



**U.S. Fish & Wildlife Service**

# **Endangered Species Act Compensatory Mitigation Policy**

*Appendix 1, 501 FW 3*



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*Appendix 1, 501 FW 3, May 2023*

*Cover Photo: Bog turtle. The small turtle thrives in emergent marsh and open-canopy wetlands, which in the past was often filled in to make room for development.  
Photo by Ryan Hagerty/USFWS*

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# Compensatory Mitigation Policy

## 1. Purposes

The mission of the U.S. Fish and Wildlife Service (Service) is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. Endangered and threatened species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people. Accordingly, in the interest of furthering the purposes of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), it is the policy of the Service to seek to mitigate losses to these species and their habitats resulting from proposed actions. In addition, one of the best ways to ensure the ESA's success is to preclude the need to list species. Therefore, the ESA Compensatory Mitigation Policy (ESA-CMP) also applies to species proposed for listing and at-risk species, as appropriate.

The ESA-CMP adopts the mitigation principles established in the Service's Mitigation Policy as of the date of publication of the mitigation policy at 501 FW 2, establishes compensatory mitigation standards, and provides guidance for the application of compensatory mitigation through implementation of the ESA. In the context of this policy, "compensatory mitigation" (or "compensation") is compensation or offsets for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or providing substitute resources or environments through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions.

The ESA-CMP complements our authorities to recommend mitigation and is intended to clarify expectations regarding mitigation to provide for a more predictable and transparent process. It is non-binding and does not establish legally binding rules; nonetheless it plays an important role in helping to ensure a consistent process for mitigation.

The ESA-CMP will: (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 offices to work with other Federal agencies, Tribes, applicants, and mitigation providers 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 habitats anticipated because of any proposed action. 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 purposes of the ESA.

Recommending and requiring mitigation is only part of how the Service achieves its conservation mission. The Service also pursues broader conservation goals through implementing provisions of the ESA and other authorities that lead to proactive and beneficial conservation practices,

species recovery, and resource enhancement. Those provisions may have purposes beyond mitigation and goals beyond no net loss. The Service's mitigation goal of no net loss focuses on avoidance, minimization, and compensation of negative effects from either program or project actions. Achieving this policy's mitigation planning goal of no net loss will be practicable in the context of many individual actions whenever doing so is allowed by existing statutory authority. The Service may provide mitigation recommendations or requirements along with separate conservation recommendations.

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

## 2. Authorities and Coordination

The ESA-CMP is focused on compensatory mitigation that can be achieved under the ESA. The Service's authority to require mitigation is limited to certain circumstances; however, in many other circumstances we can recommend compensatory mitigation to offset adverse impacts of actions that affect federally listed, proposed, and at-risk species or designated critical habitat. Section 4, *Application of Compensatory Mitigation Under the ESA* describes in detail how compensatory mitigation applies to sections of the ESA.

### 2.1. Integration with Other Authorities

Other statutes 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),





Theo Stehr/USFWS

*The Indiana bat, an endangered species listed since 1966, is found across most of the eastern half of the United States.*

National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 U.S.C. 9601 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. 791-828c) 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.

Synchronizing environmental review processes, especially through early coordination with project proponents (i.e., agencies

and applicants), allows the Service to provide comments and recommendations for all mitigation types (i.e., avoidance, minimization, and compensation) included as part of proposed actions to reduce impacts to listed 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 creates efficiencies and generally results in conservation outcomes that have a greater likelihood of meeting the Service's mitigation goal under the ESA of achieving no net loss in conservation for the species. 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.

### 3. Scope

The ESA-CMP covers all forms of compensatory mitigation, including, but not limited to, proponent-responsible mitigation, conservation banking, in-lieu fee programs, and other third-party mitigation projects or arrangements, and all species and habitat protected under the ESA 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.

Applicants may voluntarily provide compensatory mitigation for impacts to candidate and other at-risk species, and the standards set forth in this policy can be applied to identify appropriate compensatory

mitigation measures for those species. We encourage all Service programs to develop compensatory mitigation programs and tools to conserve at-risk species in cooperation with States and other partners.

The Service will not apply the ESA-CMP retroactively to approved mitigation programs; however, we will apply it 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 where the Service will apply this policy 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.

The Service will apply the ESA-CMP to other Federal or non-Federal actions permitted or otherwise authorized or approved before we issued the policy when the action may require additional compliance review under the ESA, such as through reinitiation of consultation (50 CFR 402.16) or as the result of an amended habitat conservation plan. The ESA-CMP 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 the date of publication of this mitigation policy at 501 FW 3.

The ESA-CMP clarifies guidance 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**

We identify below sections of the ESA under which the Service has authority to recommend or require compensatory mitigation for species or their habitat. In this section, we provide guidance on applications of these ESA authorities within the context of compensatory mitigation. The compensatory mitigation standards described in section 5 of this policy, *Compensatory Mitigation Standards*, apply to compensatory mitigation programs and projects established under the ESA, as appropriate.

### **4.1. Section 7 – Interagency Cooperation**

#### **4.1.1. Section 7(a)(1)**

Section 7(a)(1) of the ESA states that "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." Section 3 of the ESA defines "conservation" as 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 (i.e., recovery or the process through which recovery of listed species is accomplished). Thus, the obligations under section 7(a)(1) include, among others, the requirement for other Federal agencies to carry out programs for the conservation of listed species.

*Guidance:* The Service's primary role under section 7(a)(1) is to

encourage and support other Federal agencies as they develop and implement conservation programs for listed species consistent with the Federal agency's existing statutory authorities. Consistent with this role, the Service should encourage Federal agencies to develop 7(a)(1) programs that implement strategic, proactive, landscape-scale conservation actions. As desired by the Federal agency, this can include participation in the development of landscape-scale conservation plans and compensatory mitigation programs. Landscape-scale approaches to compensatory mitigation, such as conservation banking and in-lieu fee programs, are more likely to be successful if the Federal agencies that would use them are involved in their establishment and support their use.

