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Part III

Department of the Interior

Fish and Wildlife Service

U.S. Fish and Wildlife Service Mitigation Policy

[As corrected in the Federal Register of February 4, 1981]

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

U.S. Fish and Wildlife Service Mitigation Policy; Notice of Final Policy

AGENCY: U.S. Fish and Wildlife Service, Department of the Interior.

ACTION: Notice of Final Policy.

SUMMARY: This Notice establishes final policy guidance for U.S. Fish and Wildlife Service personnel involved in making recommendations to protect or conserve fish and wildlife resources. The policy is needed to: (1) ensure consistent and effective Service recommendations; (2) allow Federal and private developers to anticipate Service recommendations and plan for mitigation needs early; and (3) reduce Service and developer conflicts as well as project delays. The intended effect of the policy is to protect and conserve the most important and valuable fish and wildlife resources while facilitating balanced development of the Nation's natural resources.

EFFECTIVE DATE: January 23, 1981.

ADDRESS: Comments submitted on the proposed policy may be inspected in Room 738, 1375 K Street, N.W., Washington, D.C. 20005, between 9 a.m. and 3 p.m. on business days.

FOR FURTHER INFORMATION CONTACT: John Christian, Policy Group Leader—Environment, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240, (202) 343–7151.

SUPPLEMENTARY INFORMATION:

BACKGROUND

The development and use of the Nation's natural resources continues in an effort to provide people with their basic needs and to improve their lives. Fish and wildlife and the intricate fabric of natural resources upon which they depend provide benefits to people in many ways. Fishing, hunting, and bird watching are basic benefits that come to mind immediately. These activities involve the direct use of these renewable "natural resources." Perhaps a greater benefit, although more difficult for some to understand, is the maintenance of the structure and function of the ecosystem that comprises all living species, including people. The presence of diverse, healthy fish and wildlife populations generally signals a healthy ecosystem which contains those elements necessary for human survival, including unpolluted air and productive land.

That fabric of natural resources called habitat is the supply for fish and wildlife renewal. The life requirements for plant and animal species are varied and complex. Each species requires a different set of environmental conditions for survival and vigorous growth. These conditions form the habitat of the various species. The development and use of natural resources leads to changes in environmental conditions that can redefine habitat and thus change the mix and abundance of plant and animal species.

A given change in habitat might increase or decrease overall habitat productivity or result in gains or losses of species that are valuable to people or ecosystems. In some cases, habitat modifications can also increase the numbers of species considered undesirable, and create a nuisance to people or crowd out more valuable species. Therefore, development actions can cause habitat changes that are considered either beneficial or adverse depending on the intended wildlife management objectives.

When professional biologists determine that a given development action will cause a change that is considered adverse, it is appropriate to consider ways to avoid or minimize and compensate for such adverse change or loss of public resources. This is commonly referred to as mitigation.

Fish and wildlife resources are public in nature. The Service has provided Federal leadership for over 40 years to protect and conserve fish and wildlife and their habitat for the benefit of the people of the United States. Under its legal authorities, the Service conducts fish and wildlife impact investigations and provides mitigation recommendations on development projects of all kinds. These efforts have been conducted through a full partnership with State agencies responsible for fish and wildlife resources, and since 1970, with the National Marine Fisheries Service of the U.S. Department of Commerce. The recommendations of the Service are considered by the Federal development and regulatory agencies for their adoption as permitted by law.

Over the years, the Service has reviewed innumerable project and program plans with the potential to adversely affect fish and wildlife resources. The mitigation recommended in recent years by Service personnel to prevent or ameliorate adverse impacts has been governed primarily by a broad policy statement on mitigation promulgated in 1974 and by specific guidelines issued as needed. Recent events have prompted the Service to make known its mitigation objectives and policies. Specific management needs include:

(1) Recent legislative, executive and regulatory developments concerning the environment which have led to a need to update and expand the advice within the 1974 Service policy statement;

(2) Increasing Service review responsibilities which require issuance of comprehensive guidance on mitigation to maintain the quality and consistency of Service mitigation recommendations;

(3) An explicit summary of Service mitigation planning goals and policies to be disclosed to developers and action agencies to aid their earliest planning efforts; and

(4) Finally, the current national need to accelerate development of energy resources which requires that early planning decisions be made that can minimize conflict between important environmental values and energy development.

For these reasons, it was determined to be necessary to fully outline the overall mitigation policy of the U.S. Fish and Wildlife Service. The final Service policy statement integrates and outlines the major aspects of current Service mitigation efforts. Intended as an overview document, its guidance is based on an analysis of current Service field recommendations and on the guidance contained in recent Service management documents.

This policy conditions only the actions of Service employees involved in providing mitigation recommendations. It does not dictate actions or positions that Federal action agencies or individuals must accept. However, it is hoped that the policy will provide a common basis for mitigation decisionmaking and facilitate earlier consideration of fish and wildlife values in project planning activities.

Finally, it should be stressed that this Service policy outlines mitigation needs for fish and wildlife, their habitat and uses thereof. Others interested in mitigation of project impacts on other aspects of the environment such as human health or heritage conservation may find the Service policy does not fully cover their needs. There was no intent to develop a mitigation policy that covers all possible public impacts except those stated. However, the Service strongly believes that preservation and conservation of natural resources is a necessary prerequisite to human existence.

DISCUSSION

The following items are included to provide a better understanding of the policy's relationship to other guidance and to improve the understanding of its technical basis.

1. Relationship of Service Mitigation Policy to Other Service Planning Activities.

The final policy is designed to stand on its own. However, for a clearer perspective of the relationship of the policy to the goals and objectives of the U.S. Fish and Wildlife Service, it can be read with the Service Management Plan and the Habitat Preservation Program Management Document.

The Service Management Plan describes the overall direction of the Service and the interrelationships of the four major categories, including Habitat Preservation, Wildlife Resources, Fishery Resources, and Federal Aid-Endangered Species.

The Habitat Preservation Program Management Document outlines what the Service will do over a one- to five-year period to ensure the conservation and proper management of fish and wildlife habitat. It provides guidance to Service personnel and other interested parties on the goals, objectives, policies, and strategies of the Habitat Preservation Category of the U.S. Fish and Wildlife Service. It includes a discussion of important resource problems that the Service believes require priority attention.

2. Relationship of the Mitigation Policy to any future Fish and Wildlife Coordination Act (FWCA) Regulations and the National Environmental Policy Act (42 U.S.C. 4321–4347) (NEPA).

The Service mitigation policy outlines internal guidance for Service personnel for all investigations and recommendations for mitigation under relevant Service authorities, including the FWCA and NEPA. However, the coverage of the policy is basically different from that of any future FWCA regulations as was explained in the preamble to the proposed policy (September 9, 1980) (45 FR 59486–59494). Any future FWCA regulations will principally recommend procedures for all affected agencies to ensure compliance with that Act before and after they receive fish and wildlife agency recommendations. In contrast, the Service mitigation policy only applies to Service personnel and outlines mitigation planning goals and policies for impact analyses and recommendations.

The relationship of the mitigation policy to NEPA requirements is also a complementary one. The regulations implementing NEPA (43 FR 55978–56007) recognize "appropriate" mitigation recommendations as an important element of the rigorous analysis and display of alternatives including the proposed action (40 CFR Part 1502.14). The NEPA regulations later specify that Service impact analyses and mitigation recommendations shall be used as input to preparation of draft environmental impact statements (DEIS) as follows:

"To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders." (40 CFR 1502.25(a)).

These provisions provide clear direction that NEPA requirements are not duplicative of or substitute for mitigation recommendations developed under the Fish and Wildlife Coordination Act and other Service authorities. In fact, the NEPA regulations require that Service recommendations be fully integrated into the NEPA process as vital information necessary to comply with NEPA.

3. Focus of the Policy on Habitat Value.

The policy covers impacts to fish and wildlife populations, their habitat and the human uses thereof. However, the primary focus in terms of specific guidance is on the mitigation of losses of habitat value. Population estimates are considered by many to be unreliable indicators for evaluating fish and wildlife impacts. Sampling errors, cyclic fluctuations of populations and the lack of time series data all contribute to the problem. Therefore, the Service feels that habitat value, by measuring carrying capacity, is a much better basis for determining mitigation requirements. However, the use of population information is not foreclosed by the policy. In fact, concern for population losses led to formulation of the "General Policy" section to ". . . seek to mitigate all losses of fish, wildlife, their habitat and uses thereof . . ." The Service agrees that mitigation of population losses is a necessary aspect of this policy, for example, when habitat value is not affected but migration routes are blocked off as in the case of dam construction on a salmon river.

Mitigation of human use losses of fish and wildlife resources is also a necessary aspect of the policy. However, if mitigation of habitat value occurs, then in the majority of cases, losses of human use are also minimized. But, in some cases, public access to the resource may be cut off by the project and significant recreational or commercial benefits may be lost.

In those cases where mitigation of habitat value is not deemed adequate for losses of fish and wildlife populations or human uses, the Service will seek to mitigate such losses in accordance with the general principles and concepts presented in the policy. However, in the majority of cases, the Service feels that mitigation of impacts on habitat values will assure a continuous supply of fish and wildlife populations and human use opportunities.

The Service has recently revised and updated its *Habitat Evaluation Procedures* (HEP). It can be used, where appropriate, to determine mitigation needs based on habitat value losses. In some cases, the project may not be deemed appropriate for applying the methodology as in the case of activities conducted on the high seas under the Outer Continental Shelf (OCS) leasing program. In such cases, the use of other methods to describe habitat value impacts is clearly acceptable, including the best professional judgment of Service biologists. Other limitations related to the use of HEP are outlined in the Ecological Services Manual (100 ESM 1). The HEP are available upon request from the Chief, Division of Ecological Services, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

4. Acre for Acre Loss Replacement Is Not Necessarily Recommended by the Policy.

As explained above, the policy focuses on habitat value. The habitat value of an acre of habitat can vary considerably depending on the type of vegetation and other physical, biological or chemical features. Service recommendations, therefore, will be based on the habitat value adversely impacted, as opposed to strictly acreage. For example, loss of one acre of a specific type of wetland might result in recommendations for replacement of less than one acre of a different type of wetland of greater habitat value. If the habitat value of the wetland available for replacement was equal to that lost, then recommendations could be on an acre-for-acre basis.

5. Rationale for Mitigation Planning Goals.

In developing this policy, it was agreed that the fundamental principles guiding mitigation are: 1) that avoidance or compensation be recommended for the most valued resources; and 2) that the degree of mitigation requested

correspond to the value and scarcity of the habitat at risk. Four Resource Categories of decreasing importance were identified, with mitigation planning goals of decreasing stringency developed for these categories. Table 1 summarizes all categories and their goals.

Table 1: Resource Categories and Mitigation Planning Goals

Resource category	Designation criteria	Mitigation planning goal
1	High value for evaluation species and unique and irreplaceable.	No loss of existing habitat value.
2	High value for evaluation species and scarce or becoming scarce.	No net loss of in-kind habitat value.
3	High to medium value for evaluation species and abundant.	No net loss of habitat value while minimizing loss of in-kind habitat value.
4	Medium to low value for evaluation species.	Minimize loss of habitat value.

POLICY HISTORY

The policy statement integrates and outlines the major aspects of current Service mitigation efforts. Intended as an overview document, its guidance is based on an analysis of over 350 Service field recommendations and on the guidance contained in recent Service management documents. The proposed policy was published in the **Federal Register** on September 9, 1980 (45 FR 59486–59494). A correction notice which corrected insignificant formatting and typographical errors was published on September 19, 1980 (45 FR 62564). A notice extending the comment period on the proposed policy to November 10, 1980, was published on October 8, 1980 (45 FR 66878). The final publication is based on full and thorough consideration of the public comments as discussed below.

RESPONSE TO COMMENTS

Over 90 sets of comments were received on the proposed policy. All comments were thoroughly analyzed and cataloged and considered. Many commentors expressed agreement with Service publication of the policy, sensing a more consistent and predictable Service approach to mitigation recommendations and a resultant decrease in the degree of conflict with developers. Many felt the policy represented a rational approach to fish and wildlife resource management, and that it would provide for adequate protection and conservation of the Nation's fish and wildlife resources. The underlying concept that the degree of mitigation requested should correspond to the importance and scarcity of the habitat at risk was also supported by many commentors. Numerous commentors also praised its scope, cohesiveness and clarity, and stressed that it should provide valuable guidance for Government personnel providing technical and project planning assistance.

