

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service**

[Docket No. FWS-HQ-ES-2015-0126;
FXHC1122090000-156-FF09E33000]

Proposed Revisions to the U.S. Fish and Wildlife Service Mitigation Policy

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Announcement of draft policy; request for public comment.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce proposed revisions to our Mitigation Policy, which has guided Service recommendations on mitigating the adverse impacts of land and water developments on fish, wildlife, plants, and their habitats since 1981. The revisions are motivated by changes in conservation challenges and practices since 1981, including accelerating loss of habitats, effects of climate change, and advances in conservation science. The revised policy provides a framework for applying a landscape-scale approach to achieve, through application of the mitigation hierarchy, a net gain in conservation outcomes, or at a minimum, no net loss of resources and their values, services, and functions resulting from proposed actions. The primary intent of the policy is to apply mitigation in a strategic manner that ensures an effective linkage with conservation strategies at appropriate landscape scales. We request comments, information, and recommendations from governmental agencies, Indian Tribes, the scientific community, industry groups, environmental interest groups, and any other interested parties.

DATES: We will accept comments from all interested parties until May 9, 2016. Please note that if you are using the Federal eRulemaking Portal (see **ADDRESSES** below), the deadline for submitting an electronic comment is 11:59 p.m. Eastern Standard Time on this date.

ADDRESSES: *Document Review:* The draft policy is available for review at <http://www.regulations.gov>, under docket number FWS-HQ-ES-2015-0126.

General Comments: You may submit comments by one of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. In the Search box, enter the Docket number for the proposed policy, which is FWS-HQ-ES-2015-0126. You may enter a comment by clicking on the "Comment Now!" button. Please ensure that you have found the correct document before submitting your comment.

- *U.S. mail or hand delivery:* Public Comments Processing, Attn: Docket No. FWS-HQ-ES-2015-0126; Division of Policy, Performance and Management; U.S. Fish and Wildlife Service; 5275 Leesburg Pike, ABHC-PPM; Falls Church, VA 22041-3803.

We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see Request for Information below for more information).

FOR FURTHER INFORMATION CONTACT: Jason Miller, U.S. Fish and Wildlife Service, Branch of Conservation Planning Assistance, 5275 Leesburg Pike, Falls Church, VA 22041-3803, telephone 703-358-1756.

SUPPLEMENTARY INFORMATION: We, the U.S. Fish and Wildlife Service (Service), announce proposed revisions to our Mitigation Policy (January 23, 1981; 46 FR 7644-7663), which has guided Service recommendations on mitigating the adverse impacts of land and water developments on fish, wildlife, plants, and their habitats since 1981. The revisions are motivated by changes in conservation challenges and practices since 1981, including accelerating loss of habitats, effects of climate change, and advances in conservation science. The revised policy provides a framework for applying a landscape-scale approach to achieve, through application of the mitigation hierarchy, a net gain in conservation outcomes, or at a minimum, no net loss of resources and their values, services, and functions resulting from proposed actions. The primary intent of the policy is to apply mitigation in a strategic manner that ensures an effective linkage with conservation strategies at appropriate landscape scales.

The revised policy integrates all authorities that allow the Service to recommend or require mitigation of impacts to Federal trust fish and wildlife resources, and other resources identified in statute, during development processes. It is intended to serve as a single umbrella policy under which the Service may issue more detailed policies or guidance documents covering specific activities in the future.

Background

The U.S. Fish and Wildlife Service (Service) is revising its 1981 Mitigation Policy (1981 Policy), which has guided Service recommendations on mitigating the adverse impacts of land and water developments on fish, wildlife, plants, and their habitats, and uses thereof since 1981. The primary intent of the policy is to apply mitigation in a

strategic manner that ensures an effective linkage with conservation strategies at appropriate landscape scales, consistent with the Presidential Memorandum on Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (November 3, 2015), the Secretary of the Interior's Order 3330 entitled "Improving Mitigation Policies and Practices of the Department of the Interior" (October 31, 2013), and the Departmental Manual Chapter (600 DM 6) on Implementing Mitigation at the Landscape-scale (October 23, 2015). Within this context, our revisions of the 1981 Policy: (a) Broaden its scope to address all resources for which the Service has authorities to recommend or require mitigation for impacts to resources; and (b) provide an updated framework for applying mitigation measures that will maximize their effectiveness at multiple geographic scales.

By memorandum, the President directed all Federal agencies that manage natural resources to avoid and minimize damage to natural resources and to effectively offset remaining impacts, consistent with the principles declared in the memorandum and existing statutory authority. Under the memorandum, all Federal mitigation policies shall clearly set a net benefit goal or, at minimum, a no net loss goal for natural resources, wherever doing so is allowed by existing statutory authority and is consistent with agency mission and established natural resource objectives. The policy proposed herein implements the President's directions for the Service.

Secretarial Order 3330 established a Department-wide mitigation strategy to ensure consistency and efficiency in the review and permitting of infrastructure development projects and in conserving natural and cultural resources. The Order charged the Department's Energy and Climate Change Task Force with developing a report that addresses how to best implement consistent, Department-wide mitigation practices and strategies. The report of the Task Force, "A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior" (April 2014), describes guiding principles for mitigation to improve process efficiency, including the use of landscape-scale approaches rather than project-by-project or single-resource mitigation approaches. This revision of the Service's Mitigation Policy complies with a deliverable identified in the Strategy that seeks to implement the guiding principles set forth in the

Secretary's Order, the corresponding Strategy, and subsequent 600 DM 6.

In 600 DM 6, the Department of the Interior established policy intended to improve permitting processes and help achieve beneficial outcomes for project proponents, impacted communities, and the environment. By implementing this Manual Chapter, the Department will:

- (a) Effectively mitigate impacts to Department-managed resources and their values, services, and functions;
- (b) provide project developers with added predictability and efficient and timely environmental reviews;
- (c) improve the resilience of resources in the face of climate change;
- (d) encourage strategic conservation investments in lands and other resources; increase compensatory mitigation effectiveness, durability, transparency, and consistency; and
- (e) better utilize mitigation measures to help achieve Departmental goals.

The policy proposed herein implements the Department's directions for the Service.

As with the 1981 Policy, the Service intends, with this revision, to conserve, protect, and enhance fish, wildlife, plants, and their habitats for future generations. Effective mitigation is a powerful tool for furthering this mission.

Discussion

The Service's motivations for revising the 1981 Policy include:

- Accelerating loss, including degradation and fragmentation, of habitats and subsequent loss of ecosystem function since 1981;
- Threats that were not fully evident in 1981, such as effects of climate change, the spread of invasive species, and outbreaks of epizootic diseases, are now challenging the Service's conservation mission;
- The science of fish and wildlife conservation has substantially advanced in the past three decades;
- The Federal statutory, regulatory, and policy context of fish and wildlife conservation has substantially changed since the 1981 Policy; and
- A need to clarify the Service's definition and usage of mitigation in various contexts, including the conservation of species listed as threatened or endangered under the Endangered Species Act, which was expressly excluded from the 1981 Policy.

Mitigation Defined

In the context of impacts to environmental resources (including their values, services, and functions) resulting from proposed actions,

"mitigation" is a general label for measures that a proponent takes to avoid, minimize, and compensate for such impacts. The 1981 Policy adopted the definition of mitigation in the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations (40 CFR 1508.20). The CEQ mitigation definition remains unchanged since codification in 1978 and states that "Mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- compensating for the impact by replacing or providing substitute resources or environments."

This definition is adopted in this revised policy, and the use of its components in various contexts is clarified. In 600 DM 6, the Department of the Interior states that mitigation, as enumerated by CEQ, is compatible with Departmental policy; however, as a practical matter, the mitigation elements are categorized into three general types that form a sequence: Avoidance, minimization, and compensatory mitigation for remaining unavoidable (also known as residual) impacts. The 1981 Policy further stated that the Service considers the sequence of the CEQ mitigation definition elements to represent the desirable sequence of steps in the mitigation planning process. The Service generally affirms this hierarchical approach in this policy. We advocate first avoiding and then minimizing impacts that critically impair our ability to achieve conservation objectives for affected resources. We also provide guidance that recognizes how action- and resource-specific circumstances may warrant departures from the preferred mitigation sequence; for example, as when impacts to a species may occur at a location that is not critical to achieving the conservation objectives for that species, or when current conditions are likely to change substantially due to the effects of a changing climate. In such circumstances, relying more on compensating for the impacts at another location may more effectively serve the conservation objectives for the affected resources. This policy provides a logical

framework for the Service to consistently make such choices.

Scope of the Revised Mitigation Policy

The Service's mission is to conserve, protect, and enhance fish, wildlife, and plants, and their habitats for the continuing benefit of the American people. This mission includes a responsibility to make mitigation recommendations and requirements during the review of actions based on numerous authorities related to specific covered plant and animal species, habitats, and broader ecological functions. Our authority to engage actions that may affect these resources extends to all U.S. States and territories, on public and on private lands. This unique standing necessitates that we clarify our integrated interests and expectations when seeking mitigation for impacts to fish, wildlife, plants, and their habitats.

This policy serves as over-arching Service guidance applicable to all actions for which the Service has specific authority to recommend or require the mitigation of impacts to fish, wildlife, plants, and their habitats. As necessary and as budgetary resources permit, we intend to adapt or develop Service program-specific policies, handbooks, and guidance documents, consistent with the applicable statutes, to integrate the spirit and intent of this policy.

New Threats and New Science

Since the publication of the Service's 1981 Policy, land use changes in the United States have reduced the habitats available to fish and wildlife. By 1982, approximately 71 million acres of the lower 48 States had already been developed. Between 1982 and 2012, the American people developed an additional 44 million acres for a total of 114 million acres developed. Of all historic land development in the United States, excluding Alaska, over 37 percent has occurred since 1982. Much of this newly developed land had been existing habitats, including 17 million acres converted from forests.

A projection that the U.S. population will increase from 310 million to 439 million between 2010 and 2050 suggests that land conversion trends like these will continue. In that period, development in the residential housing sector alone may add 52 million (42% more) units, plus 37 million replacement units. By 2060, a loss of up to 38 million acres (an area the size of Florida) of forest habitats alone is possible. Attendant pressures on remaining habitats will also increase fragmentation, isolation, and

degradation through myriad indirect effects. The loss of ecological function will radiate beyond the extent of direct habitat losses. Given these projections, the near-future challenges for conserving species and habitats are daunting. As more lands and waters are developed for human uses, it is incumbent on the Service to help project proponents successfully and strategically mitigate impacts to fish and wildlife and prevent systemic losses of ecological function.

Accelerating climate change is resulting in impacts that pose a significant challenge to conserving species, habitat, and ecosystem functions. Climatic changes can have direct and indirect effects on species abundance and distribution, and may exacerbate the effects of other stressors, such as habitat fragmentation and diseases. The conservation of habitats within ecologically functioning landscapes is essential to sustaining fish, wildlife, and plant populations and improving their resilience in the face of climate change impacts, new diseases, invasive species, habitat loss, and other threats. Therefore, this policy emphasizes the integration of mitigation planning with a landscape approach to conservation.

Over the past 30 years, the concepts of adaptive management (resource management decision-making under uncertainty) have gained general acceptance as the preferred science-based approach to conservation. Adaptive management is an iterative process that involves: (a) Formulating alternative actions to meet measurable objectives; (b) predicting the outcomes of alternatives based on current knowledge; (c) conducting research that tests the assumptions underlying those predictions; (d) implementing alternatives; (e) monitoring the results; and (f) using the research and monitoring results to improve knowledge and adjust actions and objectives accordingly. Adaptive management further serves the need of most natural resources managers and policy makers to provide accountability for the outcomes of their efforts, *i.e.*, progress toward achieving defensible and transparent objectives.

Working with many partners, the Service is increasingly applying the principles of adaptive management in a landscape approach to conservation. Mitigating the impacts of actions for which the Service has advisory or regulatory authorities continues to play a significant role in accomplishing our conservation mission under this approach. Our aim with this policy is to align mitigation requirements and

recommendations with conservation strategies at appropriate landscape scales so that mitigation most effectively contributes to achieving the conservation objectives we are pursuing with our partners, and to align mitigation recommendations and requirements with Secretarial Order 3330 and 600 DM.

A Focus on Habitat Conservation

Although many Service authorities pertain to specific taxa or groups of species, most specifically recognize that these resources rely on functional ecosystems to survive and persist for the continuing benefit of the American people. Mitigation is a powerful tool for sustaining species and the habitats upon which they depend; therefore, the Service's mitigation policy must effectively deal with impacts to the ecosystem functions, properties, and components that sustain fish, wildlife, plants, and their habitats. The 1981 Policy focused on habitat: "the area which provides direct support for a given species, population, or community." It defined criteria for assigning the habitats of project-specific evaluation species to one of four resource categories, using a two-factor framework based on the relative scarcity of the affected habitat type and its suitability for the evaluation species, with mitigation guidelines for each category. We maintain a focus on habitats in this policy by using evaluation species and a valuation framework for their affected habitats, because habitat conservation is still generally the best means of achieving conservation objectives for species. However, our revisions of the evaluation species and habitat valuation concepts are intended to address more explicitly the landscape context of species and habitat conservation to improve mitigation effectiveness and efficiency. In addition, we recognize that some situations may require the inclusion of measures that are not habitat based to address certain species-specific impacts.

Applicability to the Endangered Species Act

The Service's 1981 mitigation policy did not apply to the conservation of species listed as threatened or endangered under the Endangered Species Act (ESA). Excluding listed species from the policy was based on: (a) A recognition that all Federal actions that could affect listed species and designated critical habitats must comply with the consultation provisions of section 7 of the ESA; and (b) a position that "the traditional concept of mitigation" did not apply to such

actions. This policy supersedes this exclusion for the Service. Mitigation, as broadly defined in this policy, is an essential component of achieving the overarching purpose of the ESA, which is to conserve listed species and the ecosystems upon which they depend. Effective mitigation can contribute to the recovery of listed species or prevent further declines in populations and habitat resources that would otherwise slow or impede recovery of listed species.

The 1982 amendments to the ESA created incidental take permitting provisions for non-Federal actions (section 10(a)(1)(B)) with specific requirements (sections 10(a)(2)(A)(ii) and 10(a)(2)(B)(ii)) for mitigating impacts to listed species to the maximum extent practicable, and amended section 7(b) to include an incidental take statement provision for Federal agency actions that do not jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. These amendments provide a legal means by which non-Federal and Federal actions are exempted from the prohibition against take in section 9 for endangered species and from comparable prohibitions adopted by regulation under section 4(d) for threatened species.

Mitigation, as broadly defined in this policy, does not relieve an action proponent of the obligation to secure exemption for unavoidable taking that results incidentally from otherwise lawful activities. Nevertheless, mitigation is an integral component of the section 7 and 10 processes by addressing the conservation needs of listed species within the context of the action and the impacts of the action on the species.

Under ESA section 7 the Service has consistently acknowledged and accepted or applied mitigation in the form of:

- Conservation measures voluntarily included as part of a proposed Federal action that avoid, minimize, rectify, reduce, or compensate for unavoidable (also known as residual) impacts to a listed species;
- components of a reasonable and prudent alternative to avoid jeopardizing the continued existence of listed species or destroying or adversely modifying designated critical habitat; and
- reasonable and prudent measures within an incidental take statement to minimize the impacts of taking on the affected listed species.

This policy encourages the Service to utilize a broader definition of mitigation

where allowed by law. Under section 10(a)(2), a non-Federal applicant is required to take steps “to minimize and mitigate such impacts . . . to the maximum extent practicable,” among other requirements to receive an incidental take permit. In addition, issuance of an incidental take permit under section 10 is a Federal action subject to the consultation requirements of section 7(a)(2).

This policy serves as over-arching Service guidance applicable to all actions for which the Service has specific authority to recommend or require the mitigation of impacts to fish, wildlife, plants, and their habitats, including those covered by the ESA. We intend to adapt Service program-specific policies, handbooks, and guidance documents, consistent with applicable statutes, to integrate the spirit and intent of this policy. For example, we anticipate publishing a Service policy specific to compensatory mitigation under the ESA that will align with the guidance described herein while providing additional operational detail.

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

1. Purpose

This policy is applicable to all actions for which the U.S. Fish and Wildlife Service (Service) has specific authority to recommend or require the mitigation of impacts to fish, wildlife, plants, and their habitats. This policy provides guidance for Service personnel. The policy allows for variations appropriate to action- and resource-specific circumstances. It will help to ensure consistent and effective recommendations by outlining policy for determining the levels of mitigation needed and the various methods for accomplishing mitigation. It will help align Service-recommended mitigation with conservation objectives for affected resources and the strategies for achieving those objectives at ecologically relevant scales. It will allow action agencies and proponents to anticipate Service recommendations and plan for mitigation measures early, thus avoiding delays and assuring equal consideration of fish and wildlife resources with other action features and purposes. This policy supersedes the Fish and Wildlife Service Mitigation Policy (46 FR 7644–7663) published in 1981. Definitions for terms used throughout this policy are provided in section 6.