#### **4.1.2. Section 7(a)(2)**

Section 7(a)(2) of the ESA states that "[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 the proposed action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated 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 and other conditions are met. Under section 7(b)(4), the incidental take statement 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. If the proposed action is likely to adversely affect designated critical habitat, the Service's biological opinion also analyzes whether destruction or adverse modification is likely to occur and specifies reasonable and prudent alternatives to avoid destruction or adverse modification, as necessary and if available.

*Mitigation Goal:* The Service should assist Federal agencies 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. The Service may encourage Federal agencies and applicants (consistent with Federal agency authorities) to include measures as part of their proposed actions to offset any anticipated impacts to these resources that are not avoided.

*Guidance:* The Service should coordinate with and encourage Federal agencies 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 designated critical habitat. Furthermore, the Service should 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. These programs can also expedite future regulatory and permitting processes for Federal agencies and applicants. Due to economies of scale, those mitigation programs are particularly effective and cost-efficient 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 that the project proponent can include as part of proposed actions to offset anticipated impacts to listed species and designated critical habitat. The Service will work with the project proponent to apply the mitigation sequence (i.e., avoid first, then minimize, then compensate), except in limited circumstances that may warrant a departure from this preferred sequence. For example, in some cases it may be preferable to compensate for, rather than avoid, 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 (e.g., increased erosion rates from sea level rise leading to extensive coastal wetlands loss locally or regionally). Regardless of the sequencing, the Service will consider conservation measures, including compensatory mitigation, as appropriate, proposed by the Federal 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 designated critical habitat. This consideration of beneficial actions (e.g., compensatory mitigation) is consistent with our implementing regulations at 50 CFR 402.14(g)(8). Federal agencies and applicants 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 that the action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated 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 prevent the proposed action from jeopardizing the continued existence of listed species or destroying or adversely modifying designated 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 RPAs**

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 and other conditions are met, 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 the Service determines necessary or appropriate to minimize the impact of the take.

RPMs can include measures that minimize the impact of the incidental taking on the species, are within the legal authority and jurisdiction of the Federal agency or applicant to perform, and are 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 explain why the measures are necessary or appropriate.

#### **4.1.3. Section 7(a)(4)**

Section 7(a)(4) of the ESA states that “[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 ESA’s confer or conference requirement allows us to identify and resolve potential conflicts at an early stage in the planning process.

*Mitigation Goal:* The Service should assist Federal agencies 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. While compensatory mitigation is not required under 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 or minimized; doing so will facilitate meeting the goal of no net loss in the conservation of those resources.

*Guidance:* The Service should coordinate with and encourage Federal agencies to use their authorities to avoid, minimize, and offset adverse impacts to proposed species and proposed critical habitat using the full mitigation sequence, except in limited circumstances that may warrant a departure from this preferred sequence. Regardless of mitigation sequencing, the Service may recommend compensatory mitigation for adverse effects to proposed species during informal conference or in a conference report or conference opinion, or the Federal 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; those RPAs may include

compensatory mitigation, consistent with 50 CFR 402. If the Service subsequently lists the species or designates critical habitat prior to completion of the action, the Service will appropriately consider compensatory mitigation when adopting the conference opinion as a biological opinion. 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. Conservation Agreements with Enhancement of Survival Permits**

Under section 10(a)(1)(A) of the ESA, we issue permits associated with conservation agreements for private and other non-Federal property owners who may voluntarily undertake conservation management activities on their properties. These property owners address key threats and enhance, restore, or maintain habitat benefiting listed and nonlisted

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*Dwarf bear poppy in Shinob Kibe, Utah, with threats of development nearby. Photo by Daniela Roth, USFWS.*





species, including species that are candidates or proposed for listing under the ESA or other at-risk species, in exchange for assurances that there will not be any increased property-use restrictions as a result of their efforts that either attract covered species to their property or that increase the numbers or distribution of covered species already on their property during the term of the agreement. These agreements are designed to encourage conservation of species on non-Federal land.

*Mitigation Goal:* The Service may transition the conservation agreements into long-term/permanent conservation that can serve as compensatory mitigation when appropriate and desired by landowners. Such transitions must provide assurance that the species conservation efforts begun under the conservation agreement will persist on the landscape beyond the term of the original agreement.

*Guidance:* Conservation agreements associated with enhancement of survival permits 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 landowner may roll over the conservation achieved through implementation of a conservation agreement to use as compensatory mitigation if: (1) the enhancement of survival permit has expired or is surrendered; (2) the landowner is in compliance with the terms and conditions of the conservation agreement and permit at the time of transition; (3) any commitments for conservation for which financial compensation from public sources was received either has been fulfilled or, 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 that the voluntary agreement 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 voluntary conservation site to a mitigation site.

Landowners enrolled in conservation agreements with enhancement of survival permits while the species remains nonlisted can provide compensatory mitigation under a State or other non-Service mitigation program or program developed under the Service's Policy Regarding Voluntary Prelisting Conservation (735 FW 1). The landowner would have to be able to independently fulfill the commitments of the conservation agreement and enhancement of survival permit, in addition to fulfilling a non-Service or Service mitigation program, so there is no double counting (see section 8.3) of credits at the Federal level. Should the species become listed before the conservation agreement 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 with Incidental Take Permits**

Section 10(a)(1)(B) of the ESA allows the Service to issue an incidental take permit to entities 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 applicant has met issuance criteria, including that the applicant will, "to the maximum extent practicable, minimize and mitigate the impacts of such taking," the Service will issue a permit. The Service incorporates these minimization and mitigation measures as terms and conditions of the permit.

*Mitigation Goal:* Section 10(a)(1)(B) requires applicants to submit an HCP that meets the

permit issuance criteria where the "applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking." Consistent with the purposes and policies of the ESA, the Service should assist applicants to develop HCPs that include a conservation strategy that meets the Incidental Take Permit issuance criteria including minimization and mitigation measures that, to the maximum extent practicable, fully offset the impacts of the taking of covered species.