Detailed responses to significant comments follow:

GENERAL COMMENTS ON THE PROPOSED SERVICE MITIGATION POLICY

Comment: Although the Service prepared an Environmental Assessment and, from its findings, concluded that policy issuance did not constitute a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act (NEPA), a few commentors disagreed with the Service's conclusion that an Environmental Impact Statement (EIS) was not necessary for the proposed action.

Response: During policy development, the Service took action to determine if preparation of an environmental impact statement under NEPA was required. Although section 1508.18 of the Council on Environmental Quality's (CEQ) Regulations for implementing the procedural provisions of NEPA classified adoption of an official policy as a "Federal action," it remained unclear as to whether this action was "major," or whether it would "significantly" affect the quality of the human environment, since policy implementation would not result in or substantially alter agency programs. As was stated in the preamble, this policy is basically a distillation of approaches and policy currently being practiced by Service field personnel in providing mitigation recommendations.

In order to resolve this uncertainty, an Environmental Assessment was prepared for the proposed and final policy. By doing so, the Service has complied with one of the major purposes of the NEPA regulations, which is to have NEPA applied early in the decisionmaking process.

The NEPA regulations do not, in the opinion of the Service, require that the agency speculate on future, possible events without any relation to actual, existing impacts of an action. Section 1502.2 of the NEPA regulations directs that an EIS is to be analytical, however, the Service action simply does not create any impacts capable of such analysis. Thus, there is no reasonable or scientific way for the Service to analyze any environmental impacts, significant or otherwise, as discussed in §§ 1502.16 and 1508.27.

This problem is particularly vexsome when those impacts depend on future contingencies and can be more appropriately analyzed when those contingencies occur. Even § 1502.4, which discussed EIS's in terms of broad agency actions, does so in the context of specific impacts caused by the action. In the opinion of the Service, it has fully complied with the letter and spirit of NEPA and its regulations.

Comment: One commentor felt that the preamble statement that an EIS would be premature at this time contradicted a finding of no significant impact.

Response: The Service sees no contradiction with a finding of no significant impact and the statement that an EIS is premature. The finding of no significant impact derives from an analysis showing that the policy has no significant impacts amenable to analysis at the present time. However, when in the future the Service does apply the policy in developing mitigation recommendations for a major Federal action which might significantly affect the quality of the human environment, then the environmental impacts associated with implementing those recommendations which are considered justifiable by the development agency can be analyzed by that development agency. The Service has no way of predicting which of its recommendations will be accepted by the developer; therefore, analysis of impacts of accepted mitigation recommendations is the responsibility of the developer.

Comment: One commentor was of the opinion that an EIS "should be prepared for the Service's proposed mitigation recommendations on each project." Moreover, the commentor felt that a significant portion of these EIS's should be devoted to analysis of economic impacts.

Response: Mitigation recommendations and actions cannot be meaningfully analyzed except in the context of the development action initiating them. And, since an EIS would be required for any major Federal action which would significantly affect the quality of the human environment and whose alternatives would include consideration of mitigation, a separate EIS would not be necessary for mitigation actions.

Under the FWCA, the action agency which makes the ultimate decision is to include all "justifiable mitigation means and measures" in project formulation. The burden of analyzing the economic impacts of "justifiable" mitigation measures therefore rests primarily with

the project sponsor, who will likely use the Water Resources Council's Principles and Standards to assist in the analysis.

Comment: The substantive requirements of the Service mitigation policy should be consistent with the requirements of the National Environmental Policy Act's implementing regulations and the Water Resources Council's Principles and Standards.

Response: We agree. The proposed and final policy have been developed consistent with the substantive and procedural requirements of these regulations.

Comment: The Environmental Assessment identifies as one of the advantages of the proposed mitigation policy the establishment of " * * * minimum performance standards for FWS recommendations (which) would serve as benchmarks by which the FWS and developers or action agencies * * * could assess individual Service mitigation proposals." However, neither the **Federal Register** notice nor the Environmental Assessment identify or discuss these "benchmarks."

Response: The term "benchmarks" referred to the mitigation goals and planning procedures. Both the proposed policy preamble and its Environmental Assessment discussed these guidelines, explaining their derivation and importance to policy purposes. However, a point of clarification is needed regarding these guidelines. It is the recommendations made by Service personnel that would be measured against these standards, not the mitigation implemented by an action agency. The final policy makes this point explicit.

Comment: Many commentors argued that the proposed policy goes beyond that authorized by law. Specific concern was expressed over the use of words that were mandatory in tone (e.g., "require" and "must") as opposed to advisory. In addition, some commented that the Service has no authority to support or oppose projects as stated in the policy.

Response: The Service agrees that the legal authorities for the mitigation policy do not authorize the Service to exercise veto power over land and water development activities. That understanding was implicit in the proposed policy. Appropriate changes have been made in the policy to more explicitly recognize and signify the advisory nature of the Service responsibility.

However, it should be clearly noted that the Fish and Wildlife Coordination Act places clear mandatory requirements on Federal development agencies falling under that Act's authority to (1) consult with the Service, National Marine Fisheries Service (NMFS) and State agencies responsible for fish and wildlife resources; (2) incorporate such reports and recommendations in one overall project report; (3) provide "full consideration" of the "reports and recommendations;" (4) include in the project plan "such justifiable means and measures for wildlife purposes as the reporting agency finds should be adopted to obtain overall maximum project benefits;" and (5) other requirements related to funding and land acquisition.

The clear intent of Congress was that recommendations developed by the U.S. Fish and Wildlife Service, NMFS, and State agencies responsible for fish and wildlife resources be taken seriously, and we know of no law which prohibits the Service from taking a position for or against a project when making mitigation recommendations.

Comment: The policy will adversely impact developmental interests.

Response: The goal of the policy is to provide for equal consideration of fish and wildlife conservation while facilitating development.

Congress has clearly stated that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs" (Pub. L. 85-624, Fish and Wildlife Coordination Act). This advice is further amplified in Senate Report 1981 on the FWCA (84th Congress, 2nd Session (1958)). The Congress recognized that in some instances, the level of dollar benefits to some purposes might have to be diminished "in some slight degree" in order to accomplish the fish and wildlife conservation objectives of the Act.

However, policy issuance should benefit developmental interests. By providing developers with a clear picture of Service mitigation concerns and priorities, the policy will allow developers to anticipate Service mitigation recommendations prior to final decisions on project design and location. By reducing a developer's planning uncertainties, the policy will result in lowered project costs and fewer project delays and conflicts.

Comment: Does the policy present general guidance or minimum required standards? The Service appears to be trying to establish required standards.

Response: The final policy sets out mitigation goals and planning guidance to guide the development of Service mitigation recommendations. It does not require absolute strict adherence to a required standard. Changes have been made to reflect this.

Comment: No mention is made of the State role in mitigation planning to assure a compatible approach. The States' authorities and decisionmaking prerogatives with respect to fish and wildlife resources should be denoted and the States' roles in mitigation should be emphasized further.

Response: A compatible approach is desirable. We have included appropriate changes. However, the policy is solely for Service personnel. There is no intent to infringe on the States' prerogatives.

Comment: The policy should require full public disclosure of Service mitigation analyses, determinations, and recommendations.

Response: We agree that full disclosure of Service analyses, determinations and recommendations during the mitigation process would serve the public interest. All public documents associated with Service recommendations for mitigation on specific land and water developments are available for review in Ecological Services field offices. No change in the policy is necessary.

Comment: The Service should specifically address the acid rain problem in its policy. In particular, the policy should address the impact of Federal policies and programs that support power plant conversions to coal.

Response: The Service currently reviews such Federal actions under NEPA, since these policies and programs are likely to require an EIS. Because acid rain has been highlighted as an Important Resource Problem (IRP) by the Service, environmental analyses which do not adequately address acid rain problems will receive particular attention by Service reviewers. Our comments will be technically reinforced by Service research already being conducted in this area. Since the policy already covers this issue, no change is necessary.

Comment: Could the mitigation policy call for a recommendation as extreme as reflooding of the Mississippi River Valley?

Response: The mitigation policy would not lead to so extreme a recommendation because it does not apply to development actions completed prior to enactment of Service authorities or exempted by those authorities. In those situations where the policy does apply, there will be no recommendations for mitigation over and above the level of impacts associated with a project. This policy acts to minimize impacts of projects, not reverse them.

Comment: Which agency enforces this policy and what power does it have?

Response: This is a policy that applies only to Service personnel. It does not predetermine the actions of other Federal agencies, nor the actions of State agencies or developers. Although the policy statement is not judicially enforceable, the Service will administer the policy by monitoring the mitigation recommendations made by its own personnel.

Comment: Too often land acquired for mitigation does not provide the spectrum of resource values previously available because the managing agency's philosophy prevents it from managing the land for a mix of goals.

Response: Lands acquired for mitigation purposes must provide the specific mitigation benefits for which they were intended. Secondary land uses, such as provision of timber, oil and gas exploration, or recreational benefits, should be attempted where these uses are compatible with the mitigation lands' primary purpose. This concept has been added to the policy.

SPECIFIC COMMENTS ON THE MITIGATION POLICY

(These comments are keyed to sections of the proposed policy.)

I. Purpose

Comment: Why is this policy apparently unconcerned with flora?

Response: Mitigating for fish and wildlife losses necessarily means dealing with the plant communities on which all animal life indirectly depends. When habitat is preserved, it is the plant communities that are the vast bulk of the living material of that habitat.

Plants *per se* are addressed by other authorities of the Service which are not within the scope of this policy, such as the Endangered Species Act and associated regulations.

II. Authority

No significant comments.

III. Scope

Comment: How does the policy affect projects already completed or under construction?

Response: Appropriate changes in the Scope section have been made to clarify policy coverage with regard to completed projects or projects under construction.

Comment: Since Federal permit renewals will result in no new effects on the environment, they should be exempt from the policy.

Response: The permit or license renewal process provides an opportunity to re-evaluate the project. Depending on new scientific information concerning impacts, the adequacy of past developer mitigation efforts, or new authorities, new mitigation recommendations may be necessary.

Not infrequently, permit or license holders use the renewal process as a convenient occasion to seek changes in their permits. Any changes in permit or license holders' activities have to be evaluated to determine whether or not they necessitate new mitigation recommendations.

This policy, therefore, will be used by the Service in permit or license renewal proceedings, keeping in mind that Service recommendations are advisory to action agencies. Appropriate changes were made in the policy to reflect this position.

Comment: Does this policy apply to man-induced wetlands?

Response: Where the Service has the authority and responsibility to recommend mitigation for these habitats, the tenets of the policy shall apply.

Comment: There is a need for a mechanism for evaluating enhancement and a means to differentiate it from mitigation.

Response: Although enhancement is an important concern of the Service, the Service mitigation policy should not serve as the primary vehicle for discussing enhancement. The final policy does differentiate between enhancement and mitigation recommendations by defining enhancement to include measures which would improve fish and wildlife resources beyond that which would exist without the project and which cannot be used to satisfy the appropriate mitigation planning goal. As for evaluating enhancement, it would appear likely that many of the procedures that can be used to evaluate mitigation can be used to evaluate enhancement.

Comment: What is the basis for the policy position that enhancement cannot occur until all losses are compensated? There is no legislative history for this.

Response: Unfortunately, the term "enhancement" suffers from wide differences in semantic usage. The proposed policy used the term to be synonymous with improvements beyond the achievement of full mitigation. This strict interpretation appeared to spark controversy.

The final policy incorporates a different usage of the term. Enhancement is used to describe measures not necessary to accomplish mitigation purposes.

Comment: The policy should credit towards mitigation goals those habitat value increases associated with areas of the habitat which are enhanced by the project. Habitat value should be computed for enhancement activities, and the inclusion of habitat enhancement factors would provide for a more accurate estimate of the project's impact on the environment.

Response: Use of the term "habitat enhancement" to describe development or improvement efforts is confused by this comment. The mitigation policy does not cover enhancement as we have described it. However, where habitat improvement or development caused by a project will result in habitat value increases, it may be considered as mitigation when consistent with the resource category designation criteria and the appropriate mitigation planning goal.

