Billing Code 4333-15

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS–HQ–ES–2015-0165; FXES11140900000—178—FF09E33000]

Endangered and Threatened Wildlife and Plants; Endangered Species Act Compensatory Mitigation Policy

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of final policy.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service or USFWS), announce the final Endangered Species Act (ESA) Compensatory Mitigation Policy. The new policy steps down and implements recent Executive Office, Department of the Interior, and Service mitigation policies that reflect a shift from project-by-project to landscape-scale approaches to planning and implementing compensatory mitigation. The new policy is established to improve consistency and effectiveness in the use of compensatory mitigation as recommended or required under the ESA. The ESA Compensatory Mitigation Policy covers permittee-responsible mitigation, conservation banking, in-lieu fee programs, and other third-party mitigation mechanisms, and stresses the need to hold all compensatory mitigation mechanisms to equivalent and effective standards.

DATES: This policy is effective on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this policy, including an environmental assessment, are available on the Internet at *http://www.regulations.gov* at Docket Number FWS–HQ–ES–

2015–0165.

FOR FURTHER INFORMATION CONTACT: Craig Aubrey, U.S. Fish and Wildlife Service, Division of Environmental Review, 5275 Leesburg Pike, Falls Church, VA 22041–3803; telephone 703–358–2442. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

The mission of the U.S. Fish and Wildlife Service (Service or USFWS) is working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. As part of our mission, we continually seek opportunities to engage both the public and private sectors to work with us to conserve species and the ecosystems on which they depend. This collaborative effort includes conservation of endangered and threatened (listed) species and their designated critical habitat protected under the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*), and other species proposed for listing or at-risk of being listed. The purposes of the ESA are to provide a means whereby the ecosystems upon which listed species depend may be conserved, and to provide a program for the conservation of such species. The Service and National Oceanic and Atmospheric Administration's National Marine Fisheries Service share responsibilities for administering the ESA. However, this policy only applies to the Service and species under our jurisdiction.

This policy is the first comprehensive treatment of compensatory mitigation under authority of the ESA to be issued by the Service. Both the 1995 interagency policy on the

establishment and operation of wetland mitigation banks (60 FR 58605, November 28, 1995) and the 2000 interagency policy on the use of in-lieu fee arrangements (65 FR 66914, November 7, 2000) are specific to wetland mitigation, but provide guidance that is generally applicable to conservation banking and in-lieu fee programs for species associated with wetlands or uplands. These interagency policies were superseded by the Environmental Protection Agency–U.S. Army Corps of Engineers 2008 Compensatory Mitigation Rule for Losses of Aquatic Resources (73 FR 19594, April 10, 2008). In 2003, the Service issued guidance on the establishment, use, and operation of conservation banks (68 FR 24753, May 8, 2003). In 2008, we issued recovery crediting guidance (73 FR 44761, July 31, 2008). This ESA Compensatory Mitigation Policy clarifies Service expectations regarding all compensatory mitigation mechanisms recommended or supported by the Service when implementing the ESA, including, but not limited to, conservation banks, in-lieu fee programs, habitat credit exchanges, and permittee-responsible mitigation.

Purpose and Importance of the Policy

The primary intent of the policy is to provide Service personnel with direction and guidance in the planning and implementation of compensatory mitigation, primarily through encouraging strategic planning at the landscape level and setting standards that mitigation programs and projects must meet to achieve conservation that is effective and sustainable. Compensatory mitigation is defined in this policy as compensation 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 (part 600, chapter 6 of the Departmental Manual (600 DM 6.4C)). While this policy addresses only the role of compensatory mitigation under the ESA, avoidance and minimization of impacts retain their central role in both the section 7 and section 10 processes. Guidance on the application of the mitigation hierarchy is provided in our Mitigation Policy (81 FR 83440, November 21, 2016), regulations implementing the ESA, and other policies and guidance documents specific to various sections of the ESA.

Alignment of the Policy with Existing Directives

By memorandum (80 FR 68743, November 6, 2015), the President directed all Federal agencies that manage natural resources, "to avoid and then minimize harmful effects to land, water, wildlife, and other ecological resources (natural resources) caused by land- or water-disturbing activities, and to ensure that any remaining harmful effects are effectively addressed, consistent with existing mission and legal authorities." This policy is consistent with the Presidential memorandum ("Mitigating Impacts on Natural Resources From Development and Encouraging Related Private Investment") issued November 3, 2015; the Department of the Interior (Department) Secretarial Order 3330 entitled, "Improving Mitigation Policies and Practices of the Department of the Interior," issued October 31, 2013; the new Interior Departmental Manual Chapter on Landscape-Scale Mitigation Policy, 600 DM 6 (October 23, 2015); and is intended to institute the policies and procedures reflected in the guiding principles on mitigation established by the Department through the report to the Secretary entitled, "A Strategy for Improving the Mitigation Policies and Practices of The Department of the Interior," issued in April 2014 (Clement et al. 2014). These directives emphasize a comprehensive landscape-scale

approach to planning and implementing mitigation programs, and they also include a mitigation goal to improve (*i.e.,* "net gain") or, at a 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.

The mitigation principles set forth in the above directives, including the landscape scale approach and the goal of "net gain," have been adopted in both the Service's Mitigation Policy (81 FR 83440, November 21, 2016), and in this policy. The landscape-scale approach to mitigation is not a new concept. For example, in 2013, the Service issued mitigation guidance for two listed songbirds in central Texas based on recovery goals for these species. The songbird mitigation guidance sets minimum standards that must be met by mitigation providers and encourages the use of consolidated compensatory mitigation in the form of permanent protection and management of large, contiguous patches of the species' habitat. Proactive approaches, such as this example, provide greater regulatory certainty for project proponents and encourage the establishment of conservation banks and other mitigation opportunities by mitigation sponsors for use by project proponents.

The mitigation goal (*i.e.,* "net gain" or, at a minimum, "no net loss") is not necessarily based on habitat area, but on numbers of individuals, size and distribution of populations, the quality and carrying capacity of habitat, or the capacity of the landscape to support stable or increasing populations of the affected species after the action (including all proposed conservation measures) is implemented. In other words, it is based on those factors that determine the ability of the species to be conserved.

Benefits of the Policy

This policy sets forth standards for compensatory mitigation that implement the tenets in the directives cited above and reflect the many lessons learned by the Service during our more than 40-year history implementing the ESA, particularly sections 7 and 10 of the ESA. The standards apply to all compensatory mitigation mechanisms (*i.e.*, permittee-responsible mitigation, conservation banks, in-lieu fee programs, habitat exchanges, and other third-party mitigation arrangements), which are instrumental to achieving effective compensatory mitigation on the landscape and encouraging private investment in compensatory mitigation.

Adherence to the mitigation principles and compensatory mitigation standards identified in this policy will achieve greater consistency, predictability, and transparency in implementation of the ESA. Service offices are encouraged to work with Federal agencies and other partners to establish compensatory mitigation programs based on landscape-scale conservation plans, such as more efficient, better coordinated, and expedited regulatory processes, which can provide project applicants with incentives to mitigate their actions. Compensatory mitigation programs and projects designed and implemented in accordance with the standards set forth in this policy are expected to achieve the best conservation outcomes for listed, proposed, and at-risk species through effective management of the risks associated with compensatory mitigation.

This policy encourages the use of market-based compensatory mitigation programs such as conservation banking in conjunction with programmatic approaches to ESA section 7 consultations and habitat conservation plans (HCPs) that can be designed to achieve a “no net loss” or a “net gain” mitigation goal. Consultations and HCPs that

establish a “program” to address multiple, similar actions and/or impacts to one or more species operate on a larger landscape scale and expedite regulatory processes. Market-based mitigation programs improve regulatory predictability, provide efficiencies of scale, and incentivize private investment in species conservation (Fox and Nino-Murcia 2005). The benefits provided by these mitigation programs generally encourage Federal agencies and incentivize applicants to develop proposed actions that fully compensate for adverse impacts to affected species anticipated as a result of their actions.

Discussion

“In enacting the ESA, Congress recognized that individual species should not be viewed in isolation, but must be viewed in terms of their relationship to the ecosystem of which they form a constituent element. Although the regulatory mechanisms of the [ESA] focus on species that are formally listed as endangered or threatened, the purposes and policies of the [ESA] are far broader than simply providing for the conservation of individual species or individual members of listed species” (Conference Report No. 97-835 House of Representatives, September 17, 1982). This comment, made over 30 years ago during reauthorization of the ESA, is a reminder of the challenges still before us.

Incorporating a landscape-scale approach to development and conservation planning, including mitigation, that ensures a “net gain” or, at a minimum, “no net loss” in the status of affected resources, as directed by the Presidential memorandum (80 FR 68743, November 6, 2015), helps address the additive impacts that lead to significant deterioration of resources over time and has the potential to foster recovery of listed species and avoid listing of additional species.

As discussed later in this document, the Service’s authority to require

compensatory mitigation under the ESA is limited and differs under sections 7 and 10. However, we can more broadly recommend the use of compensatory mitigation to offset the adverse impacts of actions under certain provisions of the ESA and under other authorities, such as the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq*.) and the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq*.). This policy encourages Service offices to work with Federal agencies and applicants, and to recommend or require, if appropriate, the inclusion of compensatory mitigation for all unavoidable adverse impacts to listed, proposed, and at-risk species and their habitat anticipated as a result of any proposed action. While this practice currently exists for some species, it is not used broadly throughout the Service. Recommending, where applicable, that Federal agencies use their authorities to fully mitigate the adverse effects of their actions (*i.e.*, ensure "no net loss" in the status of affected resources) is consistent with the Presidential memorandum (80 FR 68743, November 6, 2015), the Department's and the Service's mitigation planning goals, and the purposes of the ESA. Effective mitigation that fully offsets the impacts of an action prevents that action from causing a decline in the status of affected species (*i.e.*, achieves "no net loss").

Compensatory Mitigation under Sections 7 and 10 of the ESA

The additive effects of impacts adversely affecting listed and at-risk species as a result of many past and current human-caused actions are significant. The number of listed species has increased from slightly more than 300 in 1982 (when the ESA was reauthorized) to more than 1,500 by the end of 2016. While some listed species have been reclassified from endangered to threatened (*i.e.*, "downlisted") or removed from either the Federal List of Endangered and Threatened Wildlife or List of Endangered and

Threatened Plants (*i.e.*, "delisted") within the last 40 years, the projected increase in human population growth, increasing demand on our natural resources associated with this projected population growth, accelerated climate change, continued introductions of invasive species, and other stressors are putting even more species at risk and compromising the essential functions of ecosystems necessary to improve the status and recover these species. We cannot expect to change the status trajectories of these species without a commitment to responsible and implementable standards for accomplishing effective, sustainable compensatory mitigation that fully offsets the adverse impacts of actions to species and other resources of concern.

Compensatory mitigation is a conservation measure that can be used within an appropriate context under section 7 of the ESA to address proposed actions that may result in adverse impacts to listed species that cannot be avoided. For example, under section 7(a)(1) of the ESA, all Federal agencies are required to use their authorities to carry out conservation programs for listed species. Federal agencies may choose to develop and implement section 7(a)(1) conservation programs for listed species in conjunction with section 7(a)(2) consultation through a coordinated program. The Service supports these efforts, and we encourage Federal agencies to coordinate with us on development of such programs.

Compensatory mitigation can be used under section 10(a)(1)(B) of the ESA through HCPs developed to address adverse impacts of non-Federal actions on listed and other covered species that cannot be avoided. Landscape-scale HCPs developed for use by multiple applicants to conserve multiple resources are generally the most efficient and effective approaches. The Service supports these efforts and encourages applicants,

particularly local and State agencies and organizations, to coordinate with us on the development of such plans.

Landscape-level Approaches to Compensatory Mitigation

Taking a landscape-level approach to mitigation will assist the Service to modernize our compensatory mitigation procedures and practices and better meet the challenges posed by the growing human population's demands on our natural resources and changing conditions such as those resulting from climate change. Conservation banking is a market-based compensatory mitigation mechanism based on a landscape approach to mitigation that achieves compensation for listed and other resources of concern in advance of project impacts. In-lieu fee programs also establish compensatory mitigation sites but generally not in advance of impacts and often not through a market-based approach. Habitat credit exchanges are a relatively new market-based compensatory mitigation mechanism based on a clearinghouse model that may or may not accomplish mitigation in advance of project impacts. All three of these mitigation mechanisms use a landscape-level approach to consolidate and locate compensatory mitigation in areas identified as conservation priorities. These programs have designated service areas within which proposed actions that meet certain criteria may be mitigated with Service approval. The functions and services provided for listed, proposed, and at-risk species by these compensatory mitigation programs are represented by credits. Credits are used to offset impacts (often referred to as debits). Most credit transactions involve a permittee purchasing the amount of credits needed to offset the anticipated adverse effects of an action from the mitigation project sponsor. The Service must

approve credit transactions as to their conservation value and appropriate application for use related to any authorization or permit issued under the ESA.

The conservation banking model is generally perceived as successful at achieving effective conservation outcomes and, when used in conjunction with section 7 consultations and section 10 HCPs, has achieved notable regulatory efficiencies. Results include ecological performance that usually achieves "no net loss," and often a net benefit, in species conservation; increased regulatory predictability for Federal agencies and applicants; and more efficient and better coordinated permitting processes, especially when multiple agencies with overlapping regulatory jurisdictions are involved.

Permittee-responsible mitigation for many small to moderate impacts often cannot provide adequate compensation because it is often difficult to achieve effective conservation on a small scale. Small mitigation sites are often not ecologically defensible, and it is often difficult to ensure long-term stewardship of these sites. Most individual actions result in small or moderate impacts to species and habitat, yet the additive effects of these actions (often referred to as "death by a thousand cuts"), when not compensated for, can have substantial adverse effects on these resources by degrading the environmental baseline and impairing the potential for future actions. In general, conservation banking, in-lieu fee programs, and similar mitigation mechanisms that consolidate compensatory mitigation on larger landscapes are designed to serve project proponents with small to moderate impact actions, are ecologically more effective, and provide more economical options to achieve compensation than permittee-responsible mitigation.

Furthermore, larger landscape-scale conservation programs with market-based compensatory mitigation opportunities create an economic incentive for private landowners, investors, and mitigation project sponsors to participate in these programs. The most robust programs generate competition among mitigation sponsors and may provide cost-effective means for complying with natural resource laws such as the ESA. To be successful, these market-based and other compensatory mitigation programs must operate transparently and be held to high standards that are uniformly applied across all compensatory mitigation mechanisms. Equally important is transparency in the implementation of the ESA and the development of mitigation programs for use by regulated communities.

Mitigation Defined

Because endangered and threatened species are by definition in danger of extinction or likely to become so in the foreseeable future, avoiding, minimizing, and compensating for impacts to their populations are all forms of mitigation that the Service may consider when administering the ESA. The Council on Environmental Quality (CEQ) NEPA regulations (40 CFR 1508.20) state 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.

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. Historically, those administering the ESA have often used a condensed mitigation sequence—avoid, minimize, and compensate; or avoid, minimize, and mitigate. This policy adopts the Department's definition of compensatory mitigation: compensation 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 (600 DM 6.4C). Throughout this policy, "compensatory mitigation" or "compensation" is used in this broad sense to include any measure that would rectify, reduce, or compensate for an impact to an affected resource. We also use the term "minimize" in the broad sense throughout this policy to include any conservation measure, including compensation, which would lessen the impact of the action on the species or other affected resource. We recognize there is some overlap in the use of these terms but, as a practical matter, this use in practice is consistent with the intent of the ESA. Information regarding avoidance and observance of the mitigation sequence can be

found at our Mitigation Policy (81 FR 83440, November 21, 2016). This ESA Compensatory Mitigation Policy covers permittee-responsible mitigation, conservation banking, in-lieu fee programs, and all other compensatory mitigation mechanisms.

Implementation

The Service will issue interim guidance containing specific operational steps to assist Service staff in implementing this policy. This interim guidance will be issued in the form of a Director's memorandum, which will be used to develop a Service Manual chapter at a later date. Throughout this policy, the term "implementation guidance" will be used when referencing the interim guidance and future Service Manual chapter.

Changes from the Draft Policy

This final policy differs from the draft policy in a few substantive respects, which we list below, and contains editorial changes in response to comments we received that requested greater clarity of expression regarding various aspects of the policy's purpose, authorities, scope, general principles, framework for formulating mitigation measures, and definitions. The most common editorial change to the final policy addresses the concern that the Service lacks authority to apply compensatory mitigation to the ESA. Reasons cited by the commenters for not applying compensatory mitigation to the ESA included: (a) The ESA does not provide authority to require mitigation; and (b) policy concepts such as "net conservation gain" and a "landscape approach" to conservation are inconsistent with ESA statutory authority and regulatory requirements. This final policy adds new text to **2. Authorities and Coordination** that identifies those circumstances under which we have specific authority to require, consistent with other applicable laws and regulations, one or more forms of compensatory mitigation for impacts to federally

listed species, proposed species, and candidates as defined in the ESA. This policy provides a common framework for the Service when identifying and implementing compensatory mitigation measures pursuant to the ESA. The policy, however, cannot and does not alter or substitute for the regulations implementing the ESA. We summarize below the few substantive changes from the draft policy, listed by section.

Section 5 in the draft policy, **Application of Compensatory Mitigation Under the ESA**, was moved in its entirety to replace section 4, as we felt it more appropriate to discuss the policy's application under the ESA after section 2. **Authorities and Coordination**, and section 3. **Scope**. Section 4 in the draft policy, **Compensatory Mitigation Standards**, is now section 5 in this final policy.

In section 5.1, *Siting Sustainable Compensatory Mitigation*, this final policy focuses on overarching considerations and leaves specific factors or examples to be explained in the implementation guidance.

In section 6.1.3, "Preference for Consolidated Compensatory Mitigation," we removed habitat credit exchanges as a specifically identified preference for compensatory mitigation because we do not yet have the record of success with this mechanism that we have with other mechanisms such as conservation banks.

The bulk of sections 6.2.3, "Ensuring Durability on Public Lands," , and 6.2.4, "Transfer of Private Mitigation Lands to Public Agencies," was removed from the policy and will be discussed in the implementation guidance, as well as the prescriptive operational detail from section 6.6, *Managing Risk and Uncertainty*.

In section 7.1.4 "Habitat Credit Exchange," we added text indicating that habitat credit exchanges are a relatively new mitigation mechanism, and warrant additional care

and consideration when implementing them. We also removed section 7.1.5, "Other Third-party Compensatory Mitigation," as this is a purely hypothetical mechanism which seems to differ little from proponent-responsible mitigation, and it was redundant with section 7.3, *Other Compensatory Mitigation Programs or Projects*.

In Table 1. "Comparison of Habitat-based Compensatory Mitigation Sites Established Under Different Mechanisms," we removed the column "Instrument Required" because all discussion of instruments will be in the implementation guidance, and we removed the final row of the table: "Other Third-party Mitigation Site."

We removed the draft policy's section 8, **Establishment and Operation of Compensatory Mitigation Programs and Projects**; it will form the basis of the implementation guidance.

Section 9 of the draft policy, **Criteria for Use of Third-party Mitigation**, has been re-numbered in this policy, and is now section 8.

The majority of section 10, **Compliance and Tracking**, has been removed from the policy, and will be discussed in the implementation guidance; accordingly, the remaining paragraph has been renumbered in this policy as section 9.

Regarding appendix B, **Glossary of Terms Related to Compensatory Mitigation**, we removed several terms that are more appropriate for the implementation guidance document as well as items that could be confused with terms used in the ESA's implementing regulations.

Finally, we have removed appendix C, **Requirement of the Marine Mammal Protection Act**, to avoid confusion with the policy's focus on implementing the ESA.

Summary of Comments and Responses

The September 2, 2016, notice announcing our draft Endangered Species Act Compensatory Mitigation Policy (draft policy) (81 FR 61032) requested written comments, information, and recommendations from governmental agencies, tribes, the scientific community, industry groups, environmental interest groups, and any other interested members of the public.

That notice established a 45-day comment period, ending October 17, 2016, on the draft policy. Several commenters (1) requested an extension of time to provide their comments; (2) asked the Service to revise and recirculate the draft policy for comment; or (3) asked the Service to withdraw the draft policy to allow interested parties additional time to comment. The November 3, 2015, Presidential Memorandum on Mitigation states, "Within 1 year of the date of this memorandum, the Department of the Interior, through the U.S. Fish and Wildlife Service, shall finalize a revised mitigation policy that applies to all of the U. S. Fish and Wildlife Service's authorities and trust responsibilities. The U.S. Fish and Wildlife Service shall also finalize an additional policy that applies to compensatory mitigation associated with its responsibilities under the Endangered Species Act of 1973." In order to finalize the policy as close as possible to the date outlined in the Presidential Memorandum on Mitigation, we were unable to publish an extension or reopen the comment period.

During the comment period, we received approximately 150 public comment letters, including comments from Federal, State, and local government entities; industry; trade associations; conservation organizations; nongovernmental organizations; private citizens; and others. The range of comments varied from those that provided general

statements of support or opposition to the draft policy, to those that provided extensive comments and information supporting or opposing the draft policy in its entirety or specific aspects of the draft policy. The majority of comments submitted included detailed suggestions for revisions addressing major concepts, as well as editorial suggestions for specific wording or line edits.

All comments submitted during the comment period have been fully considered in preparing this final policy. All substantive information provided has been incorporated, where appropriate, directly into this final policy or is addressed below. The comments we received were grouped into general issues specifically relating to the draft policy, and are presented below along with the Service's responses to these substantive comments.

We received several comments requesting clarification on various aspects of the draft policy, including: reporting; monitoring; financial instruments; coordination with States, tribes, and local groups; the compensatory mitigation mechanisms; and other implementation elements. We recognize the value of these comments and are giving them due consideration. We have removed these elements from this policy and will address them in the implementation guidance.