*Guidance:* Mitigation related to HCPs should be concurrent with or in advance of impacts, whenever practicable. We recommend programmatic approaches when they will improve regulatory efficiency and conservation outcomes for the covered species. Programmatic HCPs operate on a landscape scale and often use conservation banks, in-lieu fee programs, or other compensatory mitigation tools established by mitigation sponsors and approved by the Service to offset the impact of the take. These landscape-scale programmatic approaches can achieve conservation benefits for the covered species because of economies of scale. See the 2016 *HCP Planning and Incidental Take Permit Processing Handbook* for the various options available to address mitigation for HCPs.

## **5. Compensatory Mitigation Standards**

The compensatory mitigation standards described in this section of the policy will implement the mitigation principles outlined in the Service's Mitigation Policy as of the date of publication of the mitigation policy at 501 FW 2, including using a landscape approach to inform mitigation and aspiring to meet the goal to maintain (i.e., no net loss) the current status of affected resources. Compensatory mitigation programs, projects, and measures that follow the mitigation principles and adhere to the compensatory mitigation standards

set forth in this section of the policy likely will achieve the best conservation outcomes. Service mitigation recommendations and requirements should be consistent with applicable statutory authority and the responsibilities of action proponents. The Service will apply the compensatory mitigation standards to all compensatory mitigation mechanisms (i.e., proponent-responsible mitigation, conservation banks, in-lieu fee programs, etc.) and all methods of compensatory mitigation (i.e., restoration, preservation, establishment, and enhancement) used to offset adverse effects to federally listed, proposed, or at-risk species and critical habitat and that are approved by the Service. The Service will issue specific operational details regarding the standards in forthcoming implementation guidance.

### 5.1. Effective Siting

The Service prefers compensatory mitigation sites in locations already identified in landscape-scale conservation plans or mitigation strategies that will meet conservation objectives and provide the greatest long-term benefit to the listed, proposed, and at-risk species and other resources of primary conservation concern. In addition to the Service, State agencies, Tribes, local governments, and other partners often develop conservation plans, including recovery plans, watershed plans, wildlife or game conservation plans, and land use plans. The Service will rely upon existing conservation plans that incorporate the best available scientific information, consider climate change adaptation, and contain specific objectives aimed at the biological needs of the affected resources. When conservation plans incorporating all these elements are unavailable or outdated, Service personnel will incorporate the best available science into mitigation siting decisions and recommendations.

The Service characterizes a landscape approach as scale-appropriate decision making that

implements existing conservation plans, emphasizes early engagement, and respects the need to coordinate across Federal, State, Tribal, local, and nongovernmental levels. Effectively engaging with local communities can help ensure consideration of other factors as well, including environmental justice implications of mitigation siting. For example, if a project in a degraded landscape also affects ecosystem functions or services (e.g., flood storage, recreational opportunities, water quality, etc.), working with local communities to consider opportunities to site compensatory mitigation that may also address those impacted ecosystem services may be an effective way to provide more comprehensive and equitable offsets for the project. By taking a landscape approach, the Service does not assert authority to require proponents to consider compensatory mitigation for impacts unconnected to their project. This policy does not override any statutory or regulatory authority that describes the appropriate scope of review for a particular project, nor is the landscape approach intended to supplant or disregard State, Tribal, or local plans or interests.

Taking a landscape approach means considering the broader ecological context of both impacts and mitigation opportunities and is an effective means of implementing the Service's mission in ways that also benefit project proponents. For example, siting mitigation in locations most likely to produce lasting conservation outcomes helps ensure the success of proponents' investments in compensatory mitigation. A landscape approach also supports the concept of conservation banking that can, in some cases, create access to lower-cost, more-streamlined mitigation options that can simultaneously provide higher-quality conservation outcomes. Those options give proponents additional flexibility to consider offsite locations for compensatory mitigation.

### 5.2. In-kind Mitigation for Species

Compensatory mitigation must be in kind for the listed, proposed, or at-risk species affected by the proposed action (i.e., the offsets from compensatory mitigation must benefit the same species affected by the action). This does not mean that compensatory mitigation can apply only to the same habitat type or ecological attribute of the habitat impacted, 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, migratory species may rely on a particularly limited habitat to complete their migration. Directing compensatory mitigation towards that habitat may better meet critical conservation needs of the species than directing compensatory mitigation to other, more abundant habitats the species occupies. Selecting a habitat type different from that impacted by the action or selecting more than one type of habitat for compensatory mitigation provides flexibility to best align mitigation opportunities with the conservation needs of the species.

Offsetting impacts to designated or proposed critical habitat through compensatory mitigation must be in-kind and 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).

To inform the selection of habitat types subject to compensatory mitigation actions for unavoidable adverse impacts to listed, proposed, and at-risk species or designated critical habitat, the Service may rely on: species status assessments; recovery plans and outlines; 5-year reviews; proposed and final

designated critical habitat rules; and other sources for the best available science on species status, threats, and needs.

Project proponents may use compensatory mitigation to minimize the impacts of incidental take on listed species based on habitat or another surrogate, such as a similarly affected species or ecological conditions, in 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). When reviewing compensatory mitigation proposals that include surrogates, the Service will ensure the causal link between the surrogate and take of the list species is explained and scientifically defensible. For example, the Service has used occupied habitat of a listed species as a surrogate to express the amount or extent of take of the vernal pool fairy shrimp (*Branchinecta lynchi*) because we cannot practicably quantify take of individuals, but we can accurately measure and monitor the surface area of occupied vernal pool habitat. When a surrogate is used to measure incidental take, the same surrogate and methods should be used to quantify compensatory mitigation (see section 5.3, *Reliable and Consistent Metrics*).

### 5.3. Reliable and Consistent Metrics

Metrics that measure ecological functions or services at compensatory mitigation sites and impact sites should 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 generally should be the same as those used to calculate debits for the same species or habitat type, including consistent use of baseline conditions. 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. When developing performance metrics for a mitigation mechanism, the methods and rationale to support them should be clearly described. To provide context for the metrics and their precision, that description should also account for, to the extent possible, the sources of uncertainty and their extent. 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 the best available science.

Scientifically defensible metrics also are needed to measure biological and ecological performance (i.e., the outcome of compensatory mitigation). It may be necessary to adjust metrics over time through monitoring and adaptive management processes to respond to changing conditions and to ensure the metrics remain effective at assessing the conservation objectives of the compensatory mitigation program. However, even with modifying metrics used to monitor performance, mitigation providers are still required to fully implement adaptive management.

