may not have gone far enough. Nevertheless, under the statute as written, the fact that an oil company may apply "steamrolling" pressure to federal agencies to persuade them to issue necessary permits for the company to proceed with further steps of the oil exploitation process does not in itself invalidate the resource commitment; unless it is quite likely that federal agencies will succumb to such pressure, no foreclosure of permissible alternatives has occurred.

\textsuperscript{173} See note 131 \textit{supra}.

\textsuperscript{174} See text accompanying notes 164-66 \textit{supra}.

\textsuperscript{175} See note 131 \textit{supra}.

\textsuperscript{176} The Services are required to state their views on exemption applications, 16 U.S.C. § 1536(g)(4) (Supp. III 1979); since one of the issues involved in determining whether to grant an exemption is whether prohibited commitments have been made, \textit{id}.
oped expertise concerning implementation of section 7. When one of the Services believes that a particular agency action might involve a prohibited commitment, the Service should include a statement to that effect in the section 7(b) biological opinion.

**C. Use of Agency Authorities to Protect Listed Species**

Section 7(a)(1) of ESA provides that "Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of [the Act]."¹⁷⁷ This provision which has received little attention,¹⁷⁸ requires that federal agencies act affirmatively to conserve listed species, in addition to refraining from actions that may harm listed species or critical habitats.¹⁷⁹ The joint FWS-NMFS regulations fail to discuss the substantive requirements of this provision¹⁸⁰ or establish consultation procedures that will satisfy it.¹⁸¹ The regulations state only that individual agencies have the burden of initiating consultation after reviewing and identifying any actions that "may affect"¹⁸² listed species.¹⁸³ Few reported cases deal solely with the "authorities" provision apart from the "jeopardy" and "critical habitat"¹⁸⁴ requirements.

*Defenders of Wildlife v. Andrus*¹⁸⁵ involved the duty of the Department of the Interior (DOI) to further the purposes of ESA as required by section 7(a)(1). Plaintiff challenged as violating section 7(a)(1)¹⁸⁶ and other laws¹⁸⁷ DOI regulations governing hours for hunting migra-

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¹⁷⁸. See note 133 *supra* and accompanying text.
¹⁸⁰. *See* 50 C.F.R. § 402.01- .05 (1980).
¹⁸¹. *See id.* § 402.04. This section addresses consultation procedures in general, but does not consider in particular the form of consultation to be employed in complying with the affirmative duty of section 7(a)(1).
¹⁸². For a discussion of the "may affect" standard, see note 106 *supra*.
¹⁸³. 50 C.F.R. § 402.04(a) (1980).
¹⁸⁴. For a discussion of the "critical habitat" requirements see text accompanying note 27 & notes 89-93 *supra*. For a discussion of the "jeopardy" requirement see text accompanying notes 206-13 *infra*.
¹⁸⁵. 428 F. Supp. 167 (D. D.C. 1977). *See also* Organized Fishermen of Florida v. Andrus, 488 F. Supp. 1351 (S.D. Fla. 1980), in which plaintiffs sought to enjoin National Park Service regulations that restricted certain fishing practices in the Everglades National Park to protect the endangered crocodile. *Id.* at 1353. The court found that undisputed evidence showed that the regulations would reduce the impact of fishing on the species. *Id.* at 1355-56. In rejecting the plaintiffs' arguments, the court declared that "E.S.A. imposes an affirmative duty not only to protect, but also to increase the population of endangered species." *Id.* at 1356 n.10.
tory game birds on Forest land. The regulations allowed shooting from one half hour before sunrise to sunset. Plaintiffs argued that listed species would not be adequately protected under the regulations because low visibility at sunrise and sunset made it difficult to distinguish listed from unlisted species. The court found that, despite opposition from plaintiff and other organizations at the time the regulations were proposed, DOI had failed to conduct any studies, or otherwise assemble information, regarding the impact on listed species of shooting during the contested hours. The court concluded that DOI was required to use “all methods and procedures which are necessary” to conserve listed species, not only the method it considers most important, and that the migratory bird hunting regulations failed to meet this requirement. Noting that plaintiffs' affidavits presented a substantial argument, not refuted by the agency's administrative findings, that the impact on listed species might be considerable, the court said that DOI must develop evidence for the record showing that hunting hours are fixed so that killing of listed species “is kept to the minimum consistent with other obligations imposed ... by Congress.” The Court also stated, however, that DOI did not have a duty to prohibit all twilight shooting simply because a protected animal might be killed.

Connor v. Andrus involved a different type of challenge to a DOI hunting regulation. Plaintiff sought to enjoin a DOI migratory waterfowl hunting season regulation prohibiting all duck hunting in certain areas so as to protect the endangered Mexican Duck. Relying on a biological opinion which indicated that the hunting did not jeopardize the Mexican Duck, plaintiff alleged that the DOI regulation was arbitrary and capricious. Though the court recognized the affirmative duty imposed by Defenders of Wildlife to protect listed species, it found no evidence that the regulation would help the Mexican Duck, while abundant evidence indicated that hunting did not ad-

189. Id. at 168.
190. Id. at 168-69.
191. Id. at 169.
192. Id. at 169-70.
193. Id. at 170.
194. Id.
195. Id.
196. Id.
197. Id.
199. Id. at 1039. The regulation was published at 42 Fed. Reg. 45,310 (1977).
201. Id.
versely affect the bird. The court concluded that the affirmative duty to act for the conservation of listed species does not empower federal agencies to take protective action without first adducing evidence to show that the action will benefit the species.

While differing in result, *Defenders of Wildlife* and *Connor* establish that federal agencies should develop, and include in their administrative records, evidence sufficient to show that they are using their authorities to further the purposes of ESA. FWS and NMFS should incorporate this rule into the section 7 regulations to ensure section 7's consistent application. The regulations should also establish a procedure by which an agency may fulfill its obligation under section 7(a)(1) to consult with the Services regarding such use of its authority. Where a proposed action may adversely affect a species and consultation is therefore required by section 7(a)(2), the consultation under section 7(a)(1) could be merged with the existing procedure for consultation under section 7(a)(2). In such a case the Services should recommend appropriate conservation measures even where such measures are not necessary for compliance with section 7(a)(2). Periodic consultations, or consultations on a class of similar activities or activities in similar locations, may be appropriate methods where no section 7(a)(2) consultation is required. In addition, the regulations could describe the record that must be developed by federal agencies in light of *Connor* and *Defenders of Wildlife*, thereby avoiding potential future conflicts.

**D. Substantive Requirements of Section 7(a)(2)**

The substantive requirement of section 7 is that federal agencies “insure that any action . . . carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species . . . or result in the destruction or adverse modification of [critical] habitat.” ESA provides no definition of many of these terms, and the 1973 and 1978 legislative history is largely silent about their meaning. The main guidance is found in the section 7 regulations and the legislative history to the 1979 amendments.
1. **Definitional Problems**

The 1979 amendments changed the "does not jeopardize" standard to the "is not likely to jeopardize" standard, but the legislative history makes clear that this change was intended to codify, rather than alter, existing agency practice. In explaining this amendment, Congressman Breaux stated that FWS and NMFS will be required to evaluate the probability that jeopardy will result from agency action. An agency is not required to guarantee that its action will have no adverse impact but neither Congressman Breaux's statement nor the Conference Report stated what minimum level of probability will support an agency determination that jeopardy, destruction, or adverse modification are unlikely. Under the standard rule of statutory construction that terms be given their plain meaning, however, the "is not likely to" language should require an agency to insure that there is a fairly low probability that jeopardy or destruction will occur. This standard is consistent with the Conference Report on the 1979 amendments, which states that the change to the "not likely" requirement was made to insure that absolute certainty is not required. The Report states also that the burden remains on federal agencies to show that the standard has not been violated, and says also that any doubt is to be resolved in favor of protecting the species.

More concrete authority is available for determining the meaning of the terms "jeopardize the continued existence" of a listed species and "destruction or adverse modification" of a critical habitat. The regulations suggest that these standards prohibit actions that would lead to an appreciable reduction in the likelihood of the survival or recovery of the species. This definition has two significant aspects. First, it re-

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212. Id.


215. North Slope Borough v. Andrus, 486 F. Supp. 332, 351 (D. D.C. 1979) ("section 7(a) states that the agency . . . must consult . . . to determine that there is little likelihood of jeopardizing the continued existence of endangered species").