A. Definitions

Comment (1): One commenter suggested a more precise definition of compensatory mitigation. The commenter stated the draft policy's definition suggests any remaining impacts must be "unavoidable" and not simply "un-avoided." The commenter suggests the draft policy's definition is confusing and inconsistent with the ESA language that uses "minimize" and "mitigate."

Response: The definition of "compensatory mitigation" in this policy derives from the Department of the Interior's Department Manual (600 DM 6.4C). This definition gives more flexibility in the use of avoidance and minimization measures for listed species than the recommendation provided in the comment. The use of the terms "appropriate and practicable" in this policy's definition give deference to project proponents and Federal agencies.

Comment (2): Comments included a statement that the definition of landscape-scale approach is unclear.

Response: Our definition of landscape-scale approach is informed by the definition used in 600 DM 6 and our Service's mitigation policy. The landscape approach to conservation considers the functional context of the species or habitat under consideration. For example, activities involving fairy shrimp might be evaluated at a vernal pool complex or regional scale. Issues affecting sturgeon may require strategies that consider an entire river system, thousands of miles long. Fundamental to this approach is an understanding of what is important to ensure the ecological function of the species or habitat in question, at the appropriate scale. Examples include the North American Waterfowl Management Plan, many fisheries management plans, recovery plans for federally listed species, watershed restoration plans, and State wildlife plans.

B. Policy is Based on Existing Authority

i. ESA Sections 7 and 10

Comment (3): Several commenters stated that the mitigation sequence that uses "avoidance" cannot be required under sections 7 and 10 of the ESA, unless it alleviates a

jeopardy situation. One of the commenters noted that "avoidance" is voluntary on the part of an action agency or applicant.

Response: The use of "avoidance" in the mitigation sequence is not a requirement in the sense that all impacts to listed species or critical habitat must be avoided. Through the policy, we are neither requiring nor mandating avoidance. One of the stated purposes of the ESA at section 2(b) is to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." Developing options to avoid impacts to listed resources under sections 7 and 10 is important to furthering this purpose and effectively implementing the ESA.

The policy is consistent with the Presidential memorandum ("Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment") issued November 3, 2015 (see 80 FR 68743, November 6, 2015), in which the President directed all Federal agencies that manage natural resources "to avoid and then minimize harmful effects to land, water, wildlife, and other ecological resources (natural resources) caused by land- or water-disturbing activities, and to ensure that any remaining harmful effects are effectively addressed, consistent with existing mission and legal authorities." The Service agrees that some impacts to listed species or critical habitat may be unavoidable and that the ESA provides a mechanism for both Federal agencies (section 7) and non-Federal entities (section 10) to receive take coverage in the case of any unavoidable impacts. There are multiple sections of our implementing regulations in title 50 of the Code of Federal Regulations (CFR) at 50 CFR part 402 (§§ 402.10, 402.13) that direct the Service to suggest modifications or make advisory recommendations to Federal action agencies and applicants to avoid the likelihood of adverse effects to listed species

or critical habitat. Additionally, if the Service is required to provide a reasonable and prudent alternative under section 7 consultation, the regulations state that such an alternative must be one "that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat" (50 CFR 402.02). Use of the full mitigation sequence including avoidance and minimization of impacts to listed species is consistent with the purposes and mandates set forth in the ESA.

Comment (4): Several commenters suggested compensatory mitigation cannot be required under section 7 of the ESA, and that there is no authority to include such mitigation in reasonable and prudent measures (RPMs) and the accompanying mandatory terms and conditions that the Service includes in incidental take statements. Some stated that compensation is limited to voluntary actions on behalf of the action agency and recommendations on the part of the Service. One comment stated compensation was not appropriate in both RPMs and reasonable and prudent alternatives (RPAs). Another suggested that compensation under section 7 consultation was appropriate but not under section 7(a)(4) conference. Commenters cited the ESA, its implementing regulations, and the Service's 1998 Consultation Handbook.

Response: As discussed in sections 4.1.2 and 4.1.3 of this policy, compensatory mitigation can play an important role in section 7(a)(2) consultations and 7(a)(4) conferences. Compensatory mitigation can appropriately be included as part of an action subject to consultation, or in reasonable and prudent alternatives to avoid the likelihood of jeopardy, in order to reduce the net adverse effect of an action on proposed or listed species or designated critical habitat. This policy clarifies those circumstances where it

may be appropriate to incorporate mitigation into reasonable and prudent measures and terms and conditions as part of a section 7(a)(2) consultation. For example, throughout this policy, "compensatory mitigation" or "compensation" is used to include any measure that would rectify, reduce, or compensate for an impact to an affected resource. Rectifying the impact means "repairing, rehabilitating, or restoring the affected environment" (40 CFR 1508.20). Restoring impacted habitat is a commonly used reasonable and prudent measure that meets the definition of compensatory mitigation in this policy, minimizes the amount or extent of incidental take, and can be accomplished consistent with the ESA and its implementing regulations at 50 CFR part 402.

Comment (5): Commenters said the policy's emphasis on the role of conservation in the section 7 consultation process is misdirected. Section 7(a)(2) does not include a conservation requirement for Federal agencies.

Response: The Service respectfully disagrees. Section 7(a)(2) requires that Federal agencies ensure their actions do not jeopardize the continued existence of endangered and threatened species or result in the destruction or adverse modification of critical habitat. This requirement is accomplished through the consultation process, which concludes with the Service's biological opinion. In the event a section 7 consultation concludes with a jeopardy or adverse modification determination, the Service will include reasonable and prudent alternatives (RPAs), when possible, that the action agency can implement to avoid violation of section 7(a)(2) of the ESA. Options for RPAs can include compensatory mitigation in order to avoid a jeopardy or adverse modification situation, as long as they are consistent with the definitions at 50 CFR 402.02. When the Service's biological opinion concludes that the agency action would not result in jeopardy or

adverse modification, the Service will include reasonable and prudent measures (RPMs) to minimize any incidental take associated with the action. As described in the policy, minimization of impacts of the taking on the species may include compensation as consistent with the ESA implementing regulations. The Service provides technical assistance during the section 7(a)(2) consultation process to help reduce the need for RPMs and RPAs. These measures fall within the ESA's definition of "conserve," which means "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to [the ESA] are no longer necessary."

Comment (6): Several commenters expressed concern that the policy would complicate the process for sections 7 and 10, and cause project delays. The commenters stated that such delays could create increased project costs.

Response: The Service respectfully disagrees. Mitigation provided in advance of impacts, such as through a conservation banking program, can expedite project reviews by the Service, because the mitigation is already established and has already gone through the due diligence process. Clear guidance on application of compensatory mitigation mechanisms as provided in this policy, should assist Service staff and project proponents implement their ESA responsibilities in a timely fashion. Furthermore, conducting compensatory mitigation may assist in the compliance with other required laws, which may expedite the project process. For example, compensatory mitigation may lower the level of analysis required by NEPA (allowing a mitigated environmental assessment/finding of no significant impact instead of an environmental impact statement).

Comment (7): One commenter objected to the phrase "recovery measure" when discussing section 7(a)(1) of the ESA. The commenter provided substantial information, including a section of the preamble from the Service's 1986 interagency cooperation rulemaking (51 FR 19926, June 3, 1986), noting the ESA does not mandate specific actions under section 7(a)(1), nor does it authorize the Service to mandate how or when Federal agencies should implement their section 7(a)(1) responsibilities. Specifically, the commenter said that section 7(a)(1) is not a recovery measure, and the policy failed to properly state the basis for such a characterization.

Response: We agree that the directive under section 7(a)(1) of the ESA does not give the Service authority over other Federal agencies, nor does it specifically authorize actions to be implemented. It does, however, direct other Federal agencies to consult with the Service when developing conservation programs under section 7(a)(1). To this end, the policy provides guidance and recommendations on how Federal agencies may achieve the greatest effectiveness when implementing their section 7(a)(1) obligations.

The policy clearly describes the basis for the use of the term "recovery measure" when describing section 7(a)(1), which comes from the definition of the terms "conserve," "conserving," and "conservation" in section 3 of the ESA. Although the word "recovery" is not used in the definition, it clearly describes recovery as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to [the ESA] are no longer necessary." Additionally, section 7(a)(1) directs all Federal agencies to "utilize their authorities in furtherance of the purposes of [the ESA]". One of the stated purposes of the ESA is to "provide a means whereby the ecosystems upon which endangered and

threatened species depend may be conserved." The intent is that all Federal agencies have a responsibility, using their existing authorities, to help recover listed species.

Comment (8): One commenter stated the policy should focus only on implementation of voluntary mitigation actions under the ESA. The commenter noted that mitigation guidance for sections 7 and 10 under the ESA are provided in the habitat conservation planning and consultation handbooks.

Response: This policy provides greater clarity and detail with regard to mitigation implementation than the section 7 and habitat conservation planning handbooks. As stated earlier, this policy reflects the many lessons learned by the Service during our more than 40-year history implementing the ESA, particularly sections 7 and 10. We agree that the use of voluntary mitigation programs and actions that further the purposes of the ESA should be encouraged. The development and implementation of voluntary mitigation programs should also be effective and consistent with other forms of mitigation. The policy will guide such voluntary efforts to promote consistency in the same way it will guide mitigation efforts in regulatory processes.

Comment (9): One commenter recommended we add "and applicants" following "Federal agencies" in two sentences in section 4.1.2.

Response: Applicants are not typically involved in the establishment of mitigation programs such as conservation banks and in-lieu fee programs; moreover, the responsibility for ensuring a Federal action does not violate section 7(a)(2) of the ESA ultimately lies with the Federal agency proposing the action. We did not make the suggested change.

Comment (10): One commenter thought the Service should recognize the importance of the Habitat Conservation Plan (HCP) Assurances ("No Surprises") Rule (63 FR 8859, February 23, 1998) and explicitly state that remediation and alternative mitigation will not erode protections afforded by the No Surprises Rule.

Response: The Service does recognize the importance of the No Surprises Rule in the section 10 process, and agrees that remediation and alternative mitigation should not erode protections afforded by the No Surprises Rule. The Service works with applicants to develop HCPs that include contingencies for mitigation that does not function as expected, including remediation or alternative mitigation. The No Surprises Rule is not eroded in this case, because these contingencies are included in the HCPs and agreed upon ahead of time.

Comment (11): One commenter requested clarification of how the draft policy would apply to reinitiation of consultations under section 7(a)(2) of the ESA. Specifically, what would be different, especially with regard to the concepts of "net gain" and "no net loss?"

Response: During the reinitiation process under section 7(a)(2), the concepts under this policy and their application to any consultation do not change. The ESA's directive to agencies to ensure any action is not likely to jeopardize the continued existence of any endangered or threatened species or adversely modify its critical habitat guides that process. The Service will recommend actions consistent with this policy, including consideration of the goal of a "net gain" or, at a minimum, "no net loss." Considering the variety of actions under consultation, the reasons for reinitiation, and the

multitude of species covered, it is not possible for the policy to provide specific details regarding the application of such concepts during the consultation process.

Comment (12): One commenter was concerned about section 4.7 (*Effective Conservation Outcomes and Accountability Through Monitoring, Adaptive Management, and Compliance*) of the draft policy, which states that: "A process for achieving remediation or alternative mitigation for compensatory mitigation failures beyond the control of the responsible party (*e.g.*, unforeseen circumstances) must be clearly described in the mitigation instrument, biological and/or conference opinion, or permit." The commenter asked the Service to the clarify the statement to say that biological opinions issued in connection with section 7 consultations with Federal agencies, other than the Service itself, are not required to provide for unforeseen circumstances, saying that such a requirement is associated with ESA section 10(a) HCPs, but is not required in the context of section 7 consultations by the section 7 handbook, or existing law or regulations. They were concerned the current language of the draft policy could be misinterpreted to mean that section 7 biological opinions must include alternative mitigation for compensatory mitigation failures "beyond the control of the responsible party," and this policy should not change the section 7 requirements for avoiding jeopardy to the species and adverse modification of critical habitat.

Response: The development and implementation of mitigation programs should be effective and consistent among all forms of mitigation offered in sections 7 and 10 of the ESA, regardless of whether the mitigation is voluntary or required. Planning for unforeseen circumstances is part of effective mitigation. The policy will guide efforts to promote consistency, and Service staff will work with applicants and Federal agencies to

explain how all mitigation standards can be incorporated into their mitigation plans. Nevertheless, the ESA and its implementing regulations ultimately determine how the Service makes decisions regarding listed species. We do not include the statement in question in this final policy; we will address this topic in implementation guidance.

Comment (13): One commenter stated the Service has no statutory authority to require section 7 consultation on candidate or at-risk species or to include such species in HCPs. If the policy pursues a conservation goal in excess of the Service's actual regulatory and statutory authorities, separate guidance should be issued to draw this clear distinction, in order to provide complete transparency and direction to both Service staff and others in actual implementation.

Response: The commenter is correct that the Service cannot require section 7 consultation for candidate or at-risk species. ESA section 7 regulations provide for a conference between a Federal action agency and the Service for actions that are likely to jeopardize the continued existence of a proposed species or likely to result in destruction or adverse modification of proposed critical habitat (50 CFR 402.10). Including candidate or other at-risk species in conferences would be voluntary on the part of the Federal agency; however, it is encouraged by the Service and through this policy, and other Federal agencies may voluntarily conference to expedite possible future re-consultations. This is consistent with ESA goals of recovering listed species and, ideally, avoiding the need to list species because threats to them have been addressed. Further, intra-Service consultations and conferences will consider effects of the Service's actions on listed, proposed, and candidate species. Candidate species are treated as if they are proposed for listing for purposes of conducting internal Service conferencing.

Additionally, under section 10 of the ESA, HCPs are voluntary and developed by the applicant, in consultation with the Service. It is the applicant who decides which candidate or non-listed at-risk species they wish to include. The Service has found that many applicants elect to include at-risk species to receive "no surprises" assurances and preclude the need to amend the associated incidental take permit, should the species become listed in the future. The voluntary inclusion of at-risk species in both the conference and HCP processes are proactive approaches to reduce the need for future listing of the species.

Comment (14): One commenter said the Service mixes the concepts of voluntary conservation recommendations that can be provided under ESA section 7(a)(1) with requirements under ESA section 7(a)(2). They also commented that neither standard under ESA section 10 imposes a "no net loss" requirement.

Response: Federal agencies are directed to consult with the Service under ESA section 7(a)(1) to assist their development of programs to conserve listed species. Technical assistance to agencies with actions that require compliance with section 7(a)(2) is a logical nexus for the Service to advise Federal agencies about section 7(a)(1) conservation opportunities associated with these actions. Similarly, technical assistance to non-Federal applicants for incidental take permits under section 10(a)(1)(B) is a logical nexus to advise them about conservation opportunities associated with these actions. This policy provides a framework for such recommendations, and does not otherwise alter or substitute for standards under the ESA or the regulations implementing ESA sections 7(a)(2) and 10(a)(1)(B). Though not required, striving for "no net loss" in the status of the species' conservation is an appropriate mitigation goal, and may be to the benefit of

the other agency or private landowner in greater future regulatory certainty or expedited future compliance (*e.g.*, including "at-risk" species).

ii. Authorities – Other

Comment (15): One commenter requested that we revise section 5.3 of the draft policy to provide more detail about how compensatory mitigation would work in relation to section 4(d) rules for threatened species.

Response: This policy is intended to be general in nature. More detailed guidance documents covering specific activities may be developed in the future, such as for rules promulgated under section 4(d) of the ESA.

Comment (16): One commenter said that it was unclear how the policy would "replace" rules promulgated by other Federal agencies for guiding implementation of Federal laws such as the Clean Water Act (33 U.S.C. 1251 et seq.) and natural resources such as "waters of the United States." They requested clarification of how the April 10, 2008, joint rulemaking of the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) (73 FR 19594) applies to ESA actions and what the impact of the policy would be.

Response: The Service has added clarification to this final policy that it does not replace or alter the referenced April 10, 2008, rule (73 FR 19594). Processes established by applicable statutes and regulations remain in effect and are not superseded by this policy. This policy applies to compensatory mitigation for all species and habitat protected under the ESA and for which the Service has jurisdiction. The April 10, 2008,

rule (73 FR 19594) applies to impacts to aquatic resources permitted by section 404 of the Clean Water Act.

Comment (17): One commenter said that issuance of this policy violates the Administrative Procedure Act (APA; 5 U.S.C. subchapter II) or the Regulatory Freedom Act (RFA).

Response: The Service complied with all necessary requirements in publishing the final policy. We are unaware of the Regulatory Freedom Act but for the purposes of this response, will assume the commenter is referring to the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 et seq.). The policy does not require compliance with the APA or the RFA because it is not a regulatory document.

Comment (18): One commenter was concerned that voluntary mitigation could be abused if an agency were to unreasonably withhold action for the purpose of applying undue pressure to force an applicant to volunteer mitigation measures. They said the policy should acknowledge and protect against this possibility.

Response: We agree with the commenter that such an approach by Service or other agency staff would be unacceptable. It would also be contrary to this policy and existing authority. Processes established by applicable statutes and regulations remain in effect and are not superseded by this policy.

Comment (19): One commenter stated that the policy goes beyond the authorities granted the Service in both sections 7 and 10 of the ESA. The other authorities relied on by the Service in adopting this policy, including the Presidential directives and memoranda, cannot legally form the basis for the promulgation of the policy.

Response: This policy is designed to improve and clarify implementation of the ESA. Towards that end, it seeks to provide a framework for effecting mitigation that reflects a permissible reading of the law, while fulfilling the conservation purposes of the ESA. Federal agencies are directed to consult with the Service under ESA section 7(a)(1) to assist their development of programs to conserve listed species. A mitigation framework may provide valuable expertise for an agency considering their section 7(a)(1) responsibilities. Additionally, a framework may assist agencies with actions that require compliance with section 7(a)(2) of the ESA. Similarly, technical assistance to non-Federal applicants for incidental take permits under section 10(a)(1)(B) of the ESA is a logical nexus to advise them about conservation opportunities associated with these actions. The policy provides a framework for such recommendations and does not otherwise alter or substitute for the regulations implementing ESA sections 7(a)(2) and 10(a)(1)(B). Authority to make recommendations to mitigate impacts to resources covered by the ESA is provided by that statute. Promulgation of this policy is consistent with not only the ESA, but also the Office of Management and Budget's guidelines on interpretive polices. Those guidelines state that public policies, such as this one, guide administrative processes while increasing an agency's predictability to external parties.

Comment (20): One commenter noted the ESA imposes different standards and prohibitions with respect to pre-listing versus post-listing activities for candidate conservation agreements with assurances (CCAAs) and safe harbor agreements (SHAs). By incorporating the net conservation benefit standard used for SHAs, the Service fails to account for these differences and conflates its treatment of pre-listing and post-listing activities.

Response: The Service does not intend to change the requirements for CCAAs and SHAs. The intent of the policy is to describe the requirements for converting either of these agreements to a mitigation agreement should a landowner desire to make their conservation more permanent and use it for mitigation.

iii. NEPA

Comment (21): One commenter said that the policy should recommend that the Service comment on NEPA documents apart from, or in addition to, section 7 consultation.

Response: We agree that application of the Service's authority to make advisory comments and recommendations under NEPA provides a powerful capability for influencing conservation of a broad array of natural resources while helping agencies and proponents identify appropriate project alternatives. The Service will continue to comment on NEPA documents in addition to conducting section 7 consultations whenever warranted. Our application of NEPA in a mitigation context is covered in the Service mitigation policy (81 FR 83440, November 21, 2016).

Comment (22): One commenter said the policy would increase the time and resources required by Federal agencies to comply with section 7 of the ESA and by proponents of any projects that may adversely affect an at-risk species. The commenter said that the policy meets the definition of a major Federal action defined at 40 CFR 1508.18 and should be analyzed in an environmental impact statement to comply with NEPA.

Response: As explained in more detail below, neither of the two alternatives evaluated in the NEPA assessment would be expected to result in significant effects to the human environment within the meaning of NEPA and the CEQ regulations. Although we describe potential actions and consequences that could flow from each of the alternatives, the nature and scope of environmental consequences that are likely to result from any of the alternatives would depend on a variety of intervening circumstances that are impossible to identify in this analysis. However, we find there is no basis to infer that any such effects, even viewed generously, would be significant.

In addition, because of the programmatic nature of the draft policy and the breadth of activities under consideration, the analyses of environmental effects must be very general, addressing the consequences from each alternative at a programmatic scale. Regardless of the alternative, we anticipate that the majority of the specific actions covered under the policy would receive additional project-specific NEPA review, either by other Federal agencies during their project review or by the Service during review of an ESA section 10(a)(1)(B) application. Those project-specific reviews would include development of appropriately detailed alternatives based on information necessary to complete informed and meaningful effects analyses. That information (*e.g.,* location, timing, duration, and affected resources, etc.) is currently not available. More detailed information is contained in the environmental assessment, which is available on the Internet at *http://www.regulations.gov* at Docket Number FWS–HQ–ES–2015–0165.

C. Net Conservation Gain/No Net Loss

Comment (23): One commenter stated the policy should more consistently emphasize throughout that "conservation" is the goal for protected species and their habitat, using our full suite of authorities including the ESA. While "no net loss" is appropriate under certain statutes like the Clean Water Act (as acknowledged in the April 10, 2008, joint rulemaking of USACE and EPA (73 FR 19594), for example), "no net loss" is a lower standard than what they have sought in conservation banking and in-lieu fee programs.

Response: The Service's mitigation policy (81 FR 83440, November 21, 2016) sets a mitigation planning goal of "net conservation gain," which seeks to improve the status of affected resources, and, at a minimum, maintain the status of those resources (*i.e.*, "no net loss"). Adhering to the standards discussed in section 5 of this policy (**Compensatory Mitigation Standards**) is the best way to attain this goal, although we recognize that achieving a net conservation gain will not be possible in every circumstance, and in those cases will strive for "no net loss."