### 5.4. Judicious Use of Additionality

Compensatory mitigation measures should provide benefits beyond baseline conditions,<sup>1</sup> generally at the mitigation site, that can offset

<sup>1</sup> This reference to baseline conditions should not be confused with the environmental baseline as defined in ESA section 7 interagency cooperation regulations.

the adverse effects of the action on listed species or critical habitat. Compensatory mitigation measures should include management practices, 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 measure. The additional benefits may result from:

- restoration or enhancement of habitat;
- preservation of existing habitat that lacks adequate protection and will be lost in the baseline scenario;
- 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 losses from disease or predation, or captive breeding and reintroduction/augmentation of individuals or populations).

Baseline conditions for the species’ habitat must be assessed prior to implementing the compensatory mitigation project to quantify and verify the additional benefits derived from the mitigation project that will offset the adverse effects from the action. This will facilitate meeting our no net loss mitigation goal.

Demonstrating additionality on land already designated for conservation purposes can be challenging, particularly when the land under consideration is public land. In general, the Service should only authorize credit for compensatory mitigation on public land if additionality can be clearly demonstrated and is legally attainable. Section 6.2, *Eligible Lands* provides guidance on using



public land for compensatory mitigation.

### **5.5. Reasonable Timing and Appropriate Duration**

Compensatory mitigation projects should achieve conservation objectives within a reasonable timeframe and for at least the duration of the impacts. Ideally, compensatory mitigation should be implemented (i.e., providing an ecological offset) in advance of the action that adversely impacts the listed, proposed, and at-risk species or designated critical habitat. When this is not practicable, temporal losses to the affected species must be compensated for through some means (e.g., increased mitigation ratio that reflects the degree of temporal loss). Losses of habitat that require many years to restore may best be offset by a combination of habitat restoration, 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 listed, proposed, and at-risk species and designated critical habitat.

### **5.6. Durability**

The mitigation provider secures compensatory mitigation through 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 of the authorized action.

In contrast to permanent mitigation, temporary 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, temporary mitigation includes rectifying the damage at the impact site and providing short-term compensation to offset the temporary loss caused by the action to achieve a conservation outcome that results in no net loss in the conservation of the species. For example, if an action includes temporary removal of the riparian vegetation in a nest territory of a species, temporary protection of an adjacent area of suitable habitat may be an appropriate way to offset the lost nesting functions until

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*A Service biologist inserts a red-cockaded woodpecker nest box. Nest boxes are a common type of offset for the federally endangered bird. Photo by John and Karen Hollingsworth, USFWS.*







Eric Bauey/USFWS

*The Deerleap Preserve Conservation Bank in Georgia was developed to support recovery and provide a mitigation option for unavoidable impacts to the Cherokee darter and other federally listed species.*

the affected area is restored to its pre-action condition. Implementing that temporary protection prior to project impacts would avoid any temporal habitat loss to the species.

We define temporary impact as one that meets the following criteria: (1) the impact is limited to nonlethal take; (2) the impact can be completely rectified through natural or active processes and will function within the landscape at the same level as, or at a 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) the temporal loss to the species by the impact can be estimated and compensated. Opportunities for temporary compensation are likely to be very limited and may not apply to many species. Permanent compensatory mitigation is often an alternative. For example, conservation banks credits, perhaps at a reduced ratio, could be used to compensate for temporary impacts.

### **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 authorized incidental take under sections 7 and 10 of the ESA, respectively. Incidental take exemptions provided by statute to Federal agencies and applicants through the section 7 process require that the Federal agency or its applicant implement mandatory terms and conditions included with the take statement to activate the exemption pursuant to section 7(o) (2) of the ESA. Should a mitigation project fail to meet its performance criteria and, therefore, fail to provide the expected conservation for the species, the responsible party (see Table 1) must provide equivalent mitigation through other means if the exemption or authorization is to remain valid.

### **5.8. Effective Collaboration**

The ESA-CMP 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. 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 through appropriate public processes such as those used for programmatic HCPs. Programmatic approaches to compensatory mitigation often have the advantages of advance planning and economies of scale to: (1) achieve no net loss in species' conservation, (2) reduce the unit cost of compensatory mitigation, and (3) improve regulatory procedural efficiency.

## 5.9. Transparency and Predictability

Consistent implementation of ESA programs that exempt or authorize incidental take of covered species will improve the predictability of our actions. 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. The Service will make information regarding conservation banks and in-lieu fee programs available on the Regulatory In-lieu fee and Bank Information Tracking System (RIBITS) (<https://ribits.ops.usace.army.mil>). We will also make publicly accessible similar information for habitat credit exchanges and other third-party-sponsored mitigation projects, as well as those instances when it is not otherwise possible to use RIBITS.

## 6. General Considerations

The Service will issue implementation guidance containing specific operational details, in addition to the information provided below in this section.

### 6.1. Preferences

The Service has the following general preferences related to compensatory mitigation.

#### 6.1.1. Preference for Strategically Sited Compensatory Mitigation

The Service will give preference 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. We may identify conservation areas for listed species in documents such as species status assessments, recovery plans and outlines, and 5-year reviews.

#### 6.1.2. Preference for Compensatory Mitigation in Advance of Impacts

After following the principles and standards in this policy, and all other considerations being equal,

the Service will give preference to compensatory mitigation projects implemented in advance of impacts to the species. Compensatory mitigation implemented in advance of impacts reduces risk and uncertainty, and also reduces the temporal effects of an action on a species or critical habitat. Demonstrating successfully implemented compensatory mitigation in advance of impacts provides regulatory certainty that is rarely matched by a proposal of compensatory mitigation accomplished concurrent with, or after, the impacts of the actions, even when that proposal includes higher mitigation ratios. While conservation banking is, by definition, mitigation in advance of impacts, other third-party mitigation arrangements and proponent-responsible mitigation may also satisfy this preference by implementing compensatory mitigation in advance of impacts. For example, in-lieu fee programs can satisfy this preference by implementing on-the-ground mitigation projects that achieve and maintain a supply of credits prior to actions that cause impacts that will be offset through purchase of those credits.