218. 50 C.F.R. § 402.02 (1980). The regulations define both standards with similar language emphasizing the likelihood of survival of a species. See note 86 supra. "Critical habitat" is defined to mean "any air, land, or water area . . . the loss of which would appreciably decrease the likelihood of the survival and recovery of a listed species . . . ." 50 C.F.R. § 402.02 (1980). "Destruction or adverse modification" is similarly defined to mean "a direct or indirect alteration of critical habitat which appreciably diminishes the value of that habitat for survival and recovery of a listed species." Id. Finally, "[j]eopardize the
quires insurance of a species' ability to recover as well as its survival. Because federal agencies, under their duty to "conserve" listed species, are required to bring such species to a point at which they no longer require protection, this aspect of the definition is proper. Second, the definition requires an "appreciable" reduction in the likelihood of a species' survival or recovery. The regulations further point out that this level varies with the species or habitat involved. In deciding whether a federal agency's actions will violate this standard, the Services might consider, for example, the population size, reproduction rate, and geographical distribution of a species as well as the factors that have in the past affected or are presently affecting the species. These considerations are biological and thus well within the competence of the Services.

In applying these standards to determine whether its proposed actions violate section 7(a)(2), a federal agency must evaluate not only the direct impact of its actions on a species or habitat, but also the indirect impact from related activities. In National Wildlife Federation v. Coleman, for example, the Court of Appeals for the Fifth Circuit enjoined completion of a highway because the Department of Transportation failed to consider the indirect impact of the project on the endangered sandhill crane. The court stated that, while the evidence in the record showed that the crane could survive the loss of habitat caused directly by highway construction, it was questionable whether the crane could survive the loss of habitat caused by the indirect impact of the highway, such as that caused by residential and commercial development. The court held that this failure supported an injunction against continued construction of the highway.

In addition to considering the indirect impact of their actions, federal agencies must also consider cumulative impact on a species or habitat: that is, the incremental impact of the agency's action considered together with the impacts of past, present, and reasonably foreseeable future actions. Federal agencies are required to consider both

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221. 50 C.F.R. § 402.05.
222. See id. § 402.05.
223. 529 F.2d 359 (5th Cir. 1976).
224. Id. at 373.
225. Id. at 375. See also Cabinet Mountains Wilderness v. Peterson, 510 F. Supp. 1186, 1190 (D. D.C. 1981), in which the court cites with approval the defendant's consideration of the cumulative impact of the four-year project in question.
indirect\textsuperscript{226} and cumulative\textsuperscript{227} impacts under the National Environmental Policy Act (NEPA),\textsuperscript{228} pursuant to regulations inspired by Kleppe \textit{v. Sierra Club},\textsuperscript{229} in which the Supreme Court ruled that the impacts of several projects being conducted simultaneously in a certain region cannot be considered in isolation for the purposes of drafting an environmental impact statement.\textsuperscript{230} In 1978, the Solicitor of the Department of the Interior issued an opinion that apparently adopted the NEPA scheme by requiring that biological opinions rendered under ESA consider "the cumulative effects of other activities or programs which may have similar impacts on a listed species or its habitat."\textsuperscript{231} This decision was withdrawn on August 26, 1981,\textsuperscript{232} however, and a new opinion on the subject was issued by the Associate Solicitor for Conservation and Wildlife.\textsuperscript{233} The new opinion concludes that NEPA's requirement that federal agencies consider the cumulative impacts of other projects "should not be applied, without modification, to section 7 consultations."\textsuperscript{234} While the opinion states that consultation "should consider the past and present impacts of all projects and human activities in the area, regardless of whether they are federal, state, or private in nature,"\textsuperscript{235} the opinion concluded that the cumulative effects of future federal actions "which have not been previously reviewed under section 7" should not be considered.\textsuperscript{236}

\textsuperscript{226} 40 C.F.R. § 1508.8 (1980). These regulations define "indirect effects" as those that "are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable . . . ." \textit{Id.}

\textsuperscript{227} \textit{Id.} §§ 1508.7, 1508.25.


\textsuperscript{229} 427 U.S. 390 (1976).

\textsuperscript{230} \textit{Id.} at 409-10 ("Thus, when several proposals for coal-related actions that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together").

\textsuperscript{231} Memorandum from Leo Krulitz, Solicitor, Department of the Interior, to Director, Fish and Wildlife Service, at 2 (July 18, 1978). This opinion was issued during the preparation of the biological opinion for the Grayrocks Dam and Reservoir Project. \textit{See id.} at 1. During this consultation, FWS considered the impact of several projects affecting the Platte River. \textit{Id.} at 1.

The Kleppe decision, unlike the Solicitor's opinion, did not limit consideration of cumulative effects to similar impacts. Since section 7 is designed to protect listed species, all types of impacts on such species or their critical habitats should be considered.

\textsuperscript{232} Memorandum from Solicitor, Department of the Interior, to Director, Fish and Wildlife Service (Aug. 26, 1981).

\textsuperscript{233} Memorandum from Associate Solicitor, Conservation and Wildlife, to Director, Fish and Wildlife Service (Aug. 27, 1981).

\textsuperscript{234} \textit{Id.} at 2.

\textsuperscript{235} \textit{Id.} at 6 (emphasis in original). The opinion noted further that the impact of activity "connected" to an agency action should be considered in determining the impact of the agency action. \textit{Id.} at 5.

\textsuperscript{236} \textit{Id.} at 6. The opinion also appears not to require consideration of the cumulative effect of future state and private actions. \textit{See id.} It does state, however, that the cumulative impacts of "future state or private [actions]" should be considered when "such actions are
The opinion based this conclusion on two grounds. First, the Associate Solicitor noted that "the substantive consequences of requiring such cumulative effects to be considered under section 7 differ from the procedural consequences of environmental planning statutes such as NEPA."\(^{237}\) In other words, the opinion noted, NEPA involves merely "'an extensive inquiry'" into the effects of a federal action on the environment, while section 7 operates "'to prevent'" loss of listed species,\(^{238}\) so that the consequences of application of section 7 are greater than those of NEPA's application.\(^{239}\) Second, the opinion stated that any future federal actions that might have a cumulative effect "will themselves be subject to the restraints of section 7 at some later date,"\(^{240}\) and that it is "more appropriate to consider the effects of future federal actions in a given area at the time consultation under section 7 is initiated for those actions."\(^{241}\)

While it is consistent with the goals of ESA to require consideration of the cumulative effects of past and present actions in evaluating a proposed agency project, it is questionable whether the cumulative impacts of reasonably foreseeable future actions should be ignored. Species preservation is the primary goal of ESA,\(^{242}\) and this goal likely would best be served by considering as early as possible the various effects of all reasonably foreseeable actions on listed species or their critical habitats. Such consideration would result in potential section 7(a)(2) problems being identified at a stage when project modifications and alternatives to minimize the negative impact can most easily and economically be designed and implemented. Under the prior Solicitor's opinion, more than one project could have proceeded in an area once modification of the project were adopted.\(^{243}\) Under the latter opinion, however, modifications of existing projects are unlikely because the biological opinion rendered for the project will not have analyzed future actions. In addition, the failure to consider reasonably foreseeable actions will preclude a choice between two or more projects based on the relative interests they serve, where more than one project in an area cannot be accommodated.\(^{244}\) Finally, the opinion may open

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\(^{237}\) Id. at 7 (emphasis in original).

\(^{238}\) Id. at 3 (citing TVA v. Hill, 437 U.S. 153, 188 n.34 (1978)) (emphasis in original).

\(^{239}\) See id.

\(^{240}\) Id. at 4.

\(^{241}\) Id.


\(^{243}\) See note 231 supra and accompanying text.

\(^{244}\) The opinion creates what it calls a "first-in-time, first-in-right" process, Memorandum, supra note 233, at 4, 6, by requiring that later projects in an area be evaluated in light of earlier projects, although earlier projects need not be evaluated in light of future actions.
the door to steamrolling pressures that Congress sought to prevent.\textsuperscript{245} Where a proposed second project in an area arguably bears greater social utility than an earlier project, proponents of the second project may argue that their project should be allowed to proceed although the cumulative effect of this project and an earlier one might violate section 7(a)(2). To the extent that this argument is successful so as to permit potentially injurious action to proceed, ESA’s central goal of species preservation will be frustrated.

In seeking to comply with section 7 in light of the above requirements, an agency should begin by studying the current status of the listed species or critical habitat, including the impacts of past and present ongoing activities. Such a study will enable an agency more accurately to evaluate the permissibility of its own action; in situations where several harmful factors are operating on a species or habitat, the threshold level of impact of an agency action, beyond which the agency will be unable to meet the “not likely to jeopardize” standard, will be lower than it is where the agency’s action is the only one affecting the species. The agency also must consider the direct and indirect impacts of the activity in question and the effects of reasonably foreseeable future actions.