Comment (24): One commenter strongly opposed the goal of a "net gain" in the policy, stating the Service lacks the underlying statutory authority to require it under the ESA and it will likely result in an uncompensated taking in violation of the U.S. Constitution. The commenter stated that the obligations under the policy, with the use of mandatory language such as "must" and "shall," constitute a rulemaking.

Response: This policy adopts mitigation principles established by the Service's mitigation policy (81 FR 83440, November 21, 2016) and establishes compensatory mitigation standards to guide the use of compensatory mitigation under the ESA. The mitigation goal of "net gain" or, at a minimum, "no net loss," is to assist the Service and

its partners in developing mitigation programs and projects to further the purposes of the ESA. One of the stated purposes under section 2 of the ESA is to "provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved." Section 3 of the ESA defines "conserved" as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." This conservation purpose of the ESA is served by the policy's goal of a "net gain" when developing compensatory mitigation.

In this context, the policy is not a legally binding rulemaking; the ESA and its implementing regulations determine the Service's decisions for listed species. The policy will not effectively compel a property owner to suffer a physical invasion of property and will not deny all economically beneficial or productive use of the land or aquatic resources. This policy provides consistent standards for the Service, and its partners, to apply when developing compensatory mitigation programs or projects, as appropriate under the authority of the ESA. The use of the terms "must" and "shall" in the policy are directed toward the Service's authority in implementing the ESA.

The policy is broadly framed to encompass all species covered under the ESA, but does not result in any particular actions concerning specific properties. Additionally, this policy substantially advances a legitimate government interest (conservation of species and their habitats) and does not present a barrier to all reasonable and expected beneficial use of private property.

Comment (25): One commenter stated that the Service does not explain how it will determine or impose mitigation measures to meet a mitigation target that is somewhere between maintaining and improving the status of affected resources.

Response: The Service, being national in scope of operations, wrote this policy to allow for further clarification on a regional and local scale. This will allow the Service to work with Federal agencies and applicants to develop mitigation measures that meet objectives based on local conditions and tailored to the specific species that are impacted. A less flexible policy could cause rigid adherence to a protocol, which may be more suitable in one region, or for one species, versus another.

Comment (26): Commenters stated that the ESA requirements to avoid jeopardy or adverse modification and to minimize the impact of any take of listed species do not equate to the no net loss or net gain goal articulated in the draft policy, and the Service has no authority under the ESA to require measures that will result in a "net gain" or "no net loss." In addition, one commenter said a "net gain" or "no net loss" goal is incompatible with well-established standards for administering sections 7 and 10 of the ESA.

Response: Action agencies or proponents may adopt Service recommendations provided under this policy as part of their proposed actions, but electing to do so does not change the applicable standards under the ESA or otherwise alter the processes prescribed under the ESA and its regulations.

The Service does not view a "net gain" or "no net loss" goal as incompatible with well-established standards for administering sections 7 and 10 of the ESA. Instead, it is complementary to the ESA requirements to avoid jeopardizing the continued existence of

any listed species, or destroying or adversely modifying any designated critical habitat. To achieve this goal, an action agency or applicant need not abandon the actions they have taken to avoid jeopardizing the continued existence of any listed species, or destroying or adversely modifying any designated critical habitat. Instead, they may complement these actions by including additional measures that allow their action to reach the "net gain" or "no net loss" goal.

Comment (27): One commenter said by encouraging Service staff to work with applicants to implement "no net loss" or "net conservation gain," the judgment of applications will no longer be standardized. They said the policy does not state how conservation gain will be measured, whether on a numerical basis or under what circumstances the Service will make a qualitative judgment regarding the level of mitigation that achieves this standard.

Response: This policy is national in scope, and it is beyond the scope of the policy to provide specific quantifiable measures to achieve a "net conservation gain" or specify the methodology for assessing or measuring the "net conservation gain." The Service's mitigation goal is to achieve a "net conservation gain" or, at a minimum, "no net loss" of the affected resources. The policy provides the framework for formulating compensatory mitigation measures to achieve this goal. The geographical and ecological breadth of this policy's coverage combined with the variation in project and impact types affecting species and habitats nationwide make the detailed specifications for calculating "no net loss" or "net gain" impossible to include. Such determinations will either be made on a case-by-case basis or will be addressed through additional guidance or planning processes.

Comment (28): Commenters said the policy should be revised to help Service staff avoid crossing the line between "encouraging" Federal agencies and applicants to achieve "a net gain or, at a minimum, no net loss in the conservation of listed species" and incorrectly representing to Federal agencies and applicants that they are somehow "required" to achieve a "net gain" or, at a minimum, "no net loss" in the conservation of listed species. Commenters added that Service staff should be instructed by the policy to clearly disclose to Federal agencies and applicants at all times that section 7 of the ESA does not require such a "no net loss in the conservation of listed species" or a "net gain" in relation to the "no jeopardy" and "no adverse modification" standards.

Response: This policy clearly states that the mitigation planning goal is a goal, not a requirement. We expect further clarification on a regional and local scale to reiterate this distinction.

Comment (29): One commenter stated the goal of "no net loss" is admirable and adequate with respect to the Presidential Memorandum (80 FR 68743, November 6, 2015); however, the commenter is concerned this new language may unfairly prohibit or require mitigation for agricultural actions without due process of assessment.

Response: The Service will consider the facts specific to the actions that we review under our authorities. This policy does not provide for the Service to categorically deny development or agricultural activities. Instead, our decisions and opinions on those activities will be guided by relevant statutes and regulations.

Comment (30): One commenter said the sentence, "Losses of habitat that require many years to restore may be best offset by … preservation of existing habitat …," is counter to the "no net loss policy."

Response: The entire sentence reads, "Losses of habitat that require many years to restore may best be offset by a combination of restored habitat, preservation of existing high-quality habitat, and improved management of existing habitat." It is the combination and ratios of these three habitat mitigation types that can create a "no net loss" scenario. Improved management can create an immediate conservation benefit and habitat restoration creates a long-term conservation benefit, while preservation of high quality habitat protects existing habitat from being lost. Long-term land management is included in the durability standard.

D. Applicability

Comment (31): Several commenters had concerns about the applicability of the policy to existing mitigation programs, HCPs and associated incidental take permits, and ongoing section 7 consultations that were initiated between the Federal agency and the Service prior to the effective date of the final policy. The comments requested clarity that the policy does not apply to existing projects or projects currently under development, including the associated real estate and financial assurances.

Response: The policy states that it applies to Federal and non-Federal actions permitted or otherwise authorized or approved prior to issuance of the policy only under circumstances where the action may require additional compliance review under the ESA. In addition, the policy states that it does not apply where the Service has already agreed in writing to mitigation measures for pending actions, except where new activities or changes in current activities associated with those actions would result in new impacts, or where new authorities or failure to implement agreed-upon recommendations warrant

new consideration regarding mitigation. Service offices may elect to apply this policy to actions that are under review as of its effective date (see **DATES**, above).

Comment (32): The draft policy does not include any de minimus size consideration. While consultation considers the extent of potential impacts to ESA-listed species, the draft policy does not. It talks in general terms about credit valuation and ratios, but at some point, there should be a consideration of a de minimus project size to which this draft policy would not apply.

Response: The policy is intended to guide compensatory mitigation projects for listed and at-risk species regardless of the scope, magnitude, or size of the project. As such, it would not be reasonable to attempt to define "de minimis" limits for the application of the policy that would cover all species and mitigation projects across the country. However, step-down guidance derived from this policy for particular species would be more specific for the biological needs of the species and therefore likely consider factors related to the scope of compensatory mitigation projects.

E. Scope of the Policy

Comment (33): One commenter said that the Service should identify activities and projects that are exempt from the policy.

Response: We agree that the scope of coverage should be clearly described and have listed those circumstances when the policy does not apply in section 3, **Scope**.

Comment (34): One commenter said that it is important for the policy to address species protected under additional Federal laws, including the Bald and Golden Eagle

Protection Act (BGEPA; 16 U.S.C. 668–668d) and the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703–712).

Response: We agree that conservation of the resources under BGEPA and MBTA is important. However, those resources, and processes specified by those Acts and any implementing regulations or guidance, are beyond the scope of this policy. We discuss these authorities in the Service mitigation policy (81 FR 83440, November 21, 2016).

Comment (35): One commenter said that the policy should be limited to listed threatened species, listed endangered species, candidate species, and designated critical habitat.

Response: We agree that the commenter's list of covered resources is similar to our description of covered resources in section 3, **Scope**, of this policy. There we state that the policy applies to all species and habitat protected under the ESA and for which the Service has jurisdiction. Endangered and threatened species, species proposed as endangered or threatened, designated critical habitat, and proposed critical habitat are the primary focus of this policy. We also state that candidates and other at-risk species would benefit from adherence to this policy, and encourage all Service programs to develop programs and tools in cooperation with States and other partners.

F. At-risk Species

Comment (36): Several commenters suggested only listed species should be covered by the policy, and "at-risk" species references should be removed. Commenters suggested there is no ESA basis for including at-risk species in the policy, that no standards exist for the definition of at-risk species, and that it would create additional

burdens on the public. One comment requested clarification of the jurisdiction of the Service, States, and tribes regarding at-risk species.

Response: The Service has addressed at-risk species through implementation of the ESA under many voluntary programs. Often partners (*e.g.,* other agencies, private landowners) voluntarily consider "at-risk" species for greater regulatory certainty and to expedite future compliance if these "at-risk" species are later listed under the ESA. Under section 6 of the ESA, the Service partners with the States to fund research and recovery actions on listed and at-risk species. Candidate conservation agreements with assurances (CCAAs) are a highly successful program for private landowners providing voluntary conservation for at-risk species. Many HCPs under section 10 of the ESA also include voluntary coverage for at-risk species. These and other proactive efforts for at-risk species, including our draft Policy Regarding Voluntary Prelisting Conservation Actions (79 FR 42525, July 22, 2014), focus on preventing the need to list species under the ESA. The Service also values its partnerships with the States and tribes in conservation of fish and wildlife resources. This final policy aims to strengthen these partnerships and does not extend the Service's jurisdiction over at-risk species. We have included at-risk species, as appropriate, in the policy to further these efforts in preventing the decline of species to the point that protection under the ESA is necessary.

G. Equivalent Standards

Comment (37): One commenter thought the policy should emphasize that there are no prescribed standards that will dictate mitigation but that every situation will be

considered fact-specific and flexible, and be based upon the voluntary actions of the proponent.

Response: The Service has written this policy in a manner that facilitates further clarification on a regional scale. As with many of the decisions made in impact analysis, determination of when and what type of mitigation should be implemented occurs on a project-by-project basis, under the authority at hand, with information most appropriate for the site or region of impact. Section 7 of this policy, **Compensatory Mitigation Mechanisms**, allows the Service flexibility in the type of mitigation mechanism used to meet this need. Section 5 of the policy, **Compensatory Mitigation Standards**, describes the standards we will require or recommend that all mechanisms meet.

H. Landscape-scale Approach

Comment (38): Individual actions that harm ESA-listed, proposed, and at-risk species must not be discounted or minimized because they are considered to impart only small or moderate impacts within the broader context of the landscape. The policy should consider how these site-specific impacts could be identified and accounted for prior to development of the most appropriate compensatory approach.

Response: The Service agrees that small or moderate impacts that have cumulative effects are important to address. In each situation, the project effects analyses should identify all effects to the species under consideration, as well as measures to avoid, minimize, and compensate adverse effects. These analyses can characterize repeated, ongoing actions that may affect a species at a larger scale, and can help inform

recovery efforts at a local or regional level. Ideally, the project proponent and the Service would also identify opportunities to support recovery/conservation of that species and include them in the action, if possible. This is a collaborative approach to conservation, consistent with relevant statutes and regulations, and can help offset the cumulative effects of many actions on the landscape.

Comment (39): One commenter said the draft policy should provide additional guidance on how landscape-scale indirect effects would be evaluated for buffers surrounding existing mitigation sites, including mitigation banks. They recommend clarification regarding the process when additional compensation may be necessary for landscape-scale indirect effects to existing mitigation sites.

Response: It is difficult at this time to provide specific guidance on buffers and indirect effects given the potential universe of actions that could arise and fact-specific situations of each mitigation site. We declined to provide such guidance in this policy.

Comment (40): Some commenters were concerned that the landscape-level approach to mitigation planning would focus too narrowly on certain species to the detriment of others, or that purchasing credits from a conservation bank or in-lieu fee program would not equate to replacing lost habitat.

Response: The goal of a landscape-scale approach to mitigation is to ensure functionally successful compensatory mitigation efforts for the habitats or species under consideration. While no project or habitat benefits all species all the time, using a landscape context to frame mitigation actions should reinforce functionality at the appropriate scale (*i.e.*, tract, regional, range) to benefit the target resource, and in most cases, other resources/species that also rely on that functional system. Using a landscape

approach will help ensure the compensatory mitigation measures will meaningfully offset adverse effects to a species/habitat in a way that is ecologically sustainable over the long term. This is a more holistic approach to ensuring the functionality of the ecosystems on which federally listed and at-risk species depend.

Comment (41): One commenter recommends that the Service consider revising the guidance provided under section 5.1.2 of the draft policy to discuss not only economies of scale associated with conservation banks and small impacts, but also to state that large-scale impacts require large-scale mitigation and such development projects have the potential to create landscape-scale conservation benefit for species, which may not be best achieved through banks.

Response: The Service agrees large-scale projects have the potential to provide large-scale mitigation measures to offset adverse effects and ideally contribute to recovery. The examples given in section 5.1.2 of the draft policy are compensatory mitigation programs that can be established in advance of impacts, such as conservation banking or in-lieu fee programs. A large-scale mitigation project implemented in advance of impacts will likely offset the impacts of multiple projects, and is essentially a conservation bank.

Comment (42): One commenter stated that landscape-scale mitigation is unauthorized and unfeasible. Landscape-scale impact evaluations and required mitigation measures on this basis imports a policy objective into official ESA decisions in excess of statutory authority and is incongruent with the ESA.

Response: The goal of the ESA is to conserve endangered and threatened species and the ecosystems on which they depend. Through science and technological advances,

conservation has more tools than ever to effectively evaluate land use, populations, hydrology, and so forth, at scales relevant to the needs of federally listed and at-risk species. To ensure the most effective mitigation measures for these resources, it is critical to put them in an ecologically functional context, *i.e.*, a landscape. That does not mean every action requires advanced, ecosystem-level quantitative evaluations, but rather that the effects of an action and mitigation measures to offset those effects take into consideration truly functional strategies that will continue to provide long-term resource benefits. This does not expand any existing authorities for ESA implementation.

Comment (43): We received comments requesting clarification of when programmatic approaches to mitigation would be appropriate.

Response: This policy does not require the development of programmatic documents to support infrequent compensatory mitigations needs. The decision to develop programmatic approaches to mitigation will be made based upon resource-specific circumstances, such as how frequently agencies and applicants will need to compensate for their impacts.

Comment (44): Comments included concerns about the Service's proposed extension of critical habitat to areas not currently occupied by a listed species, on the basis that an area may become critical because the species' range is expected to expand to that area. In determining the scale of a landscape-level approach to mitigation, the Service should not ignore the need for a rational connection to the area of actual impact of a proposed project. Instead, it should base requirements for landscape-scale mitigation on demonstrable connections between truly foreseeable or predictable impacts, rather than speculative projections of habitat or range modifications due to climate change.

Response: The Service agrees that compensatory mitigation must be based on the best available science, and have a rational connection between project effects and proposed mitigation measures. The landscape approach provides the context within which to frame that connection. As our understanding of species' needs, habitats, and climate change increases, we will be better able to address potential future needs of species and their habitats. In planning mitigation strategies, it is also important to recognize uncertainties in future conditions, including habitats, water supplies, temperatures, etc. Those uncertainties should be built into the mitigation strategies to ensure that the proposed mitigation benefits adequately offset adverse effects over the long term. The policy does not address the designation of critical habitat; the regulations for the designation of critical habitat are found at 50 CFR 424.12.

Comment (45): One commenter said the focus on landscape-scale conservation is laudable, but the draft policy introduces new processes and standards that could make achieving this goal more costly, time-consuming, and burdensome. The policy should include ways to incentivize the creation of landscape-scale mitigation projects that capitalize on the multiple ecosystem services and efficiencies that landscapes provide. More consideration for the self-regulating aspects of natural landscapes that could reduce management and monitoring burdens (lowering costs), and the ability to unstack credits for different listed species when their habitats overlap in space but not in function (increasing market returns), would help make landscapes a priority for the conservation marketplace.

Response: The landscape approach to conservation provides a conceptual framework to design effective and durable mitigation strategies. The intent is to approach

mitigation planning and implementation from an ecologically functional perspective for more effective, durable outcomes. Designing mitigation that works with natural landscapes will help reduce management costs and increase effectiveness. Monitoring also will help confirm our underlying understanding of mitigation benefits and may help identify where our assumptions need revision. This is critical to mitigation success.

Bundled or stacked credits cannot be unbundled or unstacked to offset the effects of multiple projects but can only be used to offset the effects of a single project. Once a unit of habitat is used as mitigation for one project, regardless of the number of listed species it supports, it cannot be used as mitigation a second time.

Comment (46): One comment suggested that it is unclear why the required inclusion of adjacent ecosystems and human systems, which is how landscapes are defined, into conservation plans will provide a benefit to species that do not require those habitats or ecosystems for survival. The Service should clarify whether it intends mitigation consistent with a landscape-scale approach to require grouping of permittee proposed compensatory mitigation projects or grouping of project proponents, and in situations where this is desired, the benefits should be explained.

Response: Including consideration of adjacent ecosystems and human systems into a landscape approach to compensatory mitigation recognizes the potential effects those systems may have on the species and habitats under consideration. This is especially important in ensuring long-term ecologic functioning of the compensatory mitigation that benefits the species/habitat. We are increasingly aware that adjacent landscapes and human management actions can significantly affect what was perceived as a protected area. This policy explicitly recognizes those factors in developing long-

term, comprehensive conservation strategies for the resources under consideration. Because those strategies will be implemented using market-based and collaborative mitigation tools, the Service will work with our conservation partners to develop effective, feasible measures to put conservation on the ground. The policy does not require permittee proposed mitigation projects to be grouped, but they should be considered in the context of the landscape in which they occur.

Comment (47): One commenter said that most species lack an up-to-date analysis of conservation status, and few have forward-looking strategies that the Service intends to rely on in implementing the policy. Furthermore, not all landscape-scale conservation strategies noted by the Service are peer-reviewed, publicly vetted, scientifically sound, or without controversy. If the Service intends to rely on such strategies in the context of preparing recovery plans, status reviews, and similar documents, then these landscape-scale conservation strategies and the process for implementing them must be vastly improved. The Service should let the conservation market identify lands that represent valuable conservation targets and take advantage of "market efficiencies" that are a benefit of the conservation banking and in-lieu fee forms of mitigation.

Response: The Service agrees on the importance of using the best available scientific information in developing conservation strategies. We rely on our conservation partners to bring their information and expertise into a collaborative process to help us develop those strategies. We also appreciate the assistance of the conservation market in designing, implementing, and expanding our suite of conservation tools to benefit listed and at-risk species.

Comment (48): One commenter said the policy would benefit from greater recognition that activities associated with the management, monitoring, protections, and assurances need not be as robust in some instances, yet will achieve a functional landscape that is capable of supporting the conservation of listed and at-risk species, different from the actions necessary to provide compensatory mitigation for wetlands and other aquatic resources.

Response: The Service agrees that some larger landscapes may require less intensive management than smaller areas. However, in most areas of the country, there are few "self-regulating" systems left that are not greatly influenced by invasive species, altered hydrology, ongoing erosion, and climate change. It is important in designing feasible, meaningful mitigation to appropriately scale the monitoring and management actions to most effectively provide resource benefits. This will depend on the resources, landscapes, and scale of the project, and should have a rational connection between the effects being offset and the benefits provided. We declined to modify the policy based on this comment.

Comment (49): One commenter said the draft policy's example of a proactive, landscape-scale mitigation approach provided by songbird mitigation guidance in Texas to encourage compensatory mitigation opportunities is misleading. The commenter cited two instances in which potential conservation banks were precluded from establishing species credits due to the requirements in the guidance.

Response: We respectfully disagree. The example used in the policy is intended to show instances where the Service has taken landscape-scale approaches for species conservation and compensatory mitigation. We recognize that not all proposals

developed under the Texas example or other local guidance will ultimately be finalized and implemented, but the intent of this policy is to promote consistency and predictability so that mitigation providers may develop programs that are more likely to be implemented.

Comment (50): Some commenters indicated that the policy should offer far more guidance on when and how the Service would apply a "landscape-level approach" to ESA mitigation, questioned whether the Service would apply a landscape approach differently to species with different range sizes, and stated that the draft policy does not explicitly describe how or whether a landscape approach would apply to listed species with narrow ranges.

Response: The landscape approach to conservation considers the functional context of the species or habitat under consideration. Working with our conservation partners and project proponents, the Service will use a landscape context to provide the most effective and durable mitigation for listed and at-risk species, while preserving the greatest flexibility to implement those measures at many scales. Given the breadth of species and landscapes under consideration, it is impossible to give a "one size fits all" set of instructions. Using a landscape context to frame mitigation actions should reinforce functionality at the appropriate scale (*i.e.*, tract, regional, range) to benefit the target resource and, in most cases, other resources/species that also rely on that functional system. Though some species may have relatively narrow ranges, their threats may be best addressed at a landscape scale (*e.g.*, invasive species, altered hydrology, climate change). This approach will help ensure the compensatory mitigation measures will

meaningfully offset adverse effects to a species/habitat in a way that is ecologically sustainable over the long term.