#### 6.1.3. Preference for Consolidated Compensatory Mitigation

The Service generally prefers mitigation mechanisms that consolidate compensatory mitigation on the landscape, such as conservation banks and in-lieu fee programs, 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;
- greater contribution to 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;
- increased 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 efficiencies in resources for design and implementation of compensatory mitigation sites, and a decreased unit cost for mitigation;
- improved administrative compliance and ecological performance through the use of third-party oversight;
- greater regulatory and financial predictability for project proponents, greatly reducing the uncertainty for their projects; 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

Willing parties may establish compensatory mitigation sites on private, public, or Tribal lands that provide the maximum conservation benefit for the listed, proposed, or 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. The use of private lands for mitigating impacts to species



occurring on any type of land ownership is usually acceptable because most private lands are not permanently protected for conservation and are generally the most vulnerable to development actions, if the project proponent can ensure durability. 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. However, the practice should be carefully considered—see section 6.2.2, *Use of Public Land to Mitigate Impacts on Private Land* for additional guidance.

Unprotected lands that are high value for conservation are good candidates for compensatory mitigation sites. 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);
- 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, proposed, 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 voluntary conservation programs that provide regulatory assurances to the landowner such as enhancement of survival permits that can be transitioned into compensatory mitigation programs once the species is listed, after the landowner meets all terms and conditions of the conservation agreement and the agreement has expired, or the landowner surrenders the ESA section 10 permit in exchange for a mitigation instrument (see section 4.2.1, *Conservation Agreements with Enhancement of Survival Permits* for additional guidance).

Section 5.1, *Effective Siting* includes 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 the surface and subsurface), 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 (see section 5.4, *Judicious Use of Additionality*);
- private lands enrolled in government programs that compensate landowners who permanently protect, restore, or create habitat for

federally listed, proposed, or at-risk species (e.g., Wetland Reserve Program easements administered by the U.S. 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 (i.e., an interest in land that is the most complete and absolute ownership in land) transfers.

While many potential high-value conservation properties throughout the United States have split-estate ownership, the Service should carefully consider the risks associated with using split-estate properties as compensatory mitigation sites. Laws and policies governing lands with split-estates may prevent land protection instruments (e.g., permanent conservation easements) from sufficiently protecting the land from future development, including oil and gas exploration or development. When legal remedies to restore single ownership of surface and subsurface 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 Office of the Solicitor to assess risks and possible remedies or to suggest other approaches.

### **6.2.2. Use of Public Land Already Designated for Conservation of Natural Resources to Mitigate Impacts on Private Land**

In general, impacts to species on private land should be mitigated on



Sally Brown/USFWS

*Collaboration between the Service and California Department of Transportation on a project to correct erosion damage along State Route 330 helped minimize impacts to the City Creek watershed and endangered mountain yellow-legged frog habitat.*

suitable private land. However, the Service may support compensatory mitigation on public land that is already designated for the conservation of natural resources to offset impacts to the species on private land provided that the project proponent clearly demonstrates additionality and it 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 land by locating compensatory mitigation on public land 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 land 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 appropriate compensatory mitigation on public land to offset impacts to the species on private land if:

- compensatory mitigation is an appropriate means of achieving the mitigation planning goal for the species;
- the mitigation provider can clearly demonstrate and quantify additionality, which is supplemental to the public agency’s foreseeable conservation actions absent the mitigation (only conservation benefits that provide additionality are counted towards achieving the mitigation planning goal);
- the mitigation provider ensures durability of the compensatory mitigation (see section 6.2.3, *Ensuring Durability on Public Lands*);
- the mitigation is consistent with and not otherwise prohibited

by all relevant statutes, regulations, and policies;

- there is no available private land suitable for compensatory mitigation or the available private land cannot provide an equivalent or greater contribution towards offsetting the impacts to meet the mitigation planning goal for the species; and
- project proponents have established a financing mechanism to cover the costs of implementation and long-term management of the compensatory mitigation.

Compensatory mitigation on public lands may require multiple tools beyond land use plan designations, including right-of-way grants, withdrawals, disposal, or lease of land for conservation, conservation easements, cooperative agreements, and agreements with third parties so that assurances of durability, including financial assurances, are in place to support the development, maintenance, and long-term

effectiveness of the mitigation measures. Mechanisms to ensure durability of land protection for compensatory mitigation on public and private lands vary among agencies but should preclude conflicting uses and ensure that protection and management of the mitigation land is commensurate with the magnitude and duration of impacts.

The Service's Final Policy on the National Wildlife Refuge System (NWRS) and Compensatory Mitigation Under the Section 10/404 Program (64 FR 49229-49234, September 10, 1999) states that the Regional Director must recommend the mitigation to the Service Director for approval when NWRS lands are proposed for compensatory mitigation for impacts on private lands. Additional considerations may apply to NWRS 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 Land**

Ensuring the durability of compensatory mitigation on public land presents particular challenges, especially regarding site-protection assurances, long-term management, and funding assurances for long-term stewardship. Mechanisms to ensure durability of land protection for compensatory mitigation on public land 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 land, we should be highly confident that incompatible uses are removed or precluded to ensure that uses of the public land do not

conflict with or compromise the conservation of the species for which the compensatory mitigation project was established. However, if mitigation sites on public land are undermined by future changes in land management, any remaining compensatory mitigation obligations would then be required to be mitigated elsewhere.

### **6.2.4. Transfer of Private Mitigation Lands to Public Agencies**

Mitigation providers may transfer private mitigation lands to public agencies with a conservation mission or Tribes 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. The Service recognizes that Tribes are sovereign

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*Seasonal ponds like those at Sparling Ranch provide breeding habitat for California tiger salamanders, as well as foraging habitat for California red-legged frogs. Photo by Steve Rottenborn.*





nations and will consider them as government entities when we consider the eligibility of Tribal lands for compensatory mitigation. 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). Alternative site protection mechanisms are allowable for Tribal lands including, but not limited to, intergovernmental agreements, Tribal integrated natural resource management plans, memorandums of agreements, or other long-term contracts that ensure Tribal sovereignty and governmental status is upheld.