Comment: There should be a clear statement that all opportunities for enhancement of fish and wildlife resources be thoroughly considered and included in project plans to the extent feasible.

Response: We agree. Appropriate changes were made.

IV. Definition of Mitigation

Comment: Some commentors indicated concern over the definition of mitigation as used in the policy. Specific concern was expressed that those aspects of project planning that include avoidance or actions to minimize impacts should be considered good project planning and that mitigation should be confined solely to actions to compensate for resource losses.

Response: The Service agrees that avoidance or actions to minimize impacts should be part of the early design of projects and not just an afterthought. Some consider mitigation to be a separate and distinct process that occurs after project planning has been completed. The legally binding definition of mitigation as used in the regulations to implement the National Environmental Policy Act (NEPA) can have the effect of altering this notion through incorporation of all those actions that can lessen project impacts throughout the planning process.

The policy has been modified to more clearly state that the Service supports and encourages incorporation of features that will reduce adverse impacts on fish and wildlife resources as part of early planning and project design in order to avoid delays or conflicts. But without the emphasis on avoidance and minimization provided by the NEPA regulations' definition, there would be little incentive for development agencies to incorporate such features. The Service, therefore, supports and adopts that definition.

V. Mitigation Policy of the U.S. Fish and Wildlife Service

Comment: A number of documents are referred to in the draft policy. They are essential to the functioning of the policy and should be published as an appendix and otherwise made available for public comment, including public hearings.

Response: The preamble to the proposed policy clearly indicated that the policy was designed to stand on its own. The referenced documents are not essential to the functioning of the policy. For instance, even though Service field personnel will rely basically on the *Habitat Evaluation Procedures* in conducting project analyses, the policy indicates that other methods can be used where appropriate and available. The concept of habitat value has been recognized throughout the history of fish and wildlife management. It is not new.

Regardless of the fact that the policy stands on its own, the referenced documents have undergone varying degrees of public scrutiny independent of the mitigation policy. For instance, a notice of availability and request for public comment was published in the **Federal Register** for the Service Management Plan and Program Management Document on September 29, 1980 (45 FR 64271–64272). A habitat-based evaluation methodology has been under active development in the Service since 1973. The first document officially called the *Habitat Evaluation Procedures* was published in 1976 with the most recent revision in 1980. During this 7 year period, the Nation's top wildlife biologists have been consulted, both within the government and outside. The procedures have been presented at numerous public conferences and have been the subject of intense scrutiny.

Finally, the referenced documents were made available to reviewers. Over 75 requests were made and immediately filled to allow commentors the full benefit of this information in preparing comments, including the group providing this comment. Minor changes were made in the policy to more clearly indicate that the policy can stand on its own.

A. General Principles

Comment: Pursued to its logical conclusion, the concept of fish and wildlife as public trust resources could lead to serious restrictions on the use and management of private lands.

Response: When the concept of personal property rights is exercised in such a way as to jeopardize the interests of the public in fish and wildlife resources on public or private lands, the government may use its authorities to see that any damage to those interests is prevented or mitigated.

The Service does and will attempt to fulfill its duties within its authorities and in a reasonable manner. It is certainly cognizant of the fact that pursuing any concept to its logical extreme may lead to unreasonableness, and will continue to strive to prevent this from happening in its mitigation activities.

Comment: What does "equal consideration" of wildlife conservation mean within the context of the Fish and Wildlife Coordination Act and this mitigation policy?

Response: "Equal consideration" was not defined in the Act or this policy, and has no particular meaning in the context of this policy. This policy only covers Service recommendations, not action agency requirements.

Comment: The proposed Service policy now absolutely precludes support for non-water dependent projects within or affecting waters of the United States. This should be modified to conform to the requirements of Federal regulatory agencies such as the Army Corps of Engineers (COE) and the Environmental Protection Agency (EPA).

Response: The Service policy clearly does not exercise veto power over development actions. Moreover, the Service will execute its responsibilities fully within the context of existing laws and regulations governing environmental reviews. However, the Service feels that wetlands and shallow water habitats should not be subjected to *needless* development because of the public values of these areas. The Service policy statement does not include water dependency as the "sole" criterion for its recommendations. Other factors, including the likelihood of a significant loss, are considered prior to a Service recommendation for support of a project or the "no project" alternative.

The provisions of the policy have been modified to make such recommendations discretionary.

Comment: Congress, not the Service, is the entity that has the authority to require and fund compensation for Federal projects.

Response: We agree. The policy has been modified.

Comment: Mitigation should not be required for an indefinite period of time.

Response: Mitigation is appropriate for the entire time period that habitat losses persist, which includes the life of the project and as long afterwards as the impacts of the project continue to exist. The policy reflects this position.

Comment: Under "General Principles," the policy should seek and endorse novel or imaginative approaches to mitigation.

Response: The Service fully supports development of novel and imaginative approaches that mitigate losses of fish and wildlife, their habitat, and uses thereof, and has been in the forefront of such development. No change is necessary.

Comment: An Indian tribe strongly supports the Department of the Interior's recognition of the role of Indian tribal governments in mitigation planning.

Response: Our national heritage and, in some cases, the livelihood of Indian tribes, can be directly linked with the conservation and use of fish and wildlife resources. Therefore, the U.S. Fish and Wildlife Service will continue to recognize and support Indian tribal governments' efforts to mitigate impacts on these resources.

B. U.S. Fish and Wildlife Service Mitigation Goals by Resource Category

Comment: The mitigation goals for the resource categories were characterized as: reasonable, too strict, or not strict enough.

Response: As was explained in the preamble to the draft policy, the resource categories and their mitigation goals were abstracted from an analysis of actual field recommendations. The designation criteria for the resource categories (replaceability, scarcity, and value for evaluation species) are the basic decision factors used by Service personnel to assess relative mitigation needs. The mitigation goals represent reasonable mitigation expectations for projects, viewed in the light of our two-faceted goal—(1) to conserve, protect and enhance fish and wildlife and their habitats, and (2) to facilitate balanced development of our Nation's natural resources.

Numerous comments were received commending us on the balanced approach embodied in this policy. Since its tenets derive from field recommendations and comments, the credit belongs entirely to our field staff.

Some commentors criticized the mitigation goals. One group felt that one or several of the mitigation goals were too strict. These commentors objected to what they considered to be unreasonably high goals for fish and wildlife mitigation. In contrast to this first group, another set of commentors felt that the goals were not strict enough, and called attention to our legislative responsibility to seek protection for all fish and wildlife resources.

Our response is that the mitigation goals represent the best professional judgment and cumulative experience of Service field supervisors in developing mitigation proposals that would satisfy

our legislative mandates, operate under time and money constraints, and assist in maximizing overall social well-being. The basic concept, therefore, is unchanged in the final policy, although minor changes were made to improve understanding based on the comments.

Comment: Rather than rely on strict inflexible mitigation goals, the Service should use "tradeoff" evaluation procedures in developing mitigation proposals.

Response: It is the responsibility of the Federal action agency to use tradeoff evaluation procedures consistent with the Water Resources Council's Principles and Standards, where applicable, to select a mitigation alternative that will assist in maximizing overall project benefits. The Fish and Wildlife Coordination Act specifies that "the project plan shall include such justifiable means and measures for wildlife purposes as the *reporting agency* (emphasis added) finds should be adopted to obtain maximum overall project benefits." The role of the Service is to represent those public trust resources under its jurisdiction. The proposed policy outlined a system wherein the highest valued resources would be subject to the most protective mitigation recommendations. Few, if any, commentors have disagreed with this valuation perspective. Therefore, no changes were made.

However, many commentors have questioned the reasonableness of a seemingly uncompromising system that did not appear to allow occasional deviations from these goals.

The system is not rigid. As stated in the Purpose section of the policy, the policy advice will be used as guidance for Service personnel, but variations appropriate to individual circumstances are permitted.

Comment: Numerous commentors raised the issue of the somewhat subjective nature of identifying certain species as "important" for the purposes of the policy. In addition, commentors indicated that such distinctions could lead to mis-classification of habitats in terms of resource categories and that clear criteria were needed. Finally, many commentors felt that the artificial distinction of certain species as "important" was both a violation of the public trust and Service legal authorities.

Response: People perceive some species to be more important than others. In the context of biology and ecology, all species are important, serving a useful purpose within the confines of their biological niche. The mitigation policy must address *both* the needs and desires of human society *and* the ecosystem perspective. This is a difficult task. But human decisions concerning fish and wildlife resources in the face of a development action require judgment about the values of what will be lost and the need to avoid or minimize and compensate for loss of such values.

The specific criteria for such determinations are also exceedingly difficult to frame in a National policy context. The importance of a species to society depends on a complex, changing mix of factors. The importance of a species within an ecosystem is also subject to many dynamic factors. But human decisions about the level and type of mitigation necessary for development actions must be made in the absence of perfect information concerning these factors. In addition, the Service biologist reviewing project impacts has severe constraints on the number of species and ecosystem linkages that can be analyzed given funding, personnel and time limitations. Somehow, choices must be made.

We have deleted the term "important species" from the policy and replaced it with a more precise term, "evaluation species." The criteria for selection of evaluation species still includes those species of high resource value to humans or that represent a broader ecological perspective of an area. Other changes have been made related to the determination of resource categories to allow for additional public input and resource agency coordination into such determinations, where appropriate.

The effect of this change is not intended and shall not be interpreted to broaden the scope or extent of application of this policy. But it does remove the implication that species can be ranked against each other in terms of their overall importance to society, which many considered quite beyond the capability of human beings.

Comment: The wording of the policy should clearly indicate that species selected for analysis should only be those demonstrated to actually utilize an area.

Response: We agree, except for situations where fish and wildlife restoration or improvement plans have been approved by State or Federal resource agencies. In that case the analysis will include species identified in such plans. Appropriate clarification has been added to the definition of evaluation species.

Comment: The proper focus of the policy should be the ecosystem rather than particular species.

Response: Aside from the very real technical problems of applying a complex concept such as the ecosystem to mitigation planning, the authorities underlying this policy deal with fish and wildlife and their habitat, rather than ecosystems.

Ecosystems are addressed under this policy in two ways. First, one criterion in the selection of an evaluation species is the biological importance of the species to the functioning of its ecosystem. Secondly, when habitat loss is mitigated, the part of the ecosystem comprising that habitat is itself protected. No changes have been made.

Comment: Recreational use losses may at times have to be directly mitigated. The goal statements should reflect this need.

Response: We agree. Appropriate changes were made.

Comment: In addition to assessing conditions of scarcity from a biogeographical viewpoint, i.e., ecoregions, the policy should also use geopolitical subdivisions, e.g., state boundaries.

Response: As a Federal agency, the Service perceives its major responsibility to be to protect those fish and wildlife and their habitat that are valuable and scarce on a national level, whether or not they transcend state boundaries. However, should State resource agencies wish to outline relative scarcity on a more local basis, Service personnel would certainly assist, whenever practicable. This point has been added to the policy.

Comment: The policy should scale the relative need to achieve a particular mitigation goal to the degree a particular habitat will be impacted. For example, if a half-acre of important habitat is affected by a project and it is part of a one-acre plot, this circumstance should lead to a mitigation recommendation different from the situation where the same half-acre is part of a ten thousand acre area. As drafted, the policy does not reflect the differences in these situations.

Response: The Purpose section of the policy states that it will be used as guidance for Service personnel, but variations appropriate to individual circumstances will be permitted. The relative need to achieve a particular mitigation goal depends primarily on the perceived value of the habitat, its scarcity, and the replaceability of the threatened habitat. Other factors, such as scaling considerations, can combine to modify this general Service perspective on what constitutes appropriate mitigation.

Comment: The resource categories and mitigation goals are general, lack definition, and provide no guidance on habitat value. These categories are all

subject to interpretation by the Service field personnel.

Response: It would be counterproductive, if not impossible, for a national policy to be worded as precisely as the commentor suggests and still be implemented in a reasonable manner under numerous and diverse local circumstances. Words used to describe resource categories and mitigation goals do have generally understood meanings. It is essential that field personnel be allowed to exercise professional judgment in applying resource categories and mitigation goals to specific activities. However, numerous clarifying changes were made based on the comments to increase comprehension and understanding.