Comment (51): One commenter noted that the statement requiring compensatory mitigation to be "sited in locations that have been identified in landscape level conservation plans or mitigation strategies" does not take into account the limited lands available for acquisition or restoration in some areas of the United States and the need to acquire property from willing sellers.

Response: The Service recognizes conservation opportunities vary across the country by species and habitats. The landscape-scale approach is a way to place those opportunities in an ecologically functional context. The policy allows for compensatory mitigation on public lands (provided certain criteria are met, *e.g.*, "additionality") and on private lands. It also encourages market-based tools and incentives to take advantage of the unique circumstances in each area. While there may be limitations in available lands in some regions, the policy includes a suite of tools that should provide meaningful options for feasible, durable compensatory mitigation nationwide.

Comment (52): The policy will result in the creation of a landscape-scale system of conservation banks and other mitigation sites controlled by the Service that will take private land and their resources out of productive use.

Response: The landscape approach to conservation considers the functional context of the species or habitat under consideration. It does not affect land ownership or control. Working with our conservation partners and project proponents, the Service will use a landscape context to provide the most effective and durable mitigation for listed and at-risk species, while preserving the greatest flexibility to implement those measures at

many scales. Providing incentives for a market-based approach to conservation allows many tools to better meet the needs of species as well as the needs of landowner/project proponents. Generally, the use of conservation banking and other mitigation projects will not take resources out of "productive" use. Rather, conservation banks and other mitigation projects located on private land remain under control of the property owner and often provide other productive uses, such as grazing livestock.

I. Metrics

Comment (53): One commenter stated that the policy should clarify that actions can meet ESA conservation standards using mitigation when adverse effects, and mitigation offsets of those effects, are calculated using tools that consider more than mere gain or loss of animals or habitat. For example, tools like Habitat Equivalency Analysis consider spatial, temporal, and functional parameters that look beyond mere loss or gain to calculate the extent and quality of mitigation required in given situations.

Response: A discussion of tools used to calculate mitigation is not within the scope of this policy.

Comment (54): Several commenters were concerned that adequate detail about how assessment methodologies are developed and applied was not provided in the draft policy. Commenters were also concerned that the numerical loss and benefit to a site is largely a qualitative measurement, and the no methodology for quantification is offered. They said that transparent formulas to calculate "mitigation ratios" are needed to reduce subjectivity and increase transparency. They also noted that equivalent metrics for

determining losses due to impacts and gains due to mitigation would aid in the assessment of “no net loss” or “net gain.”

Response: The Service agrees that transparent formulas to calculate “mitigation ratios” reduce subjectivity and increase transparency. We also agree that equivalent metrics for determining losses due to impacts and gains due to mitigation would aid in the assessment of “no net loss” or “net gain.” This policy does include a statement that equivalent metrics should be used whenever possible.

Details about how to develop and apply assessment methodologies that are quantitative and transparent were not included in the draft, or this final, policy, because these details are species-specific and too complex to describe adequately within the framework of the policy. When detailed descriptions of assessment methodology development and application are prepared by the Service for a species-specific mitigation program, these descriptions are routinely shared with the public.

Comment (55): One commenter said that since buffers are so important, they should be counted in the crediting of a mitigation site at some ratio of a full credit.

Response: The Service agrees with this comment. In section **6.6**, the policy states, “If buffers also provide functions and services for the species or other resources of concern, compensatory mitigation credit will be provided at a level commensurate with the level of functions and/or services provided to the species.”

Comment (56): One commenter stated that for the purposes of mitigation, the Service has not shown compelling evidence that adequate assessment methodologies exist to consider adverse and beneficial actions that are fundamentally different in nature.

Determining the numerical loss and benefit to a site is largely a qualitative measurement, and the draft policy offers no quantification methodology.

Response: The policy describes types of mitigation programs or projects that do not directly replace species or habitat losses resulting from development projects. These are the types of programs in which the adverse actions, like habitat development, would be offset by an action that is fundamentally different in nature, such as gating of caves that serve as habitat for the species. The Service acknowledges that these types of credit/debit systems can often be more subjective than the traditional habitat-for-habitat type of mitigation. However, this type of mitigation has been the exception rather than the rule, and we expect Service staff to use other programs or projects only when they are the best option to alleviate the greatest threats to the species involved. When these programs or projects are allowed as mitigation, the Service will clearly explain the link between the threat and the selected mitigation.

Comment (57): One commenter was concerned that there was no discussion of how successful "surrogate" indicators of incidental take have been in assuring adequate mitigation.

Response: The use of surrogate indicators for the species impacted, such as the species' habitat, when applying compensatory mitigation in accordance with 50 CFR 402.14(i)(1)(i) is discussed at section **5.2** of the policy. We declined to add additional detail to that discussion.

Comment (58): One commenter suggested that the Service require that all credits and debits associated with the same species and region be aggregated and reported across all compensatory mitigation mechanisms. They indicated this is critical to ensure an

offset achieves "net conservation gain," to ensure the offsets created by all mechanisms are using the best available science, and to ensure equivalency across multiple mechanisms. They also suggested when the same metric is not used by two different mechanisms; the requirement to define "the relationship (conservation) between credits and debits" can also be used to define the relationship between different credit metrics.

Response: Currently, the Service uses the Regulatory In-lieu Fee and Banking Information Tracking System (RIBITS) to track credits and debits for conservation banks. The Service intends to work with the USACE to adapt RIBITS for use by the Service to also track credits and debits for in-lieu fee programs. The type of credits that are acceptable for a given species is determined by the Service when a mitigation program for a specific species is developed and implemented. The Service agrees that tracking the types and amounts of credits used across a species' range is a good idea, as it informs our understanding of the species' status. Collecting this type of information and working to achieve consistency requires coordination among Service staff, including those from different program areas. Describing the actions necessary to ensure this coordination occurs is beyond the scope of this policy.

Comment (59): One commenter suggested a monitoring and verification process should be required of all mitigation. They said the verification process should include a method to verify that the outcomes of the project achieve the performance standard throughout the entire life of the mitigation project, and that method could be the initial assessment method or an abbreviated assessment that still quantifies the quality of the resource. They also suggested the party responsible for conducting the verification should be identified upfront.

Response: We agree that these are important requirements to ensure that mitigation remains adequate over time. Specific methodologies for such verification are beyond the scope of this policy.

Comment (60): One commenter said it should be made explicitly clear that while adaptive management is critical as knowledge and conditions change, the necessary updates to metrics or plans do not invalidate previous metrics or credits. They suggested that each credit, and debit if applicable, should be labeled with the method used at the time of assessment. They also suggested that reports should acknowledge when metrics are modified, but credits should still be aggregated across time. They noted that it may be necessary to use a correction method, and these correction methods should be transparent, scientifically supported, and included in all reports.

Response: We agree in concept; however, this comment goes beyond the scope of the policy.

Comment (61): One commenter asked that we clarify that plans should rely more on the criteria that define high-quality habitat, including criteria for landscape-scale attributes, indicating these criteria should be consistently reflected in the development of metrics used to define credits and debits within the region. They noted that opportunities to enhance and protect habitat may be outside of predefined conservation areas, but they must meet the definition for high-quality habitat and be deemed acceptable.

Response: We agree that metrics should define high-quality habitat. We also agree that opportunities to enhance and protect habitat may be outside of predefined conservation areas, and regardless of location, they should meet the definition for high-quality habitat and be deemed acceptable. This concept is captured in the final policy.

Comment (62): One commenter liked the concept that ecological performance criteria must be tied to conservation goals and specific objectives identified in compensatory mitigation programs and projects, but they did not think the draft policy adequately describes how to accomplish this objective.

Response: The level of detail necessary to describe how to accomplish this objective is beyond the scope of this policy and may be addressed in implementation guidance.

Comment (63): One commenter stated the draft policy should more explicitly recognize the uncertainty associated with mitigation for certain species and describe a framework for managing the uncertainty. They said the policy should describe a framework the Service would use to assess the appropriate balance of avoidance, minimization, and mitigation, as informed by the likelihood of mitigation effectiveness and the species' recovery needs.

Response: The Service agrees that there is uncertainty associated with mitigation for certain species. This policy includes a discussion of risk management tools. These tools can be used after the Service determines that a mitigation program or project is appropriate. Assessing risks and determining if mitigation is appropriate for a species is not within the scope of this policy, as uncertainty associated with mitigation for certain species will be fact specific.

J. Additionality

Comment (64): We received two comments on the draft policy's use of "additionality" when developing compensatory mitigation on both public and private

lands. Commenters believed additionality is not feasible when coupled with the "no net loss" goal, and that some inconsistencies exist in the descriptions in the text of the draft policy.

Response: One purpose of using "additionality" as a standard in the policy is to promote the "net gain/no net loss" goal. There are many examples of mitigation sites and programs that have achieved these standards. The concept of compensatory measures providing additional benefits above baseline conditions is described in general terms in the policy. Those descriptions in the text are intended to give context to the conservation benefits of mitigation actions being additive to baseline conditions on both private and public lands.

K. Durability

Comment (65): Some commenters were concerned that the requirement for perpetual management of mitigation sites places an undue burden on mitigation providers, or that perpetual management would be detrimental to the resource. They said that the imposition of perpetual endowment and adaptive management places burdens on all projects, and it would be impossible for industry to manage and maintain mitigation sites in perpetuity.

Response: Perpetual management of mitigation sites is essential to assure durability of compensatory mitigation. The species and resources present on a mitigation site will dictate what management actions are undertaken. Management plans are tailored to the needs of the site. Mitigation providers should carefully consider the long-term commitment they are making when they agree to implement a compensatory mitigation

project. Mitigation that is permanent is expected to have appropriate financial and real estate assurances to meet the durability standard in the policy.

L. Collaboration and Coordination

Comment (66): One commenter said the policy would mandate the Service to work directly with landowners, potentially resulting in the loss of confidential information. The commenter noted recent conservation plans produced in Texas were developed by stakeholders and administered through State agencies to preserve confidentiality of private landowners.

Response: The Service has a long history of working with private landowners to conserve fish and wildlife resources, including endangered and threatened species. Our partnerships with private landowners are essential to achieving our conservation mission. The policy does not include a mandate to work directly with landowners, but supports the ESA and its implementing regulations, which allows us to work with a variety of entities towards the recovery of listed species, and encourages cooperative conservation with all of our partners, including the exchange of ideas and information to better inform species management and evaluation. As noted in the policy, transparency in compensatory mitigation programs and ESA implementation is essential to achieving success. The Service is considerate of confidentiality, and any personal information maintained by the Service is protected by law (*e.g.*, Freedom of Information Act, 5 U.S.C. 552; Privacy Act, 5 U.S.C. 552a) to prevent unlawful dissemination.

Comment (67): One commenter was concerned that the Service developed the policy without having addressed concerns raised by States and other parties regarding the Service's mitigation policy. They said that moving forward with this guidance without finalizing the overarching mitigation policy was premature, and created uncertainty and confusion over what the Service was likely to adopt.

Response: This compensatory mitigation policy is a step-down policy under the final Service mitigation policy, which published in the **Federal Register** on November 21, 2016 (81 FR 83440). There were no substantial changes between the draft and final Service mitigation policy. In finalizing the Service's mitigation policy, we fully considered all comments and concerns raised by States and other parties. We also considered those comments as we developed this policy.

Comment (68): Two commenters addressed the relationship between this policy and mitigation policy developments underway in other agencies. One commenter was concerned that while interagency cooperation is addressed in the draft policy, it only provided a history of previous ESA requirements. They were concerned that the draft policy did not address the relationship between similar policies being developed by other Federal land management agencies such as the Bureau of Land Management and the U.S. Forest Service. Another commenter noted that other Federal agencies are also responding to the Presidential memorandum ("Mitigating Impacts on Natural Resources From Development and Encouraging Related Private Investment") issued November 3, 2015. They said that this created the opportunity for the Service to enter into agreements with other Federal agencies to work together on the implementation of similar mitigation policies and to avoid conflicts, delays, and inefficiencies.

Response: At the time this policy is being finalized, neither the Bureau of Land Management nor the U.S. Forest Service has published final mitigation policies or regulations. The Service did provide comments on their proposed policies, and we did receive comments on this policy from those agencies. This policy, like the Service mitigation policy published November 21, 2016 (81 FR 83440), was developed in accordance with the November 3, 2015, Presidential Memorandum; the Secretary of the Interior's Order 3330 entitled, "Improving Mitigation Policies and Practices of the Department of the Interior" (October 31, 2013); and Departmental Manual chapter (600 DM 6) on Landscape-Scale Mitigation Policy (October 23, 2015). The commenter's concern is anticipated by those documents, which envision the various agencies' mitigation policies applying common principles, terms, and approaches, thereby providing greater consistency and predictability for the public. Subsequent agreements between the Service and other agencies may be developed as need arises.

Comment (69): One commenter said the draft policy would be improved if it built upon and utilized the USACE and EPA's definitions and mitigation policies. They said that a reconciliation of terms and process should be part of the Service's next steps.

Response: We agree that this policy should apply concepts and definitions compatible with those developed through decades of mitigation practice under the Clean Water Act. Accordingly, we have developed this policy to use the same terms and approaches found in regulations and guidance promulgated by the USACE and EPA whenever possible. In some cases, we also recognized the need for language tailored to authorities, processes, and resources covered by the ESA rather than the Clean Water

Act; in these cases, the policy's language complies with the Departmental Manual on Landscape-Scale Mitigation Policy (600 DM 6).

Comment (70): One commenter said that the implementation of this policy will establish an inconsistent ESA framework because the National Marine Fisheries Service did not adopt the Service's mitigation policy (81 FR 83440, November 21, 2016). The commenter said this approach is contrary to the typical practice of promulgating joint regulations by the two agencies that provide for uniform application of the ESA. The commenter stated that by unilaterally proposing this policy and the Service mitigation policy (81 FR 83440, November 21, 2016), the Service is creating disparate requirements that will impose significant and additional regulations on project sponsors based on the possibility of a species being affected.

Response: This policy is not a rulemaking and cannot otherwise alter or substitute for the existing regulations applied by both the National Oceanic and Atmospheric Administration (NOAA) and the Service in implementing the ESA. We also have coordinated development of both this policy and the Service mitigation policy (81 FR 83440, November 21, 2016) with NOAA, and incorporated their suggestions and modifications. Also, this policy was required under the Presidential Memorandum on Mitigation, the Department of the Interior Secretarial Order 3330, and 600 DM 6.

Comment (71): One commenter said that the Service and other agencies risk unnecessary duplication of efforts and conflicting requirements, which will further delay project approval. They encouraged the Service to consider mitigation frameworks already in place before adding another layer of mitigation requirements to an already complex and burdensome project approval process.

Response: We agree that existing mitigation programs and frameworks, as well as existing mitigation and conservation plans, should be considered. The Service recognizes that there may be existing plans developed by State and local governments and other stakeholders with characteristics that may be useful in mitigation planning depending on the specific action and the affected resources. The Service will work with project proponents and other stakeholders in reviewing existing programs, frameworks, and plans for applicability in the context of a specific action.

Comment (72): One commenter said the policy would complicate other agencies' processes. They said that it would increase opportunities for the Service to force concessions from other Federal agencies and permittees, and that it has the potential to violate organic acts and will undoubtedly complicate the approval process for mining operations and other land users.

Response: The scope of this policy does not limit the existing discretion of an action agency, or hold the action agency or applicant responsible for mitigation beyond an action agency's own authority, mission, and responsibilities. The Service recognizes that the authorities and processes of different agencies may limit or provide discretion regarding the level of mitigation for a project. This policy is not controlling upon other agencies, and the Service acknowledges that there may be limitations (*e.g.*, agency-specific authorities and 600 DM 6) on the implementation of measures that would achieve the policy's goal of "net conservation gain" or a minimum of "no net loss" when the costs of such mitigation are reimbursable by project beneficiaries under laws and regulations controlling agencies' activities (*e.g.*, Bureau of Reclamation). Other agencies

may voluntarily adopt Service recommendations, which may expedite their other requirements.

Comment (73): Some commenters expressed interest in a collaborative approach to mitigation planning on a landscape level. One commenter expressed support for additional engagement with stakeholders; another commented that the role of State wildlife data, analyses, and expertise should be utilized to the greatest extent possible; another commenter was skeptical of the collaborative approach preferred by the Service.

Response: The Service agrees that developing multi-scale conservation plans and strategies benefits from many invested stakeholders that bring their unique insights and perspectives to ensure a more comprehensive and robust blueprint, and looks forward to building on our conservation partnerships through collaborative planning efforts. Our State partners in particular are critical to successful compensatory mitigation of federally listed and at-risk species. They bring statutory responsibility, data, expertise, and management capabilities to better ensure successful, durable mitigation efforts on the ground.

Comment (74): Several commenters were concerned about the level of coordination undertaken by the Service on establishment of mitigation programs, and encouraged the Service to engage with both mitigation partners and with State agencies, to avoid duplication of effort and cross-jurisdictional issues and to improve outcomes. One commenter urged the Service to expedite reviews by working with agencies that already have established mitigation policies and programs.

Response: The Service agrees that we have common goals with our partners and achieve much better outcomes when we work together on coordinated mitigation

programs, especially where our jurisdiction overlaps with that of other agencies as it often does with our State wildlife agency partners. The Service intends to continue working with all of our partners.

M. Transparency

Comment (75): One commenter requested clarification on the Service's meaning of "direct oversight" in the draft policy regarding compensatory mitigation programs and projects. The commenter also requested clarification on use of third-party evaluators in preparing monitoring reports for programs or projects.

Response: The policy identifies the Service's authority for direct oversight of compensatory mitigation programs and projects through sections 7 and 10 of the ESA. Under sections 7 and 10, the Service oversees the terms and conditions of the incidental take permit (section 10) or of the incidental take statement (section 7). Details on the roles of third-party evaluators involved in specific project actions are beyond the scope of the policy.

Comment (76): We received several comments pertaining to the availability of information generated from mitigation programs. Commenters recommended the policy include standards for transparency of data and documents, participation of stakeholders, and consistency of data reported through mitigation programs.

Response: Information on conservation banks is available to the public on the Regulatory In-lieu Fee and Banking Information Tracking System (RIBITS), and the Service intends to work with the USACE to add Service-approved in-lieu fee programs to that platform. As noted in the policy, the Service will share appropriate information

concerning mitigation programs with the public, with the exception of personally identifiable information or other information that would be exempt under the Freedom of Information Act. We declined to add specific standards for transparency to the policy. Prescriptive standards for the type of data to be shared would not be reasonable for a policy that covers the myriad listed species across the country. Such standards would be better suited for species-specific guidance.

N. Preference for Advance Mitigation

Comment (77): One commenter stated the policy should adopt an approach similar to that taken in the HCP handbook to identify exceptions to the requirement to mitigate in advance of impacts.

Response: The policy is intended to provide standards and guidance to improve consistency of compensatory mitigation programs and projects for listed, proposed, and at-risk species. The preference for advance mitigation is based on the years of experience with compensatory mitigation programs. We realize that in some cases advance mitigation may not be possible, or even preferable; however, attempting to identify exceptions for this preference would not be reasonable, considering the vast diversity of species and programs that would occur across the country.

Comment (78): Several commenters were concerned about the draft policy's preference for compensatory mitigation in advance of project impacts. One commenter specifically identified that reclamation of mining operations often lacks the ability for advanced mitigation on site. Other commenters cited that: the process of project permitting and financing determinations would likely not allow for advanced mitigation;

the Service should provide incentives such as higher ratios for "after impact mitigation"; advance mitigation would be considered pre-decisional; or it is impossible to provide mitigation in advance of impacts.

Response: We recognize that project scheduling and implementing on-site mitigation may not always align with the Service's preference for advance mitigation; however, conservation banks, in-lieu-fee programs, and other third-party mechanisms provide advanced mitigation options that reduce timing and other constraints. The Service's current practice to recommend mitigation in advance of impacts under sections 7 and 10 of the ESA is based on years of experience in compensatory mitigation practices. This policy promotes the development of advanced mitigation mechanisms, providing more options for mitigation users. The Service agrees that mitigation ratios can be used to incentivize mitigation accomplished in advance of impacts, but the discussion of specifics is beyond the scope of this policy. The Service does not consider advance mitigation to be pre-decisional, as the majority of advance mitigation programs, such as conservation banking, are established prior to any impacts, and projects that will mitigate at such sites may be unknown at the time of bank establishment. In all cases, the Service will evaluate the appropriateness of using a specific site or proposal as compensatory mitigation to offset the unavoidable impacts of a project at the time the Service reviews the project that will likely result in the impacts.

O. Eligible Lands

Comment (79): Several commenters supported mitigation projects and programs on public lands and wanted us to add more flexibility to the policy. One commenter

stated that if mitigation projects and programs occur on public lands, the land manager should be prepared to implement and fund alternative mitigation if a change in law allows incompatible uses to occur on mitigation lands. One commenter did not support mitigation projects and programs on Federal lands, but was in favor of it on State lands, and wanted State lands specifically mentioned in the policy.

Response: Compensatory mitigation can occur on public lands, either Federal or State lands, and in some cases, such siting may lead to the best ecological outcome. Compensatory mitigation for impacts on public lands can be sited on both public and private lands. Compensatory mitigation for impacts on private lands can be located on public lands, but it is this combination, or that particular change in ownership classification, where Service staff should be attentive to additional considerations before making such a recommendation. These additional considerations are necessary to achieve the "net gain" or, at a minimum "no net loss," goal of the policy.

Comment (80): Several commenters provided comments on split estates. Commenters said the Service is arbitrarily limiting areas on which mitigation can occur by not allowing lands with split estates to qualify as mitigation lands; split estates do not necessarily result in an unsuitable mitigation site; and the holder of the rights would have to secure their own authorization under the ESA from the Service prior to exercising their rights.