### 6.3. Service Areas

A service area is the geographic area assigned to a compensatory mitigation site within which a project proponent can use credits for a specific resource (e.g., a species). The impacts for which compensatory mitigation is sought must be located within the designated service area for the species unless the Service approves otherwise. If a proposed action is located within the 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, through transfer of the appropriate type and number of credits from that mitigation program or site. Although less common, a proposed action may use credits from outside a service area if appropriate. Regardless, all credit transfers require Service approval, whether they occur within or outside a service area.

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. Service areas are determined through a collaborative process between the Service and the provider that marries biological appropriateness with feasibility both technically and economically (i.e., with a market that the

provider believes is viable). The mitigation sponsor must 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 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 and accurately 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 compensatory mitigation site should be the same as calculating debits at project impact sites, including the method for determining baseline conditions. 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 for covered species once the Service verifies and releases them. Credits cannot be traded among mitigation providers, project developers, or anyone else and cannot be resold. The Service releases credits in proportion to administrative and ecological performance milestones. The Service considers credits retired if they are no longer available for use as mitigation, including credits that have been transferred to fulfill mitigation obligations. A project

proponent may also voluntarily retire credits, without being used for mitigation, which may help achieve mitigation goals.

A mitigation site may contain habitat that is suitable for multiple covered species or other resources in the same spatial area. It is important to establish how the credits will be stacked (see section 8.3, *Credit Stacking* for guidance).

Use of credits from specific compensatory mitigation programs is voluntary, and proponents may choose to purchase credits from Service-approved conservation banks or in-lieu fee programs or may complete proponent-responsible mitigation. Pricing of credits in conservation banks and in-lieu fee programs is solely at the discretion of the mitigation provider.

### 6.5. Managing Risk and Uncertainty

Compensatory mitigation can be a valuable conservation tool for offsetting unavoidable adverse impacts to listed, proposed, and at-risk species if the risk can be sufficiently managed. Predictions about the effectiveness of compensatory mitigation measures have varying degrees of 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. Compensatory mitigation accounting systems (e.g., debiting and crediting methodologies) should consider risk and adjust (e.g., using percentages, multipliers, etc.) metrics, mitigation ratios, and requirements to account for uncertainty in order to facilitate meeting our mitigation goal of no net loss.

## 7. Compensatory Mitigation Mechanisms

Compensatory mitigation mechanisms can be divided broadly into habitat-based mechanisms

and other non-habitat-based mitigation programs or projects. The Service anticipates that applying the standards in this policy will result in equivalent conservation for the species, regardless of the mechanism chosen. The compensatory mitigation mechanisms described in this policy that are developed for federally listed species will require Service approval. The Service will issue specific operational details regarding compensatory mitigation mechanisms in upcoming implementation guidance.

### **7.1. Habitat-based Compensatory Mitigation Mechanisms**

Compensatory mitigation mechanisms based on habitat acquisition and protection may include restoring damaged or degraded habitat, enhancing existing habitat, establishing new habitat, preserving existing habitat not already protected that will otherwise be lost or converted to another habitat type, or some combination of these that offsets the impacts of the action and results in or contributes to sustainable, functioning ecosystems for the species. Preserving 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 management and is a valid mechanism for achieving compensatory mitigation that reduces threats to the species.

Existing habitat that is not protected and managed for the long term is vulnerable to loss, fragmentation, and other threats such as invasive species. Site protection, management, and funding for habitat-based compensatory mitigation mechanisms ensure that those areas will persist and be managed into the future to support species recovery. To ensure long-term habitat management, the compensatory mitigation property must have a sufficiently funded endowment that

is permanently restricted to paying the costs of management and stewardship of that property.

The four 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 proponent or a third party), (2) whether the mitigation site is onsite or offsite, and (3) whether credits are generated at the mitigation site for use by more than one action. The Service will ensure that all habitat-based compensatory mitigation it approves has equivalent standards (the standards in this policy) regardless of the mitigation mechanism(s) proposed. Habitat-based compensatory-mitigation programs developed to credit conservation actions that benefit proposed and at-risk species should meet all compensatory mitigation standards in this policy if the project proponent intends to use them as compensatory mitigation for adverse impacts of actions they undertake.

### **7.2. Proponent-responsible Compensatory Mitigation**

Proponent-responsible compensatory mitigation are actions that the proponent takes that provide ecological functions and services as part of the conservation measures associated with the proponent's proposed action. While they are often in the form of conserved and managed compensatory mitigation sites, they can also include non-habitat actions that provide the necessary offsets. Proponent-responsible compensatory mitigation sites are usually permanent, as the Service anticipates that most proposed actions with a need for compensatory mitigation will result in permanent impacts to the species. Under proponent-responsible compensatory mitigation, the proponent 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, including ensuring sufficient funds are available from an endowment for long-term management, maintenance, and monitoring. Proponent-responsible compensatory mitigation may be onsite or offsite, and each proponent-responsible mitigation site is linked to the specific action that required the mitigation. Once the proponent-responsible compensatory mitigation is applied to a specific action, the compensatory mitigation cannot be used to offset effects for another action (i.e., no double counting).

### **7.3. 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. The mitigation sponsor must ensure the required compensatory mitigation measures for a permitted action are completed and successful. The bank sponsor assumes the responsibility for success of the compensatory mitigation from a proponent, typically through the transfer of credits. Conservation banks provide mitigation in advance of impacts, legal obligations granting certainty of perpetual conservation, and sufficient endowment for long-term management of the habitat.

### **7.4. In-lieu Fee Program**

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 proponents that the Service has approved to use the in-lieu fee program, instead of providing proponent-responsible compensatory mitigation. When the in-lieu fee program has collected sufficient funds, the sponsor will

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

<i>Mitigation Mechanism</i>	<i>Responsible Party</i>	<i>Credits Generated</i>	<i>Responsibility Transferable</i>
Proponent-responsible Mitigation Site	Proponent	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

establish an in-lieu fee site that meets the mitigation requirements for the impacts of proponent’s actions. In-lieu fee programs often have incremental benchmarks for funding and project implementation that ensure the monies are spent as soon as it is possible on appropriate compensatory mitigation activities.