Comment: It is essential to other agencies' review to know what general types of habitat will be most important in the U.S. Fish and Wildlife Service mitigation policy. At a minimum, some examples of the types of habitat within each category should be given.

Response: The final policy does give guidance on areas that will be generally considered for Resource Category 1 or 2. Providing examples for all resource categories could be misleading since the same type of habitat may fall into several different resource categories, depending on, among other factors, its relative scarcity and quality from one locale to another across the nation.

On the other hand, field professionals are generally familiar with the quality and abundance of a given type of habitat that is in their area, so it is preferable not to burden them with potentially inappropriate guidelines of this nature.

Comment: The policy should clearly distinguish between upland habitats and the more valuable wetland habitats.

Response: In some cases, upland habitats may be determined to have resource values equal to or greater than wetland habitats, so a policy that solely favored one habitat type over the other would not be in the best public interest. However, the policy has been changed to indicate that certain habitats within Service-identified Important Resource Problems (IRPs) and special aquatic sites should be given special consideration as Resource Category 1 or 2. The IRPs contain a predominance of wetland coastal areas.

Comment: If you build something in a habitat, it just changes it to another habitat that some other animal or fish lives in—including the human being, although the Service does not seem to appreciate that. For example, if you build a highway, it is bad for dogs, rabbits, opossums and field rats and such that get run over by cars and trucks, but it is good for crows and buzzards that eat dead meat.

Response: The Service has not come across many instances where crows and buzzards could be considered scarce, but when such a circumstance can be documented and verified, the Service will certainly try to protect and enhance valuable highway habitat.

- *Resource Category 1*

Comment: A literal interpretation of the Resource Category 1 mitigation goal would require absolutely no habitat loss—not even a nature trail. Resource Category 1 should be deleted.

Response: Not all environmental changes are adverse to the habitat of a fish and wildlife resource. If a nature trail resulted in an insignificant impact on habitat value that was determined not to be adverse, then the Service would not recommend against it. The policy has been clarified to reflect this point.

Comment: Endangered and threatened species should be included as part of Resource Category 1.

Response: It would be inappropriate to expand the scope of the Mitigation Policy to include threatened and endangered species. The treatment of these species is addressed in an extensive body of complex and detailed legislation and regulation. The Congress has legislated very specific and precise law with regard to threatened and endangered species. Inclusion of these species under this policy would only confuse the issue and compound the difficulties involved in implementation of the Endangered Species Act and its associated regulations. Other reasons are discussed in the scope section of the final policy.

Comment: For all practical purposes, Resource Categories 1 and 2 adopt a "no growth" policy.

Response: The U.S. Fish and Wildlife Service is not advocating a "no growth" mitigation policy. The means and measures to achieve mitigation for Resource Categories 1 and 2 are designed to provide some flexibility so that limited growth can occur in an environmentally prudent manner. The policy reflects the national consensus that some habitats are of exceptional public value and should be carefully conserved, as evidenced in the Wild and Scenic Rivers Act (Pub. L. 90–542), the Wilderness Act (Pub. L. 88–577), and the National Trails System Act (Pub. L. 94–527).

- *Resource Category 2*

Comment: It is ill-advised to support in-kind replacement involving trading habitat for lesser value habitat which is then improved to support the species affected by the project. It takes too long, and in the meantime, populations supported by the habitat on the project site are lost.

Response: If the period required for improving the replacement habitat to the appropriate condition was exceedingly long, this may be one indication that the habitat at risk was unique or irreplaceable and actually belonged in Resource Category 1. In that case in-kind replacement through improvement of lesser quality habitat would be an inappropriate mitigation recommendation. Also, additional measures aimed at population restoration could be recommended to restock the area, provided suitable habitat was available to support the stocked species. No changes were made.

Comment: One commenter was perturbed by an apparently rigid insistence by the policy of in-kind replacement of lost habitat. The commentor pointed out that there could be occasions in which in-kind habitat was not available to a project sponsor.

Response: The policy guideline for Resource Category 2 includes an exception when "* * * in-kind replacement is not physically or biologically attainable". No change was necessary.

Comment: The policy appears to insist upon "acre-for-acre" replacement of in-kind habitat.

Response: The policy does not insist on "acre-for-acre" replacement of in-kind habitat. The mitigation planning goals involving in-kind replacement specifically ask for replacement of in-kind habitat *value.* This point has been further clarified in the definitions section, throughout the policy, and in the policy preamble.

- *Resource Category 3*

Comment: The mitigation goal for Resource Category 3 is not authorized by law and will be difficult to implement due to professional disagreement on satisfactory achievement.

Response: Under the Fish and Wildlife Coordination Act, the Service has the responsibility to recommend compensation for the loss of fish and wildlife resources. The Act does not restrict compensation to in-kind compensation. By recommending out-of-kind compensation under certain circumstances, the Service increases the range of options that developers may use to mitigate project impacts to include development and improvement of marginal resources different from those lost. However, modifications have been made in the policy to indicate that

in-kind replacement is preferred for Resource Category 3.

Comment: The mitigation goal for Resource Category 3 should emphasize that in-kind habitat value replacement is preferable to out-of-kind replacement.

Response: We agree. This point has been brought out in the final policy statement.

Comment: Although out-of-kind replacement is acceptable for Resource Category 3 losses and, under certain circumstances, may be accepted for Resource Category 2 losses, the policy should advise against replacement of rare habitat types for more common habitat types.

Response: We agree with the commentor's point and expect that Service field personnel will recommend mitigation alternatives that incorporate this concept, to the extent practicable. The Service is entirely in favor of preserving and/or promoting habitat diversity. No changes were necessary.

• *Resource Categories 4 and 5*

Comment: Compensation should be included as a means for satisfying the mitigation goal for Resource Category 4.

Response: Appropriate language changes have been made to allow for such recommendations.

Comment: Habitats encompassed by Resource Categories 4 and 5 are the only areas wherein significant increases in fish and wildlife can be realized through habitat improvement. Yet, the mitigation goals for these categories allow continual loss of these areas which possess great potential for improvements in carrying capacity.

Response: The Service appreciates the significance of areas with relatively low existing habitat values with respect to their potential for carrying capacity improvements. In fact, the Service may recommend improvement of these areas' habitat values to mitigate for unavoidable losses in Resource Categories 2 and 3. In addition, where these areas are included in a project planning area and are not appropriate for mitigation efforts, the Service will recommend that all opportunities for enhancement of these areas be thoroughly considered and included in project plans, where practicable.

We have amended the policy to include the above guidance.

Comment: Resource Category 5 is confusing and unnecessary. All habitat has some value, no matter how low. It should be redefined or deleted.

Response: We agree. This resource category has been deleted from the final policy.

C. Mitigation Planning Procedures

1. *Mitigation Goals*

Comment: Developers, Federal resource agencies, and the public should participate with the Service and State agencies in making Resource Category determinations and in developing mitigation proposals.

Response: Developers, as well as other members of the public, may provide information that will assist the Service in making Resource Category determinations. This opportunity has been noted in the final policy statement. Moreover, where these parties' inputs will significantly aid in development of mitigation proposals that will adequately satisfy mitigation planning goals, the Service will welcome their input.

Comment: It is hoped that reclassification of habitats in Resource Category 3 to Resource Categories 2 or 1 can be readily employed if and when certain habitats become more scarce.

Response: Resource Category determinations are made on the basis of conditions likely to occur without the project. If those conditions later change, the Resource Category of a given habitat can be redetermined.

However, once a mitigation plan in connection with a given project has been agreed upon, the U.S. Fish and Wildlife Service will not provide new or additional recommendations except under limited circumstances as outlined in the policy under the scope section.

2. *Impact Assessment Methods*

Comment: The policy does not appear to recognize that development activities may also show positive environmental effects. For example, cleared spaces beneath power lines can provide browsing areas for wildlife. Such positive effects should be factored into the mitigation assessment process.

Response: We agree. This point has been included in the final policy statement. The final policy further indicates that the Service and other State and Federal resource agencies shall make the determination of whether a biological change constitutes a beneficial or adverse impact. However, when determining mitigation needs for a planning area, the Service will utilize these policy guidelines to determine whether these positive effects can be applied towards mitigation.

Comment: The draft policy indicates "no net loss" as a goal for certain Resource Categories but it is unclear in defining the time period allowed to restore the land to its original value as in the case of strip mining operations. Maintenance of "no net loss" throughout the life of a long-term operation is not possible.

Response: The policy states that the net biological impact of a specific project proposal is the difference in predicted habitat value between the future with the action and the future without the action. This is based on the procedures established by the Water Resources Council's Principles and Standards. The future with the project determination includes consideration of losses during the life of the project. Under the policy, if the disturbed habitat is of sufficient value for evaluation species to warrant a Resource Category 2 or 3 level determination, the Service will provide recommendations for "no net loss" over the life of the project. The ability of the project sponsor to achieve this goal depends on many factors that cannot be predicted in advance. In many cases, it will be possible to achieve this goal. No change was necessary.

Comment: The with and without analyses should make allowances for human activities and natural species successions which can reasonably be expected to take place in the project area.

Response: We agree. Appropriate changes have been made in this policy.

Comment: Many commentors disagreed with the emphasis placed on the *Habitat Evaluation Procedures* (HEP) within the Service policy statement. Some commentors felt it should be de-emphasized, whereas others felt it deserved further emphasis.

Response: Although references to the more technical aspects of HEP have been deleted, the methodology itself remains one of the Service's more important impact assessment tools. The policy does not recommend exclusive use of HEP, since time or resource contraints may, in some cases, show alternative methods to be more practical. Where HEP habitat value assessments do not fully capture important biological characteristics within a planning area, Service personnel will use supplemental data, methodologies, and/or professional judgment to develop appropriate mitigation proposals.

Comment: What are the "other habitat evaluation systems" alluded to in the policy's section on impact assessment methods? This reference is very vague.

Response: Other systems can include the Habitat Evaluation System (HES) developed by the Department of the Army, and the Instream Flow Incremental Methodology (IFIM) of the U.S. Fish and Wildlife Service. Additional systems are referenced by the Water Resources Council in a draft document entitled, "Analysis of

Wetland Evaluation Procedures" and other publications. This information is not appropriate for inclusion into the policy so no change was made.

Comment: If other methodologies are found to be more appropriate for use than the Instream Flow Incremental Methodology (IFIM) for measuring flow impacts, they should be used.

Response: We agree. The final policy does state, however, that consideration should be given to the use of the IFIM.

Comment: Hopefully, this policy will stop the piecemeal destruction of valuable habitat, especially in areas like the Florida Keys where insidious lot-by-lot development continues in low wetland sites with the concurrence of the U.S. Fish and Wildlife Service.

Response: The Service does not concur with piecemeal development where significant resource losses will occur. Cumulative impacts are addressed by this policy. The Service is sensitive to this loss of habitat and will seek mitigation consistent with this policy. No change was necessary.

Comment: Population information should be included as an additional factor in determining mitigation requirements.

Response: We agree. Although population mitigation was an implicit part of the proposed policy, further language clarifying this point has been added to the final policy statement.

Comment: Professional judgment should be used as an alternative method for assessing project impacts.

Response: We agree that this is a valuable method that has been in use for many years. It is difficult to improve on informed and considered scientific judgment by an expert. The Service will continue to rely heavily on this approach. The policy was changed to reflect this emphasis.

3. *Mitigation Recommendations*

Comment: Service recommendations should be timely.

Response: The proposed and final policy specifically require Service personnel to present mitigation recommendations "* * * at the earliest possible stage of project planning to assure maximum consideration." This point has been echoed throughout Service management documents. Service personnel can generally provide timely guidance provided developers make a point of notifying them of proposed projects still in the planning stage and provided Federal action agencies supply sufficient transfer funding with which to conduct environmental investigations. Under Section 2(e) of the Fish and Wildlife Coordination Act, Federal action agencies are authorized to transfer funds to the Service "* * * as may be necessary to conduct all or part of the investigations required to carry out the purposes of * * * (Section 2 of the Act)." The Service uses these transfer funds to conduct project-specific investigations.

Comment: Requiring field biologists to consider cost-effectiveness in providing mitigation recommendations is beyond their capability and may conflict with the lead agencies' role as the determiner of overall public interest. Habitat protection should be a higher priority than cost-effectiveness.