2. The Role of Biological Opinions

In determining whether their actions comply with section 7, federal agencies rely considerably on biological opinions provided by FWS and NMFS.\textsuperscript{246} Section 7(b) of ESA requires FWS and NMFS to issue biological opinions promptly after the conclusion of consultation, setting forth their opinions as to how the agency action affects the species or habitat, the information on which the opinions are based, and reasonable and prudent alternatives that would not violate section 7(a)(2).\textsuperscript{247} The purposes of the biological opinion are to alert the agency to the potential impacts of its action\textsuperscript{248} and to help resolve conflicts between agency action and protection of listed species and their critical habitats,\textsuperscript{249} thus helping to insure compliance with section

\textsuperscript{245} See 16 U.S.C. § 1536(d) (Supp. III 1979). See also text accompanying notes 162 supra.

\textsuperscript{246} H.R. REP. NO. 1625, 95th Cong., 1st Sess. 12, \textit{reprinted in} [1978] U.S. \textit{Code Cong. & Ad. News} 9453, 9462 (“The judicial decisions interpreting Section 7 indicate . . . that the biological opinion issued by the Fish and Wildlife Service will ordinarily be given great weight by the courts. Federal agencies proceeding with an action in the face of an adverse biological opinion will be doing so at their peril”).

\textsuperscript{247} 16 U.S.C. § 1536(b) (Supp. III 1979).

\textsuperscript{248} See North Slope Borough v. Andrus, 642 F.2d 589, 609-10 (D.C. Cir. 1980).

a. Incomplete information

An important issue arises in relation to biological opinions when there is insufficient information regarding the effect of a proposed agency action on a listed species or its critical habitat. Federal agencies are required by section 7(a)(2) to insure that their actions are not likely to have certain adverse effects on species or their critical habitats, and it seems to follow that where information is insufficient to insure that the action will not have such an effect, the federal agency has not complied with section 7(a)(2) and thus cannot proceed with its proposed action.

The Beaufort Sea case considered this issue in a limited context. A multi-step drilling process had been proposed pursuant to the Outer Continental Shelf Lands Act (OCSLA). NMFS had stated that insufficient information existed to determine whether the combined effect of the various steps in the process would violate section 7(a)(2). The court held that the first step in the process could proceed, despite this absence of information, in situations in which a process has been clearly divided into several steps by a federal statute such as OCSLA, as long as efforts continued to develop complete information on the effect of later steps as the time came for them to be taken. In so holding, the court noted that Congress intended to allow “incomplete opinions” so as not “[to] preclude all agency activities” at the stage of “initiation of agency action.” The court noted, however, that “§ 7(a)(2) and § 7(d) limit the intermediate steps an action agency may take when adequate knowledge is unavailable,” thus recognizing that agencies can proceed even with these intermediate activities only when they have met the requirements of section 7(a)(2) by insuring that the activities will not jeopardize listed species or destroy or adversely modify their critical habitats.

A 1980 opinion by the Solicitor of the Department of the Inte-

255. Id. at 352-53. More specifically, the court established four requirements that an agency must meet in order to proceed with intermediate steps in a multi-step process when there is an absence of information on jeopardy. See text accompanying notes 370-73 infra.
257. Id. at 353.
rior addresses the question of whether the Services, in rendering biological opinions in the face of inadequate information, must nevertheless make a conclusion as to whether an agency has met the requirements of section 7(a)(2). The Solicitor's opinion concludes that "whatever the state of the available information, the biological opinion must reach a conclusion on the likelihood of jeopardy." The Solicitor reasoned that this conclusion was mandated by the provision in section 7(a)(2), added by the 1979 amendments, that federal agencies are required to use "the best scientific and commercial data available" in fulfilling the requirements of that paragraph. The opinion cites a statement by Congressman Breaux, the House floor leader of the 1979 amendments, expressing concern that negative opinions might be issued whenever insufficient information on the likelihood of jeopardy to a species or its habitat exists.

The Solicitor's opinion, however, is clearly erroneous. In addition to stating inaccurately the legislative intent of the 1979 amendments to section 7(a)(2), the opinion's conclusion ignores the plain requirement of section 7(a)(2) that federal agencies, to proceed with proposed actions, must insure that their actions are not likely to jeopardize species or destroy or adversely modify their critical habitats. Thus section 7(a)(2) places the burden of proof on the agencies proposing

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258. Memorandum from Clyde Martz, Solicitor, Department of the Interior, to Secretary of the Interior (June 13, 1980).
259. Id. at 5.
262. The opinion's analysis of the legislative intent of the 1979 amendments to section 7(a)(2) is inadequate in several respects. It ignores the finding of the district court in Beaufort Sea that the intent of the 1979 amendments was merely to clarify, and not to alter, the statute. North Slope Borough v. Andrus, 486 F. Supp. at 350 n.44. Second, it fails to explain why the phrase "best commercial and scientific data" is used in several other places in ESA, see note 95 supra, if the phrase is to have such significance as that attributed to it by the Solicitor. Third, it fails to consider that the 1979 amendments made technical changes to the exemption procedure, allowing agencies to file an exemption application when they receive a biological opinion stating that the proposed action violates section 7(a)(2), 16 U.S.C. § 1536(g)(1) (Supp. III 1979); this change stresses that the biological opinion is to decide whether an agency has complied with section 7(a)(2), and not, as the Solicitor's opinion seems to suggest, whether jeopardy does or does not exist. As explained in note 264 infra, the distinction is a crucial one. The House Conference Report to the 1979 Amendment similarly stresses this point. H.R. Rep. No. 697, 96th Cong., 2d Sess. 12, reprinted in [1979] U.S. CODE CONG. & AD NEWS 2572, 2576. Finally, the Solicitor's opinion takes Congressman Breaux's statement out of context so as to distort his meaning; the statement expressing concern at the issuance of negative opinions was in fact made in the context of discussing the new "is not likely to" standard, see text accompanying notes 122-246 supra, rather than the "best available scientific and commercial means" provision. See 125 Cong. Rec. H9650 (daily ed. Oct. 24, 1979) (remarks of Congressman Breaux).
263. See text accompanying note 251 supra. The opinion also ignores the requirement of section 7(b) that the Services, in rendering their biological opinions, suggest reasonable
action.\textsuperscript{264} When insufficient information exists to determine whether a proposed action will present such a danger to a listed species or its critical habitat, it follows that the agency would be unable to carry its burden of proof, and thus would be precluded from proceeding with its proposed action until a more complete biological opinion could be rendered or an exemption granted. The only exception to this rule would be the limited one recognized in \textit{Beaufort Sea}.\textsuperscript{265}

Further, the opinion could mislead federal agencies in a way that Congress could not have intended. If the Services render a biological opinion stating that, based on the limited information available, no jeopardy has been demonstrated, an agency could be misled into proceeding with its action in the belief that compliance with section 7(a)(2) had been ensured. Since section 7(a)(2) requires that the agency insure that its actions are not likely to jeopardize listed species or their critical habitats, however, the "no jeopardy" opinion rendered by the Services in light of inadequate information does not enable the federal agency to meet the requirements of section 7(a)(2). It cannot be presumed that Congress would have intended that agencies be misled into taking such action. Thus Congress did not intend that the Services be required to come to a decision on jeopardy when information is unavailable to determine whether an agency can insure that its actions are not likely to bring about the results prohibited by section 7(a)(2).

Because the Solicitor's opinion ignores the plain requirement of section 7(a)(2) that federal agencies carry the burden of proof on the

\textsuperscript{264} In overlooking this important fact, the Solicitor's opinion may have subtly attempted to shift the burden of proof with regard to compliance with section 7(a)(2) from the federal agency proposing action to the Services. The opinion seems to suggest that the inquiry in making a biological opinion consists only of determining whether jeopardy does or does not exist. Memorandum, \textit{supra} note 258, at 2-3. The opinion can thus be construed as precluding agency action only when an explicit finding of jeopardy has been made. Because such a finding will not be easily rendered where adequate information is lacking, this approach would allow many actions to proceed regardless of their potentially injurious effect on listed species or their critical habitats. Such an approach would be inconsistent with the basic purposes of ESA, see notes 268-69 \textit{infra} and accompanying text; it is also inconsistent with the approach taken by the \textit{Beaufort Sea} court, which seemed clearly to contemplate that the inquiry to be made in light of inadequate information is not whether jeopardy does or does not exist, but whether the federal agency proposing action has complied with the requirements of section 7(a)(2). \textit{See} North Slope Borough v. Andrus, 486 F. Supp. at 353; see also text accompanying note 257 \textit{supra}. Further, the Solicitor's approach is inconsistent with the change in the definition of "irresolvable conflict" made by the 1978 amendments, which define the term as a situation in which a proposed agency action would violate section 7(a)(2), rather than a situation in which jeopardy to a species or adverse modification or destruction of its critical habitat are present. \textit{16 U.S.C. § 1532(11)} (Supp. III 1979). This change stresses that federal agencies must insure that their actions comply with section 7(a)(2) by not being likely to jeopardize species or adversely affect their critical habitats.