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 it is used to compensate for adverse impacts occurring elsewhere to the same species. In-lieu fee sites are usually permanent as the Service anticipates that most proposed actions with a need for compensatory mitigation will result in permanent impacts to the species. The in-lieu fee program sponsor assumes responsibility from a proponent for ensuring that the required compensatory mitigation measures are completed and successful, including long-term management and maintenance, typically 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 7.6, *Other Compensatory Mitigation Programs or Projects* for guidance on these types of programs.

**7.5. Habitat Credit Exchange**

Habitat credit exchanges are relatively new and warrant additional care and consideration when proponents are considering them as mitigation mechanisms. A habitat credit exchange is an environmental market that operates as a clearinghouse in which an exchange administrator manages credit transactions between compensatory mitigation providers and project proponents. This contrasts with direct transactions between compensatory mitigation providers and proponents that generally occur through conservation banking and in-lieu fee programs. In appropriate circumstances, an exchange administrator may also be a mitigation provider. Exchanges help connect mitigation providers and users to 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 are not intended to establish a secondary market for resale of credits. The Service must approve exchanges developed for

federally listed species as with all other compensatory mitigation mechanisms described in this policy.

**7.6. 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 that we expect 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 and outlines, 5-year reviews, or best available science on the threats and needs of the species. These other compensatory mitigation measures are varied and species-specific; the Service anticipates providing more detailed information on considerations for their development in future implementation guidance. 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. restriction of 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. administration of vaccination programs vital to species survival and recovery;
- f. gating of caves that serve as habitat for the species;
- g. retrofitting power poles to avoid electrocution of raptors;
- h. construction of wildlife overpasses or underpasses to protect migratory passages for the species; and
- i. programs that reduce the exposure of the species to contaminants in the environment that are known to cause injury or mortality.

In rare circumstances, a proponent can include as part of a mitigation package research or education that they can link directly to the relative threats to the species and show a quantifiable benefit to the species. 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 for additional guidance on appropriate uses of research or education as mitigation.

## 8. Criteria for Use of Third-party Mitigation

The Service will issue specific operational details regarding the use of third-party mitigation in upcoming implementation guidance.

### 8.1. Use of Credits for Mitigation under the ESA

Activities regulated under sections 7 or 10 of the ESA may be eligible to use Service-approved third-party-sponsored mitigation if that mitigation has the appropriate type and number of available credits that can offset the adverse impacts to the species from a particular project that is located within the service area of the relevant bank or in-lieu fee program. The Service

will only consider credits that we have verified and released as available for project proponents to use to mitigate the impacts of their actions.

### 8.2. Transfer of Responsibility

The mitigation sponsor assumes responsibility from a proponent for success of the mitigation, typically through the transfer of credits or other quantified amount of compensatory mitigation.

The Service's role is regulatory. Credit transfers are subject to Service approval of their conservation value and appropriate application for use related to any authorization or permit we issue 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

The Service recognizes the inherent efficiencies in leveraging multiple conservation efforts on the landscape and encourages the coordinated efforts provided by third-party mitigation. The Service should encourage project proponents to design compensatory mitigation projects to allow proponents to holistically address their needs under multiple programs and authorities for the same action (i.e., design compensatory mitigation projects to allow for the stacking of credits). However, project proponents must account for compensatory mitigation and other conservation actions that occur on the same mitigation site separately and manage and track all aspects of the different actions in a transparent manner.

Credit stacking allows 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. 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. As another example, 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 stacked credit is used as a single unit (i.e., it is not unstacked) and is only used once.

The Service allows stacking mitigation credits within a mitigation project, but the project proponent cannot unstack the stacked credits to provide mitigation for more than one permitted impact action even if all 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 and would not be consistent with the principle of additionality. 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.

#### **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 the NWRS) or other Federal, State, Tribal, or local agency programs consistent with the laws and requirements of each respective program. However, the Service will not consider the use of the same credits 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 the compensatory mitigation programs we describe in this policy and facilitates meeting our goal of no net loss in conserving species and habitats. Tracking systems also facilitate consistent implementation of compensatory mitigation programs and projects. It is vital that the Service track compliance directly for proponent-responsible mitigation and, at a minimum, through third parties responsible for operating compensatory mitigation programs or projects such as banks, 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 that the Service does not approve must still be accounted for in the same tracking system. The Service will provide specific operational details regarding compliance and tracking in upcoming implementation guidance.

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# Appendices

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

CFR—Code of Federal Regulations

CWA—Clean Water Act

ESA—Endangered Species Act

FWCA—Fish and Wildlife Coordination Act

HCP—Habitat conservation plan

NEPA—National Environmental Policy Act

NWRS—National Wildlife Refuge System

RIBITS—Regulatory In-lieu fee and Bank Information Tracking System

RPA—Reasonable and prudent alternative

RPM—Reasonable and prudent measure

## Appendix B: Glossary of Terms Related to Compensatory Mitigation

Definitions in this section apply only 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. We have developed other definitions based on compensatory mitigation practices. Definitions

in the glossary do not supersede or substitute for statutory or regulatory definitions previously published in the Service's or other Federal agencies' regulations.

*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.

*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*—a compensatory mitigation measure is additional when the benefits of the measure improve on the baseline conditions of the site that is compensating for the impacted resources and their values, services, and functions in a manner that is demonstrably new and would not have occurred at the compensatory mitigation site without the measure.

*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; 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; 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 nonlisted 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 current and future conditions of a defined area of habitat or a species population that are expected without implementation of the proposed action. Predictions about future environmental conditions that can be quantified by an appropriate metric to determine level of functions and/or services should account for natural species succession, implementation of approved land and resource management plans, and any other reasonably foreseeable factors that influence these conditions.

*Candidate species (candidate)*—any species being considered by the Secretary of the Interior 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, offset)*—compensation or offsets 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.