2. Authority

The Service has jurisdiction over a broad range of fish and wildlife

resources. Service authorities are codified under multiple statutes that address management and conservation of natural resources from many perspectives, including, but not limited to the effects of land, water, and energy development on fish, wildlife, plants, and their habitats. We list below the statutes that provide the Service, directly or indirectly through delegation from the Secretary of the Interior, specific authority for conservation of these resources and that give the Service a role in mitigation planning for actions affecting them. We further discuss the Service’s mitigation planning role under each statute and list additional authorities in Appendix A.

- Bald and Golden Eagle Protection Act, 16 U.S.C. 668 *et seq.* (Eagle Act)
- Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq.* (ESA)
- Federal Land and Policy Management Act, 43 U.S.C. 1701 *et seq.* (FLPMA)
- Federal Power Act, 16 U.S.C. 791–828c
- Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. 1251 *et seq.* (CWA)
- Fish and Wildlife Conservation Act, 16 U.S.C. 2901–2912
- Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661–667(e) (FWCA)
- Marine Mammal Protection Act of 1972, as amended, 16 U.S.C. 1361 *et seq.* (MMPA)
- Migratory Bird Treaty Act, 16 U.S.C. 703–712 (MBTA)
- National Environmental Policy Act, 42 U.S.C. 4371 *et seq.* (NEPA)
- National Wildlife Refuge System Administration Act, 16 U.S.C. 668dd *et seq.*

3. Scope

3.1. Actions

This policy applies to all Service activities related to evaluating the effects of proposed actions and subsequent recommendations or requirements to mitigate impacts to resources, defined in section 3.2. For purposes of this policy, actions include: (a) Activities conducted, authorized, licensed, or funded by Federal agencies (including Service-proposed activities); (b) non-Federal activities to which one or more of the Service’s statutory authorities apply to make mitigation recommendations or specify mitigation requirements; and (c) the Service’s provision of technical assistance to partners in collaborative mitigation planning processes that occur outside of individual action review.

3.2. Resources

This policy may apply to specific resources based on any Federal authority or combination of authorities, such as treaties, statutes, regulations, or Executive Orders, that empower the Federal Government to manage, control, or protect fish, wildlife, plants, and their habitats that are affected by proposed actions. Such Federal authority need not be exclusive, comprehensive, or primary, and in many cases, may overlap with that of States or tribes or both.

This policy applies to those resources identified in statute or implementing regulations that provide the Service authority to make mitigation recommendations or specify mitigation requirements for the actions described above. This is inclusive of, but not limited to, the federal trust fish and wildlife resources concept.

The Service has traditionally described its trust resources as migratory birds, federally listed endangered and threatened species, certain marine mammals, and inter-jurisdictional fish. Some authorities narrowly define or specifically identify covered taxa, such as threatened and endangered species, marine mammals, or the species protected by the Migratory Bird Treaty Act. This policy applies to trust resources; however, Service Regions and field stations retain discretion to engage actions on an expanded basis under appropriate authorities.

The types of resources for which the Service is authorized to recommend or require mitigation also include those that contribute broadly to ecological functions that sustain species. The definitions of the terms “wildlife” and “wildlife resources” in the Fish and Wildlife Coordination Act include birds, fishes, mammals, and all other classes of wild animals, and all types of aquatic and land vegetation upon which wildlife is dependent. Section 404 of the Clean Water Act (33 CFR 320.4) codifies the significance of wetlands and other waters of the United States as important public resources for their habitat value, among other functions. The Endangered Species Act envisions a broad consideration when describing its purposes as providing a means whereby the ecosystems upon which endangered and threatened species depend may be conserved and when directing Federal agencies at § 7(a)(1) to utilize their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of listed species. The purpose of the National Environmental Policy Act (NEPA) also

establishes an expansive focus in promoting efforts that will prevent or eliminate damage to the environment while stimulating human health and welfare. In NEPA, Congress recognized the profound impact of human activity on the natural environment, particularly through population growth, urbanization, industrial expansion, resource exploitation, and new technologies. NEPA further recognized the critical importance of restoring and maintaining environmental quality, and declared a Federal policy of using all practicable means and measures to create and maintain conditions under which humans and nature can exist in productive harmony. These statutes address systemic concerns and provide authority for protecting habitats and landscapes.

3.3. Exclusions

This policy does not apply retroactively to completed actions or to actions specifically exempted under statute from Service review. It does not apply where the Service has already agreed to a mitigation plan for pending actions, except where: (a) New activities or changes in current activities would result in new impacts; (b) a law enforcement action occurs after the Service agrees to a mitigation plan; (c) an after-the-fact permit is issued; or (d) where new authorities, or failure to implement agreed-upon recommendations warrant new mitigation planning. Service personnel may elect to apply this policy to actions that are under review as of the date of its final publication.

3.4. Applicability to Service Actions

This policy applies to actions that the Service proposes, including those for which the Service is the lead or co-lead Federal agency for compliance with NEPA. However, it applies only to the mitigation of impacts to fish, wildlife, plants, and their habitats that are reasonably foreseeable from such proposed actions. When it is the Service that proposes an action, the Service acknowledges its responsibility to consult with Tribes, and to consider the effects to, and mitigation for, impacts to resources besides fish, wildlife, plants, and their habitats (e.g., cultural and historic resources, traditional practices, environmental justice, public health, recreation, other socio-economic resources, etc.). This policy neither provides guidance nor supersedes existing guidance for mitigating impacts to resources besides those defined in section 3.2, Resources.

NEPA requires the action agency to evaluate the environmental effects of

alternative proposals for agency action, including the environmental effects of proposed mitigation (e.g., effects on historic properties resulting from habitat restoration). Considering impacts to resources besides fish and wildlife requires the Service to coordinate with entities having jurisdiction by law, special expertise, or other applicable authority. Appendix B further discusses the Service's consultation responsibilities with tribes related to fish and wildlife impact mitigation, e.g., statutes that commonly compel the Service to address the possible environmental impacts of mitigation activities for fish and wildlife resources. It also supplements existing Service NEPA guidance by describing how this policy integrates with the Service's decision-making process under NEPA.

3.5. Financial Assistance Programs and Mitigation

The Service's 60 financial assistance programs disburse more than \$1 billion annually to non-Federal recipients through grants and cooperative agreements. Most programs leverage Federal funds by requiring or encouraging the commitment of matching cash or in-kind contributions. Recipients have acquired approximately 10 million acres in fee title, conservation easements, or leases through these programs. To foster consistent application of financial assistance programs with respect to mitigation processes, Appendix C addresses the limited role that specific types of mitigation can play in financial assistance programs.

4. General Policy and Principles

The mission of the Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. In furtherance of this mission, the Service has a responsibility to ensure that impacts to fish, wildlife, plants, and their habitats in the United States, its territories, and possessions are considered when actions are planned, and that such impacts are mitigated so that these resources may provide a continuing benefit to the American people. Consistent with Congressional direction through the statutes listed in the "Authority" section of this policy, the Service will provide timely and effective recommendations to conserve, protect, and enhance fish, wildlife, plants, and their habitats when proposed actions may reduce the benefits thereof to the public.

Fish and wildlife and their habitats are resources that provide commercial,

recreational, social, and ecological value to the Nation. For Tribal Nations, specific fish and wildlife resources and associated landscapes have traditional cultural and religious significance. Fish and wildlife are conserved and managed for the people by State, Federal, and tribal governments. If reasonably foreseeable impacts of proposed actions are likely to reduce or eliminate the public benefits that are provided by such resources, these governments have shared responsibility or interest in recommending 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, plants, their habitats, and uses thereof resulting from proposed actions.

The following fundamental principles will guide Service-recommended mitigation, as defined in this policy, across all Service programs.

a. *The goal is a net conservation gain.* The Service's mitigation planning goal is to improve (i.e., a net gain) or, at minimum, to maintain (i.e., no net loss) the current status of affected resources, as allowed by applicable statutory authority and consistent with the responsibilities of action proponents under such authority, primarily for important, scarce, or sensitive resources, or as required or appropriate. Service mitigation recommendations or requirements will specify the means and measures that achieve this goal, as informed by established conservation objectives and strategies.

b. *Observe an appropriate mitigation sequence.* The Service recognizes it is generally preferable to take all appropriate and practicable measures to avoid and minimize adverse effects to resources, in that order, before compensating for remaining losses. However, to achieve the best possible conservation outcomes, the Service recognizes that some limited circumstances may warrant a departure from this preferred sequence. The Service will prioritize the applicable mitigation types based on a valuation of the affected resources as described in this policy in a landscape conservation context.

c. *A landscape approach will inform mitigation.* The Service will integrate mitigation into a broader ecological context with applicable landscape-level conservation plans, where available, when developing, approving, and implementing plans, and by steering mitigation efforts in a manner that will best contribute to achieving conservation objectives. The Service will consider climate change and other stressors that may affect ecosystem

integrity and the resilience of fish and wildlife populations, which will inform the scale, nature, and location of mitigation measures necessary to achieve the best possible conservation outcome. The Service will foster partnerships with Federal and State partners, tribes, and other stakeholders to design mitigation strategies that will prevent fragmented landscapes and restore core areas and connectivity necessary to sustain species.

d. *Ensure consistency and transparency.* The Service will use timely and transparent processes that provide predictability and uniformity through the consistent application of standards and protocols as may be developed to achieve effective mitigation.

e. *Science-based mitigation.* The Service will use the best available science in formulating and monitoring the long-term effectiveness of its mitigation recommendations and decisions, consistent with all applicable Service science policy.

f. *Durability.* The Service will recommend or require that mitigation measures are durable, and at a minimum, maintain their intended purpose for as long as impacts of the action persist on the landscape. The Service will recommend or require that implementation assurances, including financial, be in place when necessary to assure the development, maintenance, and long-term viability of the mitigation measure.

g. *Effective compensatory mitigation.* The Service will recommend or require that compensatory mitigation be implemented before the impacts of an action occur and be additional to any existing or foreseeably expected conservation efforts planned for the future. To ensure consistent implementation of compensatory mitigation, the Service will support application of equivalent standards regardless of the mechanism used to provide compensatory mitigation.

5. Mitigation Framework

This section of the policy provides the conceptual framework and guidance for implementing the general policy and principles declared in section 4 in an action- and landscape-specific mitigation context. Implementation of the general policy and principles as well as the direction provided in 600 DM 6 occurs by integrating landscape scale decision-making within the Service's existing process for assessing effects of an action and formulating mitigation measures. The key terms used in describing this framework are defined in section 6, Definitions.

The Service requires or recommends mitigation under one or more Federal authorities (section 2) when necessary and appropriate to avoid, minimize, and/or compensate for impacts to resources (section 3.2) resulting from proposed actions (section 3.1). Our goal for mitigation is to achieve a net conservation gain or, at minimum, no net loss of the affected resources (section 4). Sections 5.1 through 5.9, summarized below, provide an overview of the mitigation framework and describe how the Service will engage actions as part of its process of assessing the effects of an action and formulating mitigation measures that would achieve this goal. Variations appropriate to action-specific circumstances are permitted; however, the Service will provide action proponents with the reasons for such variations.

Synopsis of the Service Mitigation Framework

5.1. *Integrating Mitigation Planning with Conservation Planning.* The Service will utilize landscape-scale approaches and landscape conservation planning to inform mitigation, including identifying areas for mitigation that are most important for avoiding and minimizing impacts, improving habitat suitability, and compensating for unavoidable impacts to species. Advance mitigation plans can achieve efficiencies for attaining conservation objectives while streamlining the planning and regulatory processes for specific landscapes and/or classes of actions within a landscape.

5.2. *Collaboration and Coordination.* At both the action and landscape scales, the Service will collaborate and coordinate with action proponents and with our State, Federal, and tribal conservation partners in mitigation.

5.3. *Assessment.* Assessing the effects of proposed actions and proposed mitigation measures is the basis for formulating a plan to meet the mitigation policy goal. This policy does not endorse specific methodologies, but does describe several principles of effects assessment and general characteristics of methodologies that the Service will use in implementing this policy.

5.4. *Evaluation Species.* The Service will identify the species evaluated for mitigation purposes. The Service should select the smallest set of evaluation species necessary, but include all species for which the Service is required to issue biological opinions, permits, or regulatory determinations. When actions would affect multiple resources of conservation interest, evaluation

species should serve to best represent other affected species or aspects of the environment. This section describes characteristics of evaluation species that are useful in planning mitigation.

5.5. *Habitat Valuation.* The Service will assess the value of affected habitats to evaluation species based on their scarcity, suitability, and importance to achieving conservation objectives. This valuation will determine the relative emphasis the Service will place on avoiding, minimizing, and compensating for impacts to habitats of evaluation species.

5.6. *Means and Measures.* The means and measures that the Service recommends for achieving the mitigation policy goal are action- and resource-specific applications of the three general types of impact mitigation (avoid, minimize, and compensate). This section provides an expanded definition of each type, explains its place in this policy, and lists generalized examples of its intended use in Service mitigation recommendations and requirements.

5.7. *Recommendations.* This section describes general standards for Service recommendations, and declares specific preferences for various characteristics of compensatory mitigation measures, e.g., timing, location.

5.8. *Documentation.* Service involvement in planning and implementing mitigation requires documentation that is commensurate in scope and level of detail with the significance of the potential impacts to resources. This section provides an outline of documentation elements that are applicable at three different stages of the mitigation planning process: early planning, effects assessment, and final recommendations.

5.9. *Follow-up.* Determining whether Service mitigation recommendations were adopted and effective requires monitoring, and when necessary, corrective action.

5.1. Integrating Mitigation With Conservation Planning

The Service's mitigation goal is to improve or, at minimum, maintain the current status of affected resources, as allowed by applicable statutory authority and consistent with the responsibilities of action proponents under such authority (see section 4). This policy provides a framework for formulating mitigation means and measures (see section 5.6) intended to efficiently achieve the mitigation planning goal based upon best available science. This framework seeks to integrate mitigation requirements and recommendations into conservation

planning to better protect or enhance populations and those features on a landscape that are necessary for the long-term persistence of biodiversity and ecological functions. Functional ecosystems enhance the resilience of fish and wildlife populations challenged by the widespread stressors of climate change, invasive species, and the continuing degradation and loss of habitat through human alteration of the landscape. Achieving the mitigation goal of this policy involves:

- Avoiding and minimizing those impacts that most seriously compromise resource sustainability;
- rectifying and reducing over time those impacts where restoring or maintaining conditions in the affected area most efficiently contributes to resource sustainability; and
- strategically compensating for impacts so that actions result in an improvement in the affected resources, or at a minimum, result in a no net loss of those resources.

The Service recognizes that we will engage in mitigation planning for actions affecting resources in landscapes for which conservation objectives and strategies to achieve those objectives are not yet available, well developed, or formally adopted. The landscape-level approach to resource decisionmaking described in this policy and in the Departmental Manual (600 DM 6.6D) applies in contexts with or without established conservation plans, but it will achieve its greatest effectiveness when integrated with such planning.

Whenever required or appropriate, the Service will seek a net gain in the conservation outcome of actions we engage for purposes of this policy. It is consistent with the Service's mission to identify and promote opportunities for resource enhancement during action planning, *i.e.*, to decrease the gap between the current and desired status of a resource. Mitigation planning often presents practicable opportunities to implement mitigation measures in a manner that outweighs impacts to affected resources. When resource enhancement is also consistent with the mission, authorities, and/or responsibilities of action proponents, the Service will encourage proponents to develop measures that result in a net gain toward achieving conservation objectives for the resources affected by their actions. Such proponents include, but are not limited to, Federal agencies when responsibilities such as the following apply to their actions:

- Carry out programs for the conservation of endangered and threatened species (Endangered Species Act, section 7(a)(1));

- consult with the Service regarding both mitigation and enhancement in water resources development (Fish and Wildlife Coordination Act, section 2);
- enhance the quality of renewable resources (National Environmental Policy Act, section 101(b)(6)); and/or
- restore and enhance bird habitat (Executive Order 13186, section 3(e)(2)).