Response: The proposed policy did not require a cost-effectiveness analysis by Service biologists in a formal sense. We fully agree that Service personnel must perceive their responsibility to be analysis and recommendations based on the biological aspects of project proposals. There is no intent to require Service biologists to do a formal economic analysis for which they are not trained nor for which there is clear legislative direction. However, the Service has a responsibility to the public to give consideration to cost while recommending ways to conserve fish and wildlife. The policy has been changed to reflect this need for consideration of other factors.

Comment: The Federal action agency should have the option of non-Service expertise to develop mitigation measures in those instances where the Service cannot meet lead agency program requirements.

Response: Although the Service cannot prevent other agencies from utilizing biological expertise from non-Federal sources to develop mitigation plans, the Fish and Wildlife Coordination Act specifically authorizes the Secretary of the Interior to prepare a report and recommendations on the fish and wildlife aspects of projects, including mitigation. This report and recommendations are to receive "full consideration" by the development agency. If the Federal action agency involves the Service early and provides sufficient transfer funds, then the Service should be able to meet their needs. No change in the policy was necessary.

Comment: Several mitigation proposals should be prepared for each alternative structural or non-structural plan.

Response: The Service is willing to prepare multiple proposals provided funds and time are available.

Comment: Some commentors felt that concurrent and proportionate funding of mitigation may not always lead to optimal mitigation and should not be a rigid requirement. Other commentors strongly supported concurrent and proportionate funding.

Response: The Water Resources Council's Principles and Standards require "* * * *at least* concurrent and proportionate implementation with other major project features, except where such concurrent and proportionate mitigation is physically impossible" (emphasis added).

We agree with the Council, and endorse expenditure of funds at an earlier stage of project planning when this will lead to more effective mitigation. Appropriate changes to the policy on this matter have been made.

Comment: Mitigation costs should include the cost of managing the acquired land for the life of the project, and the value of present and future timber and crops on acquired land. In addition, an environmental benefit/cost analysis should be developed for each project, and Congress should not authorize a project unless the project plan includes the proposed mitigation program and all its costs, including the cost of lost timber productivity and other resources.

Response: Costing of projects is determined by the Water Resource Council's Principles and Standards and is therefore beyond the jurisdiction of this policy. We point out that Service policy does not preclude timber harvest or other resource recovery operations on mitigation lands when the activity is compatible with fish and wildlife management objectives.

Comment: The Service mitigation policy should more clearly note that fee-simple land acquisition should be a measure of last resort.

Response: The policy statement has undergone further modification to more clearly stress the conditions when land acquisition is to be recommended by Service personnel. In the future, the Service will place far greater emphasis on developing mitigation recommendations that avoid, minimize, or rectify impacts in order to reduce the need for compensation lands. Amplification of this point may be seen in the section on mitigation planning procedures.

Comment: If some interest in land must be acquired, areas of marginal productivity should be considered first. Such underdeveloped land would benefit from better management of its productive capacity and respond more vigorously than land already at higher levels of production.

Response: We agree that special consideration should be given to marginal lands, and have changed the policy accordingly.

Comment: Who owns land acquired for mitigation purposes?

Response: Depending on the individual circumstances of the project, land acquired through fee-simple title is usually owned either by the Federal or State government and administered by appropriate Federal or State resource agencies. Where wildlife easements are acquired, the land belongs to the property owner, and the easement right to the Federal or State government.

Comment: The policy should require Service personnel to identify the authority to be used in implementing any mitigation recommendations that are made.

Response: The final policy clearly identifies the legal authorities under which the Service is expected to develop mitigation recommendations. In addition, the policy only applies to Service recommendations and is not an instrument directing legal research in individual circumstances. It would be inappropriate to instruct our personnel to identify the implementing authority for the development agencies which are fully aware of the authorities available to implement Service recommendations. In the case of projects to be authorized by Congress, authorities to implement mitigation can be, and increasingly have been, spelled out.

Comment: The policy neglects to indicate the necessary process if an agency does not agree with Service mitigation recommendations.

Response: This process has already been established for most Federal agencies. If the project planners and the Service field office cannot agree on a modified or substitute proposal for mitigation, the matter often is referred upwards to the next highest level. Higher management levels are then generally able to resolve the issue quickly, although the Federal action agency has the final say. No change was necessary.

Comment: Mitigation recommendations should ensure that habitats which are preserved are adequate in size and contiguous to ensure species survival and ecosystem functioning.

Response: We agree. This point has not, however, been added to the policy since it is standard operating procedure at the field level.

Comment: Improvement of public use prospects within a project area should not be considered mitigation for habitat value losses. Development of public access is legitimate mitigation only when public uses are lost as a result of project action.

Response: We agree. Construction of public access facilities does not replace habitat lost or degraded and may even reduce wildlife habitat and invite degradation by making an area more accessible to more people. Construction of public use facilities may be in the public interest but should not be disguised as mitigation for loss or degradation of wildlife habitat. This point has been added to the policy.

4. *Follow-up*

Comment: The Service should initiate post-project evaluation studies, as well as encourage, support, and participate in these studies.

Response: We agree and will do so within the constraints of time, personnel and cost. The Service will initiate additional follow-up studies when funds are provided by the Federal action agency. The policy has been changed to reflect this.

Comment: Follow-up studies must be designed so as to separate the effects on fish and wildlife populations of implementing mitigation recommendations from other causes of changes in species numbers. This has not been the case in past studies.

Response: We agree in principle, but point out that this is a very difficult task technically, and that the conclusions in this regard rarely withstand vigorous analysis.

Nonetheless, distinguishing the true causes of population changes should be one of the goals of the follow-up study.

Comment: The policy should indicate what actions would occur if post-project evaluation shows mitigation recommendations are not being achieved as agreed to by the developer.

Response: We agree. The policy now includes provisions instructing Service personnel to recommend corrective action in such situations.

Appendix A

No significant comments.

Appendix B

Comment: Why not include more intensive management of remaining habitat as a way of reducing net habitat loss?

Response: We agree, and have modified the policy accordingly in the Means and Measures section, which has since been integrated into the body of the final policy.

The section clearly places priority on increased habitat management as a means of replacing habitat losses, and additionally stresses use of existing public lands to accomplish these ends.

Comment: A mitigation recommendation of "No project" is not logical or valid as a mitigation measure.

Response: The Council on Environmental Quality's definition of mitigation, which has been adopted in this policy, clearly states that mitigation includes ". . . avoiding the impact altogether by not taking a certain action or parts of an action. . . ." Obviously, a mitigation recommendation of "No project" falls under this subset of the definition, since a project's impact can be avoided *altogether* by a decision not to construct a project.

Appendix C

Comment: The definition of the word "practicable" should be amended to denote that the burden of identifying alternative mitigation measures and of conducting a searching inquiry into their practicability rests with the Service as well as the Federal action agency.

Response: The policy indicates that the Service will strive to provide mitigation recommendations that represent the best judgment of the Service on the most effective means and measures to achieve the mitigation goal, including consideration of cost.

Comment: A definition for "developments" (as used in Section V.A., "General Principles") should be provided in Appendix C.

Response: "Development" is a general-purpose term encompassing those activities falling under the scope of Service mitigation authorities cited within this policy. For example, if timber harvesting activities require preparation of an EIS, or involves waters of the U.S. and requires the issuance of a Federal permit or license, the Service would provide mitigation recommendations consistent with the policy.

NATIONAL ENVIRONMENTAL POLICY ACT REQUIREMENTS

The Service has prepared an Environmental Assessment of this final policy. Based on an analysis of the Environmental Assessment, the Director of the U.S. Fish and Wildlife Service has concluded that the final action is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347). Thus the policy does not require an Environmental Impact Statement (EIS).

The Environmental Assessment and Finding of No Significant Impact will be furnished upon request.

REGULATORY ANALYSIS

This policy statement has been issued in conformity with the Department of the Interior's rulemaking requirements, which apply to actions meeting the broad definition of a rule set forth in the Administrative Procedures Act, 5 U.S.C.

551(4) and 43 CFR Part 14.2(e) (1980). This statement is not intended to be judicially enforceable. It will not be codified. It does not create private rights. It only guides internal Service administration and is not to be inflexibly applied by Service personnel. The Department had previously determined that the proposed policy was not a significant rule and did not require a regulatory analysis under Executive Order 12044 and 43 Part 14. No significant changes were made in the final policy that required a new determination.

ACKNOWLEDGEMENTS

The primary author of this final policy is John Christian, Leader, Policy Group—Environment, U.S. Fish and Wildlife Service, (202) 343–7151. Primary support for policy development was provided by policy analysts Nancy Chu, Scott Cameron, and Peter Ciborowski; and Ecological Services Washington Office and field personnel. Manuscript preparation was accomplished by Roberta Hissey, Karen Baker, Carol Prescott, and Jinethel Baynes.

Accordingly, the mitigation policy of the U.S. Fish and Wildlife Service is set forth as follows:

U.S. FISH AND WILDLIFE SERVICE MITIGATION POLICY

I. PURPOSE

This document establishes policy for U.S. Fish and Wildlife Service recommendations on mitigating the adverse impacts of land and water developments on fish, wildlife, their habitats, and uses thereof. It will help to assure consistent and effective recommendations by outlining policy for the levels of mitigation needed and the various methods for accomplishing mitigation. It will allow Federal action agencies and private developers to anticipate Service recommendations and plan for mitigation measures early, thus avoiding delays and assuring equal consideration of fish and wildlife resources with other project features and purposes. This policy provides guidance for Service personnel but variations appropriate to individual circumstances are permitted.

This policy supersedes the December 18, 1974, policy statement entitled "Position Paper of the Fish and Wildlife Service Relative to Losses to Fish and Wildlife Habitat Caused by Federally Planned or Constructed Water Resource Developments" and the Service River Basin Studies Manual Release 2.350 entitled "General Bureau Policy on River Basin Studies."

II. AUTHORITY

This policy is established in accordance with the following major authorities: (See Appendix A for other authorities.)

Fish and Wildlife Act of 1956 (16 U.S.C. 742(a)–754). This Act authorizes the development and distribution of fish and wildlife information to the public, Congress, and the President, and the development of policies and procedures that are necessary and desirable to carry out the laws relating to fish and wildlife including: (1) ". . . take such steps as may be required for the development, advancement, management, conservation, and protection of the fisheries resources;" and (2) ". . . take such steps as may be required for the development, management, advancement, conservation, and protection of wildlife resources through research . . . and other means."

Fish and Wildlife Coordination Act (16 U.S.C. 661–667(e)). This Act authorizes the U.S. Fish and Wildlife Service, National Marine Fisheries Service (NMFS), and State agencies responsible for fish and wildlife resources to investigate all proposed Federal undertakings and non-Federal actions needing a Federal permit or license which would impound, divert, deepen, or otherwise control or modify a stream or other body of water and to make mitigation and enhancement recommendations to the involved Federal agency. "Recommendations . . . shall be as specific as practicable with respect to features recommended for wildlife conservation and development, lands to be utilized or acquired for such purposes, the results expected, and shall describe the damage to wildlife attributable to the project and the measures proposed for mitigating or compensating for these damages." In addition, the Act requires that wildlife conservation be coordinated with other features of water resource development programs.

Determinations under this authority for specific projects located in estuarine areas constitute compliance with the provisions of the Estuary Protection Act. (See Appendix A.)

Watershed Protection and Flood Prevention Act (16 U.S.C. 1001–1009). This Act allows the Secretary of the Interior to make surveys, investigations, and ". . . prepare a report with recommendations concerning the conservation and development of wildlife resources . . ." on small watershed projects.

National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347). This Act and its implementing regulations (40 CFR Part 1500–1508) requires that the U.S. Fish and Wildlife Service be notified of all major Federal actions affecting fish and wildlife resources and their views and recommendations solicited. Upon completion of a draft Environmental Impact Statement, the Service is required to review it and make comments and recommendations, as appropriate. In addition, the Act provides that "the Congress authorizes and directs that, to the fullest extent possible . . . all agencies of the Federal Government shall . . . identify and develop methods and procedures . . . which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations."