Response: The Service agrees that there are cases in which lands with split estates can be used for mitigation. The policy advises caution because we strive to ensure the durability of mitigation projects and programs, but the policy does mention possible remedies and that there could be other approaches to using lands with split estates for

mitigation. A detailed discussion of remedies and other approaches is not within the scope of this policy.

P. Tribal Lands/ Tribal Rights

Comment (81): We received some comments regarding the siting of mitigation projects on tribal lands or on lands on which tribes hold treaty rights. One commenter expressed the need for local mitigation projects to be sited in or near reservation lands as well as on traditional off-reservation sites, to benefit the natural resources of the native peoples; another commenter was concerned that locating mitigation outside of treaty areas for projects that impact the resources in treaty areas would harm the treaty rights and the resources of the tribes. Other commenters asked that tribes be consulted in the siting and approval of mitigation sites and programs. Others were concerned about the impacts of habitat restoration and long-term management on treaty resources.

Response: The Service is committed to upholding our trust responsibilities to federally recognized tribes to conserve shared natural resources, consistent with the Service's Native American Policy (revised January 2016; see 81 FR 4638, January 27, 2016). This is accomplished under this policy by ensuring that mitigation projects and programs are located in areas that provide the most benefit to the affected resources, while respecting treaty rights. The Service recognizes the importance of tribal involvement and expertise when siting mitigation projects and when developing service areas and management plans for conservation banks and other types of mitigation mechanisms. Specific guidance on Service coordination with tribes is beyond the scope of this policy.

Comment (82): We received some comments requesting specific guidance on facilitating creation of conservation banks on tribal lands, comments on including tribal cultural uses and practices as allowable uses on mitigation lands, and a suggestion for developing mitigation principles similar to those developed with the USACE in the State of Washington for specific mitigation programs.

Response: The Service agrees that these are all important considerations, and such guidance and suggestions will be more effectively addressed in step-down guidance at a later time.

Comment (83): We received comments regarding the applicability of the policy to tribes, or to a specific HCP under development, and a suggestion that the Service consult with any tribes who so request before finalizing this policy.

Response: The Service notified tribal contacts when we made the draft policy available for review and comment (81 FR 61032, September 2, 2016). We addressed all tribal comments, as appropriate, as we developed the final policy. The policy applies to all forms of compensatory mitigation for all species and habitat protected under the ESA and for which the Service has jurisdiction. The policy is flexible with regard to its application to specific mitigation projects or programs that are under development at the time this policy is finalized, leaving that decision to individual Service offices.

Q. Service Areas

Comment (84): Several commenters requested more detail in the policy about requirements for developing service areas.

Response: Specific considerations for developing service areas are beyond the scope of this policy and will be provided in implementation guidance.

R. Credit Bundling

Comment (85): A few commenters were concerned about credit bundling, also known as credit stacking, where multiple resources exist on the same unit area. One commenter was concerned that any resources bundled or stacked with a listed species would suffer, as the site would be managed only for the benefit of the listed species and not the other resource(s), and wanted multi-agency review teams to be aware of this when authorizing mitigation banks. Other commenters wanted the Service to make it clear that credits could potentially be used for multiple purposes, and another wanted the Service to allow mitigation credits to be used to compensate for multiple impact projects.

Response: The Service encourages credit bundling where multiple resources exist on the same unit area and where management actions benefit those multiple resources. However, bundled credits can only be used to compensate for one impact project (*i.e.*, the credits can never be "unbundled" or "unstacked" to compensate for multiple projects). If two resources, such as a California red-legged frog (CRLF) and a wetland regulated pursuant to section 404 of the Clean Water Act are bundled together in a credit, that credit may be used to compensate for impacts to both resources from the same project, or to compensate for impacts to CRLF or to wetlands. If the credit were used to compensate

for CRLF, then it can no longer be used to compensate for wetlands (*i.e.*, that portion of the credit is "retired"). Unbundling these functions and services would result in a net loss of habitat and would undermine the Service's efforts to conserve the species. This approach is consistent with the policies and regulations of the USACE, and other State and Federal agencies the Service works with on multi-agency-approved mitigation projects and programs.

S. Mitigation Mechanisms

Comment (86): One commenter suggested the *Benefits of the Draft Policy* section be clarified to include other mitigation mechanisms that may not be market-based. The commenter suggested that the first sentence of the final paragraph of that section be modified to read: "This draft policy would encourage mitigation in conjunction with programmatic approaches to ESA section 7 consultations and HCPs designed to focus on conservation outcomes that achieve "no net loss" or "net gain" through the use of market-based approaches (*e.g.,* conservation banks), in-lieu fee programs, permittee-responsible, and other third-party implemented mitigation programs."

Response: The Service considers that one of the benefits of this policy is the opportunity it creates for a market-based approach to mitigation as highlighted in the Presidential Memorandum of November 3, 2015, on Mitigating Impacts on Natural Resources From Development and Encouraging Related Private Investment (80 FR 68743, November 6, 2015), especially those that can be established in advance of impacts. Conservation banking is a proven example of this approach. The policy does

not preclude the other mechanisms mentioned by the commenter. We declined to adopt the commenter's suggested sentence.

Comment (87): Several commenters stated that the draft policy was confusing and complex, citing the Service's definition of compensatory mitigation being too broad, lack of a mitigation protocol, and need for a guidance document to ensure a separation of regulatory and nonregulatory authority, goals, and standards. One comment stated the complexity of obtaining approval, as well as cost, for a mitigation site would discourage investment.

Response: One purpose of the policy is to provide predictability and thereby reduce uncertainty of investment for market-based mitigation programs. We acknowledge that the nature of existing compensatory mitigation mechanisms and programs currently being implemented is complex. We have revised the draft policy so that this final policy addresses overarching goals and standards only, and we will later provide more detailed implementation guidance. However, providing a mitigation "protocol" that covers the breadth of species and circumstances across the country would not be reasonable. We anticipate species- or geographic-specific guidance to be developed under the umbrella of this policy.

Comment (88): We received two comments regarding section 7.2, *Short-Term Compensatory Mitigation*, in the draft policy. One comment indicated it may not be helpful, particularly when dealing with aquatic species. The other requested more detail in this section and stressed it should be more widely used.

Response: The use of short-term compensatory mitigation is a novel approach, with long-term results yet to be evaluated. The policy fully acknowledges that it is likely to be limited in use, for a variety of reasons, primarily the ability to predict all temporal losses of an impact in order to provide an appropriate offset for those losses. However, the concept may be useful in some circumstances. Thus, it is included in the policy in an effort to provide additional flexibility to conserve listed, proposed, and at-risk species.

Comment (89): Several commenters requested that the Service express a preference for conservation bank credits over other forms of compensatory mitigation. One commenter requested the Service add a preference for rehabilitation or restoration over preservation and that the Service prohibit use of alternative forms of mitigation if conservation bank credits are available in the same proposed service area.

Response: As stated in section 6 of this policy, the appropriate form of compensatory mitigation must be based on the species' needs and the nature of the impacts adversely affecting the species. All mitigation tools listed in the policy are capable of being strategically sited, consolidated, and provided in advance of impacts if they are designed to do so. These preferences will provide the best outcomes for species when they are implemented in any mitigation tool, and, therefore, we have retained flexibility for applicants when selecting mitigation tools. We decline to prohibit the use of alternative forms of mitigation where conservation bank credits are available, as that would limit flexibility and inherent choice of the applicant(s).

T. Climate Change

Comment (90): Several commenters addressed sections of the draft policy that referenced climate change for consideration in mitigation planning. Some commenters were concerned about the uncertainty of calculating the effects of climate change for compensatory mitigation and the use of mitigation ratios to address climate change. One commenter said the policy should provide more detail on integrating climate change effects in the analysis of mitigation programs. Another requested the basis for the term "accelerated" climate change used in the policy.

Response: Consistent with the Departmental Manual (600 DM 6), the Service recommends that climate change be considered when evaluating the effects of an action and developing appropriate mitigation measures. The Service recognizes the science of climate change is advancing, and assessment methodologies are continually being refined to address the effects of climate change to specific resources and at differing scales. Including specific information on these topics is beyond the scope of this policy. Therefore, the policy is written with language to ensure that it does not become quickly outdated as methodologies evolve. We use the term "accelerated climate change" in a general sense to reference a substantial portion of scientific literature and scholarly articles on the subject, including reports produced by the Intergovernmental Panel on Climate Change.

The final policy follows:

U.S. Fish and Wildlife Service

Endangered Species Act Compensatory Mitigation Policy

1. Purposes

This policy adopts the mitigation principles established in the U.S. Fish and Wildlife Service (Service) Mitigation Policy (81 FR 83440, November 21, 2016), establishes compensatory mitigation standards, and provides guidance for the application of compensatory mitigation through implementation of the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq*.). Compensatory mitigation (compensation) is defined in this policy as compensation 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 (600 DM 6.4C). This policy applies to all Service compensatory mitigation requirements and recommendations involving ESA compliance. It is also intended to assist other Federal agencies carrying out their statutory and regulatory responsibilities under the ESA and to provide applicants with guidance on the appropriate use of compensatory mitigation for proposed actions. The standards and guidance in the policy will also assist mitigation providers in developing compensatory mitigation project proposals.

Adherence to the principles, standards, and guidance identified in this policy is expected to: (1) Provide greater clarity on applying compensatory mitigation to actions subject to ESA compliance requirements; (2) improve consistency and predictability in the implementation of the ESA by standardizing compensatory mitigation practices; and (3) promote the use of compensatory mitigation at a landscape scale to help achieve the purposes of the ESA.

This policy encourages Service personnel to collaborate with other agencies, academic institutions, nongovernmental organizations, tribes, and other partners to develop and implement compensatory mitigation measures and programs through a landscape-scale approach to achieve the best possible conservation outcomes for activities subject to ESA compliance. It also encourages the use of programmatic approaches to compensatory mitigation that have the advantages of advance planning and economies of scale to: (1) Achieve a net gain in species' conservation; (2) reduce the unit cost of compensatory mitigation; and (3) improve regulatory procedural efficiency.

Appendices A and B provide a list of acronyms and a glossary of terms used in this policy, respectively.

2. Authorities and Coordination

This policy is focused on compensatory mitigation that can be achieved under the ESA. The Service's authority to require mitigation is limited, and our authority to require a "net gain" in the status of endangered and threatened (listed) or at-risk species has little or no application under the ESA. However, we can recommend the use of mitigation, and in particular compensatory mitigation, to offset the adverse impacts of actions under the ESA. Other statutes also provide the Service with authority for recommending compensatory mitigation for actions affecting fish, wildlife, plants, and their habitats (*e.g.*, Fish and Wildlife Coordination Act (FWCA; 16 U.S.C. 661-667e), National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), and Oil Pollution Act (33 U.S.C. 2701 *et seq.*)). In addition, statutes such as the Clean Water Act (CWA; 33 U.S.C. 1251 *et seq.*) and Federal Power Act (16 U.S.C. 791a-828c) provide other Federal agencies with authority to recommend or require compensatory mitigation for actions that

result in adverse effects to species or their habitats. These other authorities are often used in combination with, or to supplement the authorities under, the ESA to recommend or require compensatory mitigation for a variety of resources including at-risk species and their habitats. For example, the ESA and the Federal Land Policy and Management Act (43 U.S.C. 1701 *et seq*.) together provide a greater impetus to conserve desert tortoise habitat than either statute alone.

Synchronizing environmental review processes, especially through early coordination with project proponents, allows the Service to provide comments and recommendations for all mitigation types (*i.e.,* avoidance, minimization, and compensation) included as part of proposed actions in an effort to reduce impacts to listed, proposed, and at-risk species and designated and proposed critical habitat. For example, the Service may comment on proposed actions under NEPA and State environmental review statutes (*e.g.,* California Environmental Quality Act and Hawaii Environmental Policy Act). Coordination of environmental review processes generally results in conservation outcomes that have a greater likelihood of meeting the Service's mitigation goal.

The supplemental mandate of NEPA (42 U.S.C. 4335) adds to the existing authority and responsibility of the Service to protect the environment when carrying out our mission under the ESA. The Service's goal is to provide a coordinated review and analysis of the impacts of proposed actions on listed, proposed, and at-risk species, and designated and proposed critical habitat that are also subject to the requirements of other statutes such as NEPA, CWA, and FWCA. Consultation, conference, and biological assessment procedures under section 7 and permitting procedures under section

10(a)(1)(B) of the ESA can be integrated with interagency cooperation procedures required by other statutes such as NEPA or FWCA. This is particularly the case for cumulative effects. Cumulative effects are often difficult to analyze, are defined differently under different statutes, and are often not adequately considered when making decisions affecting the type and amount of mitigation recommended or required.

3. Scope

The ESA Compensatory Mitigation Policy covers all forms of compensatory mitigation, including, but not limited to, permittee-responsible mitigation, conservation banking, in-lieu fee programs, and other third-party mitigation projects or arrangements, for all species and habitat protected under the ESA and for which the Service has jurisdiction. Endangered and threatened species, species proposed as endangered or threatened, and designated and proposed critical habitat, are the primary focus of this policy. Candidates and other at-risk species would also benefit from adherence to the standards set forth in this policy, and all Service programs are encouraged to develop compensatory mitigation programs and tools to conserve at-risk species in cooperation with States and other partners.

This policy does not apply retroactively to approved mitigation programs; however, it does apply to amendments and modifications to existing conservation banks, in-lieu fee programs, and other third-party compensatory mitigation arrangements unless otherwise stated in the mitigation instrument. Examples of amendments or modifications to which this policy applies include authorization of additional sites under an existing instrument or agreement, expansion of an existing site, or addition of a new type of resource credit such as addition of a new species credit.

This policy does apply to other Federal or non-Federal actions permitted or otherwise authorized or approved prior to issuance of this policy under circumstances where the action may require additional compliance review under the ESA if: new information becomes available that reveals effects of the action to listed species or critical habitat not previously considered; the action is modified in a manner that causes effects to listed species and critical habitat not previously considered; authorized levels of incidental take are exceeded; a new species is listed or critical habitat is designated that may be affected by the actions; or the project proponent specifically requests the Service to apply the policy. This policy does not apply to actions that are specifically exempted under the ESA. It also does not apply where the Service has already agreed in writing to mitigation measures for pending actions, except where new activities or changes in current activities associated with those actions would result in new impacts, or where new authorities, or failure to implement agreed upon recommendations warrant new consideration regarding mitigation. Service offices may elect to apply this policy to actions that are under review as of **[INSERT date of Federal Register publication**],

This policy clarifies guidance given in the Service's "Guidance for the Establishment, Use, and Operation of Conservation Banks," published in the **Federal Register** on May 8, 2003 (68 FR 24753), and "Guidance on Recovery Crediting for the Conservation of Threatened and Endangered Species," published in the **Federal Register** on July 31, 2008 (73 FR 44761).

4. Application of Compensatory Mitigation Under the ESA

Sections of the ESA under which the Service has authority to recommend or require compensatory mitigation for species or their habitat are identified below. In this

section, we provide guidance on applications of these ESA authorities within the context of compensatory mitigation. The compensatory mitigation standards set forth in section **5. Compensatory Mitigation Standards** of this policy apply to compensatory mitigation programs and projects established under the ESA, as appropriate.

4.1. *Section 7—Interagency Cooperation*

Section 2(c)(1) of the ESA directs all Federal departments and agencies to conserve endangered and threatened species. "Conserve" is defined in section 3 of the ESA as all actions necessary to bring the species to the point that measures provided pursuant to the ESA are no longer necessary (*i.e.*, recovery or the process through which recovery of listed species is accomplished). This requirement to contribute to the conservation of listed species is reaffirmed in section 7(a)(1) of the ESA. Congress recognized the important role Federal agencies have in conserving listed species.

When the ESA was enacted in 1973, section 7 was a single paragraph directing "all Federal departments and agencies . . . [to] utilize their authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of [the ESA] *and* [emphasis added] by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined . . . to be critical." In 1979, section 7 was amended to create subsections 7(a)(1) and 7(a)(2). Federal agencies have separate responsibilities concerning species and their habitats under these two subsections. Section 7(a)(1) is a recovery measure that requires Federal agencies to carry out programs for the

conservation of listed species. Section 7(a)(2) is a stabilization measure that requires Federal agencies to ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat.

4.1.1. Section 7(a)(1)

Section 7(a)(1) of the ESA states, ". . . Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered species and threatened species." The Secretary's section 7(a)(1) consultation role has been delegated to the Service, and the Service therefore consults with and assists Federal agencies to accomplish these conservation programs. "Conservation," as it is defined in section 3 of the ESA, means "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." Through this policy, the Service encourages Federal agencies to use section 7(a)(1) to achieve a goal of a "net gain" through their mitigation policies and approaches so that they may help bring endangered and threatened species to the point where they no longer need to be listed pursuant to the ESA.

Mitigation Goal: Development of landscape-scale conservation programs for listed and at-risk species that are designed to achieve a net gain in conservation for the species.

Guidance: One way that Federal agencies can meet their responsibility under section 7(a)(1) of the ESA is by working with the Service and other conservation partners

to develop landscape-scale conservation plans that include compensatory mitigation programs designed to contribute to species recovery. Landscape-scale approaches to compensatory mitigation, such as conservation banking and in-lieu fee programs, are more likely to be successful if Federal agencies, especially those that carry out, fund, permit, or otherwise authorize actions that can use these programs, are involved in their establishment and support their use. For example, the Federal Highway Administration, as part of its long-term planning process, can use its authorities to work with the Service and other conservation partners on conservation programs for listed species that may be impacted by anticipated future actions. The conservation programs can include identifying priority conservation areas, developing crediting methodologies to value affected species, and developing guidance for offsetting those impacts that is expected to achieve "no net loss," or even a "net gain," in conservation for the species. These tools and information can then be used by conservation bank sponsors and other mitigation providers to develop compensatory mitigation opportunities (*e.g.*, conservation banks) for use by the Federal Highway Administration, and also by State departments of transportation and other public and private entities seeking compensation to offset the impacts of their actions for those same species. The resulting compensatory mitigation program provides conservation for the species that would otherwise not have been achieved—a contribution to listed species conservation under section 7(a)(1) of the ESA by the Federal agency.

4.1.2. Section 7(a)(2)

Section 7(a)(2) of the ESA states, "[e]ach Federal agency shall . . . insure that any action authorized, funded, or carried out, by such agency . . . is not likely to jeopardize

the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat." The Service determines through consultation under section 7(a)(2) whether or not the proposed action is likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. The Service then issues a biological opinion stating our conclusion and, in the case of a finding of no jeopardy (or jeopardy accompanied by reasonable and prudent alternatives that can be taken by the Federal agency to avoid jeopardy), formulates an incidental take statement, if such take is reasonably certain to occur, that identifies the anticipated amount or extent of incidental take of listed species and specifies reasonable and prudent measures necessary or appropriate to minimize such impacts under section 7(b)(4) of the ESA. If the proposed action is likely to adversely affect critical habitat, the Service's biological opinion also analyzes whether adverse modification is likely to occur and specifies reasonable and prudent alternatives to avoid adverse modification, as necessary and if available. If the listed species is a marine mammal, incidental taking is authorized pursuant to section 101(a)(5) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1361 *et seq*.) prior to issuance of an incidental take statement under the ESA.

Mitigation Goal: The Service should work with Federal agencies to assist them in proposing actions that are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat, as required under section 7(a)(2) of the ESA. While not required under section 7(a)(2), the Service may also encourage Federal agencies and applicants (consistent with Federal action agency authorities) to include compensation as part of their proposed actions to offset any anticipated impacts to these resources that are not avoided to achieve

a “net gain” or, at a minimum, “no net loss” in the conservation of listed species.

Guidance: The Service should coordinate with Federal agencies and encourage them to use their authorities under appropriate statutes (*e.g.*, Federal Land Policy and Management Act) to avoid, minimize, and offset adverse impacts to listed species and designated critical habitat using the full mitigation sequence. Compensation is a component of the mitigation sequence that can be applied to offset adverse effects of actions on listed species and critical habitat. Furthermore, the Service can work with Federal agencies to establish compensatory mitigation programs such as conservation banking and in-lieu fee programs that incentivize offsetting the effects of their actions through the appropriate use of compensation while expediting regulatory processes for the Federal agencies and applicants. Due to economies of scale, such mitigation programs are particularly effective at providing more effective and cost-efficient compensation opportunities for offsetting the effects of multiple actions that individually have small impacts.

4.1.2.1. Proposed Actions and Project Descriptions

To better implement section 7(a)(2) of the ESA and prevent species declines, the Service will work with Federal agencies and applicants to identify conservation measures, using the full mitigation sequence, that can be included as part of proposed actions for unavoidable impacts to listed species and critical habitat to achieve, at a minimum, “no net loss” in the species’ conservation. The mitigation sequence should be observed (*i.e.*, avoid first, then minimize, then compensate), except where circumstances may warrant a departure from this preferred sequence. For example, it may be preferable to compensate for the loss of an occupied site that will be difficult to maintain based on

projected future land use (*e.g.*, the site is likely to be isolated from the population in the future) or climate change impacts. The Service will consider conservation measures, including compensatory mitigation, as appropriate, proposed by the action agency or applicant as part of the proposed action when developing a biological opinion addressing the effects of the proposed action on listed species and critical habitat. This consideration of beneficial actions (*i.e.*, compensatory mitigation) is consistent with our implementing regulations at 50 CFR 402.14(g)(8). Federal agencies should coordinate early with the Service on the appropriateness of such beneficial actions as compensation for anticipated future actions.

4.1.2.2. Jeopardy or Adverse Modification Determinations and RPAs

When the Service issues a biological opinion with a finding of jeopardy or adverse modification of critical habitat, we include reasonable and prudent alternatives (RPAs) when possible. RPAs may include any and all forms of mitigation, including compensatory mitigation, that can be applied to avoid proposed actions from jeopardizing the existence of listed species or destroying or adversely modifying critical habitat, provided they are consistent with the regulatory definition of RPAs at 50 CFR 402.02.