To serve the public interest in fish and wildlife resources, the Service works under various authorities (see section 2) with partners to establish conservation objectives for species, and to develop and implement plans for achieving such objectives in various landscapes. We define a landscape as an area encompassing an interacting mosaic of ecosystems and human systems that is characterized by common management concerns (see section 6, Definitions). Relative to this policy, such management concerns relate to conserving species. The geographic scale of a landscape is variable, depending on the interacting elements that are meaningful to particular conservation objectives and may range in size from large regions to a single watershed or habitat type. When proposed actions may affect species in a landscape addressed in one or more established conservation plans, such plans will provide the basis for Service recommendations to avoid and minimize particular impacts, rectify and reduce over time others, and compensate for others. The criteria in this policy for selecting evaluation species (section 5.4) and assessing the value of their affected habitats (section 5.5) are designed to place mitigation planning in a landscape conservation context by applying the various types of mitigation where they are most effective at achieving the mitigation policy goal.

The Service recognizes the inefficiency of automatically applying under all circumstances each mitigation type in the traditional mitigation sequence. As DM 6 also recognizes, in limited situations, specific circumstances may exist that warrant an alternative from this sequence, such as when seeking to achieve the maximum benefit to impacted resources and their values, services, and functions. For example, the cost and effort involved in avoiding impacts to a habitat that is likely to become isolated or otherwise unsuitable for evaluation species in the foreseeable future may result in less conservation when compared to actions that achieve a greater conservation benefit if used to implement onsite compensatory mitigation in area(s) that are more important in the long term to achieving conservation objectives for the affected resource(s). Conversely,

onsite avoidance is the priority where impacts would substantially impair progress toward achieving conservation objectives.

The Service will rely upon existing conservation plans that are based upon the best available scientific information, consider climate-change adaptation, and contain specific objectives aimed at the biological needs of the affected resources. Where existing conservation plans are not available that incorporate all of these elements or are not updated with the best available scientific information, Service personnel will otherwise incorporate the best available science into mitigation decisions and recommendations and continually seek better information in areas of greatest uncertainty.

Advance Mitigation Planning at Larger Scales

The Service supports the planning and implementation of advance mitigation plans in a landscape conservation context, *i.e.*, mitigation developed before actions are proposed, particularly in areas where multiple similar actions are expected to adversely affect a similar suite of species. Advance mitigation plans should complement or tier from existing conservation plans relevant to the affected resources (*e.g.*, recovery plans, habitat conservation plans, or non-governmental plans). Effective and efficient advance mitigation identify high-priority resources and areas on a regional or landscape scale, prior to and without regard to specific proposed actions, in which to focus: (a) Resource protection for avoiding impacts; (b) resource enhancement or protection for compensating unavoidable impacts; and (c) measures to improve the resilience of resources in the face of climate change or otherwise increase the ability to adapt to climate and other landscape change factors. In many cases, the Service can take advantage of available Federal, State, tribal, local or non-governmental plans that identify such priorities.

Developing advance mitigation should involve stakeholders in a transparent process for defining objectives and the means to achieving those objectives. Planning for advance mitigation should establish standards for determining the appropriate scale, type, and location of mitigation for impacts to specific resources within a specified area. Adopted plans that incorporate these features are likely to substantially shorten the time needed for regulatory review and approval as actions are subsequently proposed. Advance mitigation plans, not limited to

those developed under a programmatic NEPA decision-making process or a Habitat Conservation Plan process, will provide efficiencies for project-level Federal actions and will also better address potential cumulative impacts.

Procedurally, advance mitigation should draw upon existing land-use plans and databases associated with human infrastructure, including transportation, and water and energy development, as well as ecological data and conservation plans for floodplains, water quality, high-value habitats, and key species. Stakeholders and Service personnel process these inputs to design a conservation network that considers needed community infrastructure and clearly prioritizes the role of mitigation in conserving natural features that are necessary for long-term maintenance of ecological functions on the landscape. As development actions are proposed, an effective advance regional mitigation plan will provide a transparent process for identifying appropriate mitigation opportunities within the regional framework and selecting the mitigation projects with the greatest aggregated conservation benefits.

5.2. Collaboration and Coordination

The Service shares responsibility for conserving fish and wildlife with State, local and tribal governments and other Federal agencies and stakeholders. Our role in mitigation may involve Service biological opinions, permits, or other regulatory determinations as well as providing technical assistance. The Service must work in collaboration and coordination with other governments, agencies, organizations, and action proponents to implement this policy. The Service will:

a. Coordinate activities with the appropriate Federal and State agencies, tribes, and other stakeholders who have responsibilities for fish and wildlife resources when developing mitigation recommendations for resources of concern to those entities;

b. to consider resources and plans made available by State, local, and tribal governments and other Federal agencies;

c. seek to apply compatible approaches and avoid duplication of efforts with those same entities;

d. collaborate with Federal and State agencies, tribes, and other stakeholders in the formulation of landscape-level mitigation plans; and

e. cooperate with partners to develop, maintain, and disseminate tools and conduct training in mitigation methodologies and technologies.

The Service should engage agencies and applicants during the early

planning and design stage of actions. The Service is encouraged to engage in early coordination during the NEPA federal decision-making process to resolve issues in a timely manner (516 DM 8.3). Coordination during early planning, including participation as a cooperating agency or on interdisciplinary teams, can lead to better conservation outcomes. For example, the Federal Highway Administration (FHWA) is most likely to adopt alternatives that avoid or minimize impacts when the Service provides early comments under section 4(f) of the Transportation Act of 1966 relative to impacts to refuges or other Service-supported properties. When we identify potential impacts to tribal interests, the Service, in coordination with affected tribes, may recommend mitigation measures to address those impacts. Recommendations will carry more weight when the Service and tribe have overlapping authority for the resources in question and when coordinated through government-to-government consultation.

Coordination and collaboration with stakeholders allows the Service to confirm that the persons conducting mitigation activities, including contractors and other non-Federal persons, have the appropriate experience and training in mitigation best practices, and where appropriate, include measures in employee performance appraisal plans or other personnel or contract documents, as necessary. Similarly, this allows for the development of rigorous, clear, and consistent guidance, suitable for field staff to implement mitigation or to deny authorizations when impacts to resources and their values, services, and functions are not acceptable. Collaboratively working across Department of the Interior bureaus and offices allows the Service to conduct periodic reviews of the execution of mitigation activities to confirm consistent implementation of the principles of this policy.

5.3. Assessment

Effects are changes in environmental conditions caused by an action that are relevant to the resources (fish, wildlife, plants, and their habitats) covered by this policy. This policy addresses mitigation for impacts to these resources. We define impacts as adverse effects relative to the affected resources. Mitigation is the general label for all measures implemented as part of an action to avoid, minimize, and/or compensate for its predicted impacts.

The Service should design mitigation measures to achieve the mitigation goal

of net gain, as required or appropriate, or a minimum of no net loss for affected resources. This design should take into account the degree of risk and uncertainty associated with both predicted project effects and predicted outcomes of the mitigation measures. The following principles shall guide the Service's assessment of anticipated effects and the expected effectiveness of mitigation measures.

1. The Service will consider action effects and mitigation outcomes within planning horizons commensurate with the expected duration of the action's impacts. In predicting whether mitigation measures will achieve the mitigation policy goal for the affected resources during the planning horizon, the Service will recognize that predictions about the more-distant future are more uncertain and adjust the mitigation recommendations accordingly.

2. Action proponents should provide reasonable predictions about environmental conditions relevant to the affected area both with and without the action over the course of the planning horizon (*i.e.*, baseline condition). If such predictions are not provided, the Service will assess the effects of a proposed action over the planning horizon considering: (a) the full spatial and temporal extent of resource-relevant direct and indirect effects caused by the action, including resource losses that will occur during the period between implementation of the action and the mitigation measures; and (b) any cumulative effects to the affected resources resulting from existing concurrent or reasonably foreseeable future activities in the landscape context. When assessing the affected area without the action, the Service will also evaluate: (a) expected natural species succession; (b) implementation of approved restoration/improvement plans; and (c) reasonably foreseeable conditions resulting directly or indirectly from any other factors that may affect the evaluation of the project, including, but not limited to, climate change.

3. The Service will use the best available effect assessment methodologies that:

a. Display assessment results in a manner that allows decision-makers, action proponents, and the public to compare present and predicted future conditions for affected resources;

b. measure adverse and beneficial effects using common metrics to determine mitigation measures necessary to achieve the mitigation policy goal for the affected resources;

c. predict effects over time, including changes to affected resources that would occur with and without the action, changes induced by climate change, and changes resulting from reasonably foreseeable actions;

d. are practical, cost-effective, and commensurate with the scope and scale of impacts to affected resources;

e. are sufficiently sensitive to estimate the type and relative magnitude of effects across the full spectrum of anticipated beneficial and adverse effects;

f. may integrate predicted effects with data from other disciplines such as cost or socioeconomic analysis; and

g. allow for incorporation of new data or knowledge as action planning progresses.

4. Where appropriate effects assessment methods or technologies useful in valuation of mitigation are not available, Service employees will apply best professional judgment supported by best available science to assess impacts and to develop mitigation recommendations.

5.4. Evaluation Species

Section 3.2 identifies the resources to which this policy applies. Depending on the authorities under which the Service is engaging an action for mitigation purposes, these resources may include: Particular species; fish, wildlife, and plants more generally; and their habitats, including those contributing to ecological functions that sustain species. Always, however, one or more species of conservation interest to the Service is necessary to initiate mitigation planning, and under this policy, the Service will explicitly identify evaluation species for mitigation purposes. In instances where the Service is required to issue a biological opinion, permit, or regulatory determination for specific species, the Service will identify such species, at minimum, as evaluation species.

Selecting evaluation species in addition to those for which the Service must provide a regulatory determination varies according to action-specific circumstances. In practice, an initial examination of the habitats affected and review of typically associated species of conservation interest are usually the first steps in identifying evaluation species. The purpose of Service mitigation planning is to develop a set of recommendations that would improve or, at minimum, maintain the current status of the affected resources. When available, conservation planning objectives (*i.e.*, the desired status of the affected resources) will inform mitigation planning (see section 5.1).

Therefore, following those species for which we must provide a regulatory determination, species for which action effects would cause the greatest increase in the gap between their current and desired status are the principal choices for selection as evaluation species.

An evaluation species must occur within the affected area for at least one stage of its life history, but as other authorities permit, the Service may consider evaluation species that are not currently present in the affected area if the species is:

a. Identified in approved State or Federal fish and wildlife conservation, restoration, or improvement plans that include the affected area; or

b. likely to occur in the affected area during the reasonably foreseeable future with or without the proposed action due to natural species succession.

Evaluation species may or may not occupy the affected area year-round or when direct effects of the action would occur.

The Service should select the smallest set of evaluation species necessary to relate the effects of an action to the full suite of affected resources and applicable authorities, including all species for which the Service is required to issue opinions, permits, or regulatory determinations. When an action affects multiple resources, evaluation species should represent other affected species or aspects of the environment so that the mitigation measures formulated for the evaluation species will mitigate impacts to other similarly affected resources to the greatest extent possible. Characteristics of evaluation species that are useful in mitigation planning may include, but are not limited to, the following:

a. Species that are addressed in conservation plans relevant to the affected area and for which habitat objectives are articulated;

b. species strongly associated with an affected habitat type;

c. species for which habitat limiting factors are well understood;

d. species that perform a key role in ecological processes (*e.g.*, nutrient cycling, pollination, seed dispersal, predator-prey relations), which may, therefore, serve as indicators of ecosystem health;

e. species that require large areas of contiguous habitat, connectivity between disjunct habitats, or a distribution of suitable habitats along migration/movement corridors, which may, therefore, serve as indicators of ecosystem functions;

f. species that belong to a group of species (a guild) that uses a common environmental resource;

g. species for which sensitivity to one or more anticipated effects of the proposed action is documented;

h. species with special status (*e.g.*, species of concern in E.O. 13186, Birds of Conservation Concern);

i. species of cultural or religious significance to tribes;

j. species that provide monetary and non-monetary benefits to people from consumptive and non-consumptive uses including, but not limited to, fishing, hunting, bird watching, and educational, aesthetic, scientific, or subsistence uses;

k. species with characteristics such as those above that are also easily monitored to evaluate the effectiveness of mitigation actions and/or

l. species that would be subject to direct mortality as a result of an action (*e.g.* wind turbine).

5.5. Habitat Valuation

Species conservation relies on functional ecosystems, and habitat conservation is generally the best means of achieving species population objectives. Section 5.4 provides the guidance for selecting evaluation species to represent these habitat resources. The value of specific habitats to evaluation species varies widely, such that the loss or degradation of higher-value habitats has a greater impact on achieving conservation objectives than the loss or degradation of an equivalent area of lower-value habitats. To maintain landscape capacity to support species, our mitigation policy goal (Section 4) applies to all affected habitats of evaluation species, regardless of their value in a conservation context. However, the Service will recognize variable habitat value in formulating appropriate means and measures to mitigate the impacts of proposed actions, as described in this section. The primary purpose of habitat valuation is to determine the relative emphasis the Service will place on avoiding, minimizing, and compensating for impacts to habitats of evaluation species.

The Service will assess the overall value of affected habitats by considering their: (a) Scarcity; (b) suitability for evaluation species; and (c) importance to the conservation of evaluation species.

- *Scarcity* is the relative spatial extent (*e.g.*, rare, common, or abundant) of the habitat type in the landscape context.

- *Suitability* is the relative ability of the affected habitat to support one or more elements of the evaluation species' life history (reproduction, rearing, feeding, dispersal, migration,

hibernation, or resting protected from disturbance, etc.) compared to other similar habitats in the landscape context. A habitat's ability to support an evaluation species may vary over time.

- *Importance* is the relative significance of the affected habitat, compared to other similar habitats in the landscape context, to achieving conservation objectives for the evaluation species. Habitats of high importance are irreplaceable or difficult to replace, or are critical to evaluation species by virtue of their role in achieving conservation objectives within the landscape (e.g., sustain core habitat areas, linkages, ecological functions). Areas containing habitats of high importance are generally, but not always, identified in conservation plans addressing resources under Service authorities (e.g., in recovery plans) or when appropriate, under authorities of partnering entities (e.g., in State wildlife action plans, Landscape Conservation Cooperative conservation "blueprints," etc.).

The Service has flexibility in applying appropriate methodologies and best available science when assessing the overall value of affected habitats, but also has a responsibility to communicate the rationale applied, as described in section 5.8 (Documentation Standards). These three parameters are the considerations that will inform Service determinations of the relative value of an affected habitat that will then be used to guide application of the mitigation hierarchy under this policy.

For all habitats, the Service will apply appropriate and practicable measures to avoid and minimize impacts over time, generally in that order, before applying compensation as mitigation for remaining impacts. For habitats we determine to be of high value, however, the Service will seek avoidance of all impacts. For habitats the Service determines to be of lower value, we will consider whether compensation is more effective than other components of the mitigation hierarchy to maintain the current status of evaluation species, and if so, may seek compensation for most or all such impacts.

The relative emphasis given to mitigation types within the mitigation hierarchy depends on the landscape context and action-specific circumstances that influence the efficacy and efficiency of available mitigation means and measures. For example, it is generally more effective and efficient to achieve the mitigation policy goal by maximizing avoidance and minimization of impacts to habitats that are either rare, of high suitability, or of high importance, than to rely on

other measures, because these qualities are typically not easily repaired, enhanced through on-site management, or replaced through compensatory actions. Similarly, compensatory measures may receive greater emphasis when strategic application of such measures (i.e., to further the objectives of relevant conservation plans) would more effectively and efficiently achieve the policy goal for mitigating impacts to habitats that are either abundant, of low suitability, or of low importance.

When more than one evaluation species uses an affected habitat, the highest valuation will govern the Service's mitigation recommendations or requirements. Regardless of the habitat valuation, Service mitigation recommendations will represent our best judgment as to the most practicable means of ensuring that a proposed action improves or, at minimum, maintains the current status of the affected resources.

5.6. Means and Measures

The means and measures that the Service recommends for achieving the goal of this policy (see section 4) are action- and resource-specific applications of the five general types of impact mitigation: Avoid, minimize, rectify, reduce over time, and compensate. The third and fourth mitigation types, rectify and reduce over time, are combined under the minimization label (e.g., in mitigation planning for permitting actions under the Clean Water Act, in the Presidential Memorandum on Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment, and in 600 DM 6.4), which we adopt for this policy and for the structure of this section, while also providing specific examples for rectify and reduce. When carrying out its responsibilities under NEPA, the Service will apply the mitigation meanings and sequence in the NEPA regulations (40 CFR 1508.20). In particular, the Service will retain the ability to distinguish, as needed, between minimizing, rectifying, and reducing or eliminating the impact over time, as described in Appendix B: Service Mitigation Policy and NEPA.

The emphasis that the Service gives to each mitigation type depends on the evaluation species selected (section 5.4) and the value of their affected habitats (section 5.5). Habitat valuation aligns mitigation with conservation planning for the evaluation species by identifying where it is critical to avoid habitat impacts altogether and where compensation measures may more effectively advance conservation

objectives. All appropriate mitigation measures have a clear connection with the anticipated effects of the action and are commensurate with the scale and nature of those effects.