\textsuperscript{265} See text accompanying notes 252-57 \textit{supra}. 
question of jeopardy, and because it misconstrues the legislative intent of the 1979 amendments to section 7, the Solicitor's opinion should be rejected. The opinion would permit an agency to proceed even when it could not rule out a potential harm to listed species or their critical habitats under the standard of section 7(a)(2). Allowing these threats to listed species runs counter to the policy and intent at the heart of ESA.

b. Non-biological data

The biological opinion also provides reviewing courts with evidence of an agency’s compliance with section 7(a)(2). Courts give substantial weight to the opinions as evidence of compliance. Further, under the Administrative Procedure Act, courts will find a violation of section 7(a)(2) only where the agency’s decision to proceed is determined to be “arbitrary and capricious.” Thus, where an agency relies on a biological opinion in deciding that its action complies with section 7(a)(2), it is unlikely that a court would find that the action violates that section.

The wisdom of this judicial attitude is questionable in certain circumstances. While it makes sense for courts to defer to FWS and NMFS when only biological issues are involved, such deference is less sensible when the opinions rely on non-biological factors outside the expertise of the Services. For example, in the case of the proposed Pittston oil refinery in Eastport, Maine, the Services, in rendering their biological opinions, had to consider such factors as the likelihood of an oil spill from a tanker, the likely location, size, and time of year of a spill, the likely movement of the spill in the water, the weathering of the oil in the water, and the likelihood of cleanup of the oil. FWS

266. See text accompanying notes 263-65 supra.
267. See note 262 supra.
268. See note 264 supra.
269. See text accompanying notes 9-14 supra.
271. H.R. REP. No. 697, 96th Cong., 1st Sess. 12, reprinted in [1979] U.S. CODE CONG. & AD. NEWS 2572, 2576. But see In Re Pittston Co., NPDES Permit App. No. ME0022420, at 90 (Initial Decision Jan. 17, 1979), in which an EPA Administrative Law Judge, while agreeing that biological opinions enjoy a presumption of validity at administrative hearings, found that the presumption, once it had been overcome by probative evidence, disappeared and had no further effect on an administrative decision as to compliance with section 7(a)(2).
274. See Memorandum of National Wildlife Federation & Environmental Defense Fund, Inc. in support of their Motions for Summary Judgment and in Opposition to the Motions of the Pittston Company for Summary Judgment and to Dismiss, at 2, 3, National
and NMFS lack the resources routinely to obtain and evaluate information concerning such non-biological questions,\textsuperscript{275} and their opinions on such issues should be accorded less deference when no other federal agencies having expertise in the areas have contributed to the opinion.\textsuperscript{276} A court thus should defer to a biological opinion only if the non-biological information used in preparing the opinion has been provided by an agency with some expertise in the relevant subject area.

Weak causal links between an activity and its possible effect on listed species or critical habitats pose even greater difficulties for the Services in rendering biological opinions. A recent example is the highly publicized problem of "acid rain."\textsuperscript{277} Emissions from motor vehicles, smelting operations, and oil and coal burning power plants contain sulfur and nitrogen oxides,\textsuperscript{278} which are chemically transformed in the atmosphere into sulfuric and nitric acids.\textsuperscript{279} These acids may travel thousands of miles through the atmosphere before a rainfall washes them back to earth as acid rain.\textsuperscript{280} The resulting acidification of certain

\begin{itemize}
\item \textsuperscript{276} It should be possible for FWS and NMFS to request a probability analysis from other federal agencies in areas in which the latter agencies have expertise. Alternatively, the Services might contract with private parties for the provision of such information, but the expense of this option might well be prohibitive. In cases, therefore, in which no particular federal agency is able to render expert advice to the Services, it is likely that the Services will have to render an opinion on less than optimal information and expertise.
\item \textsuperscript{277} See generally Wetstone, Air Pollution Control Laws in North America and the Problem of Acid Rain and Snow, 10 Envt'l L. Rptr. 50001, 50002-03 (1980); Babich, Davis, & Stotzky, Acid Precipitation: Causes and Consequences, Environment (May, 1980) at 6-13, 40-41.
\item Other situations presenting weak causal links between an action and its possible environmental effects are the depletion of ozone and the increase in carbon dioxide levels in the atmosphere. Depletion of stratospheric ozone in the upper atmosphere may diminish the earth's protection from solar ultra violent radiation; increases in solar radiation may in turn lead to severe forms of skin cancer in humans and may affect many forms of life. L. Brown, The Twenty-Ninth Day 40-41 (1978). The decrease in stratospheric ozone has been linked to the release of fluorocarbons used in aerosol spray cans. \textit{Id.} at 41.
\item Increasing levels of carbon dioxide in the atmosphere have been and are being caused by significant increases in the use of fossil fuels. \textit{Id.} at 62. Scientists have speculated that the increase in carbon dioxide in the atmosphere will provide a greenhouse affect—that is, carbon dioxide, while note reducing incoming solar radiation, will warm the earth by absorbing some of the heat that is reflected by the earth's surface. \textit{Id.} Consequent changes in the earth's climate might raise sea levels, thus threatening populations living in coastal areas. \textit{Id.} at 62-63.
\item These three problems are raised as significant concerns in the recently published Global 2000 Report to the President, prepared by the State Department and Council on Environmental Quality (1980). \textit{Id.}, vol. 1 at 36-37, vol. 2 at 51-65, 256-69, 403-04, 535-44.
\end{itemize}
mountain and upstream lakes prevents fish from reproducing, and thus threatens fish and other aquatic species with extinction. Because of the lack of understanding of acid rain and the difficulty of establishing that it has caused certain impacts, the Services will be hard pressed to determine under section 7 whether an agency has ensured that its actions are not "likely to" jeopardize the existence of listed species or to destroy or adversely modify their critical habitats. Knowledge of such problems complied in the future may be adequate to establish causal links between particular agency actions and threats to listed species or critical habitats. If this occurs, section 7 would be an appropriate mechanism to regulate such actions.

C. Administrative Review of Biological Opinions

Another issue that has arisen in connection with the biological opinions issued by the Services is the scope of review of these opinions during the exemption process. The Services may at times issue biological opinions on which reasonable persons might differ. When a negative opinion is issued, an agency or permit or license applicant may seek an exemption which would permit activity to proceed. Section 7 provides that, upon filing of an exemption application, a review board shall first review the Services’ decision that an irresolvable conflict exists between the proposed activity and a listed species; if it affirms this finding, and finds that the exemption applicant has met certain other conditions, the application is passed on to the Endangered Species Committee, which decides whether to issue the exemption. An important issue in this context is the proper scope of review to be employed by the review board: whether the board should review only the consultation process to be assured that an irresolvable conflict exists, or whether the board is to conduct a substantive review of the evidence considered by the Services in issuing their biological opinions. If

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281. Id.; Babich, supra note 277, at 8-12; Graves, supra note 277, at 76-77. Acid rain may have negative environmental impacts on soil and materials such as stone and metals as well. Wetstone, supra note 277, at 50002.

282. Wetstone, supra note 277, at 50002. The extinction of one species may have been caused by acid rain. Id. at 50003.

283. Attention has only recently been focused on the acid rain problem, and future research may provide better documentation of the problem and its ecological effects. See id. at 50001.

284. Section 7(g)-(p) of ESA, 16 U.S.C. § 1536(g)-(p) (Supp. III 1979), governs the exemption process. See note 73 supra for a summary of this process.


286. Specifically, the board must find that the federal agency applying for an exemption has carried out its consultation responsibilities properly and in good faith, has conducted any required biological assessment, and has refrained from making irreversible or irretrievable commitments of resources. 16 U.S.C. § 1536(g)(5) (Supp. III 1979). See note 73 supra.

the board undertakes a substantive review, it becomes important to determine whether it should conduct a de novo review of the evidence, or should employ a more lenient standard upholding the Services' biological opinion.

This issue was first raised, but not answered, in *Pittston Co. v. Endangered Species Committee*. The Pittston Company proposed to build an oil refinery in Eastport, Maine, but negative opinions were issued by both NMFS and FWS. The Company then filed exemption applications and sought review of the biological opinions. When Pittston filed its exemption applications, the review board's scope of review was unclear, although the Endangered Species Committee had published interim final regulations to govern review board and Endangered Species Committee proceedings. The interim regulations provided for substantive review of biological opinions based on a "substantial evidence" test, providing that the finding of irresolvable conflict should be affirmed only if supported by substantial evidence. Pittston argued that the substantial evidence test was too narrow, and that the review board should determine whether an irresolvable conflict existed only by conducting a *de novo* review of the evidence. Environmentalist intervenors argued in opposition that Congress intended to authorize only a procedural review of the irresolvable conflict question and that the substantive review would in effect allow the review board to grant exemptions to the Act, a function Congress reserved to the Endangered Species Committee. The court did not, however, decide this issue. Because the Environmental Protection Agency had not yet made a final determination on Pittston's application, the court held that Pittston's exemption application was not ripe for review and consequently declined to rule on the proper scope of review.