4.1.2.3. No Jeopardy and No Adverse Modification Determinations and RPMs

When the Service issues a biological opinion with a finding of no jeopardy, we provide the Federal agency and applicant (if any) with an incidental take statement, if take is reasonably certain to occur, in accordance with section 7(b)(4) of the ESA. The incidental take statement specifies the amount or extent of anticipated take, the impact of such take on the species, and any reasonable and prudent measures (RPMs) and implementing terms and conditions determined by the Service to be necessary or

appropriate to minimize the impact of the take.

RPMs can include mitigation, in appropriate circumstances, if such a measure minimizes the effect of the incidental take on the species, and as long as the measure is consistent with the interagency consultation regulations at 50 CFR 402.14. RPMs should also be commensurate with and proportional to the impacts associated with the action. The Service should provide an explanation of why the measures are necessary or appropriate. If the proposed action includes conservation measures sufficient to fully compensate for incidental take, it may not be necessary to include additional minimization measures (beyond monitoring) through RPMs.

4.1.3. Section 7(a)(4)

Section 7(a)(4) of the ESA states, "[e]ach Federal agency shall confer with [the Service] on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed . . . or result in the destruction or adverse modification of critical habitat proposed to be designated for such species." The conference is designed to assist the Federal agency and any applicant to identify and resolve potential conflicts at an early stage in the planning process.

Mitigation Goal: The Service should work with Federal agencies to assist them in proposing actions that are not likely to jeopardize the continued existence of any species proposed for listing or result in the destruction or adverse modification of any proposed critical habitat, in accordance with section 7(a)(4) of the ESA. The Service should also encourage Federal agencies and applicants to include compensation as part of their proposed actions to offset any anticipated impacts to resources that are not avoided to achieve a net gain or, at a minimum, no net loss in their conservation.

Guidance: The Service should coordinate with Federal agencies and encourage them to use their authorities to avoid and minimize adverse impacts to proposed and at-risk species and proposed critical habitat using the full mitigation sequence. The Service may recommend compensatory mitigation for adverse effects to proposed or at-risk species during informal conference or in a conference report or conference opinion, or the Federal action agency or applicant may propose compensatory mitigation as part of the action. If a conference opinion or report determines that a proposed action is likely to jeopardize the continued existence of a proposed species or adversely modify or destroy proposed critical habitat, the Service will include RPAs, if any are available, that may include compensatory mitigation. If the species is subsequently listed or critical habitat is designated prior to completion of the action, the Service will give appropriate consideration to compensatory mitigation when confirming the conference opinion as a biological opinion or if formal consultation is necessary. This consideration of beneficial actions is consistent with our implementing regulations at 50 CFR 402.14(g)(8).

4.2. *Section 10 – Conservation Plans and Agreements*

4.2.1. Safe Harbor and Candidate Conservation Agreements

Under a candidate conservation agreement with assurances (CCAA), private and other non-Federal property owners may voluntarily undertake conservation management activities on their properties to address threats to unlisted species and to enhance, restore, or maintain habitat benefiting species that are candidates or proposed for listing under the ESA or other at-risk species in exchange for assurances that no further action on their part is required should the species become listed during the term of the CCAA. Under a safe harbor agreement (SHA), private and other non-Federal property owners may

voluntarily undertake management activities on their property to enhance, restore, or maintain habitat benefiting species listed under the ESA in exchange for assurances that there will not be any increased property use restrictions as a result of their efforts that either attract listed species to their property or that increase the numbers or distribution of listed species already on their property during the term of the agreement. Both types of agreements are designed to encourage conservation of species on non-Federal land.

Mitigation Goal: Transitioning CCAAs and SHAs into long-term/permanent conservation that can serve as compensatory mitigation when appropriate and desired by landowners. Such transitions provide greater assurance that the species conservation efforts begun under the CCAA or SHA will persist on the landscape beyond the term of the original agreement.

Guidance: CCAAs or SHAs are not intended to be mitigation programs and do not require site protection and financial assurances that meet the compensatory mitigation standards set forth in this policy, however, the conservation achieved through implementation of a CCAA or SHA may be 'rolled over' for use as compensatory mitigation if: (1) the CCAA or SHA permit has expired or is surrendered; (2) the landowner is in compliance with the terms and conditions of the CCAA or SHA at the time of transition; (3) any commitments for conservation for which financial compensation from public sources was received has been fulfilled and if not fulfilled is prorated and deducted from the mitigation credit assigned to the property; and (4) all other requirements for providing compensatory mitigation are met. If the Service determines the CCAA or SHA would provide greater conservation to the species as compensatory mitigation, then the Service should inform the landowner of this

assessment and provide the landowner with the opportunity to transition their property from a CCAA or SHA site to a mitigation site.

Landowners enrolled in CCAAs while the species remains unlisted can provide compensatory mitigation under a State or other non-Service mitigation program if the actions related to the mitigation are additional to those taken to satisfy the CCAA requirement. Should the species become listed before the CCAA expires, the landowner has the option to roll over the existing mitigation agreement to a Service-approved mitigation instrument that meets the standards established in this policy.

4.2.2. Habitat Conservation Plans

Section 10(a)(1)(B) of the ESA allows the Service to issue an incidental take permit for "any taking otherwise prohibited by section 9(a)(1)(B) [of the ESA] if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." If, under section 10(a)(2)(B) of the ESA, the Service finds the issuance criteria are met by the applicant, including that the applicant will, "to the maximum extent practicable, minimize and mitigate the impacts of such taking," the Service will issue a permit. Plant species and unlisted animal species may also be covered in the habitat conservation plan (HCP), provided the applicant meets requirements for their coverage described in the implementing regulations. The Service incorporates these measures as terms and conditions of the permit. Regulations governing incidental take permits for endangered and threatened wildlife species are found at 50 CFR 17.22 and 17.32. The Service is required to conduct a section 7(a)(2) consultation on issuance of an incidental take permit.

Mitigation Goal: Consistent with the purposes and polices of the ESA, the

Service should work with applicants to assist them in developing HCPs that achieve a "net gain" or, at a minimum, "no net loss" in the conservation of covered species and critical habitat. Though the statute does not require this of HCP applicants, applicants often will request additional measures for greater future assurances. This is generally achievable through programmatic approaches, which provide opportunities for the use of landscape-scale compensatory mitigation programs to offset impacts of actions.

Guidance: Compensatory mitigation should be concurrent with or in advance of impacts, whenever possible. Programmatic approaches are recommended when they will produce regulatory efficiency and improved conservation outcomes for the covered species. These HCPs operate on a landscape scale and often use conservation banks, in-lieu fee programs, or other compensatory mitigation opportunities established by mitigation sponsors and approved by the Service. These landscape-scale programmatic approaches can achieve a net gain in conservation for the covered species as a result of economies of scale. See the revised HCP Handbook for the various options available to address compensatory mitigation for HCPs.

4.3. *Other Sections of the ESA Where Compensatory Mitigation Can Play a Role*

Section 4(d) of the ESA authorizes the Service to issue protective regulations that are necessary and advisable to provide for the conservation of threatened species. The Service used this authority to extend the prohibition of take (section 9 of the ESA) to all threatened species by regulation in 1978, through promulgation of a "blanket 4(d) rule" (50 CFR 17.31). This blanket 4(d) rule can be modified by a species-specific 4(d) rule (*e.g.*, Special Rule Concerning Take of the Threatened Coastal California Gnatcatcher (58 FR 65088, December 10, 1993)). Depending on the threats, the inclusion of

compensatory mitigation in a species-specific 4(d) rule may help offset habitat loss, and could hasten recovery or preclude the need to reclassify the species as endangered.

Section 5 of the ESA provides authority for the Service and the U.S. Department of Agriculture, with respect to the National Forest System, to establish and implement a program to conserve fish, wildlife, and plants, including those which are listed as endangered species or threatened species through:

- Use of land acquisition and other authority under the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742a-742j, not including 742d-1); the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 *et seq*.); and the Migratory Bird Conservation Act (16 U.S.C. 715–715d, 715e, 715f–715r) , as appropriate; and
- Acquisition by purchase, donation, or otherwise, of lands, waters, or interests therein.

Establishment of compensatory mitigation programs that conserve listed or at-risk species on lands adjacent to National Forests could be used to offset losses to those species and their habitats by actions authorized by the Service and also help buffer National Forests from incompatible neighboring land uses.

5. Compensatory Mitigation Standards

The mitigation principles, as described in the Service's Mitigation Policy (81 FR 83440, November 21, 2016), are goals the Service intends to achieve, in part through recommending or requiring, as appropriate, under the ESA and other applicable authorities, the inclusion of compensatory mitigation in proposed actions with adverse impacts to listed, proposed, or at-risk species, and designated or proposed critical habitat.

The compensatory mitigation standards described in this section of the policy will implement the mitigation principles, as outlined in the Mitigation Policy, including using a landscape approach to inform mitigation and aspiring to meet the goal 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. Compensatory mitigation programs, projects, and measures that are consistent with the mitigation principles and adhere to the compensatory mitigation standards set forth in this section of the policy are expected to achieve the best conservation outcomes. The compensatory mitigation standards apply to all compensatory mitigation mechanisms (*i.e.*, permittee-responsible mitigation, conservation banks, in-lieu fee programs, etc.) and all forms of compensatory mitigation (*i.e.*, restoration, preservation, establishment, and enhancement) approved by the Service. Specific operational details regarding the standards will be in the implementation guidance to be issued by the Service. The standards are as follows:

5.1. *Siting Sustainable Compensatory Mitigation*

Compensatory mitigation will be sited in locations that have been identified in landscape-scale conservation plans or mitigation strategies as areas that will meet conservation objectives and provide the greatest long-term benefit to the listed, proposed, and/or at-risk species and other resources of primary conservation concern. 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.

5.2. *In-kind for Species*

Compensatory mitigation must be in-kind for the listed, proposed, or at-risk species affected by the proposed action. The same requirement does not necessarily apply to the habitat type affected, as the best conservation outcome for the species may not be an offset of the same habitat type or ecological attribute of the habitat impacted by the action. Many species use different habitat types at different life stages or for different life-history requirements such as feeding, breeding, and sheltering. For example, some species are migratory. Selecting a habitat type different from that impacted by the action or selecting more than one type of habitat for compensatory mitigation may best meet the conservation needs of the species.

Offsetting impacts to designated or proposed critical habitat through the use of compensatory mitigation should target the maintenance, restoration, or improvement of the recovery support function of the affected critical habitat as described in the relevant biological or conference opinion, conservation or mitigation plan, mitigation instrument, permit, or conference report. Recovery plans, 5-year reviews, proposed and final critical habitat rules, and the best available science on species status, threats, and needs should be relied on to inform the selection of habitat types subject to compensatory mitigation actions for unavoidable adverse impacts to species or critical habitat.

The use of compensatory mitigation to minimize the impacts of incidental take on listed species can be based on habitat or another surrogate such as a similarly affected

species or ecological conditions under circumstances where it is not practicable to express or monitor the amount or extent of take in terms of the number of individuals of the species, in accordance with 50 CFR 402.14(i)(1)(i). A causal link between the surrogate and take of the species must be explained and must be scientifically defensible. For example, occupied habitat of a listed species has been used as a surrogate to express the amount or extent of take of the vernal pool fairy shrimp (*Branchinecta lynchi*) because quantification of take in terms of individuals is not practicable, but the surface area of occupied vernal pool habitat is easily measured and monitored.

5.3. *Reliable and Consistent Metrics*

Metrics that measure ecological functions and/or services at compensatory mitigation sites and impact sites must be science-based, quantifiable, consistent, repeatable, and related to the conservation goals for the species. These metrics may be species- or habitat-based. Metrics used to calculate credits should be the same as those used to calculate debits for the same species or habitat type. If they are not the same, the relationship (conversion) between credits and debits must be transparent and scientifically defensible. Metrics must account for duration of the impact, temporal loss to the species, management of risk associated with compensatory mitigation, and other such measures. This does not mean that metrics developed to measure losses and gains on the landscape must be precise, as this is rarely possible in biological systems, but uncertainty should be noted where it exists and metrics must be based on the best scientific data available to gauge the adequacy of the compensatory mitigation. Modifying existing metrics on which approved conservation banks or other compensatory mitigation programs are based and still in use warrants careful consideration and must be

based on best available science.

Scientifically defensible metrics also are needed to measure biological and ecological performance criteria used to monitor the outcome of compensatory mitigation. It may be necessary to adjust metrics over time through monitoring and adaptive management processes in order to respond to changing conditions and ensure they remain effective at assessing the conservation objectives of the compensatory mitigation program. However, modifying metrics used to monitor performance should not be a substitute for lack of compliance or failure to implement adaptive management.

5.4. *Judicious Use of Additionality*

Compensatory mitigation must provide benefits beyond those that would otherwise have occurred through routine or required practices or actions, or obligations required through legal authorities or contractual agreements. A compensatory mitigation measure is "additional" when the benefits of the 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 (600 DM 6.4G). The additional benefits may result from restoration or enhancement of habitat; preservation of existing habitat that lacks adequate protection; management actions that protect, maintain, or create habitat (*e.g.*, regularly scheduled prescribed burns or purchase of rights in a split estate); or other activities (*e.g.*, an action that reduces threats from disease or predation, or captive breeding and reintroduction of individuals or populations). Baseline conditions for the habitat relevant to the species must be assessed prior to implementing the compensatory mitigation project for comparison to conditions after completion of the compensatory mitigation project in

order to quantify and verify the additional benefits derived from the mitigation project.

Demonstrating additionality on lands already designated for conservation purposes can be challenging, particularly when the lands under consideration are public lands. In general, credit can only be authorized for compensatory mitigation on public lands if additionality can be clearly demonstrated and is legally attainable. See section **6.2.** *Eligible Lands* for guidance on using public lands for compensatory mitigation.

5.5. *Timing and Duration*

Compensatory mitigation projects must achieve conservation objectives within a reasonable timeframe and for at least the duration of the impacts. Ideally, compensatory mitigation should be implemented in advance of the action that adversely impacts the species or critical habitat. When this is not possible or practicable, temporal losses to the affected species must be compensated through some means (*e.g.*, increased mitigation ratio that reflects the degree of temporal loss). Temporal loss may include indirect effects of the action on the species that occur beyond the time period of any direct effects of the action (*e.g.*, removal of habitat during a season when individuals of a migratory species are absent). Temporal loss to the species as a result of both direct and indirect adverse effects must be addressed when determining appropriate compensatory mitigation. Losses of habitat that require many years to restore may best be offset by a combination of restored habitat, preservation of existing high-quality habitat, and improved management of existing habitat. The amount of temporal loss, the form of compensatory mitigation (*i.e.*, establishment, enhancement, restoration, preservation, or some combination of these forms), and the time anticipated to establish the compensatory mitigation on the landscape should be used to determine the amount of compensatory mitigation needed to

meet the mitigation goal for the species, critical habitat, and/or other resources of concern.

5.6. *Ensure Durability*

Compensatory mitigation must be secured by adequate legal, real estate, and financial protections that ensure the success of the mitigation. Most compensatory mitigation projects are permanent, and the viability of the assurances to achieve long-term stewardship of a mitigation site must be carefully planned and implemented to ensure durability. A compensatory mitigation measure is "durable" when the effectiveness of the measure is sustained for the duration of the associated impacts (including direct and indirect impacts) of the authorized action (600 DM 6.4H).

5.7. *Effective Conservation Outcomes and Accountability*

The Service has authority to conduct direct oversight of all compensatory mitigation programs and projects for which we have exempted or permitted incidental take under the ESA. A standard condition of HCP incidental take permits provides for such oversight. Incidental take exemptions provided by statute to Federal agencies and applicants through the ESA section 7 process require that mandatory terms and conditions included with the take statement must be implemented by the Federal agency or its applicant to activate the exemption in 7(o)(2) of the Act. Should a mitigation project fail to meet its performance criteria and therefore fail to provide the expected conservation for the species, the responsible party must provide equivalent compensation through other means.

5.8. *Encourage Collaboration*

Successful landscape-scale compensatory mitigation depends on the engagement

of affected communities and stakeholders. Governments, communities, organizations, and individuals support what they help to develop. The Service will provide opportunities for and encourage appropriate stakeholder participation in development of landscape-scale compensatory mitigation strategies that affect listed, proposed, and at-risk species, and proposed and designated critical habitat through appropriate public processes such as those used for programmatic habitat conservation plans (HCPs). Programmatic approaches to compensatory mitigation programs for at-risk species are also encouraged, particularly when led by State agencies, and the Service will make every effort to participate in the planning, establishment, and operation of such programs as described in our draft Policy Regarding Voluntary Prelisting Conservation Actions (79 FR 42525, July 22, 2014). The Service's regional and field offices will determine or assist in determining, as appropriate, the level and methods of public participation using transparent processes.

5.9. *Maintain Transparency and Predictability*

Consistent implementation of ESA programs that permit or authorize incidental take of listed species will provide regulatory predictability for everyone. The Service will share appropriate information on the availability of compensatory mitigation programs and projects with the public through online media or other appropriate means. Information regarding conservation banks is available on the Regulatory In-lieu fee and Bank Information Tracking System (RIBITS) (*https://ribits.usace.army.mil*). The Service anticipates working with the USACE to update RIBITS so that it may be used for our in-lieu fee programs. Similar information for habitat credit exchanges and other third-party sponsored mitigation projects, or when it is not otherwise possible to use RIBITS, must

be made publicly accessible.

6. General Considerations

Specific operational details, in addition to the information provided below in this section, will be in implementation guidance issued by the Service.

6.1. *Preferences*

The appropriate form of compensatory mitigation (*i.e.*, preservation, restoration, enhancement, establishment, or a combination of some or all of these forms) must be based on the species' needs and the nature of the impacts adversely affecting the species. The Service has the following general preferences related to compensatory mitigation.

6.1.1. Preference for Strategically Sited Compensatory Mitigation

Preference shall be given to compensatory mitigation projects sited within the boundaries of priority conservation areas identified in existing landscape-scale conservation plans as described in the Service's Mitigation Policy (81 FR 83440, November 21, 2016). Priority conservation areas for listed species may be identified in documents such as species status assessments, recovery plans, and/or 5-year reviews.

6.1.2. Preference for Compensatory Mitigation in Advance of Impacts

After following the principles and standards outlined in this policy and all other considerations being equal, preference will be given to compensatory mitigation projects implemented in advance of impacts to the species. Mitigation implemented in advance of impacts reduces risk and uncertainty. Demonstrating that mitigation is successfully implemented in advance of impacts provides ecological and regulatory certainty that is rarely matched by a proposal of mitigation to be accomplished concurrent with, or subsequent to, the impacts of the actions even when that proposal is supplemented with

higher mitigation ratios. While conservation banking is by definition mitigation in advance of impacts, other third-party mitigation arrangements and permittee-responsible mitigation may also satisfy this preference by implementing compensatory mitigation in advance of impacts. In-lieu fee programs can also satisfy this preference through a "jump start" that achieves and maintains a supply of credits that offer mitigation in advance of impacts.

6.1.3. Preference for Consolidated Compensatory Mitigation

Mitigation mechanisms that consolidate compensatory mitigation on the landscape, such as conservation banks and in-lieu fee programs, are generally preferred to small, disjunct compensatory mitigation sites spread across the landscape. Consolidated mitigation sites generally have several advantages over multiple, small, isolated mitigation sites. These advantages include:

- Avoidance of a piecemeal approach to conservation efforts that often results in small, non-sustainable parcels of habitat scattered throughout the landscape;
- Sites that are usually a component of a landscape-level strategy for conservation of high-value resources;
- Cost effective compensatory mitigation options for small projects, allowing for effective offsetting of the cumulative adverse effects that result from numerous, similar, small actions;
- An increase in public-private partnerships that plan in advance and a landscape-scale approach to mitigation to provide communities with opportunities to conserve highly valued natural resources while still allowing for community development and growth;

- Greater capacity for bringing together financial resources and scientific expertise not practicable for small conservation actions;
- Economies of scale that provide greater resources for design and implementation of compensatory mitigation sites and a decreased unit cost for mitigation;
- Improved administrative and ecological compliance through the use of third-party oversight;
- Greater regulatory and financial predictability for project proponents, greatly reducing the uncertainty that often causes project proponents to view compensatory mitigation as a burden; and
- Expedited regulatory compliance processes, particularly for small projects, saving all parties time and money.

6.2. *Eligible Lands*

6.2.1. Lands Eligible for Use as Compensatory Mitigation

Compensatory mitigation sites may be established by willing parties on private, public, or tribal lands that provide the maximum conservation benefit for the listed, proposed, and at-risk species and other affected resources. Maintaining the same classification of land ownership between the impact area and mitigation site may be important in preventing a long-term net loss in conservation, in particular a reduction in the range of the species. Because most private lands are not permanently protected for conservation and are generally the most vulnerable to development actions, the use of private lands for mitigating impacts to species occurring on any type of land ownership is usually acceptable as long as durability can be ensured. Locating compensatory

mitigation on public lands for impacts to species on private lands is also possible, and in some circumstances may best achieve the conservation objectives for species, but should be carefully considered—see section **6.2.2.** Use of Public Land to Mitigate Impacts on Private Land for additional guidance.