Nothing in this policy supersedes the statutes and regulations governing prohibited "take" of wildlife (e.g., ESA-listed species, migratory birds, eagles); however, the policy applies to mitigating the impacts to habitats and ecological functions that support populations of evaluation species, including federally protected species. Attaining the goal of improving or, at a minimum, maintaining the current status of evaluation species will often involve applying a combination of mitigation types. For each of the mitigation types, the following subsections begin with a quote of the regulatory language at 40 CFR 1508.20, then provides an expanded definition, explains its place in this policy, and lists generalized examples of its intended use in Service mitigation recommendations. Ensuring that Service-recommended mitigation measures are implemented and effective is addressed in sections 5.8, Documentation, and 5.9, Follow-up.

5.6.1. Avoid

"Avoid the impact altogether by not taking a certain action or parts of an action." Avoiding impacts is the first tier of the mitigation hierarchy. Avoidance ensures that an action or a portion of the action has no direct or indirect effects during the planning horizon on fish, wildlife, plants, and their habitats. Actions may avoid direct effects to a resource (e.g., by shifting the location of the construction footprint), but unless the action also avoids indirect effects caused by the action (e.g., loss of habitat suitability through isolation from other habitats, accelerated invasive species colonization, degraded water quality, etc.), the Service will not consider that impacts to a resource are fully avoided. In some cases, indirect effects may cumulatively result in population and habitat losses that negate any conservation benefit from avoiding direct effects. An impact is unavoidable when an appropriate and practicable alternative to the proposed action that would not cause the impact is unavailable. The Service will recommend avoiding all impacts to high-value habitats. Generalized examples follow:

- a. Design the timing, location, and/or operations of the action so that specific resource impacts would not occur.
- b. Add structural features to the action, where such action is sustainable

(e.g., fish and wildlife passage structures, water treatment facilities, erosion control measures) that would eliminate specific losses to affected resources.

c. Adopt a non-structural alternative to the action that is sustainable and that would not cause resource losses (e.g., stream channel restoration with appropriate grading and vegetation in lieu of rip-rap).

d. Adopt the no-action alternative.

5.6.2. Minimize (Includes Rectify and Reduce Over Time)

“Minimize the impact by limiting the degree or magnitude of the action and its implementation.” Minimizing impacts, together with rectifying and reducing over time, is the second tier of the mitigation hierarchy. Minimizing is reducing the intensity of the impact (e.g., population loss, habitat loss, reduced habitat suitability, reduced habitat connectivity, etc.) to the maximum extent appropriate and practicable. Generalized examples of types of measures to minimize impacts follow:

a. Reduce the overall spatial extent and/or duration of the action.

b. Adjust the daily or seasonal timing of the action.

c. Retain key habitat features within the affected area that would continue to support life-history processes for the evaluation species.

d. Adjust the spatial configuration of the action to retain corridors for species movement between functional habitats.

e. Apply best management practices to reduce water quality degradation.

f. Adjust the magnitude, timing, frequency, duration, and/or rate-of-change of water flow diversions and flow releases to minimize the alteration of flow regime features that support life-history processes of evaluation species.

g. Install screens and other measures necessary to reduce aquatic life entrainment/impingement at water intake structures.

h. Install fences, signs, markers, and other measures necessary to protect resources from impacts (e.g., fencing riparian areas to exclude livestock, marking a heavy-equipment exclusion zone around burrows, nest trees, and other sensitive areas).

Rectify. This subset of the second tier of the mitigation hierarchy involves “repairing, rehabilitating, or restoring the affected environment.” Rectifying impacts may possibly improve relative to no-action conditions a loss in habitat availability and/or suitability for evaluation species within the affected area and contribute to a net conservation gain. Rectifying impacts

may also involve directly restoring a loss in populations through stocking. Generalized examples follow:

a. Repair physical alterations of the affected areas to restore pre-action conditions or improve habitat suitability for the evaluation species (e.g., re-grade staging areas to appropriate contours, loosen compacted soils, restore altered stream channels to stable dimensions).

b. Plant and ensure the survival of appropriate vegetation where necessary in the affected areas to restore or improve habitat conditions (quantity and suitability) for the evaluation species and to stabilize soils and stream channels.

c. Provide for fish and wildlife passage through or around action-imposed barriers to movement.

d. Consistent with all applicable laws, regulations, policies, and conservation plans, stock species that experienced losses in affected areas when habitat conditions are able to support them in affected areas.

Reduce Over Time. This subset of the second tier of the mitigation hierarchy is to “reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.” Reducing impacts over time is preserving, enhancing, and maintaining the populations, habitats, and ecological functions that remain in an affected area following the impacts of the action, including areas that are successfully restored or improved through rectifying mitigation measures. Preservation, enhancement, and maintenance operations may improve upon conditions that would occur without the action and contribute to a net conservation gain (e.g., when such operations would prevent habitat degradation expected through lack of management needed for an evaluation species). Reducing impacts over time is an appropriate means to achieving the mitigation goal after applying all appropriate and practicable avoidance, minimization, and rectification measures. Generalized examples follow:

a. Control land uses and limit disturbances to portions of the affected area that may continue to support the evaluation species.

b. Control invasive species in the affected areas.

c. Manage fire-adapted habitats in the affected areas with an appropriate timing and frequency of prescribed fire, consistent with applicable laws, regulations, policies, and conservation plans.

d. In affected areas, maintain or replace equipment and structures to prevent losses of fish and wildlife resources due to equipment failure (e.g.,

cleaning and replacing trash racks and water intake screens, maintaining fences that limit access to environmentally sensitive areas).

e. Ensure proper training of personnel in operations necessary to preserve existing or restored fish and wildlife resources in the affected area.

5.6.3. Compensate

“Compensate for the impact by replacing or providing substitute resources or environments.” Compensating for impacts is the third and final tier of the mitigation hierarchy. Compensation is protecting, maintaining, enhancing, and/or restoring habitats and ecological functions for an evaluation species, generally in an area outside the action’s affected area. Mitigating some percentage of unavoidable impacts through measures that minimize, rectify, and reduce losses over time is often appropriate and practicable, but the costs or difficulties of mitigation may rise rapidly thereafter to achieve the mitigation planning goal entirely within the action’s affected area. In such cases, a lesser or equivalent effort applied in another area may achieve greater benefits for the evaluation species. Likewise, the effort necessary to mitigate the impacts to a habitat of low suitability and low importance of a type that is relatively abundant in the landscape context (low-value habitat) will more likely achieve sustainable benefits for an evaluation species if invested in enhancing a habitat of moderate suitability and high importance. This policy is designed to apply the various types of mitigation where they may achieve the greatest efficiency toward accomplishing the mitigation planning goal.

The Service encourages proponents to offset unavoidable resource losses in advance of their actions. Further, the Service considers the banking of habitat value for the express purpose of compensating for future unavoidable losses to be a legitimate form of mitigation, provided that withdrawals from a mitigation/conservation bank are commensurate with losses of habitat value (considering suitability and importance) for the evaluation species and not based solely upon the affected habitat acreage or the cost of land purchase and management. Resource losses compensated through purchase of conservation or mitigation bank credits may include, but are not limited to, habitat impacts to species covered by one or more Service authorities.

The mechanisms for delivering compensatory mitigation differ according to: (1) Who is ultimately

responsible for the success of the mitigation (the action proponent or a third party); (2) whether the mitigation site is within or adjacent to the impact site (on-site) or at another location that provides either equivalent or additional resource value (offsite); and (3) when resource benefits are secured (before or after resource impacts occur). Regardless of the delivery mechanism, species conservation strategies and other landscape-level conservation plans that are based on the best scientific information available are expected to provide the basis for establishing and operating compensatory mitigation sites and programs. Such strategies and plans should also inform the assessment of species-specific impacts and benefits within a defined geography. The Service will ensure the application of equivalent ecological, procedural, and administrative standards for all compensatory mitigation mechanisms. As outlined by DM 6.6 C, this means that compensatory mitigation measures will maximize the benefit to impacted resources; implement and earn credits in advance of impacts; reduce risk to achieving effectiveness; use transparent methodologies; and use mitigation measures with equivalent standards that clearly identify responsible parties and that establish monitoring. Mitigation options delivered through any compensatory mitigation mechanism must incorporate, address, or identify the following that are intended to ensure successful implementation and durability:

- a. Type of resource(s) and/or its values(s), service(s) and function(s), and amount(s) of such resources to be provided (usually expressed in acres or some other physical measure), the method of compensation (restoration, establishment, preservation, etc.), and the manner in which a landscape-scale approach has been considered;
- b. factors considered during the site selection process;
- c. site protection instruments to ensure the durability of the measure;
- d. baseline information;
- e. the mitigation value of such resources (usually expressed as a number of credits or other units of value), including a rationale for such a determination;
- f. a mitigation work plan including the geographic boundaries of the measure, construction methods, timing, and other considerations;
- g. a maintenance plan;
- h. performance standards to determine whether the measure has achieved its intended outcome;
- i. monitoring requirements;

j. long-term management commitments;

k. adaptive management commitments; and

l. financial assurance provisions that are sufficient to ensure, with a high degree of confidence, that the measure will achieve and maintain its intended outcome, in accordance with the measure's performance standards.

Multiple mechanisms may be used to provide compensatory mitigation, including habitat credit exchanges and other emerging mechanisms. Proponent-responsible mitigation, mitigation/conservation banks, and in-lieu fee funds are the three most common mechanisms. Descriptions of their general characteristics follow:

a. *Proponent-Responsible Mitigation.* A proponent-responsible mitigation site provides ecological functions and services in accordance with Service-defined or -approved standards to offset the habitat impacts of a proposed action on particular species. As its name implies, the action proponent is solely responsible for ensuring that the compensatory mitigation activities are completed and successful. Proponent-responsible mitigation may occur on-site or off-site relative to action impacts. Like all compensatory mitigation measures, proponent-responsible mitigation should: (a) Maximize the benefit to impacted resources and their values, services, and functions; (b) implement and earn credits in advance of project impacts; and (c) reduce risk to achieving effectiveness.

b. *Mitigation/Conservation Banks.* A conservation bank is a site or suite of sites that provides ecological functions and services expressed as credits that are conserved and managed in perpetuity for particular species and are used expressly to offset impacts occurring elsewhere to the same species. A mitigation bank is established to offset impacts to wetland habitats under section 404 of the Clean Water Act. Some mitigation banks may also serve the species-specific purposes of a conservation bank. Mitigation and conservation banks are typically for-profit enterprises that apply habitat restoration, creation, enhancement, and/or preservation techniques to generate credits on their banking properties. The establishment, operation, and use of a conservation bank requires a conservation bank agreement between the Service and the bank sponsor, and aquatic resource mitigation banks require a banking instrument approved by the U.S. Army Corps of Engineers. Responsibility for ensuring that compensatory mitigation activities are successfully completed is transferred

from the action proponent to the bank sponsor at the time of the sale/transfer of credits. Mitigation and conservation banks generally provide mitigation in advance of impacts.

c. *In-Lieu Fee.* An in-lieu fee site provides ecological functions and services expressed as credits that are conserved and managed for particular species or habitats, and are used expressly to offset impacts occurring elsewhere to the same species or habitats. In-lieu fee programs are sponsored by governmental or non-profit entities that collect funds used to establish in-lieu fee sites. In-lieu fee program operators apply habitat restoration, creation, enhancement, and/or preservation techniques to generate credits on in-lieu fee sites. The establishment, operation, and use of an in-lieu fee program may require an agreement between regulatory agencies of applicable authority, including the Service, and the in-lieu fee program operator. Responsibility for ensuring that compensatory mitigation activities are successfully completed is transferred from the action proponent to the in-lieu fee program operator at the time of sale/transfer of credits. Unlike mitigation or conservation banks, in-lieu fee programs generally provide compensatory mitigation after impacts have occurred. See section 5.7.2 for discussion of the Service's preference for compensatory mitigation that occurs prior to impacts.

Research and education, although important to the conservation of many resources, are not typically considered compensatory mitigation. This is because they do not, by themselves, replace impacted resources or adequately compensate for adverse effects to species or habitat. In rare circumstances, research or education that can be linked directly to threats to the resource and provide a quantifiable benefit to the resource may be included as part of a mitigation package. These circumstances may include: (a) When the major threat to a resource is something other than habitat loss; (b) when the Service can reasonably expect the benefits of applying the research or education results to more than offset the impacts; (c) where there is an adaptive management approach wherein the results/recommendations of the research will then be applied to improve mitigation of the impacts of the project or proposal; or (d) there are no other reasonable options for mitigation.

5.7. Recommendations

Consistent with applicable authorities, the policy's fundamental principles, and the mitigation planning

principles described herein, the Service will provide recommendations to mitigate the impacts of proposed actions at the earliest practicable stage of planning to ensure maximum consideration. The Service will develop mitigation recommendations in cooperation with the action proponent and/or the applicable authorizing agency, considering the cost estimates and other information that the proponent/agency provides about the action and its effects, and relying on the best scientific information available. Service recommendations will represent our best judgment as to the most practicable means of ensuring that a proposed action improves or, at minimum maintains, the current status of the affected resources. The Service will provide mitigation recommendations under an explicit expectation that the action proponent or the applicable authorizing agency is fully responsible for implementing or enforcing the recommendations.

The Service will strive to provide mitigation recommendations, including reasonable alternatives to the proposed action, which, if fully and properly implemented, would achieve the best possible outcome for affected resources while also achieving the stated purpose of the proposed action. However, on a case-by-case basis, the Service may recommend the “no action” alternative. For example, when appropriate and practicable means of avoiding significant impacts to high-value habitats and associated species are not available, the Service may recommend the “no action” alternative.

5.7.1. Preferences

Unless action-specific circumstances warrant otherwise, the Service will observe the following preferences in providing mitigation recommendations or requirements:

Advance compensatory mitigation. When compensatory mitigation is necessary, the Service prefers compensatory mitigation measures that are implemented and earn credits in advance of project impacts. The extent of the compensatory measures that are not completed until after action impacts occur will account for the interim loss of resources consistent with the assessment principles (section 5.3).

Compensatory mitigation in relation to landscape strategies and plans. The preferred location for Service-recommended or required compensatory mitigation measures is within the boundaries of an existing strategically planned, interconnected conservation network that serves the conservation objectives for the affected resources in

the relevant landscape context. Compensatory measures should enhance habitat connectivity or contiguity, or strategically improve targeted ecological functions important to the affected resources (e.g., enhance the resilience of fish and wildlife populations challenged by the wide-spread stressors of climate change).

Similarly, Service-recommended or required mitigation should emphasize avoiding impacts to habitats located within a planned conservation network, consistent with the Habitat Valuation guidance (section 5.5).

Where existing conservation networks or landscape conservation plans are not available for the affected resources, Service personnel should develop mitigation recommendations and requirements based on best available scientific information and professional judgment that would maximize the effectiveness of the mitigation measures for the affected resources, consistent with this policy’s guidance on Integrating Mitigation Planning with Conservation Planning (section 5.1).

5.7.2. Recommendations for Locating Mitigation on Public or Private Lands

When appropriate as specified in this policy, the Service may recommend establishing compensatory mitigation at locations on private, public, or tribal lands that provide the maximum conservation benefit for the affected resources. The Service will generally, but not always, recommend compensatory mitigation on lands with the same ownership classification as the lands where impacts occurred, e.g., impacts to evaluation species on private lands are generally mitigated on private lands and impacts to evaluation species on public lands are generally mitigated on public lands. However, most private lands are not permanently dedicated to conservation purposes, and are generally the most vulnerable to impacts resulting from land and water resources development actions; therefore, mitigating impacts to any type of land ownership on private lands is usually acceptable as long as they are durable. Locating compensatory mitigation on public lands for impacts to evaluation species on private lands is also possible, and in some circumstances may best serve the conservation objectives for evaluation species. Such compensatory mitigation options require careful consideration and justification relative to the Service’s mitigation planning goal, as described below.