The issue of the proper scope of review was addressed by regulations published after the *Pittston* case was decided. The Endangered
Species Committee published final regulations mandating substantive review by review boards on two questions: whether "the biological opinion is based on the best available commercial and scientific data," and whether FWS or NMFS have made "no clear error in judgment on the question of jeopardy" to a listed species or of "adverse modification or destruction" of its critical habitat. Thus the Committee took a middle ground, mandating a limited amount of substantive review. This decision should deter, but probably will not eliminate, attempts to overturn biological opinions through the exemption process. Even in calling for limited substantive review, however, the regulation is of questionable validity, for the legislative history of ESA indicates that Congress did not intend that review boards conduct a substantive review of biological opinions.

FWS and NMFS should revise and expand their section 7 regulations to address the issues under section 7(a)(2) that remain unresolved or unsatisfactorily resolved, in order to guide agencies and the courts in applying the standards of section 7. The regulations should clarify the meaning of the "is not likely to" standard, require the consideration of direct, indirect, and cumulative impacts, and establish the responsibilities of federal agencies in conducting consultation and of the Services in issuing biological opinions. By giving the agencies more definite standards under which to assess their actions accurately and formulate alternatives early in the planning process, such regulations might prevent the confrontations that develop when agencies are

300. See H.R. REP. NO. 1625, 95th Cong., 1st Sess. 21-23, reprinted in [1979] U.S. CODE CONG. & AD. NEWS 9453, 9471-73. Several factors indicate that Congress did not intend that review boards conduct a substantive review of biological opinions. Congress anticipated that the initial screening process would take only 60 days, 16 U.S.C. § 1536(g)(5) (Supp. III 1979) this suggests that Congress did not intend that the boards substantively review exemption applications. Further, Congress did not require that members of the review board, with the exception of the Administrative Law Judge, possess expertise with respect to the species involved, the requirements of section 7, or legal review procedures, 16 U.S.C. § 1536(g)(3) (Supp. III 1979); if Congress had intended the board to conduct a substantive review, it seemingly would have required that board members possess expertise in these areas. Moreover, the review board is required to make a full review of consultations carried out under section 7(a), 16 U.S.C. § 1536(g)(5) (Supp. III 1979), but the biological opinion is not issued until the consultation has concluded, id. § 1536(b) (Supp. III 1979). This indicates that there is to be no substantive review of biological opinions. Further, the review board lacks authority to issue exemptions. See note 298 supra.
301. See note 131 supra.
302. See text accompanying notes 95-97 supra.
303. See text accompanying notes 223-31 supra.
304. See text accompanying notes 204-05 supra.
305. See text accompanying notes 246-83 supra.
forced to abandon their plans after great expenditures of time, money,
and resources.

E. Scope of Section 7

1. International Applicability

Both ESA and the regulations seek to define the scope of section 7. Section 7 states that it shall apply to actions "authorized, funded, or
 carried out" by a federal agency, \(^{306}\) and the regulations to section 7
cover federal "activities and programs," a phrase the regulations define
very broadly. \(^{307}\) There are, nevertheless, a number of unresolved ques-
tions concerning the scope of section 7. One issue concerns the interna-
tional application of section 7: whether the section applies to agency
actions taken outside of the United States. The joint FWS-NMFS reg-
ulations have attempted to deal with this question. \(^{308}\) Although FWS
and NMFS have taken the position that they lack authority to desig-
nate critical habitats in foreign countries, \(^{309}\) the regulations state that
section 7 "requires every Federal agency to insure that its activities or
 programs . . . in foreign countries will not jeopardize the existence of a
listed species." \(^{310}\) In addition, a recent district court decision has held
that the Services can designate critical habitats in foreign countries, \(^{311}\)
and recent developments concerning the international scope of the Na-
tional Environmental Policy Act (NEPA), \(^{312}\) along with the 1978
Amendments to ESA, have strengthened the argument that section 7 is
international in scope.

The issue of international scope of environmental statutes has also

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\(^{307}\) The regulations define "activities and programs" as "all actions of any kind authorized, funded, or carried out by Federal agencies in whole or in part . . . ." 50 C.F.R. § 402.02 (1980).

\(^{308}\) Id. § 402.04(a)(3) (1980).

\(^{309}\) Memorandum from Assoc. Solicitor, Conservation & Wildlife, to Director, Fish
and Wildlife Service, April 12, 1977 at 1, 5. NATIONAL WILDLIFE LAW, supra note 10, at 405
n.123. This determination was made because of the absence of a requirement in ESA to
consult with foreign governments like the mandate to consult with states. NATIONAL WILD-
LIFE LAW, supra note 10, at 405 n.123.

\(^{310}\) 50 C.F.R. § 402.01 (1980).

\(^{311}\) Colorado River Water Conservation District v. Andrus, Civ. No. 78-A-1191 (D.
Colo. Aug. 3; 1981). In Colorado River, plaintiffs claimed that the listing of the totoaba, a
species of fish, was defective because a critical habitat was not identified in conjunction with
listing. Id. at 10 (citing 16 U.S.C. § 1533(a) (1976 & Supp. III 1979)). Federal defendants
argued in response that the habitat of the fish was only within the territorial jurisdiction of
Mexico, and that "no critical habitat need be designated for endangered species found
outside the United States." Id. The court rejected this defense, concluding that the failure
to designate a critical habitat for the totoaba was a violation of the Act because critical
habitat must be designated to the maximum extent prudent. Id. at 11. The court held that
the Services possess the power to designate critical habitats in foreign countries, noting that
"[b]oth foreign and domestic species can be listed as endangered or threatened." Id.

arisen in the context of NEPA. NEPA may provide some guidance in analyzing the scope of ESA and of section 7. The international application issue with regard to NEPA was largely settled on January 4, 1979, when Presi-

313. See notes 315-22 infra and accompanying text.


ESA does not apply to takings of listed species by certain natives and non-native permanent residents of Alaska native villages if the taking is primarily for subsistence purposes, unless the taking will have a material negative effect on the species. 16 U.S.C. § 1539(e) (1976). The Act also provides that the Endangered Species Committee must grant an exemption when the Secretary of Defense finds that the exemption is needed for national security, 16 U.S.C. § 1536(j) (Supp. III 1979), and when an exemption is necessary to repair or replace a public facility in an area declared by the President to be a major disaster area under the Disaster Relief Act of 1974, 42 U.S.C. §§ 5121-5202 (Supp. III 1979). 16 U.S.C. § 1536(p) (Supp. III 1979). It should be noted further than an exemption is permanent and applicable to other species if a biological assessment has been prepared, unless the exemption would result in the extinction of a species that is not the subject of consultation under section 7 and not identified in a biological assessment. 16 U.S.C. § 1536(h)(2) (Supp. III 1979). In the latter situations, the Committee must determine whether the exemption shall be permanent. Id.

Another difference between ESA and NEPA is that, under NEPA, federal agencies are limited to all practical means consistent with other national policies in implementing the Act, 42 U.S.C. § 4331(b) (Supp. III 1979), while no such limitations are imposed on the implementation of ESA. 16 U.S.C. § 1536(a) (Supp. III 1979); see also H. REP. No. 412, 93rd Cong., 1st Sess. 14 (1973).

dent Carter signed an Executive Order entitled "Environmental Effects Abroad of Major Federal Actions." While some of the issues addressed by the Order apply only to NEPA, others, concerning foreign policy considerations and the presumption against extraterritoriality, are very similar to arguments that could be raised under ESA. Although the required scope of environmental review under the Executive Order varies with the effect of the federal action, and the Order contains other limitations and exemptions, the Order established the Executive's position that environmental impacts are to be considered in making decisions about major federal actions taken outside the territorial United States. It is of course unclear whether