*Compensatory mitigation project*—compensatory mitigation implemented by the Federal agency, a permittee, or a mitigation sponsor. Compensatory mitigation projects include proponent-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 (easement)*—a recorded legal document established to conserve biological resources for a specified duration, usually in perpetuity, on an identified conservation property and which restricts certain activities and requires certain habitat management obligations for the conservation property. An easement is an encumbrance and transfers with the land deed.

*Conservation measures (conservation actions)*—those actions that avoid, minimize, or compensate (i.e., offset) for impacts of an action to listed species or critical habitat and may be included in the proposed action by an agency or applicant, or found in conservation plans for the species and critical habitat. These actions can also include actions to benefit or promote the recovery of listed species, pursuant to section 7(a)(1), that are included by the Federal agency as an integral part of the proposed action.

*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.

*Conservation plan (species conservation plan)*—a plan developed by Federal, State, or local government agencies; Tribes; or appropriate nongovernmental organizations, in consultation with relevant stakeholders, for the specific goal of conserving one or more listed, proposed, 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, range-wide conservation plans, and conservation plans developed as part of a large landscape habitat conservation plan.

*Consolidated compensatory mitigation*—compensatory mitigation that is located adjacent or in close proximity on the landscape such that it functions as a system, rather than small, isolated, spatially and functionally disjunct patches of compensatory mitigation. Mitigation mechanisms that incorporate consolidated mitigation include conservation banks and in-lieu fee programs.

*Covered species*—species specifically included in a conservation bank, habitat conservation plan, permit, range-wide 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 or services for a species at a mitigation site or within a mitigation program.

*Credit stacking*—allowing a single unit of a mitigation site to provide two or more credit types representing spatially overlapping ecosystem functions or services that can be used to compensate for an action. In certain circumstances, a credit may be used to meet more than



one permitting authorization for the same action (e.g., a stacked credit from a joint CWA 404/conservation bank may provide mitigation for both wetlands and listed species).

*Credit transfer*—the use of credits by a bank sponsor or mitigation provider to a proponent 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 Interior to be areas essential for the conservation of the species (16 U.S.C. 1532(5)(A)).

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

*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. Double-counting/double-dipping is not allowed.

*Durability*—the condition or state in which the measurable environmental benefits of the compensatory-mitigation project or measure are sustained, at a minimum, for the duration of the associated 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.

*Endangered species*—any species that 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 compensatory 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 the 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.”

*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.

*Habitat conservation plan (HCP)*—a planning document that describes the anticipated effects of a proposed activity on the taking of a covered 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)*—an

environmental market that operates as a clearinghouse in which an exchange administrator manages credit transactions between compensatory-mitigation providers and project proponents. This contrasts with the direct transactions between compensatory mitigation providers and proponents that generally occur through conservation banking and in-lieu fee programs. In appropriate circumstances, an exchange administrator may also be a mitigation provider. Exchanges help connect mitigation providers and users to 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 are not intended to establish a secondary market for resale of credits.

*High-value habitats*—habitats that are rare, scarce, and of high suitability and importance for a selected species. They may also be difficult to offset given existing science (e.g., karst formations, bat hibernacula, etc.).

*Impact(s) (of an action)*—adverse effects relative to the affected resources. 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 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 exempted or authorized for endangered or threatened species through section 7 or 10, or for threatened species, excepted (if prohibited in the first instance) through a rule codified under section 4(d) of the Endangered Species Act (see also “take”).

*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, “mitigation 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.

*Landscape-scale approach*—Scale-appropriate decision making that implements existing conservation plans, where available, emphasizing early engagement and coordination across Federal, State, Tribal, local, and nongovernmental levels. As defined in the Service’s Mitigation Policy, the landscape-scale approach applies the mitigation hierarchy for impacts to resources and their values, services, and functions at the relevant scale, however narrow or broad, necessary to sustain, or otherwise achieve, established goals for those resources and their values, services, and functions (see section 5.1, *Effective Siting*).

*Listed species*—any species 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.

*Mitigation (mitigation hierarchy, mitigation sequence)*—as defined and codified in the Council on Environmental Quality National Environmental Policy Act (42 U.S.C.

4321 et seq.) regulations (40 CFR 1508.1(s)), mitigation includes:

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

This 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, Tribal, 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).

*No net loss*—Meeting the Service’s mitigation goal of no net loss means that with appropriate avoidance, minimization, and compensatory mitigation measures, the status of the affected resource is undiminished relative to pre-impact conditions. Mitigation that meets the no net loss goal should fully offset the impacts of the action to the affected resources, including considerations for temporal losses, risk, and uncertainty.

*Offsite*—a mitigation area that is located neither on nor adjacent to the same parcel of land as the impact site

(adopted from U.S. Army Corps of Engineers regulations 33 CFR 332.2).

*Onsite*—a mitigation site located on or adjacent to the same parcel of land as the impact site (adopted from U.S. Army Corps of Engineers regulations 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”).

*Proponent-responsible mitigation*—activities or projects undertaken by a proponent or an authorized agent or contractor to provide compensatory mitigation for which the proponent retains full responsibility. As used in this policy, proponent-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 considering a compensatory mitigation measure’s beneficial value and a land-use activity’s overall purpose, scope, and scale.

*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.

*Public land*—land that is owned by a public entity (e.g., local, State, or Federal agency). In many cases public land may already have conservation as a primary management purpose.

*Resources (resources of concern)*—fish, wildlife, plants, and their habitats, and uses thereof, for which the Service has authority to recommend or require the mitigation of impacts resulting from proposed actions.

*Restoration*—repairing or rehabilitating habitat for the benefit of the species on a mitigation site with the goal of returning it to its natural/historical 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.

*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*—includes any species or 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*—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)).

*Temporal loss*—the cumulative loss of functions or services relevant to the species attributed to the time between the loss of habitat functions or services or individuals of the population(s) caused by the action, and the replacement of habitat functions or services or repopulation

of the species at the compensatory mitigation site to the same level had the action not occurred. Temporal loss may include effects of the action on the species that occur later in time, as well as those effects stemming directly from the action itself.

*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.





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