Good candidates for compensatory mitigation sites are unprotected lands that are high value for conservation and that are acceptable to the Service. Designations of high conservation value may include lands with existing high-value habitat or habitat that when restored, enhanced, established, or properly managed will provide high value to the species. In addition to these general considerations, lands that may be good candidates for compensatory mitigation sites include:

- Lands previously secured through easements or other means but that lack the full complement of protections necessary to conserve the species (*e.g.*, buffer lands for a military installation that do not include management, or private lands with existing conservation easements for which landowners have not received financial compensation from public sources or regulatory assurances from the Service.);
- Lands adjacent to undeveloped, protected public lands such as National Wildlife Refuges or State Wildlife Management Areas;
- Private lands enrolled in programs that provide financial compensation from public sources to landowners in exchange for agreements that protect, restore, or create habitat for federally listed or at-risk species for a limited period of time, such as the Service's Partners for Wildlife Program or some Farm Bill programs (*e.g.*, Environmental Quality Incentives Program) if additional conservation benefits are provided above and beyond the terms and conditions of the agreement or if the agreement/easement has

expired; and

- Private lands enrolled in programs that provide regulatory assurances to the landowner such as SHAs or CCAAs that can be transitioned into compensatory mitigation, after all terms and conditions of the agreement have been met and the agreement has expired or the permit is surrendered in exchange for a mitigation instrument (see section **4.2.1.** Safe Harbor and Candidate Conservation Agreements for additional guidance).

See section **5.1.** *Siting Sustainable Compensatory Mitigation* for other considerations when selecting a site suitable for compensatory mitigation.

Lands that generally do not qualify as compensatory mitigation sites include:

- Lands without clear title unless the existing encumbrances (*e.g*., liens, rights-of-way) are compatible with the objectives of the mitigation site or can be legally removed or subordinated;

- Split estates (*i.e*., lands that have separate owners of various surface and subsurface rights, usually mineral rights), unless a remedy can be found (see below for guidance on split estates);

- Private or public lands already designated for conservation purposes, unless the proposed compensatory mitigation project would add additional conservation benefit for the species above and beyond that attainable under the existing land designation;

- Private lands enrolled in government programs that compensate landowners who permanently protect, restore, or create habitat for federally listed or at-risk species (*e.g*., Wetland Reserve Program easements administered by the United States Department

of Agriculture's Natural Resources Conservation Service);

- Inventory and debt restructure properties under the Food Security Act of 1985 (16 U.S.C. 3801 *et seq*.); and
- Lands protected or restored for conservation purposes under fee title transfers.

Additional guidance on limitations involving Federal funding and mitigation, including grants, is provided in the Service's Mitigation Policy (81 FR 83440, November 21, 2016).

Lands with split estate ownership and laws and policies governing existing rights (*e.g.*, mining laws) may prevent land protection instruments (*e.g.*, permanent conservation easements) from providing sufficient protection from future development of mineral rights, including oil and gas exploration or development. Many potential high-value conservation properties throughout the United States are split estates. The risk of using split estate properties as compensatory mitigation should be carefully considered. When legal remedies to restore single ownership are not possible or practicable, other approaches to managing the risks may be available to bolster durability on split estates. A mineral deed acquisition, mineral assessment report, or subsurface use agreement are a few of the options for managing mineral rights on compensatory mitigation sites that provide varying levels of protection (Raffini 2012). Service personnel tasked with assessing the viability of split estates as mitigation sites should work with the Service's Realty Specialists and the Department of the Interior Solicitor to assess risks and possible remedies or other approaches.

6.2.2. Use of Public Land to Mitigate Impacts on Private Land

In general, the Service supports compensatory mitigation on public lands that are

already designated for the conservation of natural resources to offset impacts to the species on private lands only if additionality is clearly demonstrated and is legally attainable. Additionality is a reasonable expectation that the conservation benefits associated with the compensatory mitigation actions would not occur in the foreseeable future without those actions. Offsetting impacts to private lands by locating compensatory mitigation on public lands already designated for conservation purposes generally risks a long-term net loss in landscape capacity to sustain species (*e.g.*, future reduction in the range of the species) by relying increasingly on public lands to serve conservation purposes. However, we recognize under certain circumstances this offset arrangement may provide the best possible conservation outcome for the species based on best available science. When this is the case, the Service will consider mitigation on public lands to offset impacts to the species on private lands appropriate if:

- Compensatory mitigation is an appropriate means of achieving the mitigation planning goal for the species;
- Additionality can be clearly demonstrated and quantified, and is supplemental to conservation the public agency is foreseeably expected to implement absent the mitigation (only conservation benefits that provide additionality are counted towards achieving the mitigation planning goal);
- Durability of the compensatory mitigation is ensured (see section **6.2.3.** Ensuring Durability on Public Lands);
- It is consistent with and not otherwise prohibited by all relevant statutes, regulations, and policies; and
- Private lands suitable for compensatory mitigation are unavailable or are

available but cannot provide an equivalent or greater contribution towards offsetting the impacts to meet the mitigation planning goal for the species.

When the public lands under consideration for use as compensatory mitigation for impacts on private lands are National Wildlife Refuge (NWR) System lands, the Service's Final Policy on the NWR System and Compensatory Mitigation Under the Section 10/404 Program (USFWS 1999) states that the Regional Director must recommend the mitigation to the Service Director for approval. Additional considerations may apply to NWR System lands for habitat losses authorized through the section 10/404 program (*i.e.*, Rivers and Harbors Act/Clean Water Act).

6.2.3. Ensuring Durability on Public Lands

Ensuring the durability of compensatory mitigation on public lands presents particular challenges, especially regarding site protection assurances, long-term management, and funding assurances for long-term stewardship. Mechanisms available for ensuring durability of land protection for compensatory mitigation on public lands vary from agency to agency, are subject to site-specific limitations, and are likely to be politically and administratively challenging to secure. Some mechanisms may require a legislative act while other mechanisms can be achieved administratively at various levels of an agency's organization.

To ensure the durability of long-term management on public lands, there should be a high degree of confidence that incompatible uses are removed or precluded to ensure that uses of the public lands do not conflict with or compromise the conservation of the species for which the compensatory mitigation project was established.

6.2.4. Transfer of Private Mitigation Lands to Public Agencies

Private mitigation lands may be transferred to public agencies with a conservation mission if allowed by applicable laws, regulations, and policies.

6.2.5. Compensatory Mitigation on Tribal Lands

Tribal lands are generally eligible as compensatory mitigation sites if they meet the standards and other requirements set forth in this policy. Ensuring durability, particularly site protection, is usually a sensitive issue for a tribal nation because a conservation easement entrusts the land to another entity (Terzi 2012), but acceptable entities may be available to hold easements. Additional guidance regarding mitigation and tribes is included in the Service's Mitigation Policy (81 FR 83440, November 21, 2016).

6.3. *Service Areas*

A service area is the geographic area assigned to a compensatory mitigation site within which credits for a specific resource (*e.g.*, a species) can be utilized. The impacts for which mitigation is sought must be located within the designated service area for the species, unless otherwise approved by the Service. If a proposed action is located within the identified service area of a specific conservation bank, in-lieu fee program, or other third-party mitigation program or site, then the proponent of that action may offset unavoidable impacts, with the Service's approval, through transfer of the appropriate type and number of credits from that mitigation program or site. Use of the credits outside of service areas is subject to approval by the Service. Service areas that apply to all mitigation mechanisms may be designated by the Service's regional or field offices, usually through issuance of species-specific mitigation guidance.

The service area is an important component for a potential mitigation sponsor

who will need to evaluate the market for credits prior to committing to a mitigation project. The mitigation sponsor has the responsibility to determine if a proposed mitigation project or program will be financially feasible and if they will move forward with the action.

6.4. *Crediting and Debiting*

A credit is a defined unit representing the accrual or attainment of ecological functions and/or services at a mitigation site. Credits are often expressed as a measure of surface area (*e.g.*, an acre or hectare), linear distance of constant width (*e.g.*, stream miles), number of individuals or mating pairs of a particular species, habitat function (*e.g.*, habitat suitability index), or other appropriate metric that can be consistently quantified.

Metrics developed to support credits by measuring an increase in ecological functions and services at compensatory mitigation sites and those developed to measure an expected loss or debit in ecological functions and services at impact sites must be science-based, quantifiable, consistent, repeatable, and related to the conservation goals for the species. In general, the method of calculating credits at a mitigation site should be the same as calculating debits at project impact sites. If use of a common "currency" between credits and debits is not practicable, the conversion between crediting and debiting metrics must be transparent.

Credits are available for use as mitigation once they are verified and released by the Service. Credits are released in proportion to administrative and ecological milestones. Credits are considered retired if they are no longer available for use as mitigation, including credits that have been transferred to fulfill mitigation obligations.

Credits may also be voluntarily retired, without being used for mitigation, which may help achieve no net loss or net conservation benefit goals. Credits are not to be traded among developers or anyone else and cannot be re-sold. Once a credit has been transferred as mitigation for a particular action, it may not be used again.

A mitigation site may contain habitat that is suitable for multiple listed species or other resources in the same spatial area. When this occurs, it is important to establish how the credits will be stacked or bundled and if they can be unstacked and transferred separately. See section **8.3.** *Credit Stacking and Bundling* for guidance.

Compensatory mitigation programs that use credits are voluntary, and permittees are never required to purchase credits from these compensatory mitigation sources. Pricing of credits is solely at the discretion of the mitigation provider.

6.5. *Timelines*

The Service does not have mandated timelines for review of conservation banks, in-lieu fee programs, or other compensatory mitigation projects that are not part of a consultation or permit decision. However, this does not mean that compensatory mitigation programs and projects are not a priority for the Service. Establishment of programmatic compensatory mitigation options for project proponents will provide efficiencies, particularly when developed in coordination with programmatic consultations and HCPs for large landscapes. These efficiencies include reducing the Service's workloads associated with ESA sections 7 and 10, expediting incidental take authorization for project proponents, and achieving better conservation outcomes for listed and other at-risk species.

6.6. *Managing Risk and Uncertainty*

Compensatory mitigation can be a valuable conservation tool for offsetting unavoidable adverse impacts to listed and at-risk species if the risk can be sufficiently managed. Predictions about the effectiveness of compensatory mitigation measures have varying degrees of uncertainty. Compensatory mitigation accounting systems (*e.g.*, debiting and crediting methodologies) should consider risk and adjust metrics and mitigation ratios to account for uncertainty. An exact accounting of the functions and services lost at the impact sites and gained at the mitigation sites is rarely possible due to the variability and uncertainty inherent in biological systems and ecological processes. To buffer risk and reduce uncertainty, it is often helpful to design compensatory mitigation programs and projects to achieve measures beyond no net loss to attain sufficient conservation benefits for the species. Designing conservation plans with mitigation that is expected to achieve more than no net loss in species conservation generally increases regulatory predictability and can result in shorter project reviews and facilitated permitting.

7. Compensatory Mitigation Mechanisms

Compensatory mitigation mechanisms can be divided broadly into habitat-based mechanisms and other non-habitat-based mitigation programs or projects. Whatever mechanism(s) are selected, compensatory mitigation is expected to provide either equivalent or additional conservation for the species to that lost as a result of the action. Specific operational details regarding compensatory mitigation mechanisms will be in the implementation guidance to be issued by the Service.

7.1. *Habitat-based Compensatory Mitigation Mechanisms*

Compensatory mitigation mechanisms based on habitat acquisition and protection

may consist of restoration of damaged or degraded habitat, enhancement of existing habitat, establishment of new habitat, preservation of existing habitat not already protected, or some combination of these that offsets the impacts of the action and results in or contributes to sustainable, functioning ecosystems for the species. Preservation of existing habitat often includes a change in land management that renders the site suitable for the species or provides additional ecological function or services for the species. Preservation includes site protection and is a valid mechanism for achieving compensatory mitigation that, at a minimum, reduces threats to the species. Existing habitat that is not protected and managed for the long term is vulnerable to loss and cannot count toward recovery of listed species.

The five habitat-based mitigation mechanisms described below and compared in Table 1 differ by: (1) the party responsible for the success of the mitigation site (the permittee or a third party); (2) whether the mitigation site is within or adjacent to the action area (on-site) or elsewhere (off-site); and (3) whether credits are generated at the mitigation site for use by more than one action. Habitat-based compensatory mitigation will be held to equivalent standards (the standards set forth in this policy) regardless of the mitigation mechanism(s) proposed. Habitat-based compensatory mitigation programs developed to credit conservation actions that benefit unlisted species should meet all compensatory mitigation standards set forth in this policy if they are intended to be used as compensatory mitigation for adverse impacts of actions undertaken after listing.

7.1.1. Permittee-responsible Compensatory Mitigation

Permittee-responsible compensatory mitigation is a conserved and managed mitigation site that provides ecological functions and services as part of the conservation

measures associated with a permittee's proposed action. Permittee-responsible mitigation sites are usually permanent, as most proposed actions with a need for compensatory mitigation are anticipated to result in permanent impacts to the species. The permittee retains responsibility for ensuring the required compensatory mitigation is completed and successful. This includes long-term management and maintenance when the mitigation is intended to be permanent. Permittee-responsible compensatory mitigation may be on-site or off-site, and each permittee-responsible mitigation site is linked to the specific action that required the mitigation. Permittee-responsible mitigation approved for a specific action is not transferable to other actions and cannot be used for other mitigation needs.

7.1.2. Conservation Bank Program

A conservation bank is a site or suite of sites that is conserved and managed in perpetuity and provides ecological functions and services expressed as credits for specified species that are later used to compensate for adverse impacts occurring elsewhere to the same species. Bank sponsors may be public or private entities. Ensuring the required compensatory mitigation measures for a permitted action are completed and successful is the responsibility of the bank sponsor. The responsibility for success of the mitigation is transferred to the bank sponsor through the transfer (usually a purchase by the permittee) of credits. Conservation banks provide mitigation in advance of impacts.

7.1.3. In-lieu Fee Program

An in-lieu fee site is a conserved and managed compensatory mitigation site established as part of an in-lieu fee program that provides ecological functions and services expressed as credits for specified species and used to compensate for adverse impacts occurring elsewhere to the same species. In-lieu fee sites are usually permanent

as most proposed actions with a need for compensatory mitigation are anticipated to result in permanent impacts to the species. In-lieu fee programs may be sponsored by a government agency or an environmental, conservation-based, not-for-profit organization with a mission that is consistent with species or habitat conservation. The in-lieu fee sponsor collects fees from permittees that have been approved by the Service to use the in-lieu fee program, instead of providing permittee-responsible compensatory mitigation. An in-lieu fee site that meets the mitigation requirements for the impacts of permittees' actions will be established when the in-lieu fee program has collected sufficient funds. All responsibility for ensuring the required compensatory mitigation measures are completed and successful, including long-term management and maintenance, is transferred from the permittee to the in-lieu fee program sponsor through the transfer (usually purchase) of credits. In-lieu fee programs generally do not provide mitigation in advance of impacts.

In-lieu fee programs can also be established to fund non-habitat-based compensatory mitigation measures. See section **7.3** *Other Compensatory Mitigation Programs or Projects* for guidance on these types of programs.

7.1.4. Habitat Credit Exchange

Habitat credit exchanges are relatively new and warrant additional care and consideration when being considered as a mitigation mechanism. A habitat credit exchange is an environmental market that operates as a clearinghouse in which an exchange administrator, operating as a mitigation sponsor, manages credit transactions between compensatory mitigation providers and project permittees. This is in contrast to the direct transactions between compensatory mitigation providers and permittees that

generally occur through conservation banking and in-lieu fee programs. Exchanges provide ecological functions and services expressed as credits that are conserved and managed for specified species and are used to compensate for adverse impacts occurring elsewhere to the same species. Exchanges may be designed to provide credits for permanent compensatory mitigation sites, short-term compensatory mitigation sites, or both types of sites. Habitat credit exchanges may operate at a local or larger landscape scale, may consist of one or more mitigation sites, and may obtain credits from conservation banks or in lieu fee programs. Exchange administrators may be public or private entities. Exchanges developed for federally listed species will require Service approval as with all other mitigation mechanisms described in this policy.

Table 1—Comparison of Habitat-based Compensatory Mitigation Sites Established under Different Mechanisms.

Mitigation Mechanism	Responsible Party	Credits Generated	Responsibility Transferable
Permittee-responsible Mitigation Site	Permittee	No	No
Conservation Bank	Bank Sponsor	Yes	Yes
In-lieu Fee Program Site	In-lieu Fee Sponsor	Yes	Yes
Habitat Credit Exchange Site	Exchange Administrator, Mitigation Sponsor, or other identified responsible entity	Yes	Yes

7.2. *Short-term Compensatory Mitigation*

The concept of short-term compensatory mitigation has merit if it serves the conservation goals of the species. Short-term compensatory mitigation may be appropriate in some situations to offset impacts that can be completely rectified by repairing, rehabilitating, or restoring the affected environment within a short and predictable timeframe. Under this policy, short-term compensatory mitigation includes rectifying the damage at the impact site and providing short-term compensation to offset the temporal loss caused by the action to achieve a conservation outcome that results in, at a minimum, no net loss to the species.

A short-term impact is defined in this policy as an action that meets the following criteria: (1) the impact is limited to harassment or other forms of nonlethal take; (2) the impact can be completely rectified through natural or active processes, and the site will function long term within the landscape at the same or greater level than before the impact; (3) restoration of the impact site can occur within a short and predictable timeframe based on current science and the knowledge of the species; and (4) all temporal loss to the species by the impact can be estimated and compensated. Opportunities for short-term compensation are likely to be very limited and may not apply to most species.

Inherent in applying short-term compensatory mitigation is the recovery of the affected species' populations to pre-disturbance levels and any additional increase in population levels that was anticipated to occur if the action had not taken place (*i.e.*, adjusted for temporal loss). Determining the amount and duration of compensatory mitigation needed requires substantial knowledge of the biology of the species (*e.g.*, abundance, distribution, fecundity). Actions that meet the criteria for short-term impacts

are not limited to short-term compensatory mitigation as a mitigation option. The Service prefers mitigation mechanisms that protect conservation values in perpetuity. Permanent compensatory mitigation either at the same or a reduced mitigation ratio (determined by the Service) is usually an alternative. Conservation banks or in-lieu fee programs with available credits that meet the compensatory mitigation needs for actions with short-term impacts are usually a good alternative to short-term compensatory mitigation.

7.3. *Other Compensatory Mitigation Programs or Projects*

Compensatory mitigation is based on the concept of replacing or providing substitute resources or environments for the impacted resource (40 CFR 1508.20). However, mechanisms or conservation measures that do not exactly meet this definition, but that meet the conservation objectives for the specified species and are expected to compensate for adverse effects to species or their habitats, may be suitable as compensatory mitigation. These types of compensatory mitigation measures are acceptable if they are closely tied to recovery actions identified in species status assessments, recovery plans, 5-year reviews, or best available science on the threats and needs of the species. Compensatory mitigation of this type is often funded through an in-lieu fee program. Examples of potentially suitable compensatory measures include, but are not limited to:

a. Transfer and retirement of timber, water, mineral, or other severed rights to an already existing conservation site, thereby significantly reducing or eliminating the risk of future development on the site that would be incompatible with conservation of the species;

b. Restricting human use of waterways or other public spaces through legal

means to allow for increased or exclusive use by the species;

c. Controlled propagation, population augmentation, and reintroduction of individuals of the species to offset losses from an action;

d. Captive rearing and release of individuals of the species to offset losses from an action;

e. Administering vaccination programs vital to species survival and recovery;

f. Gating of caves that serve as habitat for the species;

g. Construction of wildlife overpasses or underpasses to protect migratory passages for the species; and/or

h. Programs that reduce the exposure of the species to contaminants in the environment that are known to cause injury or mortality.

In rare circumstances, research or education that can be linked directly to the relative threats to the species and provide a quantifiable benefit to the species may be included as part of a mitigation package. Although research can assist in identifying substitute resources, it does not replace impacted resources or adequately compensate for adverse effects to species or habitat. See the Service's Mitigation Policy (81 FR 83440, November 21, 2016) for additional guidance on appropriate uses of research or education as mitigation.

8. Criteria for Use of Third-party Mitigation

Specific operational details regarding the use of third-party mitigation will be in the implementation guidance to be issued by the Service.

8.1. *Project Applicability*

Activities regulated under sections 7 or 10 of the ESA may be eligible to use

third-party sponsored mitigation, if the adverse impacts to the species from the particular project can be offset by transfer of the appropriate type and number of credits provided by the third-party sponsored mitigation program. The impacts for which third-party sponsored mitigation is sought must be located within the service area for the species provided by the third-party sponsored mitigation program unless otherwise approved by the Service. In no case may the same credit(s) be used to compensate for more than one action. However, the same credit(s) may be used to compensate for a single action that requires authorization under more than one regulatory authority (*e.g.*, a vernal pool restoration credit that provides mitigation for a listed species under the ESA and wetlands under section 404 of the CWA).

Only credits that have been verified by the Service and released are considered available. Only available credits can be used to mitigate actions.

8.2. *Transfer of Responsibility*

The mitigation sponsor assumes responsibility for success of the mitigation through the transfer (usually a purchase by the permittee) of credits or other quantified amount of compensatory mitigation.

The Service's role is regulatory. Credit transfers are subject to approval by the Service, as to their conservation value and appropriate application for use related to any authorization or permit issued under the ESA. Market and legal risks arising from the purchase and use of mitigation credits are borne solely by the parties to the sale of such credits.

8.3. *Credit Stacking and Bundling*

The Service recognizes the inherent efficiencies in leveraging multiple

conservation efforts on the landscape and encourages these coordinated efforts. However, compensatory mitigation and other conservation actions that occur on the same mitigation site must be accounted for separately, and all aspects of the different actions must be managed and tracked in a transparent manner. Stacking mitigation credits within a mitigation site (*i.e.*, more than one credit type on spatially overlapping areas) is allowed, but the stacked credits cannot be used to provide mitigation for more than one permitted impact action even if all the resources included in the stacked credit are not needed for that action. To do so would result in a net loss of resources in most cases because using a species credit separately from the functions and services that accompany its habitat, such as carbon sequestration or pollination services, would result in double counting (*i.e.*, "double dipping"). Double counting is selling or using a unit of the same ecosystem function or service on the ground more than once. This can occur through an accounting error in which the credit is sold twice, and it also can occur when stacked credits are unstacked and one or more functions or services are sold separately. For example, a credit representing an acre of habitat is sold once as a species habitat credit for a permitted action and again as a carbon credit for a different action in a different location. The loss of species habitat at the first impact site included all functions and services associated with that habitat including carbon sequestration, so selling that same unit of compensatory mitigation again for carbon sequestration results in no carbon offset for the loss of carbon sequestration at the second impact location. Using a stacked credit separately to reflect its various values is an ecologically challenging accounting exercise.