The Service generally only supports locating compensatory mitigation on (public or private) lands that are already designated for the conservation of

natural resources if additionality (see section 6, Definitions) is clearly demonstrated and is legally attainable. In particular, the Service usually does not support offsetting impacts to private lands by locating compensatory mitigation on public lands designated for conservation purposes because this practice risks a long-term net loss in landscape capacity to sustain species by relying increasingly on public lands to serve conservation purposes. However, the Service acknowledges that public ownership does not automatically confer long-term protection and/or management for evaluation species in all cases, which may justify locating compensatory mitigation measures on public lands, including compensation for impacts to evaluation species on public or private lands. The Service may recommend compensating for private-land impacts to evaluation species on public lands (whether designated for conservation of natural resources or not) when:

a. Compensation is an appropriate means of achieving the mitigation planning goal, as specified in this policy;

b. the compensatory mitigation would provide additional conservation benefits above and beyond measures the public agency is foreseeably expected to implement absent the mitigation (Only such additional benefits are counted towards achieving the mitigation planning goal.);

c. the additional conservation benefits are durable, i.e., lasting as long as the impacts that prompted the compensatory mitigation;

d. consistent with and not otherwise prohibited by all relevant statutes, regulations, and policies; and

e. the public land location would provide the best possible conservation outcome, such as when private lands suitable for compensatory mitigation are unavailable or are available but do not provide an equivalent or greater contribution towards offsetting the impacts to meet the mitigation planning goal for the evaluation species.

Ensuring the durability of compensatory mitigation on public lands may require multiple tools beyond land use plan designations, including right-of-way grants, withdrawals, disposal or lease of land for conservation, conservation easements, cooperative agreements, and agreements with third parties. Mechanisms to ensure durability of land protection for compensatory mitigation on public and private lands vary among agencies, but should preclude conflicting uses and ensure that protection and management of the mitigation land is commensurate

with the magnitude and duration of impacts.

When the public lands under consideration for use as compensatory mitigation for impacts on private lands are National Wildlife Refuge System (NWRS) lands, additional considerations covered in the Service's Final Policy on the NWRS and Compensatory Mitigation Under the Section 10/404 Program (64 FR 49229–49234, September 10, 1999) may apply. Under that policy, the Regional Director will recommend the mitigation plan proposing to site compensatory mitigation on NWRS lands to the Director for approval.

5.7.3. Recommendations Related to Recreation

Mitigation for impacts to recreational uses of wildlife and habitat. The Service will generally not recommend measures intended to increase recreational value as mitigation for habitat losses. The Service may address impacts to recreational uses that are not otherwise addressed through habitat mitigation, but will do so with separate and distinct recreational use mitigation recommendations.

Recreational use of mitigation lands. Consistent with applicable statutes, the Service supports those recreational uses on mitigation lands that are compatible with the conservation goals of those mitigation lands. If certain uses are incompatible with the conservation goals for the mitigation lands, the Service will recommend against such uses.

5.8. Documentation

The Service should advise action proponents and decision-making agencies at timely stages of the planning process. To ensure effective consideration of Service recommendations, it is generally possible to communicate key concerns that will inform our recommendations early in the mitigation planning process, communicate additional components during and following an initial assessment of effects, and provide final written recommendations toward the end of the process, but in advance of a final decision for the action. The following outline lists the components applicable to these three planning stages. Because actions vary substantially in scope and complexity, these stages may extend over a period of years or occur almost simultaneously, which may necessitate consolidating some of the components listed below. For all actions, the level of the Service's analysis and documentation should be commensurate with the scope and

severity of the potential impacts to resources.

A. Early Planning

1. Inform the proponent of the Service's goal to improve or, at minimum, maintain the status of affected resources, and that the Service will identify opportunities for a net conservation gain if required or appropriate.

2. Coordinate key data collection and planning decisions with the proponent, relevant tribes, and Federal and State resource agencies; including, but not limited to:

- a. Delineate the affected area;
- b. define the planning horizon;
- c. identify species that may occur in the affected area that the Service is likely to consider as evaluation species for mitigation planning;
- d. identify landscape-scale strategies and conservation plans and objectives that pertain to these species and the affected area;
- e. define surveys, studies, and preferred methods necessary to inform effects analyses; and
- f. as necessary, identify reasonable alternatives to the proposed action that may achieve the proponent's purpose and the Service's no-net-loss goal for resources.

3. As early as possible, inform the proponent of the presence of probable high-value habitats in the affected area (see Section 5.5), and advise the proponent of Service policy to avoid all impacts to such habitats.

B. Effects Assessment

1. Coordinate selection of evaluation species with relevant tribes, Federal and State resource agencies, and action proponents.

2. Communicate the Service's assessment of the value of affected habitats to evaluation species.

3. If high-value habitats are affected, advise the proponent of the Service's policy to avoid all impacts to such habitats.

4. Assess action effects to evaluation species and their habitats.

5. Formulate mitigation options that would achieve the mitigation policy goal (an appropriate net conservation gain or, at minimum, no net loss) in coordination with the proponent and relevant tribes, and Federal and State resource agencies.

C. Final Recommendations

The Service's final mitigation recommendations should communicate in writing the following:

1. The authorities under which the Service is providing the mitigation

recommendations consistent with this policy.

2. A description of all mitigation measures that the Service believes are reasonable and appropriate to ensure that the proposed action improves or, at minimum, maintains the current status of affected fish, wildlife, plants, and their habitats.

3. The following elements should be specified within a mitigation plan or equivalent by either the Service, action proponents, or in collaboration:

- a. Measurable objectives;
 - b. implementation assurances, including financial, as applicable;
 - c. effectiveness monitoring;
 - d. additional adaptive management actions as may be indicated by monitoring results; and
 - e. reporting requirements.
4. An explanation of the basis for the Service recommendations, including, but not limited to:
- a. Evaluation species used for mitigation planning;
 - b. the assessed value (high, moderate, low) of affected habitats to evaluation species;
 - c. predicted adverse and beneficial effects of the proposed action;
 - d. predicted adverse and beneficial effects of the recommended mitigation measures; and
 - e. the rationale for our determination that the proposed action, if implemented with Service recommendations, would achieve the mitigation policy goal.
5. The Service's expectations of the proponent's responsibility to implement the recommendations.

5.9. Follow-up

The Service encourages, supports, and will initiate, whenever practicable, post-action monitoring studies and evaluations to determine the effectiveness of recommendations in achieving the mitigation planning goal. In those instances where Service personnel determine that action proponents have not carried out those agreed-upon mitigation means and measures, the Service will request that the parties responsible for regulating the action initiate corrective measures, or will initiate access to available assurance measures. These provisions also apply when the Service is the action proponent.

6. Definitions

Definitions in this section apply to the implementation of this policy and were developed to provide clarity and consistency within the policy itself, and to ensure broad, general applicability to all mitigation processes in which the

Service engages. Some Service authorities define some of the terms in this section differently or more specifically, and the definitions herein do not substitute for statutory or regulatory definitions in the exercise of those authorities.

Action. An activity or program implemented, authorized, or funded by Federal agencies; or a non-Federal activity or program for which one or more of the Service's authorities apply to make mitigation recommendations, specify mitigation requirements, or provide technical assistance for mitigation planning.

Additionality. A compensatory mitigation measure is additional when the benefits of a compensatory mitigation measure improve upon the baseline conditions of the impacted resources and their values, services, and functions in a manner that is demonstrably new and would not have occurred without the compensatory mitigation measure.

Affected area. The spatial extent of all effects, direct and indirect, of a proposed action to fish, wildlife, plants, and their habitats.

Affected resources. Those resources, as defined by this policy, that are subject to the adverse effects of an action.

Compensatory mitigation. Compensatory mitigation means to compensate for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or providing substitute resources or environments (See 40 CFR 1508.20.) through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions. Impacts are authorized pursuant to a regulatory or resource management program that issues permits, licenses, or otherwise approves activities. In this policy, "mitigation" is a deliberate expression of the full mitigation hierarchy, and "compensatory mitigation" describes only the last phase of that sequence.

Conservation. In the context of this policy, the noun "conservation" is a general label for the collective practices, plans, policies, and science that are used to protect and manage species and their habitats to achieve desired outcomes.

Conservation objective. A measurable expression of a desired outcome for a species or its habitat resources. Population objectives are expressed in terms of abundance, trend, vital rates, or other measurable indices of population status. Habitat objectives are expressed in terms of the quantity, quality, and

spatial distribution of habitats required to attain population objectives, as informed by knowledge and assumptions about factors influencing the ability of the landscape to sustain species.

Conservation planning. The identification of strategies for achieving conservation objectives. Conservation plans include, but are not limited to, recovery plans, habitat conservation plans, watershed plans, green infrastructure plans, and others developed by Federal, tribal, State, or local government agencies or non-governmental organizations. This policy emphasizes the use of landscape-scale approaches to conservation planning.

Durability. A mitigation measure is durable when the effectiveness of the measure is sustained for the duration of the associated impacts of the action, including direct and indirect impacts.

Effects. Changes in environmental conditions that are relevant to the resources covered by this policy.

Direct effects are caused by the action and occur at the same time and place.

Indirect effects are caused by the action, but occur at a later time and/or another place.

Cumulative effects are caused by other actions and processes, but may refer also to the collective effects on a resource, including direct and indirect effects of the action. The causal agents and spatial/temporal extent for considering cumulative effects varies according to the authority(ies) under which the Service is engaged in mitigation planning (*e.g.*, refer to the definitions of cumulative effects and cumulative impacts in ESA regulations and NEPA, respectively), and the Service will apply statute-specific definitions in the application of this policy.

Evaluation species. Fish, wildlife, and plant resources in the affected area that are selected for effects analysis and mitigation planning.

Habitat. An area with spatially identifiable physical, chemical, and biological attributes that supports one or more life-history processes for evaluation species. Mitigation planning should delineate habitat types in the affected area using a classification system that is applicable to both the region(s) of the affected area and the selected evaluation species in order to facilitate determinations of habitat scarcity, suitability, and importance.

Habitat value. An assessment of an affected habitat with respect to an evaluation species based on three attributes—scarcity, suitability, and importance—which define its conservation value to the evaluation

species in the context of this policy. The three parameters are assessed independently but are sometimes correlated. For example, rare or unique habitat types of high suitability for evaluation species are also very likely of high importance in achieving conservation objectives.

Impacts. In the context of this policy, impacts are adverse effects relative to the affected resources.

Importance. The relative significance of the affected habitat, compared to other examples of a similar habitat type in the landscape context, to achieving conservation objectives for the evaluation species. Habitats of high importance are irreplaceable or difficult to replace, or are critical to evaluation species by virtue of their role in achieving conservation objectives within the landscape (*e.g.*, sustain core habitat areas, linkages, ecological functions). Areas containing habitats of high importance are generally, but not always, identified in conservation plans addressing resources under Service authorities (*e.g.*, in recovery plans) or when appropriate, under authorities of partnering entities (*e.g.*, in State wildlife action plans, Landscape Conservation Cooperative conservation "blueprints," etc.).

Landscape. An area encompassing an interacting mosaic of ecosystems and human systems that is characterized by a set of common management concerns. The most relevant concerns to the Service and this policy are those associated with the conservation of species and their habitats. The landscape is not defined by the size of the area, but rather the interacting elements that are meaningful to the conservation objectives for the resources under consideration.

Landscape-scale approach. For the purposes of this policy, the landscape-scale approach applies the mitigation hierarchy for impacts to resources and their values, services, and functions at the relevant scale, however, narrow or broad, necessary to sustain, or otherwise achieve, established goals for those resources and their values, services, and functions. A landscape-scale approach should be used when developing and approving strategies or plans, reviewing projects, or issuing permits. The approach identifies the needs and baseline conditions of targeted resources and their values, services, and functions, reasonably foreseeable impacts, cumulative impacts of past and likely projected disturbance to those resources, and future disturbance trends. The approach then uses such information to identify priorities for avoidance, minimization, and

compensatory mitigation measures across that relevant area to provide the maximum benefit to the impacted resources and their values, services, and functions, with full consideration of the conditions of additionality and durability.

Landscape-scale strategies and plans. For the purposes of this policy, landscape-scale strategies and plans identify clear management objectives for targeted resources and their values, services, and functions at landscape-scales, as necessary, including across administrative boundaries, and employ the landscape-scale approach to identify, evaluate, and communicate how mitigation can best achieve those management objectives. Strategies serve to assist project applicants, stakeholders, and land managers in pre-planning as well as to inform NEPA analysis and decision making, including decisions to develop and approve plans, review projects, and issue permits. Land use planning processes provide opportunities for identifying, evaluating, and communicating mitigation in advance of anticipated land use activities. Consistent with their statutory authorities, land management agencies may develop landscape-scale strategies through the land use planning process, or incorporate relevant aspects of applicable and existing landscape-scale strategies into land use plans through the land use planning process.

Mitigation. In the context of this policy, the noun “mitigation” is a label for all types of measures (see Mitigation Types) that a proponent would implement toward achieving the Service’s mitigation goal.

Mitigation hierarchy. The elements of mitigation, summarized as avoidance, minimization, and compensation, provide a sequenced approach to addressing the foreseeable impacts to resources and their values, services, and functions. First, impacts should be avoided by altering project design, location, or declining to authorize the project; then minimized through project modifications and permit conditions; and, generally, only then compensated for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied.

Mitigation planning. The process of assessing the effects of an action and formulating mitigation measures that would achieve the mitigation planning goal.

Mitigation goal. The Service’s goal for mitigation is to improve or, at minimum, maintain the current status of affected resources, as allowed by applicable statutory authority and

consistent with the responsibilities of action proponents under such authority.

Mitigation types. General classes of methods for mitigating the impacts of an action (Council on Environmental Quality, 40 CFR 1508.20(a–e)), including:

(a) Avoid the impact altogether by not taking the action or parts of the action;

(b) minimize the impact by limiting the degree or magnitude of the action and its implementation;

(c) rectify the impact by repairing, rehabilitating, or restoring the affected environment;

(d) reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action; and

(e) compensate for the impact by replacing or providing substitute resources or environments.

These five mitigation types, as enumerated by CEQ, are compatible with this policy; however, as a practical matter, the mitigation elements are categorized into three general types that form a sequence: avoidance, minimization, and compensation for remaining unavoidable (also known as residual) impacts. Section 5.6 (Mitigation Means and Measures) of this policy provides expanded definitions and examples for each of the mitigation types.

Practicable. Available and capable of being done after taking into consideration existing technology, logistics, and cost in light of a mitigation measure’s beneficial value and a land use activity’s overall purpose, scope, and scale.

Proponent. The agency(ies) proposing an action, and if applicable, any applicant(s) for agency funding or authorization to implement a proposed action.

Resources. Fish, wildlife, plants, and their habitats for which the Service has authority to recommend or require the mitigation of impacts resulting from proposed actions.

Scarcity. The relative spatial extent (e.g., rare, common, or abundant) of the habitat type in the landscape context.

Suitability. The relative ability of the affected habitat to support one or more elements of the evaluation species’ life history (reproduction, rearing, feeding, dispersal, migration, hibernation, or resting protected from disturbance, etc.) compared to other similar habitats in the landscape context. A habitat’s ability to support an evaluation species may vary over time.

Unavoidable. An impact is unavoidable when an appropriate and practicable alternative to the proposed

action that would not cause the impact is not available.

Appendix A. Authorities and Direction for Service Mitigation Recommendations

A. Relationship of Service Mitigation Policy to Other Policies, Regulations

This section is intended to describe the interaction of existing policies and regulations with this policy in agency processes. Descriptions regarding the application of mitigation concepts generally, and elements of this policy specifically, for each of the listed authorities follow.

1. The Bald and Golden Eagle Protection Act (16 U.S.C. 668–668d) (Eagle Act)

The Eagle Act prohibits take of bald eagles and golden eagles except pursuant to Federal regulations. The Eagle Act regulations at title 50, part 22 of the Code of Federal Regulations (CFR), define the “take” of an eagle to include the following actions: “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb” (§ 22.3).

Except for protecting eagle nests, the Eagle Act does not directly protect eagle habitat. However, because disturbing eagles is a violation of the Act, some activities within eagle habitat, including some habitat modification, can result in illegal take in the form of disturbance. “Disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

The Eagle Act allows the Secretary of the Interior to authorize certain otherwise prohibited activities through regulations. The Service is authorized to prescribe regulations permitting the taking, possession, and transportation of bald and golden eagles provided such permits are “compatible with the preservation of the bald eagle or the golden eagle” (16 U.S.C. 668a). Permits are issued for scientific and exhibition purposes; religious purposes of Native American tribes; falconry (golden eagles, only); depredation; protection of health and safety; removal of nests for resource development and recovery (golden eagles, only); and nonpurposeful (incidental) take.

The regulations for eagle nest take permits and eagle nonpurposeful take permits explicitly provide for mitigation, although the form and methods of mitigation are not specified, nor do the regulations contain criteria stipulating thresholds for when compensatory mitigation is required. The Eagle Act requires mitigation in the form of avoidance and minimization for these permits by restricting permitted take to circumstances where take is “necessary.” Though eagle habitat is not directly protected by the Eagle Act, the statute and implementing regulations allow the Service to require habitat preservation and/or enhancement as compensatory mitigation for eagle take.