317. In Section 1 of Executive Order 12,144, President Carter indicated that the Order was intended "[t]o further the purpose of the National Environmental Policy Act . . . [and] to encourage] actions to be taken by Federal agencies to further the purpose of the National Environmental Policy Act . . . ." Id., 3 C.F.R. at 356-57. While President Carter tailored the language of Executive Order 12,114 to NEPA considerations, its broad language may also apply to ESA.
318. Executive Order 12,114, 3 C.F.R. at 357-59.
319. Note, The Extraterritorial Scope of NEPA's Environmental Impact Statement Requirement, 74 MICH. L. REV. 349 (1975) ("The presumption against extraterritoriality, as stated in Restatement (Second) of the Foreign Relations Law of the United States, Section 38 (1965), advises that rules of the United States statutory law . . . apply only to conduct occurring within, or having effect within the territory of the United States, unless the contrary is clearly indicated by the statute"). See also Legal Memorandum from the Council on Environmental Quality to the Department of Justice (entitled "NEPA's Application to Federal Agency Activities Occurring or Having Environmental Effects Outside the United States") (June 2, 1978) at 25. The presumption arises from two concepts: first, that Congress is primarily concerned with domestic conditions and probably intends statutes to apply only within the U.S.; second, that Congress usually does not intend to enact statutes that contravene international law. Id. at 26. The Council on Environmental Quality (CEQ) has argued that the presumption against extraterritoriality is inapplicable to NEPA because NEPA imposes no legal obligation on foreign governments, their citizens, or their territory. Id. at 25. NEPA's obligations apply to U.S. government officials and agencies and thus do not contravene any basic concepts of international law. Id. at 29-33. CEQ has argued also that applying NEPA to activities outside the U.S. complied with the emerging principle of international law that "each nation is responsible for, and must strive to eliminate or mitigate, adverse environmental impacts outside its boundaries resulting from its actions or those of its citizens . . . ." Id. at 33. These reasons against applying the presumption against extraterritoriality to NEPA appear equally applicable to section 7 of ESA.
320. See note 319 supra.
321. The Order encompasses four types of "major federal actions": those (1) affecting the "global commons"; (2) affecting foreign nations not involved in the action; (3) affecting the environment of foreign nations by providing to those nations a product or project involving radioactive substances or toxic effects; and (4) affecting globally significant resources. Exec. Order No. 12,114, 3 C.F.R. 356, 357 (1980). Each of these categories of action is subject to a particular type of environmental review. Id. at 357-58. Exemptions include most export licenses or permits, and actions taken by the President or a Cabinet officer where national security is involved. Id. at 358-59.
322. Id. at 356-57. A recent opinion by the Court of Appeals for the D.C. Circuit held, however, that preparation of an environmental impact statement (EIS) was not required for the sale of a nuclear reactor and "complementary nuclear materials" to the Philippines. Nat-
the present administration or future administrations will adhere to this position.

A recent opinion by the Associate Solicitor of the Department of the Interior, however, takes the position that section 7 of ESA does not apply to federal agency actions taken in other countries. Noting that the 1978 amendments to section 7 did not explicitly provide for an exemption process with respect to agency actions taking place in foreign countries, the opinion reasons that Congress did not intend section 7 to apply to such actions. Acknowledging in a noteworthy under-
statement that there are "inherent risks associated with determining Congressional intent through Congressional silence," the opinion seeks to bolster its conclusion by reference to "foreign policy concerns" such as respecting "foreign sovereignty" and insuring the "confidentiality which is often a prerequisite to foreign policy initiatives, intelligence operations or military assistance."

The Associate Solicitor's opinion—in addition to lacking any real support in the language or legislative history of ESA ignores several indications that Congress did intend that section 7 apply to the actions of federal agencies taken in foreign countries.

First, section 7 applies to any agency action, without an explicit limitation to actions taken within the territorial jurisdiction of the United States. Further, Congress has demonstrated its intention of having section 7 apply extraterritorially. For instance, species found on the high seas and in foreign countries may be listed pursuant to section 4. Moreover, a number of provisions in the 1978 amendments indicate that Congress was aware that extraterritorial "irresolvable conflicts" could develop. The amendments provide for judicial review, in the Court of Appeals for the D.C. Circuit, of decisions by the Endangered Species Committee where the agency action will be carried on outside the territorial jurisdiction of any other Court of Appeals Circuit. Also, the amendments imply extraterritorial applicability by permitting exemption applications by the governor of the state, "if any," in which a federal agency's action will be carried out; the quoted phrase contemplates that some agency actions take place in no state, but outside the territorial jurisdiction of the United States.

\[\text{tions, see notes } 329-38 \text{ infra and accompanying text, and also ignores the fact that regulations promulgated by the Department of the Interior and the National Oceanic and Atmospheric Administration recognize that there may be situations in which "no state is affected" by the action, 50 C.F.R. §§ 451.03(b)(ii), 451.04(b)(2) (1980).}\]

\[\text{326. Memorandum, supra note } 323, \text{ at 6.}\]

\[\text{327. Id.}\]

\[\text{328. See note } 325 \text{ supra.}\]


\[\text{330. Id. § 1533(b) (Supp. III 1979). ESA requires that listing determinations be based in part on consultations with countries in which species are normally found or whose citizens harvest such species on the high seas. Id. § 1533(b)(1) (Supp. III 1979). The Act also requires that the efforts of foreign nations to protect species be considered as a factor in determining whether or not to list a species. Id. § 1533(b)(2) (1976). ESA further provides that species designated as requiring protection from unrestricted commerce by any foreign country, or by international agreement, shall receive full consideration for listing. Id. § 1533(b)(3) (1976).}\]

\[\text{331. Id. § 1536(n) (Supp. III 1979).}\]

\[\text{332. Id. § 1536(g)(1) (Supp. III 1979). ESA similarly requires notification of the Governor of each affected state "if any," of receipt of the exemption application. Id. § 1536(g)(2)(B) (Supp. III 1979). There are, of course, areas within the jurisdiction of the United States but not of any state, such as trust territories and the outer continental shelf. As to the former, however, the definition of "state" under ESA includes such areas. ESA}\]
these provisions are more significant because they were passed with congressional knowledge of the position taken in the regulations that section 7 applies to agency actions taken outside the territorial jurisdiction of the United States; the extension of ESA by the 1978 Amendments implies congressional approval of the regulations. Specific problems encountered when foreign policy issues are involved—such as the need to notify the State Department of consultations and to adjust the consulting period in certain circumstances because of potential foreign policy problems—can be dealt with through counterpart regulations. Moreover, the exemption process is available to federal agencies when exemption is necessary to avoid foreign policy problems. Thus the existing section 7 regulations accurately state the extraterritorial effect of section 7.

2. Agency Action

Section 7 of ESA requires federal agencies to insure that "any action" they authorize, find, or carry out is not likely to jeopardize species or adversely modify their critical habitats. The Act does not define the term "action," however, and thus several questions have arisen as to the term's scope.

defines "state" to mean "any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands." Id. § 1532(17) (Supp. III 1979). As to the outer continental shelf, the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. §§ 1331-1356 (1976 & Supp. III 1979) provides that "the civil and criminal laws of each adjacent State . . . are declared to be the law of the United States for that portion of the subsoil and seabed of the outer Continental Shelf . . . which would be within the area of the State if its boundaries were extended seaward to the outer margin of the outer Continental Shelf. . . ." Id. § 1333(a)(2) (Supp. III 1979). Because state laws thus apply to the outer continental shelf, it seems likely that the shelf would be considered part of the state to which each portion of the shelf is adjacent for purposes of the notification requirement imposed by section 7 of ESA.

333. 50 C.F.R. § 402.01 (1980) ("Section 7 . . . requires every Federal agency to insure that its activities . . . in the United States, upon the high seas, and in foreign countries will not jeopardize the continued existence of a listed species").

334. See note 68 supra.

335. Existing regulations provide that the Director of the Office of Environmental Affairs, Department of State be notified when foreign nations or the high seas are involved. 50 C.F.R. § 402.04(a)(3) (1980).

336. The performance of required biological assessments, 16 U.S.C. § 1536(c)(1) (Supp. III 1979), for example, might cause foreign policy problems by offending the nations in which the assessment must be performed.

337. 50 C.F.R. § 402.04(i) (1980) provides in relevant part: "The consultation procedures set forth in this section may be superseded for a particular Federal agency by joint counterpart regulations drafted by that agency and [by FWS and NMFS]."


a. Inaction

A problem addressed under NEPA but not under section 7 is whether an agency’s failure to act when it has authority to do so can be considered “federal action” within the scope of the statute. Even the NEPA regulations are ambiguous on this issue. These regulations state generally that major federal actions include actions that “are potentially subject to Federal control and responsibility”\(^{341}\) —implying that inaction constitutes “major federal action”—but then state that, to constitute such action, the “failure to act must be reviewable by courts or administrative tribunals under the Administrative Procedure Act or other applicable law as agency action.”\(^{342}\) In light of this ambiguity, two circuit courts have narrowly delineated the scope of the term “federal action” in the context of NEPA. The Court of Appeals for the Ninth Circuit has held that the failure of the Secretary of the Interior to prevent a proposed “wolf kill” by the state of Alaska on federal lands was merely “nonuse of a power of supervision,” and thus not subject to challenge under NEPA.\(^{343}\) The Court of Appeals for the District of Columbia Circuit has addressed the inaction issue in greater detail and has agreed with the Ninth Circuit, although for somewhat different reasons.\(^{344}\) The court read NEPA as calling for an impact statement only when there was a proposal for affirmative action.\(^{345}\) The court held that an impact statement is not required in the case of an agency’s inaction even though the environmental consequences of inaction may be greater than those of action, and even though NEPA’s purpose is to assure that environmentally informed decisions are made.\(^{346}\) The court opined that federal agencies would not be able to meet NEPA obligations if they had to prepare impact statements whenever they had the power to act and did not.\(^{347}\)