Compensatory mitigation projects may be designed to holistically address requirements under multiple programs and authorities for the same action and may use

bundled credits to accomplish this goal. For example, a stream credit may satisfy requirements for an U.S. Army Corps of Engineers section 404 CWA permit and issuance of incidental take authority under the ESA for a listed mussel species occurring in that stream, or a county-wide HCP may establish an in-lieu fee program for which a single fee is collected from project applicants for a permit which covers multiple mitigation obligations under Federal, State, and local authorities. In both these examples, the bundled credit is used as a single commodity (*i.e.*, it is not unbundled or unstacked) and is only used once.

8.4. *Use of Credits for Mitigation Under Authorities Other Than the ESA*

Compensatory mitigation projects established for use under one Service program (*e.g.*, Ecological Services) may also be used to satisfy the environmental requirements of other Service programs (*e.g.*, Migratory Birds or Refuges) or other Federal, State, or local agency programs consistent with the laws and requirements of each respective program. However, the same credits may not be used for more than one authorized or permitted action (*i.e.*, no double counting of mitigation credits).

9. Compliance and Tracking

A tracking system is essential in ensuring compliance with the mitigation instruments used to implement compensatory mitigation programs described in this policy. Tracking systems also facilitate consistency in the implementation of compensatory mitigation programs and projects. It is vital that the Service track compliance directly for permittee-responsible mitigation and, at a minimum, through third parties responsible for operating compensatory mitigation programs or projects such as in-lieu fee programs and habitat exchanges. Transactions (credit withdrawals) at a

Service authorized mitigation program or project that are not related to ESA compliance and are not approved by the Service must be tracked in the same tracking system. The Service is not liable for any event or transaction that eludes detection through the Service's tracking function. Specific operational details regarding compliance and tracking will be in the implementation guidance to be issued by the Service.

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Appendix A: List of Acronyms and Abbreviations Used in this Policy

CCAA	Candidate conservation agreement with assurances
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FWCA	Fish and Wildlife Coordination Act
HCP	Habitat conservation plan

MMPA	Marine Mammal Protection Act
NEPA	National Environmental Policy Act
NWR	National Wildlife Refuge
RPA	Reasonable and prudent alternative
RPM	Reasonable and prudent measure
RIBITS	Regulatory In-lieu fee and Bank Information Tracking System
SHA	Safe harbor agreement
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

Appendix B: Glossary of Terms Related to Compensatory Mitigation

Definitions in this section apply to the implementation of the U.S. Fish and Wildlife Service (Service) Endangered Species Act Compensatory Mitigation Policy and were developed to provide clarity and consistency. Some definitions are defined in Service authorities such as the Endangered Species Act or the National Environmental Policy Act, or in regulations or policies existing at the time this policy was issued. Other definitions have been developed based on compensatory mitigation practices. Definitions in the glossary do not substitute for statutory or regulatory definitions in the exercise of those authorities.

Action—an activity or program implemented, authorized, or funded, in whole or in part, 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 (81 FR 83440; November 21, 2016).

Action area—all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02).

Adaptive management—a systematic approach for improving resource management by learning from management outcomes. An adaptive approach involves exploring alternative ways to meet management objectives, predicting the outcomes of alternatives based on the current state of knowledge, implementing one or more of these alternatives, monitoring to learn about the impacts of management actions, and then using the results to update knowledge and adjust management actions. Adaptive management focuses on learning and adapting, through partnerships of managers, scientists, and other stakeholders who learn together how to create and maintain sustainable resource systems (Williams et al. 2009). As applied to compensatory mitigation, it is a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the implementation of activities to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to achieve stated biological goals. It includes the selection of appropriate measures that will ensure that the resource functions and services are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems (modified from 33 CFR 332.2).

Additionality—conservation benefits of a compensatory mitigation measure that 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 (600 DM 6.4G).

Additive impacts, additive effects—the combined effects of past actions on a species, other resource, or community; impacts of an action may be relatively insignificant on their own, but when considered with the impacts from other actions as they accumulate over time collectively lead to significant overall loss or degradation of resources. See also "*cumulative effects*."

Applicant—any person who requires formal approval or authorization from a Federal agency as a prerequisite to conducting an action (50 CFR 402.02); "person" means an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States (16 U.S.C. 1532(13)).

At-risk species—candidate species and other unlisted species that are declining and are at risk of becoming a candidate for listing under the Endangered Species Act. This may include, but is not limited to, State listed species, species identified by States as species of greatest conservation need, or species with State heritage ranks of G1 or G2.

Avoidance—avoiding the impact altogether by not taking a certain action or parts of an action (40 CFR 1508.20).

Bank Sponsor—any public or private entity responsible for establishing and, in most circumstances, operating a conservation bank. Bank sponsors are most often private individuals, companies, or Limited Liability Corporations, but they may also be

nongovernmental organizations, Tribes, or government agencies. See also "*mitigation sponsor*."

Baseline—the pre-existing condition of a defined area of habitat or a species population that can be quantified by an appropriate metric to determine level of functions and/or services and re-measured at a later time to determine if the same area of habitat or species population has increased, decreased, or maintained the same level of functions and/or services.

Candidate conservation agreement with assurances (CCAA) —a formal agreement between the Service or the National Marine Fisheries Service and one or more non-Federal parties who voluntarily agree to manage their lands or waters to remove threats to candidate or proposed species and in exchange receive assurances that their conservation efforts will not result in future regulatory obligations in excess of those they agreed to at the time they entered into the agreement. The management activities included in the agreement must significantly contribute to elimination of the need to list the target species when considered in conjunction with other landowners conducting similar management activities within the range of the species (USFWS CCAA Policy).

Candidate species (candidate) —any species being considered by the Secretary for listing as an endangered or threatened species, but not yet the subject of a proposed rule (50 CFR 424.02); a species for which the Service or the National Marine Fisheries Service has on file sufficient information on biological vulnerability and threats to support a proposal to list as endangered or threatened under the Endangered Species Act.

Compensatory mitigation (compensation) —compensation 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 (600 DM 6.4C).

Compensatory mitigation project—compensatory mitigation implemented by the action agency, a permittee, or a mitigation sponsor. Compensatory mitigation projects include permittee-responsible mitigation, conservation banks, in lieu fee programs and sites, habitat credit exchanges, and other third-party compensatory mitigation projects.

Conservation, conserve, conserving —to use and the use of all methods and procedures which are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to the Endangered Species Act are no longer necessary (16 U.S.C. 1532(3)).

Conservation bank—a site, or suite of sites, that is conserved and managed in perpetuity and provides ecological functions and services expressed as credits for specified species that are later used to compensate for impacts occurring elsewhere to the same species.

Conservation easement—a recorded legal document established to conserve biological resources for a specified duration, usually in perpetuity, on a identified conservation property and which restricts certain activities and requires certain habitat management obligations for the conservation property.

Conservation measures (conservation actions) —measures pledged in the project description that the Federal agency or applicant will implement to minimize, rectify, reduce, and/or compensate for the adverse impacts of the development project on the species. Conservation measures designed to compensate for unavoidable impacts may

include the restoration, enhancement, establishment, and/or preservation of species habitat or other measures conducted for the purpose of offsetting adverse impacts to the species. Upon issuance of a permit, license or other such authorization associated with the proposed project, implementation of that project requires implementation of the conservation measures as well as any other terms and conditions of the permit.

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 the species (81 FR 83440; November 21, 2016).

Conservation plan (species conservation plan) —a plan developed by Federal, State, and/or local government agencies, Tribes, or appropriate nongovernmental organizations, in consultation with relevant stakeholders, for the specific goal of conserving one or more listed or at-risk species. A conservation plan is developed using a landscape-scale approach and addresses the status of, needs of, and threats to the species, and usually includes recommended conservation measures for the conservation/recovery of the species. Examples of species conservation plans include species conservation frameworks, rangewide conservation plans, and conservation plans developed as part of a large landscape habitat conservation plan.

Covered species—species specifically included in a conservation bank, habitat conservation plan, safe harbor agreement, candidate conservation agreement with

assurances, rangewide conservation plan, or other such conservation plan for which a commitment is made to achieve specific conservation measures for the species.

Credit (species credit, habitat credit) —a defined unit representing the accrual or attainment of ecological functions and/or services for a species at a mitigation site or within a mitigation program.

Credit bundling—allowing a single unit of a mitigation site to provide compensation for two or more spatially overlapping ecosystem functions or services that are grouped together into a single credit type and used as a single commodity to compensate for a single permitted action. A bundled credit may be used to compensate for all or a subset of the functions or services included in the credit type but may only be used once, even if all functions and services represented in the credit type were not required for the permitted action. See also "*credit stacking.*"

Credit reserve account – credits set aside in reserve to offset force majeure or other unforeseen events as agreed to by the Service, allowing a mitigation program to continue uninterrupted.

Credit stacking—allowing a single unit of a mitigation site to provide two or more credit types representing spatially overlapping ecosystem functions or services which can be unstacked and used as separate commodities to compensate for different permitted actions. Credit stacking can result in double counting (*i.e*., a net loss of resources on the landscape) if the same functions or services are not also accounted for separately at all impact sites. See also "*credit bundling"* and *"double-counting."*

Credit transfer—the use, sale, or conveyance of credits by a bank sponsor or mitigation provider to a permittee or other entity for the purposes of offsetting impacts of

an action.

Critical habitat—specific areas within the geographical area occupied by the species at the time it is listed as endangered or threatened under the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species at the time it is listed, which are determined by the Secretary of the Department of the Interior to be areas essential for the conservation of the species (16 U.S.C. 1532(5)(A)).

Cumulative effects—those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation under the Endangered Species Act (50 CFR 402.14(g)(3)). Under the National Environmental Policy Act, cumulative effects are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7).

Debit—a defined unit representing the loss of ecological functions and/or services for a species at an impact site. Debits should be expressed using the same metrics used to value credits at mitigation sites.

Direct effects—those effects to the species or other resource that are caused by the action and occur at the same time and place (81 FR 83440; November 21, 2016).

Double-counting (double-dipping) —using a credit, however defined, representing the same unit of ecosystem function or service on a mitigation site more than once. This

is not allowed.

Durability—the condition or state in which the measurable environment benefits of the compensatory mitigation project or measure are sustained, at a minimum, for the duration of the associated impacts (including direct and indirect impacts) of the authorized action. To be durable, mitigation measures effectively compensate for remaining unavoidable impacts that warrant compensatory mitigation; use long-term administrative and legal provisions to prevent actions that are incompatible with the measure; and employ financial instruments to ensure the availability of sufficient funding for the measure's long-term monitoring, site protection, and management (600 DM 6.4G).

Effects (effects of the action) —changes in the environmental conditions caused by an action that are relevant to the species or other resources (81 FR 83440; November 21, 2016), including the direct, indirect, and cumulative effects of the action on the species and other activities that are interrelated to, or interdependent with, that action as defined at 50 CFR 402.02. See also "*cumulative effects*."

Endangered species—any species which is in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)).

Endowment—as used in this policy, funds that are conveyed solely for the long-term stewardship of a mitigation property and are permanently restricted to paying the costs of management and stewardship of that property. The management of endowment funds is generally governed by State and Federal laws, as applicable. Endowments do not include funds conveyed for meeting short-term performance objectives of a mitigation project.

Enhancement—activities conducted in existing habitat of the species that improve one or more ecological functions or services for that species, or otherwise provide added benefit to the species and do not negatively affect other resources of concern. Compare with "*restoration.*"

Establishment – construction of habitat of a type that did not previously exist on a mitigation site but which will provide a benefit to the species and does not negatively affect other resources of concern. Compare with "*restoration.*"

Fee title (fee) —an interest in land that is the most complete and absolute ownership in land; it is of indefinite duration, freely transferable, and inheritable.

Functions—the physical, chemical, and biological processes that occur in ecosystems (33 CFR 332.2); functions are the ecological processes necessary for meeting species' habitat and lifecycle needs.

Habitat—an area with spatially identifiable physical, chemical, and biological attributes that supports one or more life-history processes for the species (81 FR 83440; November 21, 2016).

Habitat conservation plan (HCP) —a planning document that describes the anticipated effects of a proposed activity on the taking of federally listed species, how those impacts will be minimized and mitigated, and how the plan will be funded (16 U.S.C. 1539). The HCP is required as part of an incidental take permit application to the Service or the National Marine Fisheries Service (see "*incidental take*").

Habitat credit exchange (habitat credit exchange program) —a market-based system that operates as a clearinghouse in which an exchange administrator, acting as a mitigation sponsor, manages credit transactions between compensatory mitigation

providers and permittees or others authorized to implement actions that adversely affect protected species.

Impact(s) (of an action) —adverse effects relative to the affected resources (81 FR 83440; November 21, 2016). More specifically under this policy, adverse effects on the species or its habitat anticipated in a proposed action or resulting from an authorized or permitted action.

Incidental take—take of any endangered or threatened species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or an applicant (50 CFR 402.02). Incidental take may be authorized for endangered or threatened species through section 7 or 10, or for threatened species, through a rule codified under section 4(d) of the Endangered Species Act. (See also, "*take.*")

Indirect effects—those effects to the species that are caused by the action at a later time or another place, but are reasonably certain to occur (50 CFR 402.02).

In-kind—a resource of a similar structural and functional type to the impacted resource (33 CFR 332.2); when used in reference to a species, in-kind means the same species.

In-lieu fee program—a program involving the restoration, establishment, enhancement, and/or preservation of habitat through funds paid to a governmental or nonprofit natural resources management entity to satisfy compensatory mitigation requirements for impacts to specified species or habitat (modified from 33 CFR 332.2).

In-lieu fee program sponsor—any government agency or nonprofit natural resources management organization responsible for establishing, and in most

circumstances, operating an in-lieu fee program. See also, "*sponsor*."

In-lieu fee site—a compensatory mitigation site established under an approved in-lieu fee program.

Landscape—an area encompassing an interacting mosaic of ecosystems and human systems that is characterized by a set of common management concerns. The landscape is not defined by the size of the area, but rather by the interacting elements that are relevant and meaningful in a management context (600 DM 6D).

Landscape-scale approach—an approach to conservation planning that 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 (600 DM 6E).

Listed species—any species or subspecies of fish, wildlife, or plant which has been determined to be endangered or threatened under section 4 of the Endangered Species Act (50 CFR 402.02). Listed species are found at 50 CFR 17.11 and 17.12.

Management plan—the stewardship plan prepared to instruct the land manager in the operations and biological management for the compensatory mitigation site to, at a minimum, maintain the functions and services for specified species and other resources on the mitigation site. These are generally long-term plans that include a detailed estimate of the itemized costs for all management actions required by the plan. These annual costs are used to estimate the size of the endowment that will be needed to maintain and monitor the mitigation site for the intended duration.

Mitigation (mitigation hierarchy, mitigation sequence) —as defined and codified in the Council on Environmental Quality (CEQ) National Environmental Policy Act (42 U.S.C. 4321 *et seq*.) regulations (40 CFR 1508.20), mitigation includes:

- Avoid the impact altogether by not taking the action or parts of the action;
- Minimize the impact by limiting the degree or magnitude of the action and its implementation;
- Rectify the impact by repairing, rehabilitating, or restoring the affected environment;
- Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action; and
- Compensate for the impact by replacing or providing substitute resources or environments.

This sequence is often condensed to: Avoidance, minimization, and compensation.

Mitigation ratio—the relationship between the amount of the compensatory offset for, and the impacts to, the species, habitat for the species, or other resource of concern.

Mitigation sponsor (mitigation project sponsor, sponsor, mitigation provider) — any public or private entity responsible for establishing, and in most circumstances, operating a compensatory mitigation program or project such as a conservation bank, in-lieu fee program, or habitat credit exchange (modified from 33 CFR 332.2).

Off-site—a mitigation area that is located neither on nor adjacent to the same parcel of land as the impact site (33 CFR 332.2).

On-site—a mitigation site located on or adjacent to the same parcel of land as the impact site (33 CFR 332.2).

Performance criteria—observable or measurable administrative and ecological (physical, chemical, or biological) attributes that are used to determine if a compensatory mitigation project meets the agreed upon conservation objectives identified in a mitigation instrument or the conservation measures proposed as part of a permitted or otherwise authorized action.

Permittee—any person who receives formal approval or authorization, generally in the form of a permit or license, from a Federal agency to conduct an action. See also, "*applicant*."

Permittee-responsible mitigation—activities or projects undertaken by a permittee or an authorized agent or contractor to provide compensatory mitigation for which the permittee retains full responsibility. As used in this policy, permittee-responsible mitigation also includes compensatory mitigation undertaken by Federal agencies to offset impacts resulting from actions carried out directly by the Federal agency.

Perpetuity—endless or infinitely long duration or existence; permanent.

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 (81 FR 83440; November 21, 2016).

Preservation—the protection and management of existing resources for the species that would not otherwise be protected through removal of a threat to, or preventing the decline of, the resources to compensate for the loss of the same species or resources elsewhere.

Proponent (project proponent) —the agency proposing an action, and if applicable, any applicant(s) for agency funding or authorization to implement a proposed action (81 FR 83440; November 21, 2016). For purposes of this policy, any person, organization, or agency advocating a development proposal that is anticipated to result in adverse impacts to one or more listed or at-risk species. See also, "*applicant"* and "*permittee*."

Resources (resources of concern) —fish, wildlife, plants, and their habitats for which the Service has authority to recommend or require the mitigation of impacts resulting from proposed actions (81 FR 83440; November 21, 2016) .

Restoration—repairing or rehabilitating habitat for the benefit of the species on a mitigation site with the goal of returning it to its natural/historic habitat type with the same or similar functions where they have ceased to exist, or exist in a substantially degraded state.

Retired credit—a credit that is no longer available for use as mitigation. Credits that have been sold or otherwise used to fulfill a mitigation obligation are considered retired. Credits may also be voluntarily retired or forfeited, without being used for

mitigation.

Safe harbor agreement (SHA) —formal agreement between the Service or National Marine Fisheries Service and one or more non-Federal property owners in which property owners voluntarily manage for listed species for an agreed amount of time providing a net conservation benefit to the species and, in return, receive assurances from the Service or National Marine Fisheries Service that no additional future regulatory restrictions will be imposed (USFWS Safe Harbor Policy). Under the Safe Harbor Policy, "net conservation benefit" is defined as contributing to the recovery of the listed species covered by the SHA.

Service area—the geographic area within which impacts to the species or other resources of concern can be mitigated at a specific compensatory mitigation site.

Species—the term "species" includes any species, subspecies of fish, or wildlife, or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature (16 U.S.C. 1532(16)).

Take—means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect a federally listed species, or to attempt to engage in any such conduct (16 U.S.C. 1532(19)). "Take" applies only to fish and wildlife, not plants.

Temporal loss—the cumulative loss of functions and/or services relevant to the species attributed to the time between the loss of habitat functions and/or services or individuals of the population(s) caused by the action and the replacement of habitat functions and/or services or repopulation of the species at the compensatory mitigation site to the same level had the action not occurred.

Threatened species—any species which is likely to become an endangered species

within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)).

Unavoidable impact—an impact for which an appropriate and practicable alternative to the proposed action that would not cause the impact is not available (81 FR 83440; November 21, 2016).

Determinations Under Other Authorities

As mentioned above, we intend to apply this policy when considering the adequacy of compensatory mitigation programs, projects, and measures proposed by Federal agencies and applicants as part of a proposed action and mitigation sponsors. Below we discuss compliance with several Executive Orders and statutes as they pertain to this policy.

National Environmental Policy Act (NEPA)

We have analyzed this policy in accordance with the criteria of the National Environmental Policy Act, as amended (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). Issuance of policies, directives, regulations, and guidelines are actions that may generally be categorically excluded under NEPA (43 CFR 46.210(i)). Based on comments received, we determined that a categorical exclusion can apply to this policy; nevertheless, the Service chose to prepare an environmental assessment (EA) to inform decision makers and the public regarding the possible effects of the policy revisions.

We announced our intent to prepare an EA pursuant to NEPA when we published the draft policy. We requested 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 during the comment period on the draft policy. Comments from the public were considered in the drafting of the final EA. The final EA is available on the Internet at *http:// www.regulations.gov* under Docket Number FWS–HQ–ES–2015–0165.

Paperwork Reduction Act of 1995

This final policy does not contain any new collections of information that require approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). OMB has reviewed and approved the information collection requirements for applications for incidental take permits, annual reports, and notifications of incidental take for native endangered and threatened species for safe harbor agreements, candidate conservation agreements with assurances, and habitat conservation plans under OMB Control Number 1018-0094, which expires on January 31, 2017. We are currently in the process of seeking renewal for OMB Control Number 1018-0094. We may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59

FR 22951), Executive Order 13175 "Consultation and Coordination with Indian Tribal Governments," and the Department of the Interior Manual at 512 DM 2, we have considered possible effects on federally recognized Indian tribes and have determined that there are no potential adverse effects of issuing this policy. Our intent with the policy is to provide a consistent approach to the consideration of compensatory mitigation programs, projects, and measures, including those taken on Tribal lands. We will work with Tribes as applicants proposing compensatory mitigation as part of proposed actions and with Tribes as mitigation sponsors.

Authority

The authorities for this action include the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), and the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*).

Dated: December 15, 2016

Signed:

Daniel M. Ashe

Director, U.S. Fish and Wildlife Service.

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