Eagle take permits of all types are also subject to the requirement that any take that would exceed take thresholds established within geographic eagle management units (EMUs) must be offset by mitigation that will essentially replace each eagle taken. For example, if, under an eagle nonpurposeful take permit, a project is expected to kill an average of three eagles over a 5-year period, and take thresholds have been met in that EMU, the permittee must provide compensatory mitigation that prevents three eagles from being taken by another activity. At the time this Appendix A is being written, take thresholds for golden eagles are set at zero throughout the United States because golden eagle populations appear to be stable but not increasing, and as such unable to withstand additional take while still maintaining current numbers of breeding pairs over time. Accordingly, all permits for golden eagle take that would result in cumulative take within the EMU at levels above the 2009 baseline must incorporate compensatory mitigation. Permittees may be required to provide compensatory mitigation designed to improve conditions for eagles including habitat preservation or enhancement of prey base.

2. Clean Water Act (33 U.S.C. 1251 *et seq.*)

Several locations within the statute under section 404 describe the responsibilities and roles of the Service. The authority at section 404(m) is most directly relevant to the Service's engagement of Clean Water Act permitting processes to secure mitigation for impacts to aquatic resources nationwide and is routinely used by Ecological Services Field Offices. At section 404(m), the Secretary of the Army is required to notify the Secretary of the Interior, through the Service Director, that an individual permit application has been received or that the Secretary proposes to issue a general permit. The Service will submit any comments in writing to the Secretary of the Army (Corp of Engineers) within 90 days. The Service has the opportunity to engage several thousand Corps permit actions affecting aquatic habitats and wildlife annually and to assist the Corps of Engineers in developing permit terms that avoid, minimize, or compensate for permitted impacts. The Department of the Army has also entered into a Memorandum of Agreement with the Department of the Interior under Section 404(q) of the Clean Water Act. The current Memorandum of Agreement, signed in 1992, provides procedures for elevating national or regional issues relating to resources, policy, procedures, or regulation interpretation.

3. Endangered Species Act of 1973, as Amended (16 U.S.C. 1531 *et seq.*)

A primary purpose of the Endangered Species Act (ESA) of 1973 as amended (16 U.S.C. 1531 *et seq.*) is to conserve the ecosystems upon which species listed as endangered and threatened depend. Conserving listed species involves the use of all methods and procedures that are necessary for their recovery, which includes mitigating the impacts of actions to listed species and their habitats. All actions must comply with the applicable prohibitions

against taking endangered animal species under ESA section 9 and taking threatened animal species under regulations promulgated through ESA section 4(d). Under ESA section 7(a)(2), Federal agencies must consult with the Service(s) to insure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat. Federal agencies, and any permit or license applicants, may be exempted from the prohibitions against incidental taking for actions that are not likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of designated critical habitat, if the terms and conditions of the incidental take statement are implemented.

The Service may permit incidental taking resulting from a non-Federal action under ESA section 10(a)(1)(B) after approving the proponent's habitat conservation plan (HCP) under section 10(a)(2)(A). The HCP must specify the steps the permit applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps. The basis for issuing a section 10 permit includes a finding that the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of incidental taking; and a finding that the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

This mitigation policy applies to all actions that may affect ESA-protected resources except for conservation/recovery permits under section 10(a)(1)(A). The Service will recommend mitigation for impacts to listed species, designated critical habitat, and other species for which the Service has authorized mitigation responsibilities consistent with the guidance of this policy, which proponents may adopt as conservation measures to be added to the project descriptions of proposed actions. Such adoption may ensure that actions are not likely to jeopardize species or adversely modify designated critical habitat; however, such adoption alone does not constitute compliance with the ESA. Federal agencies must complete consultation per the requirements of section 7 to receive Service concurrence with "may affect, not likely to adversely affect" determinations, biological opinions for "likely to adversely affect" determinations, and incidental take statement terms and conditions. Proponents of actions that do not require Federal authorization or funding must complete the requirements under section 10(a)(2) to receive an incidental take permit. The mitigation planning under this policy applies to all species and their habitats for which the Service has authorities to recommend mitigation on a particular action, including listed species and critical habitat. Although this policy is intended, in part, to clarify the role of mitigation in endangered species conservation, nothing herein replaces, supersedes, or substitutes for the ESA implementing regulations.

All forms of mitigation are potential conservation measures of a proposed Federal action in the context of section 7 consultation

and are factored into Service analyses of the effects of the action, including any voluntary mitigation measures proposed by a project proponent that are above and beyond those required by an action agency. Service regulations at 50 CFR 402.14(g)(8) affirm the need to consider "any beneficial actions" in formulating a biological opinion, including those "taken prior to the initiation of consultation." Because jeopardy and adverse modification analyses weigh effects in the action area relative to the status of the species throughout its listed range and to the status of all designated critical habitat units, respectively, "beneficial actions" may also include proposed conservation measures for the affected species within its range but outside of the area of adverse effects (*e.g.*, compensation).

Mitigation measures included in proposed actions that avoid and minimize the likelihood of adverse effects and incidental take are also relevant to the Service's concurrence with "may affect, not likely to adversely affect" determinations through informal consultation. All mitigation measures included in proposed actions that benefit listed species and/or designated critical habitat, including compensatory measures, are relevant to jeopardy and adverse modification conclusions in Service biological opinions.

Likewise, the Service may apply all forms of mitigation, consistent with the guidance of this policy, in formulating a reasonable and prudent alternative that would avoid jeopardy/adverse modification, provided that it is also consistent with the regulatory definition of a reasonable and prudent alternative at 50 CFR 402.02. It is preferable to avoid or minimize impacts to listed species or critical habitat before rectifying, reducing over time, or compensating for such impacts. Under some limited circumstances, however, the latter forms of mitigation may provide all or part of the means to achieving the best possible conservation outcome for listed species consistent with the purpose-, authority-, and feasibility-requirements of a reasonable and prudent alternative.

For Federal actions that are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of habitat, the Service may provide a statement specifying those reasonable and prudent measures that are necessary or appropriate to minimize the impacts of taking incidental to such actions on the affected listed species. No proposed mitigation measures relieve an action proponent of the obligation to obtain incidental take exemption through an incidental take statement (Federal actions) or authorization through an incidental take permit (non-Federal actions), as appropriate, for unavoidable incidental take that may result from a proposed action.

4. Executive Order 13186 (E.O. 13186), Responsibilities of Federal Agencies To Protect Migratory Birds

E.O. 13186 directs Federal departments and agencies to avoid or minimize adverse impacts on "migratory bird resources," defined as "migratory birds and the habitats upon which they depend." These acts of

avian protection and conservation are implemented under the auspices of the MBTA, the Eagle Act, the Fish and Wildlife Coordination Act (16 U.S.C. 661–666c), the Endangered Species Act, the National Environmental Policy Act, and “other established environmental review process” (Section 3(e)(6)). Additionally, E.O. 13186 directs Federal agencies whose activities will likely result in measurable negative effects on migratory bird populations to collaboratively develop and implement an MOU with the Service that promotes the conservation of migratory bird populations. These MOUs can clarify how an agency can mitigate the effects of impacts and monitor implemented conservation measures. MOUs can also define how appropriate corrective measures can be implemented when needed, as well as what proactive conservation actions or partnerships can be formed to advance bird conservation, given the agency’s existing mission and mandate.

The Service policy regarding its responsibility to E.O. 13186 (720 FW 2) states “all Service employees should: A. Implement their mission-related activities and responsibilities in a way that furthers the conservation of migratory birds and minimizes and avoids the potential adverse effects of migratory bird take, with the goal of eliminating take” (22.A.). The policy also stipulates that the Service will support the conservation intent of the migratory bird conventions by: integrating migratory bird conservation measures into our activities, including measures to avoid or minimize adverse impacts on migratory bird resources; restore and enhance the habitat of migratory birds; and prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds.

5. Executive Order 13653 (E.O. 13653), Preparing the United States for the Impact of Climate Change

E.O. 13653 directs Federal agencies to improve the Nation’s preparedness and resilience to climate change impacts. The agencies are to promote: (1) Engaged and strong partnerships and information sharing at all levels of government; (2) risk-informed decision-making and the tools to facilitate it; (3) adaptive learning, in which experiences serve as opportunities to inform and adjust future actions; and (4) preparedness planning.

Among the provisions under section 3, *Managing Lands and Waters for Climate Preparedness and Resilience*, is this: “agencies shall, where possible, focus on program and policy adjustments that promote the dual goals of greater climate resilience and carbon sequestration, or other reductions to the sources of climate change . . . [a]gencies shall build on efforts already completed or underway . . . as well as recent interagency climate adaptation strategies.” Section 5 specifies that agencies shall develop or continue to develop, implement, and update comprehensive plans that integrate consideration of climate change into agency operations and overall mission objectives.

The Priority Agenda: Enhancing The Climate Resilience of American’s Natural

Resources (October 2014) called for in E.O. 13653, includes provisions to develop and provide decision support tools for “climate-smart natural resource management” that will improve the ability of agencies and landowners to manage for resilience to climate change impacts.

The Service policy on climate change adaptation (056 FW 1) states that the Service will “effectively and efficiently incorporate and implement climate change adaptation measures into the Service’s mission, programs, and operations.” This includes using the best available science to coordinate an appropriate adaptive response to impacts on fish, wildlife, plants, and their habitats. The policy also specifically calls for delivering landscape conservation actions that build resilience or support the ability of fish, wildlife, and plants to adapt to climate change.

6. Federal Power Act (16 U.S.C. 791–828c) (FPA)

The Federal Energy Regulatory Commission (FERC) authorizes non-Federal hydropower projects pursuant to the FPA. The Service’s roles in hydropower project review are primarily defined by the FPA, as amended in 1986 by the Electric Consumers Protection Act, that explicitly ascribes those roles to the Service. The Service has mandatory conditioning authority for projects on National Wildlife Refuge System lands under section 4(e) and to prescribe fish passage to enhance and protect native fish runs under section 18. Under section 10(j), FERC is required to include license conditions that are based on recommendations made pursuant to the Fish and Wildlife Coordination Act by states, NOAA, and the Service for the adequate and equitable protection, mitigation, and enhancement of fish, wildlife, and their habitats.

7. Fish and Wildlife Conservation Act (16 U.S.C. 2901–2912)

Specifically, Federal Conservation of Migratory Nongame Birds (16 U.S.C. 2912) implicitly provides for mitigation by requiring the Service to “identify the effects of environmental changes and human activities on species, subspecies, and populations of all migratory nongame birds” (section 2912(2)); “identify conservation actions to assure that species, subspecies, and populations of migratory nongame birds . . . do not reach the point at which the measures provided pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531–1543) become necessary” (section 2912(4)); and “identify lands and waters in the United States and other nations in the Western Hemisphere whose protection, management, or acquisition will foster the conservation of species, subspecies, and populations of migratory nongame birds . . .” (section 2912(5)).

8. Fish and Wildlife Coordination Act (16 U.S.C. 661–667e)(FWCA)

The FWCA requires Federal agencies developing water-related projects to consult with the Service, NOAA, and the States regarding fish and wildlife impacts. The FWCA establishes fish and wildlife

conservation as a coequal objective of all federally funded, permitted, or licensed water-related development projects. Federal action agencies are to include justifiable means and measures for fish and wildlife, and the Service’s mitigation and enhancement recommendations are to be given full and equal consideration with other project purposes. The Service’s mitigation recommendations may include measures addressing a broad set of habitats beyond the aquatic impacts triggering the FWCA and taxa beyond those covered by other resource laws. Action agencies are not bound by the FWCA to implement Service conservation recommendations in their entirety.

9. Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 et seq.) (MMPA)

The MMPA prohibits the take (*i.e.*, hunting, killing, capture, and/or harassment) of marine mammals and enacts a moratorium on the import, export, and sale of marine mammal parts and products. There are exemptions and exceptions to the prohibitions. For example, under section 101(b), Alaskan Natives may hunt marine mammals for subsistence purposes and may possess, transport, and sell marine mammal parts and products.

In addition, section 101(a)(5) allows for the authorization of incidental, but not intentional, take of small numbers of marine mammals by U.S. citizens while engaged in a specified activity (other than commercial fishing) within a specified geographical region, provided certain findings are made. Specifically, the Service must make a finding that the total of such taking will have a negligible impact on the marine mammal species and will not have an unmitigable adverse impact on the availability of these species for subsistence uses. Negligible impact is defined at 50 CFR 18.27(c) as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.” Unmitigable adverse impact, which is also defined at 50 CFR 18.27(c), means “an impact resulting from the specified activity that is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by (i) causing the marine mammals to abandon or avoid hunting areas, (ii) directly displacing subsistence users, or (iii) placing physical barriers between the marine mammals and the subsistence hunters; and (2) cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.”

Section 101(a)(5)(A) provides for the promulgation of Incidental Take Regulations (ITRs), which can be issued for a period of up to 5 years. The ITRs set forth permissible methods of taking pursuant to the activity and other means of affecting the least practicable adverse impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance. In addition, ITRs include requirements pertaining to the monitoring and reporting of such takings. Under the ITRs, a U.S. citizen may request

a Letter of Authorization (LOA) for activities proposed in accordance with the ITRs. The Service evaluates each LOA request based on the specific activity and geographic location, and determines whether the level of taking is consistent with the findings made for the total taking allowable under the applicable ITRs. If so, the Service may issue an LOA for the project and will specify the period of validity and any additional terms and conditions appropriate to the request, including mitigation measures designed to minimize interactions with, and impacts to, marine mammals. The LOA will also specify monitoring and reporting requirements to evaluate the level and impact of any taking. Depending on the nature, location, and timing of a proposed activity, the Service may require applicants to consult with potentially affected subsistence communities in Alaska and develop additional mitigation measures to address potential impacts to subsistence users. Regulations specific to LOAs are codified at 50 CFR 18.27(f).

Section 101(a)(5)(D) established an expedited process to request authorization for the incidental, but not intentional, take of small numbers of marine mammals for a period of not more than 1 year if the taking will be limited to harassment, *i.e.*, Incidental Harassment Authorizations (IHAs). Harassment is defined in section 3 of the MMPA (16 U.S.C. 1362). For activities other than military readiness activities or scientific research conducted by or on behalf of the Federal Government, harassment means “any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild” (the MMPA calls this Level A harassment) “or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to migration, breathing, nursing, breeding, feeding, or sheltering” (the MMPA calls this Level B harassment). There is a separate definition of harassment applied in the case of a military readiness activity or a scientific research activity conducted by or on behalf of the Federal Government. The IHA prescribes permissible methods of taking by harassment and includes other means of achieving the least practicable impact on marine mammal species or stocks and their habitats, paying particular attention to rookeries, mating grounds, and areas of similar significance. In addition, as appropriate, the IHA will include measures that are necessary to ensure no unmitigable adverse impact on the availability of the species or stock for subsistence purposes in Alaska. IHAs also specify monitoring and reporting requirements pertaining to the taking by harassment.

ITRs and IHAs can provide considerable conservation and management benefits to covered marine mammals. The Service shall recommend mitigation for impacts to species covered by the MMPA that are under its jurisdiction consistent with the guidance of this policy. Proponents may adopt these recommendations as components of proposed actions. However, such adoption itself does not constitute full compliance with the MMPA.

10. *Migratory Bird Treaty Act (16 U.S.C. 703–712) (MBTA)*

The MBTA does not allow the take of migratory birds without a permit or other regulatory authorization (*e.g.*, rule, depredation order). The Service has express authority to issue permits for purposeful take and currently issues several types of permits for purposeful take of individuals (*e.g.*, hunting, depredation, scientific collection). Hunting permits do not require the mitigation hierarchy be enacted; rather, the Service sets annual regulations that limit harvest to ensure levels harvested do not diminish waterfowl breeding populations. For purposeful take permits that are not covered in these annual regulations (*e.g.*, depredation, scientific collection), there is an expectation that take be avoided and minimized to the maximum extent practicable as a condition of the take authorization process. Compensation and offsets are not required under these purposeful take permits, but can be accepted.

The Service has implied authority to permit incidental take of migratory birds, though incidental take has only been authorized in limited situations (*e.g.*, Department of Defense Readiness Rule and the NOAA Fisheries Special Purpose Permit). In all situations, permitted or unpermitted, there is an expectation that take be avoided and minimized to the maximum extent practicable, and voluntary offsets can be employed to this end. However, the Service cannot legally require or accept compensatory mitigation for unpermitted, and thus illegal, take of individuals. While action proponents are expected to reduce impacts to migratory bird habitat, such impacts are not regulated under MBTA. As a result, action proponents are allowed to use the full mitigation hierarchy to manage impacts to their habitats, regardless of whether or not a permit for take of individuals is in place. Assessments of action effects should examine direct, indirect, and cumulative impacts to migratory bird habitats, as habitat losses have been identified as a critical factor in the decline of many migratory bird species.