The provisions of section 7 differ from those of NEPA in several significant respects, however, and would call for a different result should the inaction issue arise under section 7. First, unlike those of NEPA, the provisions of section 7 apply whenever there is federal agency action, and not only when there is a proposal for action.\(^{348}\) This distinction was recognized by the Court of Appeals for the D.C. Cir-

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341. 40 C.F.R. § 1508.18 (1980).
342. Id.
343. Alaska v. Andrus, 591 F.2d 537, 541 (9th Cir. 1979).
345. Id. at 1243.
346. Id.
347. Id. at 1246. The court cited a letter from the Council on Environmental Quality General Counsel, which noted that the definition of “major federal action” in the NEPA regulations, note 341 supra, would exclude this situation from the application of the term. Id. at 1246-47.
cuit, which acknowledged that the decision not to act is federal agency action, but held that this was insufficient to trigger application of NEPA because it was not a “proposal for action.” Second, the agency consultations required by ESA would not impose as severe a burden on federal agencies as would preparation of the environmental impact statements required by NEPA. Furthermore, ESA already requires that federal agencies use their authorities to further the purposes of the Act. To meet this latter requirement, agencies should at least examine whether nonuses of their authority comply with the conservation requirement. The additional burden of a section 7 consultation in instances where failure to act may affect a species or critical habitat would be minimal. Thus the “potentially subject to Federal control and responsibility” test found in the NEPA regulations should be incorporated specifically into the section 7 regulations so as to make section 7 applicable to federal inaction.

b. Multiple activities

Another conceptual problem that has arisen under section 7 is the determination of when an agency’s activities should be treated as a single “agency action” for the purposes of section 7. This issue is an important one, because treating multiple activities as a single agency action will mean that none of the activities may proceed unless all of them can meet the requirements of section 7—that is, unless the agency can insure that the actions are not likely to jeopardize a listed species or to destroy or adversely modify its critical habitat. Neither ESA nor its legislative history provides explicit guidance on this issue.

The Beaufort Sea case addressed this issue at length. A multi-

352. See text accompanying note 341 supra.
353. The regulations indicate that agencies conducting programs that “involve more than one Federal agency . . . [may consult] through a single lead agency,” 50 C.F.R. § 402.04(b)(2) (1980), and that, with the approval of the Services, a consultation may involve a number of similar activities within a given geographical area, administrative unit, or segment of a comprehensive plan, id. § 402.04(a)(3) (1980), but the regulations do not otherwise clarify the problem of multiple agency actions. See id. The legislative history also fails to address this issue. See, e.g., H.R. Rep. No. 1625, 95th Cong., 1st Sess., reprinted in [1979] U.S. Code Cong. & Ad. News 9453.
step oil exploitation process had been proposed pursuant to the Outer Continental Shelf Lands Act (OCSLA).\(^{355}\) NMFS had stated that insufficient information existed to determine whether the entire process would violate section 7(a)(2).\(^{356}\) Plaintiffs argued that the entire exploitation process should be viewed as a single agency action, and that none of the steps could proceed because the entire "agency action" did not meet the requirements of section 7.\(^{357}\) In support of permitting the initial steps of the process to proceed, defendants argued that the extent of the activity to be treated as an "agency action" should be determined by reference to OCSLA, the statute under which the activity was being conducted; that since OCSLA separated the process into separate steps, each step should be considered as a separate agency action for purposes of section 7.\(^{358}\) Thus, defendants argued, the only agency action to be considered was the first step in the process—the lease sale and pre-exploration activities.\(^{359}\)

The district court adopted a middle position in settling this dispute. It rejected the argument of defendants that the extent of "agency action" should be determined by reference to the statute under which the activity was being conducted:

Agency action as a factual concept—what the agency is doing in a particular case—may be derived by scrutinizing the statute authorizing the agency action. But agency action as a legal concept—what is acceptable agency action under the Endangered Species Act—can only be determined by scrutinizing that statute.\(^{360}\)

To hold otherwise, the court reasoned, would lead to inconsistent enforcement and possible emasculation of ESA; it would tacitly relieve federal agencies from much of the scrutiny provided by ESA whenever they acted pursuant to another statute giving greater flexibility and planning authority to the agencies.\(^{361}\) Citing *TVA v. Hill*,\(^{362}\) the court reasoned that the caution mandated by Congress when listed species are involved required a broad definition of agency action.\(^{363}\) Thus the court appeared to hold that the entire exploitation process should be considered as one agency action.

This analysis is questionable for a number of reasons, however. First, the court’s reliance on *TVA v. Hill* was misplaced. While that

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357. See id. at 349-50. This argument was predicated on the contention that no proper biological opinion had been rendered. See notes 252-57 supra and accompanying text.
359. Id.
360. Id.
361. Id. at 350-51.
362. Id. at 351 (citing TVA v. Hill, 437 U.S. 153 (1978)).
363. Id.
case states that all agency actions are subject to ESA scrutiny, it does not address the questions of when that scrutiny is to occur and whether an action can be segmented for the purpose of such scrutiny. Moreover, ESA itself and its legislative history provide virtually no guidance as to how to define "agency action," and the meaning of that term as contemplated by ESA is thus difficult to ascertain. Given this uncertainty, it is reasonable to look to the underlying statute authorizing the activity in order to determine the scope of the agency action. While OCSLA does not explicitly define "agency action," it establishes a multi-step procedure, the steps of which Congress clearly intended to be severable. The Beaufort Sea court conceded, in fact, that agency action "as a factual concept" was determined by looking at OCSLA, the underlying statute. Further, reliance on OCSLA to define agency action—so as to treat the oil exploitation process as divisible agency actions—would not threaten the court's sensible concerns with caution and with early identification of problems. These concerns could be addressed by considering the cumulative impacts of the various steps in the exploitation process.

However flawed the court's analysis of this issue may have been, the effect of such a broad definition of "agency action" was mitigated by the court's further holding that federal agencies may proceed with "intermediate activity," such as the lease sale and pre-exploration activities, when the statute pursuant to which action is taken itself segments a process into separate steps. The court further held, however, that such intermediate steps could proceed only if the affected agency could meet four requirements: (1) it must continue research and consultation so that a complete biological opinion could ultimately be issued; (2) it must obtain a biological opinion based on adequate information for each intermediate activity as it becomes ripe for analysis; (3) it must avoid the commitment of prohibited resources for the

366. See notes 155 & 170 supra. Under OCSLA, the Interior Department must approve a lessee's plan for each separate step of the exploitation process prior to the lessee's engaging in that step. 43 U.S.C. §§ 1340, 1351 (Supp. III 1979).
367. See note 360 supra and accompanying text.
368. See notes 223-31 supra and accompanying text.
370. Id. at 353.
371. Id.
intermediate activity;\textsuperscript{372} and (4) it must demonstrate a reasonable like-
lihood of ultimate compliance with section 7.\textsuperscript{373}

The effect of the court's opinion is thus consistent with the ap-
proach argued by the defendants in the \textit{Beaufort Sea} case, despite their
differing analyses. While the impacts of an agency action must be con-
sidered in their entirety, a federal agency is not necessarily precluded
from taking intermediate steps where FWS or NMFS can issue only an
incomplete biological opinion. The court's approach facilitates early
identification of potential problems by requiring that the effects of the
entire process be considered before any action is taken. At the same
time, the court's approach provides flexibility by permitting agencies to
proceed with initial steps of a multi-step process established by Con-
gress, if the agency fulfills certain requirements that minimize the risk
of ultimate harm to the listed species.

c. Applicability to state actions

A final question in interpreting the term "agency action" is
whether the actions of state governments may be subject to section 7
when the states are acting pursuant to power delegated by federal agen-
cies or are administering a federal program. The section 7 regulations
do not explicitly address the applicability of section 7 to federal legisla-
tive programs implemented at the state level. Such programs include
many environmental statutes such as the Clean Air Act,\textsuperscript{374} the Clean
Water Act,\textsuperscript{375} the Safe Drinking Water Act,\textsuperscript{376} the Resource Conserva-
tion and Recovery Act,\textsuperscript{377} the Surface Mining Control and Reclama-

\textsuperscript{372} \textit{Id.} at 356-58. On the question of when an "irretrievable commitment" has been
made, see Part II.B supra.

\textsuperscript{373} North Slope Borough v. Andrus, 486 F. Supp. at 356-58. In this case, the court
found that a reasonable likelihood of compliance existed because there was no evidence
(such as a negative biological opinion) of non-compliance or of bad faith, and because the
court presumed that the Secretary would use his broad powers under the Outer Continental
Shelf Lands Act to fulfill his legal obligations. \textit{Id.} at 358. \textit{Cf.} 40 C.F.R. \textsection 1506.1 (NEPA
limitations on intermediate actions).