III. SCOPE

A. Coverage

This policy applies to all activities of the Service related to the evaluation of impacts of land and water developments and the subsequent recommendations to mitigate those adverse impacts except as specifically excluded below. This includes: (1) investigations and recommendations for all actions requiring a federally issued permit or license that would impact waters of the U.S.; (2) all major Federal actions significantly affecting the quality of the human environment; and (3) other Federal actions for which the Service has legislative authority or executive direction for involvement including, but not limited to: coal, minerals, and outer continental shelf lease sales or Federal approval of State permit programs for the control of discharges of dredged or fill material.

B. Exclusions

This policy does not apply to threatened or endangered species. The requirements for threatened and endangered species are covered in the Endangered Species Act of 1973 and accompanying regulations at 50 CFR Parts 17, 402, and 424. Under Section 7 of the Endangered Species Act, as amended, all Federal agencies shall ensure that activities authorized, funded, or carried out by them are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Mitigating adverse impacts of a project would not in itself be viewed as satisfactory agency compliance with Section 7. Furthermore, it is clear to the Service that Congress considered the traditional concept of mitigation to be inappropriate for Federal activities impacting listed species or their critical habitat.

This policy does not apply to Service recommendations for Federal projects completed or other projects permitted or licensed prior to enactment of Service authorities (unless indicated otherwise in a specific statute) or specifically exempted by them and not subject to reauthorization or renewal. It also does not apply where mitigation plans have already been agreed to by the Service, except where new activities or changes in current activities would result in new impacts or where new authorities, new scientific information, or developer failure to implement agreed upon recommendations make it necessary. Service personnel involved in land and water development investigations will make a judgment as to the applicability of the policy for mitigation plans under development and not yet agreed upon as of the date of final publication of this policy.

Finally, this policy does not apply to Service recommendations related to the enhancement of fish and wildlife resources. Recommendations for measures which improve fish and wildlife resources beyond that which would exist without the project and which cannot be used to satisfy the

appropriate mitigation planning goal should be considered as enhancement measures. The Service strongly supports enhancement of fish and wildlife resources. The Service will recommend that all opportunities for fish and wildlife resource enhancement be thoroughly considered and included in project plans, to the extent practicable.

IV. DEFINITION OF MITIGATION

The President's Council on Environmental Quality defined the term "mitigation" in the National Environmental Policy Act regulations to include: "(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments." (40 CFR Part 1508.20(a–e)).

The Service supports and adopts this definition of mitigation and considers the specific elements to represent the desirable sequence of steps in the mitigation planning process. (See Appendix B for definitions of other important terms necessary to understand this policy.)

V. MITIGATION POLICY OF THE U.S. FISH AND WILDLIFE SERVICE

The overall goals and objectives of the Service are outlined in the Service Management Plan and an accompanying Important Resource Problems document which describes specific fish and wildlife problems of importance for planning purposes. Goals and objectives for Service activities related to land and water development are contained in the Habitat Preservation Program Management Document. The mitigation policy was designed to stand on its own; however, these documents will be consulted by Service personnel to provide the proper perspective for the Service mitigation policy. They are available upon request from the Director, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

A. General Policy

The mission of the U.S. Fish and Wildlife Service is to:

PROVIDE THE FEDERAL LEADERSHIP TO CONSERVE, PROTECT AND ENHANCE FISH AND WILDLIFE AND THEIR HABITATS FOR THE CONTINUING BENEFIT OF THE PEOPLE.

The goal of Service activities oriented toward land and water development responds to Congressional direction that fish and wildlife resource conservation receive equal consideration and be coordinated with other features of Federal resource development and regulatory programs through effective and harmonious planning, development, maintenance and coordination of fish and wildlife resource conservation and rehabilitation in the United States, its territories and possessions. The goal is to:

CONSERVE, PROTECT AND ENHANCE FISH AND WILDLIFE AND THEIR HABITATS AND FACILITATE BALANCED DEVELOPMENT OF THIS NATION'S NATURAL RESOURCES BY TIMELY AND EFFECTIVE PROVISION OF FISH AND WILDLIFE INFORMATION AND RECOMMENDATIONS.

Fish and wildlife and their habitats are public resources with clear commercial, recreational, social, and ecological value to the Nation. They are conserved and managed for the people by State, Federal and Indian tribal Governments. If land or water developments are proposed which may reduce or eliminate the public benefits that are provided by such natural resources, then State and Federal resource agencies and Indian tribal agencies have a responsibility to recommend means and measures to mitigate such losses. Accordingly:

IN THE INTEREST OF SERVING THE PUBLIC, IT IS THE POLICY OF THE U.S. FISH AND WILDLIFE SERVICE TO SEEK TO MITIGATE LOSSES OF FISH, WILDLIFE, THEIR HABITATS, AND USES THEREOF FROM LAND AND WATER DEVELOPMENTS.

In administering this policy, the Service will strive to provide information and recommendations that fully support the Nation's need for fish and wildlife resource conservation as well as sound economic and social development through balanced multiple use of the Nation's natural resources. The Service will actively seek to facilitate needed development and avoid conflicts and delays through early involvement in land and water development planning activities in advance of proposals for specific projects or during the early planning and design stage of specific projects.

This should include early identification of resource areas containing high and low habitat values for important species and the development of ecological design information that outlines specific practicable means and measures for avoiding or minimizing impacts. The former can be used by developers to site projects in the least valuable areas. This could possibly lower total project costs to development interests. These actions are part of good planning and are in the best public interest.

The early provision of information to private and public agencies in a form which enables them to avoid or minimize fish and wildlife losses as a part of initial project design is the preferred form of fish and wildlife conservation.

B. U.S. Fish and Wildlife Service Mitigation Planning Goals by Resource Category

The planning goals and guidelines that follow will be used to guide Service recommendations on mitigation of project impacts. Four Resource Categories are used to indicate that the level of mitigation recommended will be consistent with the fish and wildlife resource values involved.

The policy covers impacts to fish and wildlife populations, their habitat and the human uses thereof. However, the primary focus in terms of specific guidance is on recommendations related to habitat value losses. In many cases, compensation of habitat value losses should result in replacement of fish and wildlife populations and human uses. But where it does not, the Service will recommend appropriate additional means and measures.

RESOURCE CATEGORY 1

a. Designation Criteria

Habitat to be impacted is of high value for evaluation species and is unique and irreplaceable on a national basis or in the ecoregion section.

b. Mitigation Goal

No Loss of Existing Habitat Value.

c. Guideline

The Service will recommend that all losses of existing habitat be prevented as these one-of-a-kind areas cannot be replaced. Insignificant changes that do not result in adverse impacts on habitat value may be acceptable provided they will have no significant cumulative impact.

RESOURCE CATEGORY 2

a. Designation Criteria

Habitat to be impacted is of high value for evaluation species and is relatively scarce or becoming scarce on a national basis or in the ecoregion section.

b. Mitigation Goal

No Net Loss of In-Kind Habitat Value.

c. Guideline

The Service will recommend ways to avoid or minimize losses. If losses are likely to occur, then the Service will recommend ways to immediately rectify them or reduce or eliminate them over time. If losses remain likely to occur, then the Service will recommend that those losses be compensated by replacement of the same kind of habitat value so that the total loss of such in-kind habitat value will be eliminated.

Specific ways to achieve this planning goal include: (1) physical modification of replacement habitat to convert it to the same type lost; (2) restoration or rehabilitation of previously altered habitat; (3) increased management of similar replacement habitat so that the in-kind value of the lost habitat is replaced, or (4) a combination of these measures. By replacing habitat value losses with similar habitat values, populations of species associated with that habitat may remain relatively stable in the area over time. This is generally referred to as in-kind replacement.

Exceptions: An exception can be made to this planning goal when: (1) different habitats and species available for replacement are determined to be of greater value than those lost, *or* (2) in-kind replacement is not physically or biologically attainable in the ecoregion section. In either case, replacement involving different habitat kinds may be recommended provided that the total value of the habitat lost is recommended for replacement (see the guideline for Category 3 mitigation below).

RESOURCE CATEGORY 3

a. Designation Criteria

Habitat to be impacted is of high to medium value for evaluation species and is relatively abundant on a national basis.

b. Mitigation Goal

No Net Loss of Habitat Value While Minimizing Loss of In-Kind Habitat Value.

c. Guideline

The Service will recommend ways to avoid or minimize losses. If losses are likely to occur, then the Service will recommend ways to immediately rectify them or reduce or eliminate them over time. If losses remain likely to occur, then the Service will recommend that those losses be compensated by replacement of habitat value so that the total loss of habitat value will be eliminated.

It is preferable, in most cases, to recommend ways to replace such habitat value losses in-kind. However, if the Service determines that in-kind replacement is not desirable or possible, then other specific ways to achieve this planning goal include: (1) substituting different kinds of habitats, or (2) increasing management of different replacement habitats so that the value of the lost habitat is replaced. By replacing habitat value losses with different habitats or increasing management of different habitats, populations of species will be different, depending on the ecological attributes of the replacement habitat. This will result in no net loss of total habitat value, but may result in significant differences in fish and wildlife populations. This is generally referred to as out-of-kind replacement.

RESOURCE CATEGORY 4

a. Designation Criteria

Habitat to be impacted is of medium to low value for evaluation species.

b. Mitigation Goal

Minimize Loss of Habitat Value.

c. Guideline

The Service will recommend ways to avoid or minimize losses. If losses are likely to occur, then the Service will recommend ways to immediately rectify them or reduce or eliminate them over time. If losses remain likely to occur, then the Service may make a recommendation for compensation, depending on the significance of the potential loss.

However, because these areas possess relatively low habitat values, they will likely exhibit the greatest potential for significant habitat value improvements. Service personnel will fully investigate these areas' potential for improvement, since they could be used to mitigate Resource Category 2 and 3 losses.

C. Mitigation Planning Policies

1. State-Federal Partnership

a. The U.S. Fish and Wildlife Service will fully coordinate activities with those State agencies responsible for fish and wildlife resources, the National Marine Fisheries Service (NMFS) and the Environmental Protection Agency (EPA) related to the investigation of project proposals and development of mitigation recommendations for resources of concern to the State, NMFS or EPA.

b. Service personnel will place special emphasis on working with State agencies responsible for fish and wildlife resources, NMFS and EPA to develop compatible approaches and to avoid duplication of efforts.

2. Resource Category Determinations

a. The Service will make Resource Category determinations as part of the mitigation planning process. Such determinations will be made early in the planning process and transmitted to the Federal action agency or private developer to aid them in their project planning, to the extent practicable.

b. Resource Category determinations will be made through consultation and coordination with State agencies responsible for fish and wildlife resources and other Federal resource agencies, particularly the National Marine Fisheries Service and the Environmental Protection Agency, whenever resources of concern to those groups are involved. Where other elements of the public, including development groups, have information that can assist in making such determinations, the Service will welcome such information.

c. All Resource Category determinations will contain a technical rationale consistent with the designation criteria. The rationale will: (1) outline the reasons why the evaluation species were selected; (2) discuss the value of the habitat to the evaluation species; and (3) discuss and contrast the relative scarcity of the fish and wildlife resource on a national and ecoregion section basis.

Note.—If the State agency responsible for fish and wildlife resources wishes to outline scarcity on a more local basis, U.S. Fish and Wildlife Service personnel should assist in developing such rationale, whenever practicable.

d. When funding, personnel, and available information make it practicable, specific geographic areas or, alternatively, specific habitat types that comprise a given Resource Category should be designated in advance of development. Priority for predesignation will be placed on those areas that are of high value for evaluation species and are subject to development pressure in the near future. Such predesignations can be used by developers or regulators to determine the least valuable areas for use in project planning and siting considerations.

e. The following examples should be given special consideration as either Resource Category 1 or 2:

(1) Certain habitats within Service-identified Important Resource Problem (IRP) areas. Those IRPs dealing with threatened or endangered species are not covered by this policy. (See Scope)

(2) Special aquatic and terrestrial sites including legally designated or set-aside

areas such as sanctuaries, fish and wildlife management areas, hatcheries, and refuges, and other aquatic sites such as floodplains, wetlands, mudflats, vegetated shallows, coral reefs, riffles and pools, and springs and seeps.