11. *National Environmental Policy Act (42 U.S.C. 4321 et seq.) (NEPA)*

NEPA requires Federal agencies to integrate environmental values into decision making processes by considering impacts of their proposed actions and reasonable alternatives. Agencies disclose findings through Environmental Assessments or a detailed Environmental Impact Statement and are required to identify and include all relevant and reasonable mitigation measures that could improve the action. The Council on Environmental Quality’s implementing regulations under NEPA define mitigation as a sequence, where mitigation begins with avoidance of impacts; followed by minimization of the degree or magnitude of impacts; rectification of impacts through repair, restoration, or rehabilitation; reducing impacts over time during the life of the action; and lastly, compensation for impacts by providing replacement resources. Effective mitigation through this ordered approach starts at the beginning of the NEPA process,

not at the end. Implementing regulations require that the Service be notified of all major Federal actions affecting fish and wildlife and our recommendations solicited. Engaging this process allows the Service to provide comments and recommendations for mitigation of fish and wildlife impacts.

12. *National Wildlife Refuge Mitigation Policy*

The Service’s Final Policy on the National Wildlife Refuge System and Compensatory Mitigation under the section 10/404 Program (64 FR 49229–49234, September 10, 1999) (Refuge Mitigation Policy) published in 1999 establishes guidelines for the use of Refuge lands for siting compensatory mitigation for impacts permitted through section 404 of the Clean Water Act (CWA) and section 10 of the Rivers and Harbors Act (RHA). The Refuge Mitigation Policy clarifies that siting mitigation for off-Refuge impacts on Refuge lands is appropriate only in limited and exceptional circumstances. Mitigation banks may not be sited on Refuge lands, but the Service may add closed banks to the Refuge system if specific criteria are met. The Refuge Mitigation Policy, which explicitly addresses only compensatory mitigation under the CWA and RHA, remains in effect and is unaltered by this policy. However, the Service will evaluate all proposals for using Refuge lands as sites for other compensatory mitigation purposes using the criteria and procedures established for aquatic resources in the Refuge Mitigation Policy (*e.g.*, to locate compensatory mitigation on Refuge property for off-Refuge impacts to endangered or threatened species).

13. *Natural Resource Damage Assessment and Restoration (NRDAR)*

This policy applies to actions for which the Service is a participating bureau, supporting the Department of the Interior, during activities associated with assessment of injuries to natural resources caused by oil spills or releases of hazardous materials, under the Oil Pollution Act (33 U.S.C. 2701 *et seq.*) and the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 9601), as amended by Public Law 99–499. When a release of hazardous materials or an oil spill injures natural resources under the jurisdiction of State, tribal, and Federal agencies, these governments quantify the injuries to determine appropriate restoration to compensate the public for losses of those resources or their services.

A restoration settlement, in the form of damages provided through a settlement document, is usually determined by quantifying the type and amount of restoration necessary to offset the injury caused by the spill or release. The type of restoration conducted depends on the resources injured by the release (*e.g.*, marine habitats, ground water, or biological resources (fish, birds)).

The NRDAR program may impose constraints associated with the Service’s Mitigation Policy. Jurisdiction over natural resources varies by agency, and the restoration portion of a given settlement is often resolved jointly with other Federal/

State/tribal trustees, thus requiring their approval of allocation of funds for restoration projects. This policy will be used by the Service to guide restoration projects that benefit Service resources and as one mechanism to direct restoration planning toward goals common to other trustees. Thus, the policy maintains the flexibility to implement the appropriate restoration to compensate for the injured resources under the jurisdiction of multiple government agencies. This policy does not seek to inhibit discussions aimed at achieving settlement, rather it seeks to offer flexibility while defining compensatory projects by providing support for weighing or modifying project elements to reach Service goals.

B. Additional Legislative Authorities

1. Clean Air Act; 42 U.S.C. 7401 *et seq.*, as amended (See <http://www.fws.gov/refuges/airquality/permits.html>)
2. Marine Protection, Research, and Sanctuaries Act; 16 U.S.C. 1431 *et seq.* and 33 U.S.C. 1401 *et seq.*
3. Resource Conservation and Recovery Act; 42 U.S.C. 6901 *et seq.*
4. Shore Protection Act; 33 U.S.C. 2601 *et seq.*
5. Coastal Zone Management Act; 16 U.S.C. 1451 *et seq.*
6. Coastal Barrier Resources Act; 16 U.S.C. 3501
7. Surface Mining Control and Reclamation Act; 30 U.S.C. 1201 *et seq.*
8. National Wildlife Refuge System Administration Act; 16 U.S.C. 668dd, as amended
9. National Historic Preservation Act; 16 U.S.C. 470f
10. Pittman-Roberts Wildlife Restoration Act; 16 U.S.C. 669–669k
11. Dingell-Johnson Sport Fish Restoration Act; 16 U.S.C. 777–777n, except 777 e–1 and g–1
12. Federal Land and Policy Management Act, 43 U.S.C. 1701 *et seq.*

C. Implementing Regulations

1. National Environmental Policy Act (NEPA), 40 CFR part 1508, 42 U.S.C. 55
2. Marine Mammal Protection Act (MMPA), 50 CFR part 18, 16 U.S.C. 1361 *et seq.*
3. Migratory Bird Treaty Act (MBTA), 50 CFR part 21, 16 U.S.C. 703 *et seq.*
4. Bald and Golden Eagle Protection Act (Eagle Act), 50 CFR part 22, 16 U.S.C. 668 *et seq.*
5. Guidelines for Wetlands Protection, 33 CFR parts 320 and 332, 40 CFR part 230
6. Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR parts 325 and 332 (USACE) and 40 CFR part 230 (EPA), 33 U.S.C. 1344
7. Natural Resource Damage Assessments (OPA), 15 CFR part 990, 33 U.S.C. 2701 *et seq.*
8. Natural Resource Damage Assessments (CERCLA), 43 CFR part 11, 42 U.S.C. 9601
9. Endangered Species Act of 1973, as amended; 50 CFR parts 13, 17 (specifically §§ 17.22, 17.32, 17.50), part 402; 16 U.S.C. 1531 *et seq.*

D. Executive Orders

1. Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
2. Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, January 4, 1979
3. Executive Order 11988, Floodplain Management, May 24, 1977
4. Executive Order 11990, Protection of Wetlands, May 24, 1977
5. Executive Order 12898, Environmental Justice for Low Income and Minority Populations, February 11, 1994
6. Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, October 5, 2009
7. Executive Order 13604, Improving Performance of Federal Permitting and Review of Infrastructure Projects, March 22, 2012

E. Council on Environmental Quality (CEQ) Policy and Guidance

1. Guidance Regarding NEPA Regulations (48 FR 34236, July 28, 1983)
2. Designation of Non-Federal Agencies to be Cooperating Agencies in Implementing the Procedural Requirements of the National Environmental Policy Act (40 CFR 1508.5, July 28, 1999)
3. Cooperating Agencies in Implementing the Procedural Requirements of the National Environmental Policy Act (January 30, 2002)
4. Memorandum, “Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact” (January 14, 2011)

F. Department of the Interior Policy and Guidance

1. Department of the Interior National Environmental Policy Act Procedures, 516 DM 1–7
2. Secretarial Order 3330, Improving Mitigation Policies and Practices of the Department of the Interior (October 31, 2013)
3. Secretarial Order 3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act (June 5, 1997)
4. Department of the Interior Climate Change Adaptation Policy, 523 DM 1

G. U.S. Fish and Wildlife Service (USFWS) Policy and Guidance

1. Service Responsibilities to Protect Migratory Birds, 720 FW 2
2. Final Policy on the National Wildlife Refuge System and Compensatory Mitigation under the Section 10/404 Program, 64 FR 49229–49234, September 10, 1999
3. Habitat Conservation Planning and Incidental Take Permit Processing Handbook, 61 FR 63854, 1996
4. USFWS National Environmental Policy Act Reference Handbook, 505 FW 1.7 and 550 FW 1
5. Endangered Species Act Habitat Conservation Planning Handbook (with NMFS), 1996
6. Endangered Species Act Consultation Handbook (with NMFS), 1998

7. Inter-agency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act’s National Oil and Hazardous Substances Pollution Contingency Plan and the Endangered Species Act, 2002
8. Guidance for the Establishment, Use, and Operation of Conservation Banking, 2003
9. Endangered and Threatened Wildlife and Plants; Recovery Crediting Guidance, 2008
10. Service Climate Change Adaptation Policy, 056 FW 1

H. Other Agency Policy, Guidance, and Actions Relevant to Service Activities

1. Memorandum of Agreement Between The Department of the Army and The Environmental Protection Agency, The Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines, 1990
2. Federal Highway Administration, Consideration of Wetlands in the Planning of Federal Aid Highways, 1990
3. Clean Water Act Section 404(q) Memorandum of Agreement Between the Department of the Interior and the Department of the Army, 1992
4. Interagency Agreement between the National Park Service, Fish and Wildlife Service, Bureau of Land Management, and the Federal Aviation Administration Regarding Low-Level Flying Aircraft Over Natural Resource Areas, 1993
5. USFWS Memorandum from Acting Director to Regional Directors, Regarding “Partners for Fish and Wildlife Program and NEPA Compliance,” 2002
6. Agreement between the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers for Conducting Fish and Wildlife Coordination Act Activities, 2003
7. Memorandum of Agreement Between the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers, 2003
8. Partnership Agreement between the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service for Water Resources and Fish and Wildlife, 2003
9. Memoranda of understanding with nine Federal agencies, under E.O. 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (<http://www.fws.gov/migratorybirds/PartnershipsAndInitiatives.html>)

Appendix B. Service Mitigation Policy and NEPA

A. Mitigation in Environmental Review Processes

NEPA was enacted to promote efforts to prevent or eliminate damage to the environment and biosphere (42 U.S.C. 4321). The NEPA process is intended to help officials make decisions based on an understanding of environmental consequences and take actions that protect, restore, and enhance the environment (40 CFR part 1501). It requires consideration of the impacts from connected, cumulative, and similar actions, and their relationship to the maintenance and enhancement of long-term productivity (42 U.S.C. 4332). Mitigation measures should be developed that effectively and efficiently address the

predicted and actual impacts, relative to the ability to maintain and enhance long-term productivity. The consideration of mitigation (type, timing, degree, etc.) should be consistent with and based upon the evaluation of direct, indirect, and cumulative impacts. The Service should also consider and encourage public involvement in development of mitigation planning, including components such as compliance and effectiveness monitoring, and adaptive management processes.

Consistent with January 14, 2011 CEQ Memorandum: Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impacts, Service-proposed actions should incorporate measures to avoid, minimize, rectify, reduce, and compensate for impacts into initial proposal designs and described as part of the action. Measures to achieve net gain or no-net-loss outcomes have the greatest potential to achieve environmentally preferred outcomes that are encouraged by the memorandum, and measures to achieve net gain outcomes have the greatest potential to enhance long-term productivity. We should analyze mitigation measures considered, but not incorporated into the proposed action, as one or more alternatives. For illustrative purposes, our NEPA documents may address mitigation alternatives or consider mitigation measures that the Service does not have legal authority to implement. However, the Service should not commit to mitigation alternatives or measures considered or analyzed without sufficient legal authorities or sufficient resources to perform or ensure the effectiveness of the mitigation (CEQ 2011). The Service should monitor the compliance and effectiveness of our mitigation commitments. For applicant-driven actions, some or most of the responsibility for mitigation monitoring may lie with the applicant; however, the Service retains the ultimate responsibility to ensure that monitoring is occurring when needed and that the results of monitoring are properly considered in an adaptive management framework.

When carrying out its responsibilities under NEPA, the Service will apply the mitigation meanings and sequence in the NEPA regulations (40 CFR 1508.20). In particular, the Service will retain the ability to distinguish between:

- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- rectifying the impact by repairing, rehabilitating, or restoring the affected environment; and
- reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

Minimizing impacts under NEPA is commonly applied at the planning design stage, prior to the action (and impacts) occurring. Rectification and reduction over time are measures applied after the action is implemented (even though they may be included in the plan). Therefore, under NEPA, there are often very different temporal scopes between minimization measures and those for rectification and reduction over

time. These temporal differences can be important for developing and evaluating alternatives, analyzing indirect and cumulative impacts, and for designing and implementing effectiveness and compliance monitoring. Therefore, the Service will retain the ability to distinguish between these three mitigation types when doing so will improve the ability to take the requisite NEPA “hard look” at potential environmental impacts and reasonable alternatives to proposed actions.

Other statutes besides NEPA that compel the Service to address the possible environmental impacts of mitigation activities for fish and wildlife resources commonly include the National Historic Preservation Act of 1996 (NHPA) (16 U.S.C 470 *et seq.*), as amended in 1992, the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. 1251–1376), Fish and Wildlife Coordination Act (16 U.S.C 661–667(e)), as amended (FWCA), and the Clean Air Act (42 U.S.C. 7401–7661). Service mitigation decisions should also comply with all applicable Executive Orders, including E.O. 13514, Federal Leadership in Environmental, Energy, and Economic Performance (October 5, 2009), E.O. 13653, Preparing the United States for the Impacts of Climate Change (November 1, 2013), and E.O. 12898, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations. DOI Environmental Compliance Memorandum (ECM) 95–3 provides additional direction regarding responsibilities for addressing environmental justice under NEPA, including the equity of benefits and risks distribution.

B. Efficient Mitigation Planning

The CEQ Regulations Implementing NEPA include provisions to reduce paperwork (§ 1500.4), delay (§ 1505.5), duplication with State and local procedures (§ 1506.2), and combine documents in compliance with NEPA. A key component of the provisions to reduce paperwork directs Federal agencies to use environmental impact statements for programs, policies, or plans, and to tier from statements of broad scope to those of narrower scope, in order to eliminate repetitive discussions of the same issues (§ 1501.1(i), 1502.4, and 1502.20). To the fullest extent possible, the Service should coordinate with State, tribal, local, and other Federal entities to conduct joint mitigation planning, research, and environmental review processes. Mitigation planning can also provide efficiencies when it is used to reduce the impacts of a proposed project to the degree it eliminates significant impacts and avoids the need for an Environmental Impact Statement. When using this approach, employing a mitigated Finding of No Significant Impact (FONSI), the Service should ensure consistency with the aforementioned January 14, 2011, CEQ memorandum.

Use of this mitigation policy will help focus our NEPA discussion on issues for fish, wildlife, plants, and their habitats, and will avoid unnecessarily lengthy background information. When appropriate, the Service should use the process for establishing evaluation species and resource categories to

concentrate our environmental analyses on relevant and significant issues.

Programmatic NEPA analyses can establish standards for consideration and implementation of mitigation, and can more effectively address cumulative impacts. To ensure that landscape-scale mitigation planning is effectively implemented and meets conservation goals, the Service should seek and consider collaborative opportunities to conduct programmatic NEPA decision-making processes on Service actions that are similar in timing, impacts, alternatives, resources, and mitigation. Existing landscape-scale conservation and mitigation plans that have already undergone a NEPA process will provide efficiencies for Federal actions taken on a project-specific basis and will also better address potential cumulative impacts. However, the Service may incorporate plans or components of plans by reference (40 CFR 1502.21), while addressing impacts from plans or components within the NEPA process on the Service action.

C. NEPA and Tribal Trust Responsibilities

NEPA also provides a process through which all Tribal Trust responsibilities can be addressed simultaneous to consultation, but care should be taken to ensure that culturally sensitive information is not disclosed. Resources that may be impacted by Service actions or mitigation measures include culturally significant or sacred landscapes, species associated with those landscapes, or species that are separately considered culturally significant or sacred. The Service should coordinate or consult with affected tribes to develop methods for evaluating impacts, significance criteria, and meaningful mitigation to sacred or culturally significant species and their locales. Because climate change has been identified as an Environmental Justice (EJ) issue for tribes, adverse climate change-related effects to culturally significant or sacred landscapes or species may be cumulatively greater, and may indicate the need for a separate EJ analysis. Affected tribes can be those for which the locale of the action or landscape mitigation planning lies within traditional homelands and can include traditional migration areas. The final determination of whether a tribe is affected is made by the tribe, and should be ascertained during consultation or a coordination process. When government-to-government consultation takes place, the consultation process will be guided by the Service Tribal Consultation Handbook.

The Service has overarching Tribal Trust Doctrine responsibilities under the Eagle Act, the National Historic Preservation Act (NHPA), the American Indian Religious Freedom Act (AIRFA) (42 U.S.C. 1996), Religious Freedom Restoration Act of 1993 (RFRA) (42 U.S.C. 2000bb *et seq.*), Secretarial Order 3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, the Endangered Species Act (June 5, 1997), Executive Order 13007, Indian Sacred Sites (61 FR 26771, May 29, 1996), and the USFWS Native American Policy. Government-wide statutes with requirements to consult with tribes include the Archeological Resources Protection Act of 1979 (ARPA) (16 U.S.C.