On appeal, the Court of Appeals for the D.C. Circuit stated its "qualified" agreement
with the lower court's holding that biological opinions cannot deal with only one stage of an
failed, however, to state clearly the reasons for qualifying its agreement with the district
court. \textit{See id.} at 34-37, 41-42.

\textsuperscript{374} 42 U.S.C. \textsection 7401-7642, \textsection 7410 (Supp. III 1979) (state implementation plans for
primary and secondary ambient air quality standards).

\textsuperscript{375} 33 U.S.C. \textsection 1251-1376, \textsection 1342(b)-(e), 1344(g)-(k) (1976 & Supp. III 1979) (section
402 National Pollutant Discharge Elimination System and section 404 disposal of dredge
and fill material permits).

\textsuperscript{376} 42 U.S.C. \textsection 300(f)-(j), \textsection 300(g)(2)-(g)(5), 300(h) (1976 & Supp. III 1979) (state
enforcement of national drinking water programs and state programs for protection of un-
derground sources of drinking water).

\textsuperscript{377} 42 U.S.C. \textsection 6901-6987, \textsection 6926-6931 (1976 & Supp. III 1979) (state hazardous
waste programs).
tion Act,\textsuperscript{378} and the Atomic Energy Act.\textsuperscript{379} If the standards set by section 7 are inapplicable to actions of states taken pursuant to these programs, the nation's ability to protect listed species and their critical habitats may be significantly weakened.

Because section 7 does not explicitly require state actions to be consistent with the purposes of ESA—as it does of federal actions\textsuperscript{380}—it is likely that the acts of state agencies would generally not be subject to section 7 because no federal "agency action" would be found. An exception to this rule might be found, however, when a state agency's action had been approved or rejected by a supervising federal agency.\textsuperscript{381} A recent decision by the Supreme Court, \textit{Crown Simpson Pulp Co. v. Costle},\textsuperscript{382} considered this possibility with reference to the Clean Water Act's requirement of specified acts by the Environmental Protection Agency (EPA) as a prerequisite to judicial review.\textsuperscript{383} Under section 402 of the Act, (EPA) issues National Pollutant Discharge Elimination System permits except in states that have been authorized by EPA to issue these permits through their own state programs.\textsuperscript{384} In such states, the state permit-issuing authority must notify EPA of its permit actions, and EPA may veto the permit under certain conditions.\textsuperscript{385} The Act provides for appellate review of EPA actions "in issuing or denying any permit," but does not explicitly state whether an EPA veto of a permit is subject to review.\textsuperscript{386} In \textit{Crown Simpson}, the Supreme Court held that an EPA veto of a state's issuance of a permit is equivalent to a denial of a permit, and is thus federal action allowing judicial review under the Act.\textsuperscript{387} The Court further noted, however, that its holding did not necessarily apply to cases in which EPA fails to object to a permit action.\textsuperscript{388}

\textit{Crown Simpson Pulp Co. v. Costle} suggests that the decisions of


\textsuperscript{381} Under several federal statutes that delegate regulatory authority to state governments or in which state governments administer a federal program, a federal agency has the responsibility of supervising state agencies by approving or disapproving of certain of their actions. For example, under the Clean Water Act, the Environmental Protection Agency oversees the issuance of pollution discharge permits by state agencies. See notes 384-85 infra and accompanying text.

\textsuperscript{382} 445 U.S. 193 (1980).


\textsuperscript{384} Id. § 1342(b) (1976 & Supp. III 1979).

\textsuperscript{385} Id. § 1342(d)(2) (Supp. III 1979).

\textsuperscript{386} Id. § 1369(b)(1)(F) (1976).

\textsuperscript{387} Crown Simpson Pulp Co. v. Costle, 445 U.S. at 196.

\textsuperscript{388} Id. at 197 n.9 (citing Save the Bay, Inc. v. EPA, 556 F.2d 1282 (5th Cir. 1977) and Mianus River Preserv'n Comm. v. EPA, 541 F.2d 899 (2d Cir. 1976)).
federal agencies to approve or disapprove the actions of state agencies may constitute "agency action" for purposes of section 7, thus bringing the actions of state agencies indirectly under the requirements of that section.\textsuperscript{389} Whether the "agency action" requirement would be met by a state agency's acts under a given federal statute would depend on the intent of the governing statute. Federal "agency action" under a particular statute would likely be found only where the controlling statute contemplates a substantial supervisory role for the federal agency that has approved or disapproved a state agency's decision.

Another context in which federal agency action will be found in relation to state agency actions is in the initial decision of a federal agency to approve a state regulatory program. Many federal statutes, such as those discussed above, in which a federal agency delegates authority to state governments or in which states administer federal programs require federal approval of a state's actions.\textsuperscript{390} This act of approval would appear to constitute "agency action" for purposes of section 7. ESA specifically applies to actions authorized by a federal agency that indirectly affect air, land, or water so as to pose a threat to listed species.\textsuperscript{391} Federal decisions to allow implementation of a state program should fall within this provision, because the decision would potentially have an indirect effect on listed species by making possible state agency actions that would not have to meet the requirements of section 7, and which may thus pose a threat to listed species.

ESA thus requires consultation relating to the potential threat to listed species inherent in federal approval of state regulatory programs.\textsuperscript{392} This consultation would not likely be effective in preventing harmful state action, however, because it would be difficult to identify effects on listed species or on critical habitats at the time of the authorization. A number of innovative methods nevertheless could provide for section 7 consultation regarding particular actions of state agencies. Where not prohibited by federal law, federal agencies could require as a condition of approval of state programs that states identify particular

\textsuperscript{389} Two qualifications on this point should be noted. First, the Court considered the issue of "agency action" only in light of the Clean Water Act's requirement of agency action as a prerequisite to judicial review. It is possible that the meaning of "agency action" might differ in the context of section 7, so that the Court's holding in \textit{Crown Simpson} would not apply in determining whether the requirements of agency action in section 7 were met. Second, the Court held only that a federal agency's disapproval of a state act constituted agency action; it did not hold that a decision to approve state action would also satisfy the agency action requirement.


\textsuperscript{391} 16 U.S.C. § 1536(a) (Supp. III 1979); 50 C.F.R. § 402.02 (1980).

\textsuperscript{392} 50 C.F.R. § 402.04(a)(1) (1980).
permits that may affect listed species or their critical habitats, and could then conduct a consultation to review the permit's issuance. Alternatively, federal agencies responsible for approving state programs could require, as a prerequisite to approval, that the programs contain requirements akin to those of section 7, thus in effect implementing section 7 at the state level. Finally, several state programs that have been authorized by a federal agency or in which states administer federal programs must be reviewed periodically for consistency with the statute permitting this delegation, and this review could be conducted with section 7 in mind so as to require that the state programs meet the purposes of that section.

ESA certainly does not preclude federal agency attempts to take such innovative measures, and the duty imposed on federal agencies by section 7—requiring them to use their authority to further the purposes of the Act—may even require that they take such action. At present, however, the regulations to section 7 are silent on the possibility of taking such measures. The Services should issue new regulations to deal with this question, and might address problems encountered with particular state programs.

CONCLUSION

Since its enactment in 1973, the Endangered Species Act has proved an effective means of protecting species endangered by human activities. Although some feared that TVA v. Hill’s expansive interpretation of the Act might lead to congressional moves to limit section 7's scope, this fear has not materialized. While Congress has taken steps, such as that of adding an exemption procedure to the Act, designed to further the benefits gained from federal projects, it has not sacrificed the goal of species preservation to this objective. Rather, the Act appears capable of continuing to serve its central goal of species preservation.

This Article has attempted to pinpoint and address a number of unresolved questions in the application of section 7. Many of these issues, such as the Act’s applicability to actions of state governments and to international actions of federal agencies, will bear significantly on the overall effectiveness of the Act. To the extent that section 7 is interpreted to reach such activities, the Act’s goal of species preservation will be further served. Whether the Act is given such scope will depend largely on the Services' implementation of ESA and on the willingness of courts to read ESA broadly.

393. See, e.g., 42 U.S.C. § 7410(a)(2)(D), (a)(4) (Supp. III 1979) (Clean Air Act’s requirement for review by federal agencies before construction or modification of new facilities).

Several other problems considered in this Article can be addressed best through legislative or administrative action. The 1978 and 1979 amendments and the regulations to ESA have successfully addressed several important questions under the Act. The refinement of the regulations to implement the provisions of the 1978 and 1979 amendments and to resolve remaining problems can obviate further uncertainty and inconsistency in the enforcement of ESA.