3. Impact Assessment Principles

a. Changes in fish and wildlife productivity or ecosystem structure and function may not result in a biologically adverse impact. The determination as to whether a biological change constitutes an adverse impact for which mitigation should be recommended is the responsibility of the Service and other involved Federal and State resource agencies.

b. The net biological impact of a development proposal (or alternatives) is the difference in predicted biological conditions between the future with the action and the future without the action. If the future without the action cannot be reasonably predicted and documented by the project sponsor, then the Service analysis should be based on biological conditions that would be expected to exist over the planning period due to natural species succession or implementation of approved restoration/improvement plans or conditions which currently exist in the planning area.

c. Service review of project impacts will consider, whenever practicable:

(1) The total long-term biological impact of the project, including any secondary or indirect impacts regardless of location; and (2) any cumulative effects when viewed in the context of existing or anticipated projects.

d. The *Habitat Evaluation Procedures* will be used by the Service as a basic tool for evaluating project impacts and as a basis for formulating subsequent recommendations for mitigation subject to the exemptions in the Ecological Services Manual (100 ESM 1). When the *Habitat Evaluation Procedures* do not apply, then other evaluation systems may be used provided such use conforms with policies provided herein.

e. In those cases where instream flows are an important determinant of habitat value, consideration should be given to the use of the Service's Instream Flow Incremental Methodology to develop instream flow mitigation recommendations, where appropriate.

f. Where specific impact evaluation methods or mitigation technologies are not available, Service employees shall continue to apply their best professional judgment to develop mitigation recommendations.

4. Mitigation Recommendations

a. The Service may recommend support of projects or other proposals when the following criteria are met:

(1) They are ecologically sound;

(2) The least environmentally damaging reasonable alternative is selected;

(3) Every reasonable effort is made to avoid or minimize damage or loss of fish and wildlife resources and uses;

(4) All important recommended means and measures have been adopted with guaranteed implementation to satisfactorily compensate for unavoidable damage or loss consistent with the appropriate mitigation goal; and

(5) For wetlands and shallow water habitats, the proposed activity is clearly water dependent and there is a demonstrated public need.

The Service may recommend the "no project" alternative for those projects or other proposals that do not meet all of the above criteria and where there is likely to be a significant fish and wildlife resource loss.

b. Recommendations will be presented by the Service at the earliest possible stage of project planning to assure maximum consideration. The Service will strive to provide mitigation recommendations that represent the best judgment of the Service, including consideration of cost, on the most effective means and measures of satisfactorily achieving the mitigation planning goal. Such recommendations will be developed in cooperation with the Federal action agency or private developer responsible for the project, whenever practicable, and will place heavy reliance on cost estimates provided by that Federal action agency or private developer.

c. The Service will recommend that the Federal action agency include designated funds for all fish and wildlife resource mitigation (including, but not limited to, Service investigation costs, initial development costs and continuing operation, maintenance, replacement, and administrative costs) as part of the initial and any alternative project plans and that mitigation funds (as authorized and appropriated by Congress for Federal projects) be spent concurrently and proportionately with overall project construction and operation funds throughout the life of the project.

Note.—Prevention of losses may necessitate expenditure of funds at an earlier stage of project planning. This is acceptable and preferred.

d. Service mitigation recommendations will be made under an explicit expectation that these means and measures: (1) would be the ultimate responsibility of the appropriate Federal action agency to implement or enforce; and (2) would provide for a duration of effectiveness for the life of the project plus such additional time required for the adverse effects of an abandoned project to cease to occur.

e. Land acquisition in fee title for the purpose of compensation will be recommended by the Service *only* under one or more of the following three conditions:

(1) When a change in ownership is necessary to guarantee the future conservation of the fish and wildlife resource consistent with the mitigation goal for the specific project area; *or*

(2) When other means and measures for mitigation (see Section 5 below) will not compensate habitat losses consistent with the mitigation goal for the specific project area; *or*

(3) When land acquisition in fee title is the most cost-effective means that may partially or completely achieve the mitigation goal for the specific project area.

Service recommendations for fee title land acquisition will seek to identify mitigation lands with marginal economic potential.

f. First priority will be given to recommendation of a mitigation site within the planning area. Second priority will be given to recommendation of a mitigation site in proximity to the planning area within the same ecoregion section. Third priority will be given to recommendation of a mitigation site elsewhere within the same ecoregion section.

g. Service personnel will fully support a variety of uses on mitigation lands where such uses are compatible with dominant fish and wildlife uses and, for Federal wildlife refuges, are consistent with the provisions of the Refuge Recreation Act and the National Wildlife Refuge Administration Act. However, it may be in the best public interest to recommend limiting certain uses that would significantly decrease habitat value for species of high public interest. In such cases, the Service may recommend against such incompatible uses.

h. Measures to increase recreation values will not be recommended by Service personnel to compensate for losses of habitat value. Recreation use losses not restored through habitat value mitigation will be addressed through separate and distinct recommended measures to offset those specific losses.

i. The guidelines contained in this policy do not apply to threatened or endangered species. However, where both habitat and endangered or threatened species impacts are involved,

Service personnel shall fully coordinate Environment efforts with Endangered Species efforts to provide timely, consistent, and unified recommendations for resolution of fish and wildlife impacts, to the extent possible. More specifically, Environment and Endangered Species personnel shall coordinate all related activities dealing with investigations of land and water developments. This includes full use of all provisions that can expedite Service achievement of "one-stop shopping," including coordinated early planning involvement, shared permit review activities, consolidated permit reporting, and consolidated flow of pre-project information to developers, consistent with legislative mandates and deadlines.

j. The Service will place high priority on and continue to develop and implement procedures for reducing delays and conflicts in permit related activities. Such procedures will include, but not be limited to:

(1) Joint processing of permits.

(2) Resource mapping.

(3) Early provision of ecological design information.

(4) Involvement in Special Area Management Planning.

k. The Service will encourage predevelopment compensation actions by Federal action agencies which can be used to offset future unavoidable losses for lands or waters not adequately protected by an existing law, policy, or program.

Banking of habitat value for the express purpose of compensation for unavoidable future losses will be considered to be a mitigation measure and not an enhancement measure. Withdrawals from the mitigation "bank" to offset future unavoidable losses will be based on habitat value replacement, not acreage or cost for land purchase and management.

5. Mitigation Means and Measures

Mitigation recommendations can include, but are not limited to, the types of actions presented below. These means and measures are presented in the general order and priority in which they should be recommended by Service personnel with the exception of the "no project" alternative. (See Section 4(a)).

a. Avoid the impact

(1) Design project to avoid damage or loss of fish and wildlife resources including management practices such as timing of activities or structural features such as multiple outlets, passage or avoidance structures and water pollution control facilities.

(2) Use of nonstructural alternative to proposed project.

(3) No project.

b. Minimize the impact

(1) Include conservation of fish and wildlife as an authorized purpose of Federal projects.

(2) Locate at the least environmentally damaging site.

(3) Reduce the size of the project.

(4) Schedule timing and control of initial construction operations and subsequent operation and maintenance to minimize disruption of biological community structure and function.

(5) Selective tree clearing or other habitat manipulation.

(6) Control water pollution through best management practices.

(7) Time and control flow diversions and releases.

(8) Maintain public access.

(9) Control public access for recreational or commercial purposes.

(10) Control domestic livestock use.

c. Rectify the impact

(1) Regrade disturbed areas to contours which provide optimal fish and wildlife habitat or approximate original contours.

(2) Seed, fertilize and treat areas as necessary to restore fish and wildlife resources.

(3) Plant shrubs and trees and other vegetation to speed recovery.

(4) Control polluted spoil areas.

(5) Restock fish and wildlife resources in repaired areas. Fish stocking or introductions will be consistent with the Service Fish Health Policy (January 3, 1978).

d. Reduce or eliminate the impact over time

(1) Provide periodic monitoring of mitigation features to assure continuous operation.

(2) Assure proper training of project personnel in the operations of the facility to preserve existing or restored fish and wildlife resources at project sites.

(3) Maintain or replace equipment or structures so that future loss of fish and wildlife resources due to equipment or structure failure does not occur.

e. Compensate for impacts

(1) Conduct wildlife management activities to increase habitat values of existing areas, with project lands and nearby public lands receiving priority.

(2) Conduct habitat construction activities to fully restore or rehabilitate previously altered habitat or modify existing habitat suited to evaluation species for the purpose of completely offsetting habitat value losses.

(3) Build fishery propagation facilities.

(4) Arrange legislative set-aside or protective designation for public lands.

(5) Provide buffer zones.

(6) Lease habitat.

(7) Acquire wildlife easements.

(8) Acquire water rights.

(9) Acquire land in fee title.

6. Follow-up

The Service encourages, supports, and will initiate, whenever practicable, post-project evaluations to determine the effectiveness of recommendations in achieving the mitigation planning goal. The Service will initiate additional follow-up studies when funds are provided by the Federal action agency.

In those instances where Service personnel determine that Federal agencies or private developers have not carried out those agreed upon mitigation means and measures, then the Service will request the responsible Federal action agency to initiate corrective action.

APPENDIX A—OTHER AUTHORITIES AND DIRECTION FOR SERVICE MITIGATION RECOMMENDATIONS

LEGISLATIVE

Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.). The 1977 amendments require the Fish and Wildlife Service ". . . upon request of the Governor of a State, and without reimbursement, to provide technical assistance to such State in developing a Statewide (water quality planning) program and in implementing such program after its approval." In addition, this Act requires the Service to comment on proposed State permit programs for the control of discharges of dredged or fill material and to comment on all Federal permits within 90 days of receipt.

Federal Power Act of 1920, as amended (16 U.S.C. 791(a), 803, 811). This Act authorizes the Secretary of the Interior to impose conditions on licenses issued for hydroelectric projects within specific withdrawn public lands. The Secretary is given specific authority to prescribe fishways to be constructed, maintained, and operated at the licensee's expense.

Estuary Protection Act (16 U.S.C. 1221–1226). This Act requires the Secretary of the Interior to review all project plans and reports for land and water resource development affecting estuaries and to make recommendations for conservation, protection, and enhancement.

Coastal Zone Management Act of 1972 (16 U.S.C. 1451–1464). This Act

requires the Secretary of Commerce to obtain the views of Federal agencies affected by the program, including the Department of the Interior, and to ensure that these views have been given adequate consideration before approval of Coastal Zone Management Plans. The Service provides the Department's views about fish and wildlife resources. Pursuant to the Coastal Zone Management Act Amendments of 1980 (Pub. L. 96-464) the Department of Interior provides comments on Federal grants to help States protect and preserve coastal areas because of their ". . . conservational, recreational, ecological or aesthetic values." The 1980 Amendments also authorize the Department of Interior to enter into Special Area Management Planning to ". . . provide for increased specificity in protecting natural resources, reasonable coast dependent economic growth . . . and improved predictability in government decisionmaking."

Water Bank Act (16 U.S.C. 1301–1311). This Act requires that the Secretary of Agriculture ". . . shall consult with the Secretary of Interior and take appropriate measures to insure that the program carried out . . . is in harmony with wetlands programs administered by the Secretary of the Interior."

Wild and Scenic Rivers Act (16 U.S.C. 1271–1287). This Act requires the Secretary of the Interior to comment on such proposals. The Fish and Wildlife Service provides the Department's views with regard to fish and wildlife resources.

Geothermal Steam Act of 1970 (30 U.S.C. 1001–1025). This Act requires that the Fish and Wildlife Service recommend to the Secretary those lands that shall not be leased for geothermal development by reason of their status as ". . . a fish hatchery administered by the Secretary, wildlife refuge, wildlife range, game range, wildlife management area, waterfowl production area, or for lands acquired or reserved for the protection and conservation of fish and wildlife that are threatened with extinction."

Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.). This Act requires the Department of the Interior to regulate surface mining and reclamation at existing and future mining areas. The Fish and Wildlife Service provides the Department with technical assistance regarding fish and wildlife aspects of Department programs on active and abandoned mine lands, including review of State regulatory submissions and mining plans, and comments on mining and reclamation plans.

Outer Continental Shelf Lands Act Amendments of 1978 (43 U.S.C. 1801). This Act requires the Secretary of the Interior to manage an environmentally sound oil and natural gas development program on the outer continental shelf. The Fish and Wildlife Service provides recommendations for the Department regarding potential ecological impacts before leasing in specific areas and contributes to environmental studies undertaken subsequent to leasing.