470aa-mm), the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001 *et seq.*), and AIRFA. Regulations with requirements to consult include NAGPRA, NHPA, and NEPA.

D. Integrating Mitigation Policy Into the NEPA Process

When the Service is the lead or co-lead Federal agency for NEPA compliance, the mitigation policy may inform several components of the NEPA process and make it more effective and more efficient in conserving the affected Federal trust resources. This section discusses the role of the mitigation policy in Service decision making under NEPA.

Scoping

The Service should use internal and external scoping to help identify appropriate evaluation species, obtain information about the relative scarcity, suitability, and importance of affected habitats for resource category assignments, identify issues associated with these species and habitats, and identify issues associated with other affected resources. Climate change vulnerability assessments can be a valuable tool for identifying or screening new evaluation species. The Service should coordinate external scoping with agencies having special expertise or jurisdiction by law for the affected resources.

Purpose and Need

The Purpose and Need statement of the NEPA document should incorporate relevant conservation objectives for evaluation species and their habitats, and the need to ensure either a net gain or no-net-loss. Because the statement of Purpose and Need frames the development of the Proposed Action and Alternatives, including conservation objectives from the beginning, it steers action proposals away from impacts that may otherwise necessitate mitigation. Addressing conservation objectives in the purpose statement initiates a planning process in which the proposed action and all reasonable alternatives evaluated necessarily include appropriate conservation measures, differing in type or degree, and avoids presenting decision makers with a choice between a "conservation alternative" and a "no conservation alternative."

Affected Environment

The Affected Environment discussion should focus on significant environmental issues associated with evaluation species and their habitats and highlight resource vulnerabilities that may require mitigation features in the project design. This section should document the relative scarcity, suitability, and importance of affected habitats, along with the sensitivity and status of the species and habitats. It should identify relevant temporal and spatial scales for each resource and the appropriate indicators of effects and units of measurement for evaluating mitigation features. This section should also identify habitats for evaluation species that are currently degraded but have a moderate to high potential for restoration or improvement.

Significance Criteria

Explicit significance criteria provide the benchmarks or standards for evaluating effects under NEPA. Potentially significant impacts to resources require decision making supported by an Environmental Impact Statement. Determining significance considers both the context and intensity of effects. For resources covered by this mitigation policy, the sensitivity and status of affected species, and the relative scarcity, suitability, and importance of affected habitats, provide the context component of significance criteria. Measures of the severity of effects (degree, duration, spatial extent, etc.) provide the intensity component of significance criteria. Significance criteria may help identify appropriate levels and types of mitigation; however, the Service should consider mitigation for impacts that do not exceed thresholds for significance as well as those that do.

Analysis of Environmental Consequences

The analysis of Environmental Consequences should address the relationship of effects to the maintenance and enhancement of long-term productivity (40 CFR 1502.16), and include the timing and duration of direct, indirect, and cumulative effects to resources, short-term versus long-term effects (adverse and beneficial), and how the timing and duration of mitigation would influence net effects over time. The Service's net gain goal for fish and wildlife resources under this policy applies to the full planning horizon of a proposed action. Guidance under section V.B.3 (Assessment Principles) of this policy supplements existing Service, Department, and government-wide guidance for the Service's environmental consequences analyses for affected fish and wildlife resources under NEPA.

Cumulative Effects Analyses

The long-term benefits of mitigation measures, whether on-site or off-site relative to the proposed action, often depend on their placement in the landscape relative to other environmental resources and stressors. Therefore, cumulative effects analyses, including the effects of climate change, are especially important to consider in designing mitigation measures for fish and wildlife resources. Cumulative effects analyses should include consideration of direct and indirect effects of climate change and should incorporate mitigation measures to address altered conditions. Cumulative effects are doubly important in actions affecting species in decline, such as ESA-listed or candidate species, marine mammals, and Birds of Conservation Concern, for which the Service should design mitigation that will improve upon existing conditions and offset as much as practicable reasonably foreseeable adverse cumulative effects. Also, to the extent practicable, cumulative effects analyses should address the synergistic effects of multiple foreseeable resource stressors. For example, in parts of some western States, the combination of climate change, invasive grasses, and nitrogen deposition may substantially increase fire frequency and intensity, adversely affecting some resources

to a greater degree than the sum of these stressors considered independently.

Analysis of Climate Change

The analyses of climate change effects should address effects to and changes for the evaluation species, resource categories, mitigation measures, and the potential for changes in the effects of mitigation measures. Anticipated changes may result in the need to choose different or additional evaluation species and habitat, at different points in time.

Decision Documents

Mitigation measures should be included as commitments within a Record of Decision (ROD) for an EIS, and within a mitigated FONSI. The decision documents should clearly identify: Measures to achieve outcomes of no net loss or net gain; the types of mitigation measures adopted for each evaluation species or suite of species; the spatial and temporal application and duration of the measures; compliance and effectiveness monitoring; criteria for remedial action; and unmitigable residual effects.

Appendix C. Compensatory Mitigation in Financial Assistance Awards Approved or Administered by the U.S. Fish and Wildlife Service

The basic authority for Federal financial assistance is in the Federal Grant and Cooperative Agreement Act of 1977 (31 U.S.C. 6301 *et seq.*). It distinguishes financial assistance from procurement, and explains when to use a grant or a cooperative agreement as an instrument of financial assistance. Regulations at 2 CFR part 200 provide Government-wide rules for managing financial assistance awards. Each of the Service's 60 financial assistance programs has at least one statutory authority, which are listed in the Catalog of Federal Domestic Assistance at www.cfda.gov. These statutory authorities and their program-specific regulations may supplement or create exceptions to the Government-wide regulations. The authorities and regulations for the vast majority of financial assistance programs do not address mitigation, but there are at least two exceptions. The statutory authority for the North American Wetlands Conservation Fund program (16 U.S.C. 4401 *et seq.*) prohibits the use of program funds for specific types of mitigation. Regulations implementing the National Coastal Wetlands Conservation Grant program (50 CFR part 84) include among the activities ineligible for funding the acquisition, restoration, enhancement, or management of lands to mitigate recent or pending habitat losses. To foster consistent application of financial assistance programs with respect to mitigation processes, the following provisions describe appropriate circumstances as well as prohibitions for use of financial assistance in developing compensatory mitigation.

A. What is federal financial assistance?
Federal financial assistance is the transfer of cash or anything of value from a Federal agency to a non-Federal entity to carry out a public purpose authorized by a U.S. law. If

the Federal Government will be substantially involved in carrying out the project, the instrument for transfer must be a cooperative agreement. Otherwise, it must be a grant agreement. We use the term *award* interchangeably for a grant or cooperative agreement. This policy applies only to awards approved or administered by the Service in one of its 60 financial assistance programs. If the Service shares responsibility for approving or administering an award with another entity, the policy applies only to those decisions that the Service has the authority to make under the terms of the shared responsibility.

B. Where do most mitigation issues occur in financial assistance? Mitigation issues mostly occur in the match (cost share) proposed by applicants. Match is the share of project costs not paid by Federal funds, unless otherwise authorized by Federal statute. Most Service-approved or -administered financial-assistance programs require or encourage applicants to provide match.

C. Can the Federal or matching share in a financially assisted project be used to generate mitigation credits for activities authorized by Department of the Army (DA) permits?

1. Neither the Federal nor matching share in financially assisted aquatic-resource-restoration projects or aquatic-resource-conservation projects can be used to generate mitigation credits for DA-authorized activities except as authorized by 33 CFR 332.3(j)(2) and 40 CFR 230.93(j)(2)). These exceptional situations are any of the following:

a. The mitigation credits are solely the result of any match over and above the required minimum. This surplus match must supplement what will be accomplished by the Federal funds and the required-minimum match to maximize the overall ecological benefits of the restoration or conservation project.

b. The Federal funding for the award is specifically authorized for the purpose of mitigation.

c. The work funded by the financial-assistance award is subject to a DA permit that requires mitigation as a condition of the permit. An example is an award that funds a boat ramp that will adversely affect adjacent wetlands and the impact must be mitigated. The recipient may pay the cost of the mitigation with either the Federal funds or the non-Federal match.

2. Match cannot be used to generate mitigation credits under the exceptional situations described in section C(1)(a–c) if the financial-assistance program's statutory authority or program-specific regulations prohibit the use of match or program funds for compensatory mitigation.

D. Can the Service approve a proposal to use the proceeds from the purchase of credits in an in-lieu-fee program or a mitigation bank as match?

1. In-lieu-fee programs and mitigation banks are mechanisms authorized in 33 CFR part 332 and 40 CFR part 230 to provide mitigation for activities authorized by a DA permit. The Service must not approve a proposal to use proceeds from the purchase

of credits in an in-lieu-fee program or mitigation bank as match unless both of the following apply:

a. The proceeds are over and above the required minimum match. This surplus match must supplement what will be accomplished by the Federal funds and the required-minimum match to maximize the overall ecological benefits of the project.

b. The statutory authority for the financial-assistance program and program-specific regulations (if any) do not prohibit the use of match or program funds for mitigation.

2. The reasons that the Service cannot approve a proposal to use proceeds from the purchase of credits in an in-lieu-fee program or mitigation bank as match except as described in section D(1)(a–b) are:

a. Proceeds from the purchase of credits are legally required compensation for resources or resource functions impacted elsewhere. The sponsor of the in-lieu-fee program or mitigation bank uses these proceeds for the restoration, establishment, enhancement, and/or preservation of the resources impacted. The purchase price of the credits is based on the full cost of providing the compensatory mitigation.

b. When credits are purchased from an in-lieu-fee program sponsor or a mitigation bank to compensate for impacts authorized by a DA permit, the responsibility for providing the compensatory mitigation transfers to the sponsor of the in-lieu-fee program or mitigation bank. The process is not complete until the sponsor provides the compensatory mitigation according to the terms of the in-lieu-fee program instrument or mitigation-banking instrument approved by the District Engineer of the U.S. Army Corps of Engineers.

E. Can the Federal share or matching share in a financially assisted project be used to satisfy a mitigation requirement of a permit or legal authority other than a DA permit?

The limitations on the use of mitigation in a Federal financially assisted project are generally the same regardless of the source of the mitigation requirement, but only the limitations regarding mitigation required by a DA permit are currently established in regulation. Limitations for a permit or authority other than a DA permit are established in this Service policy. They are:

1. Neither the Federal nor matching share in a financially assisted project can be used to satisfy Federal mitigation requirements except in any of the following situations:

a. The mitigation credits are solely the result of any match over and above the required minimum. This surplus match must supplement what will be accomplished by the Federal funds and the required minimum match to maximize the overall ecological benefits of the project.

b. The Federal funding for the award is specifically authorized for the purpose of mitigation.

c. The work funded by the Federal financial assistance award is subject to a permit or authority that requires mitigation as a condition of the permit. An example is an award that funds a boat ramp that will adversely affect adjacent wetlands and the impact must be mitigated. The recipient may pay the cost of the mitigation with either the Federal funds or the non-Federal match.

2. Match cannot be used to satisfy Federal mitigation requirements under the exceptional situations described in section E(1)(a–c) if the financial-assistance program's statutory authority or program-specific regulations prohibit the use of match or program funds for mitigation.

3. If any regulations govern the specific type of mitigation, and if these regulations address the role of mitigation in a Federal financially assisted project, the regulations will prevail in any conflict between the regulations and this section of Appendix C.

F. Can the Service approve a proposal to use revenue from a Natural Resource Damage Assessment and Restoration (NRDAR) Fund settlement as match in a financial assistance award?

1. The Service can approve such a proposal as long as the financial assistance program does not prohibit the use of match or program funds for compensatory mitigation. In certain cases, this revenue qualifies as match because:

a. Federal and non-Federal entities jointly recover the fees, fines, and/or penalties and deposit the fees, fines, and/or penalties as joint and indivisible recoveries into a fiduciary fund for this purpose.

b. The governing body of the NRDAR Fund may include Federal and non-Federal trustees, who must unanimously approve the transfer to a non-Federal trustee for use as non-Federal match.

c. The project is consistent with a negotiated settlement agreement and will carry out the provisions of the Comprehensive Environmental Response Compensation and Liability Act, as amended, Federal Water Pollution Control Act of 1972, and the Oil Pollution Act of 1990 for damage assessment activities.

d. The use of the funds by the non-Federal trustee is subject to binding controls.

G. Can the Service approve financial assistance to satisfy mitigation requirements of State, tribal, or local governments?

1. The Service can approve or administer funding for a proposed financially assisted project that satisfies a compensatory mitigation requirement of a State, tribal, or local government, or has match that originated from such a requirement.

2. Satisfying this mitigation requirement with Federal financial assistance must not be contrary to any law, regulation, or policy of the State, tribal, or local government as applicable.

H. Can a mitigation proposal be located on land acquired under a Service financial-assistance award?

1. A mitigation proposal can be located on land acquired under a Service approved or administered financial-assistance award only if:

a. The land will continue to be used for its authorized purpose as long as it is needed for that purpose.

b. The mitigation proposal will provide environmental benefits over and above the terms of the financial-assistance award(s) that acquired, restored, or enhanced the property.

2. Service staff must be involved in the decision to locate mitigation on real property acquired under a Service-approved or administered financial assistance award for one or both of the following reasons:

a. The Service has a responsibility to ensure that real property acquired under one of its financial assistance awards is used for its authorized purpose as long as it is needed for that purpose.

b. If the proposed legal arrangements or the site-protection instrument to use the land for mitigation would encumber the title, the recipient of the award that funded the acquisition of the real property must obtain the Service's approval. If the proposed legal arrangements would dispose of any real-property rights, the recipient must request disposition instructions from the Service.

Request for Information

We intend that a final policy will consider information and recommendations from all interested parties. We, therefore, invite comments, information, and recommendations from governmental agencies, Indian Tribes, the scientific community, industry groups, environmental interest groups, and any other interested parties. All comments and materials received by the date listed above in DATES will be considered prior to the approval of a final policy.

In addition to more general comments and information, we ask that you comment on the following specific aspects of the policy:

(1) Principles established by the policy in section 4, including the Service's mitigation planning goal of a net conservation gain, or at a minimum, no net loss, *i.e.*, maintaining the current status of affected resources.

(2) Integration of mitigation planning into a broader ecological context with applicable landscape-level conservation planning, by steering mitigation efforts in a manner that will best contribute to achieving conservation objectives.

(3) The integration of all applicable authorities that allow the Service to

recommend or require mitigation within a single mitigation policy.

If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the Web site. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

National Environmental Policy Act (NEPA)

We have analyzed the proposed policy in accordance with the criteria of the National Environmental Policy Act (NEPA) (42 U.S.C. 4332(c)), the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR parts 1500–1508), and the Department of the Interior's NEPA procedures (516 DM 2 and 8; 43 CFR part 46). We have determined that the proposed policy includes substantive revisions to the 1981 Mitigation Policy that are not purely administrative in nature and cannot be categorically excluded from NEPA documentation requirements consistent with 40 CFR 1508.4 and 43 CFR 46.210(i). In addition, this action may have the potential to trigger an extraordinary circumstance, as outlined in 43 CFR 46.215. Therefore, we announce our intent to prepare an environmental assessment (EA) pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. We request comments on the scope of the NEPA review, information regarding important environmental issues that

should be addressed, the alternatives to be analyzed, and issues that should be addressed at the programmatic stage in order to inform the site-specific stage. This notice provides an opportunity for input from other Federal and State agencies, local government, Native American Tribes, nongovernmental organizations, the public, and other interested parties.

Authors

The primary authors of the draft policy are the following staff members of the U.S. Fish and Wildlife Service: Karen Cathey of the Southwest Regional Office; Deborah Mead and Jason Miller (team leader) of the Ecological Services Program, Headquarters Office; Doreen Stadlander of the Carlsbad Fish and Wildlife Office; Diana Whittington of the Migratory Birds Program, Headquarters Office; Jerry Ziewitz of the Southeast Regional Office; and other Headquarters, Regional, and field contributors. Primary support for policy development was provided by Cheryl Amrani of the Ecological Services Program, Headquarters Office.

Authority

The multiple authorities for this action include the: Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*); Fish and Wildlife Coordination Act, as amended, (16 U.S.C. 661–667(e)); National Environmental Policy Act (42 U.S.C. 4371 *et seq.*); and others identified in section 2 and Appendix A of this policy.

James W. Kurth,

Acting Director, U.S. Fish and Wildlife Service.

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