Mineral Leasing Act of 1920, as amended (30 U.S.C. 185). This Act authorizes the Secretary of the Interior to grant rights-of-way through Federal lands for pipelines transporting oil, natural gas, synthetic liquids or gaseous fuels, or any other refined liquid fuel. Prior to granting a right-of-way for a project which may have a significant impact on the environment, the Secretary is required by this Act to request and review the applicant's plan for construction, operation, and rehabilitation of the right-of-way. Also, the Secretary is authorized to issue guidelines and impose stipulations for such projects which shall include, but not be limited to, ". . . requirements for restoration, revegetation and curtailment or erosion of surface land; . . . requirements designed to control or prevent damage to the environment (including damage to fish and wildlife habitat); and . . . requirements to protect the interests of individuals living in the general area of the right-of-way or permit who rely on the fish, wildlife and biotic resources of the area for subsistence purposes."

Cooperative Unit Act (16 U.S.C. 753(a)–753(b)). This Act provides for cooperative programs for research and training between the Fish and Wildlife Service, the States, and universities.

Airport and Airway Development Act (49 U.S.C. 1716). This Act requires the Secretary of Transportation to ". . . consult with the Secretary of the Interior with regard to the effect that any project . . . may have on natural resources including, but not limited to, fish and wildlife, natural, scenic, and recreation assets, water and air quality, and other factors affecting the environment . . .".

Department of Transportation Act (49 U.S.C. 1653(f)). This Act makes it national policy that ". . . special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites . . .," and requires that the Secretary of Transportation ". . . cooperate and consult with the Secretary of the Interior in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed." The Department of Transportation projects using protected lands cannot be approved unless there are no feasible and prudent alternatives to avoid such use and, if none, all possible measures to minimize harm have been considered.

EXECUTIVE

President's Water Policy Message (June 6, 1978). This Message directs the Secretary of the Interior to promulgate procedures for determination of measures to mitigate losses of fish and wildlife resources.

Water Resources Council's *Final Rules; Principles and Standards for Water and Related Land Resources Planning—Level C* (September 29, 1980). These rules reiterate the importance of participation in the development planning process by interested Federal agencies, including the Department of the Interior. This participation includes review, coordination, or consultation required under various legislative and executive authorities. Under these rules, "Consideration is to be given to mitigation (as defined in 40 CFR 1508.20) of the adverse effects of each alternative plan. Appropriate mitigation is to be included where suitable as determined by the agency decisionmaker. Mitigation measures included are to be planned for at least concurrent and proportionate implementation with other major project features, except where such concurrent and proportionate mitigation is physically impossible. In the latter case, the reasons for deviation from this rule are to be presented in the planning report, and mitigation is to be planned for the earliest possible implementation. Mitigation for fish and wildlife and their habitat is to be planned in coordination with Federal and State fish and wildlife agencies in accordance with the Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661–664) (sic)."

Executive Order 11990—Protection of Wetlands (May 24, 1977). This Executive Order requires that each Federal agency ". . . take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for: (1) acquiring, managing and disposing of Federal lands and facilities; and (2) providing federally undertaken, financed or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation and licensing activities." Relevant wetland concerns and values include, but are not

limited to, maintenance of natural systems and long-term productivity of existing flora and fauna, habitat diversity, hydrological utility, fish, wildlife, timber, and food. Under this Order, a developmental project in a wetland may proceed only if no practicable alternatives can be ascertained and if the proposal . . . includes all practicable measures to minimize harm to the wetland that may result from its use."

Executive Order 11988—Floodplain Management (May 24, 1977). This Executive Order requires that Federal agencies take floodplain management into account when formulating or evaluating water or land use plans and that these concerns be reflected in the budgets, procedures, and regulations of the various agencies. This Order allows developmental activities to proceed in floodplain areas only when the relevant agencies have ". . . considered alternatives to avoid adverse effects and incompatible development in the floodplains . . ." or when, in lieu of this, they have ". . . designed or modified their actions in order to minimize potential harm to or within the floodplain . . .".

Executive Order 11987—Exotic Organisms (May 24, 1977). This Executive Order requires that Federal agencies shall restrict, to the extent permitted by law, the introduction of exotic species into the lands or waters which they own, lease, or hold for purposes of administration, and encourage the States, local governments, and private citizens to do the same. This Executive Order also requires Federal agencies to restrict, to the extent permitted by law, the importation of exotic species and to restrict the use of Federal funds and programs for such importation. The Secretary of the Interior, in consultation with the Secretary of Agriculture, is authorized to develop by rule or regulation a system to standardize and simplify the requirements and procedures appropriate for implementing this Order.

NATIONAL/INTERNATIONAL TREATIES

Federal Trust Responsibility to Indian Tribes. This responsibility is reflected in the numerous Federal treaties with the Indian tribes. These treaties have the force of law. Protection of Indian hunting and fishing rights necessitates conservation of fish and wildlife and their habitat.

Convention Between the United States and Japan (September 19, 1974). This Treaty endorses the establishment of sanctuaries and fixes preservation and enhancement of migratory bird habitat as a major goal of the signatories.

Convention Between the United States and the Union of Soviet Socialist Republics Concerning the Conservation of Migratory Birds and Their Environments (November 8, 1978). This Treaty endorses the establishment of sanctuaries, refuges, and protected areas. It mandates reducing or eliminating damage to all migratory birds. Furthermore, it provides for designation of special areas for migratory bird breeding, wintering, feeding, and molting, and commits the signatories to ". . . undertake measures necessary to protect the ecosystems in these areas . . . against pollution, detrimental alteration and other environmental degradation." Implementing legislation, Pub. L. 95–616, was passed in the United States in 1978.

Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (April 15, 1941). This Treaty has several provisions requiring parties to conserve certain wildlife resources and their habitats.

Convention Between the United States and Great Britain (for Canada) for Protection of Migratory Birds (August 1, 1916, as amended January 30, 1979). This Treaty provides for a uniform ". . . system of protection for certain species of birds which migrate between the United States and Canada, in order to assure the preservation of species either harmless or beneficial to man." The Treaty prohibits hunting insectivorous birds, but allows killing of birds under permit when injurious to agriculture. The 1979 amendment allows subsistence hunting of waterfowl outside of the normal hunting season.

APPENDIX B—OTHER DEFINITIONS

"Compensation," when used in the context of Service mitigation recommendations, means full replacement of project-induced losses to fish and wildlife resources, provided such full replacement has been judged by the Service to be consistent with the appropriate mitigation planning goal.

"Ecoregion" refers to a large biogeographical unit characterized by distinctive biotic and abiotic relationships. An ecoregion may be subclassified into domains, divisions, provinces, and sections. A technical explanation and map is provided in the "Ecoregions of the United States" by Robert G. Bailey, published by the U.S. Forest Service, 1976.

"Ecosystem" means all of the biotic elements (i.e., species, populations, and communities) and abiotic elements (i.e., land, air, water, energy) interacting in a given geographic area so that a flow of energy leads to a *clearly* defined trophic structure, biotic diversity, and material cycles. (Eugene P. Odum. 1971. *Fundamentals of Ecology)*

"Evaluation species" means those fish and wildlife resources in the planning area that are selected for impact analysis. They must currently be present or known to occur in the planning area during at least one stage of their life history except where species not present (1) have been identified in fish and wildlife restoration or improvement plans approved by State or Federal resource agencies, or (2) will result from natural species succession over the life of the project. In these cases, the analysis may include such identified species not currently in the planning area.

There are two basic approaches to the selection of evaluation species: (1) selection of species with high public interest, economic value or both; and (2) selection of species to provide a broader ecological perspective of an area. The choice of one approach in lieu of the other may result in a completely different outcome in the analysis of a proposed land or water development. Therefore, the objectives of the study should be clearly defined before species selection is initiated. If the objectives of a study are to base a decision on potential impacts to an entire ecological community, such as a unique wetland, then a more ecologically based approach is desirable. If, however, a land or water use decision is to be based on potential impacts to a public use area, then species selection should favor animals with significant human use values. In actual practice, species should be selected to represent social, economic and broad ecological views because mitigation planning efforts incorporate objectives that have social, economic, and ecological aspects. Species selection always should be approached in a manner that will optimize contributions to the stated objectives of the mitigation planning effort.

Most land and water development decisions are strongly influenced by the perceived impacts of the proposed action on human use. Since economically or socially important species have clearly defined linkages to human use, they should be included as evaluation species in all appropriate land and water studies. As a guideline, the following types of species should be considered:

- Species that are associated with Important Resource Problems as designated by the Director of the Fish and Wildlife Service (except for threatened or endangered species).

• Other species with monetary and non-monetary benefits to people accruing from consumptive and nonconsumptive human uses including, but not limited to, fishing, hunting, bird-watching and educational, aesthetic, scientific or subsistence uses.

An analysis based only on those species with directly identifiable economic or social value may not be broad enough to adequately describe all of the ramifications of a land and water use proposal. If it is desirable to increase the ecological perspective of an assessment, the following types of species should be considered:

• Species known to be sensitive to specific land and water use actions. The species selected with this approach serve as "early warning" or indicator species for the affected fish and wildlife community.

• Species that perform a key role in a community because of their role in nutrient cycling or energy flows. These species also serve as indicators for a large segment of the fish and wildlife community, but may be difficult to identify.

• Species that represent groups of species which utilize a common environmental resource (guilds). A representative species is selected from each guild and predicted environmental impacts for the selected species are extended with some degree of confidence to other guild members.

"Federal action agency" means a department, agency or instrumentality of the United States which plans, constructs, operates or maintains a project, or which plans for or approves a permit, lease, or license for projects or manages Federal lands.

"Fish and wildlife resources" means birds, fishes, mammals, and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

"Habitat" means the area which provides direct support for a given species, population, or community. It includes all environmental features that comprise an area such as air quality, water quality, vegetation and soil characteristics and water supply (including both surface and groundwater).

"Habitat value" means the suitability of an area to support a given evaluation species.

"Important Resource Problem" means a clearly defined problem with a single important population or a community of similar species in a given geographic area as defined by the Director of the Fish and Wildlife Service.

"In-kind replacement" means providing or managing substitute resources to replace the habitat value of the resources lost, where such substitute resources are physically and biologically the same or closely approximate those lost.

"Loss" means a change in fish and wildlife resources due to human activities that is considered adverse and;

(1) reduces the biological value of that habitat for evaluation species;

(2) reduces population numbers of evaluation species;

(3) increases population numbers of "nuisance" species;

(4) reduces the human use of those fish and wildlife resources; or

(5) disrupts ecosystem structure and function.

Changes that improve the value of existing habitat for evaluation species are not to be considered losses, i.e., burning or selective tree harvesting for wildlife management purposes. In addition, reductions in animal populations for the purpose of harvest or fish and wildlife managment will not be considered as losses for the purpose of this policy.

"Minimize" means to reduce to the smallest practicable amount or degree.

"Mitigation banking" means habitat protection or improvement actions taken expressly for the purpose of compensating for unavoidable losses from specific future development actions. It only includes those actions above and beyond those typically taken by Congress for protection of fish and wildlife resources.

"Out-of-kind replacement" means providing or managing substitute resources to replace the habitat value of the resources lost, where such substitute resources are physically or biologically different from those lost.

"Planning area" means a geographic space with an identified boundary that includes:

(1) The area identified in the study's authorizing document;

(2) The locations of resources included in the study's identified problems and opportunities;

(3) The locations of alternative plans, often called "project areas;" and

(4) The locations of resources that would be directly, indirectly, or cumulatively affected by alternative plans, often called the "affected area."

"Practicable" means capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of the pertinent factors, such as environment, cost, or technology.

"Project" means any action, planning or approval process relating to an action that will directly or indirectly affect fish and wildlife resources.

"Replacement" means the substitution or offsetting of fish and wildlife resource losses with resources considered to be of equivalent biological value. However, resources used for replacement represent loss or modification of another type of habitat value. Replacement actions still result in a loss of habitat acreage and types which will continually diminish the overall national resource base. It should be clearly understood that replacement actions never restore the lost fish and wildlife resource—that is lost forever.

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Cecil Andrus,

Secretary of the Department of the Interior.

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