



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

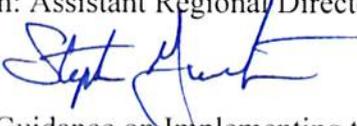


JAN 17 2017

In Reply Refer To:
FWS/AES/DER/BNC/064884

Memorandum

To: Regional Directors, Regions 1-8
Attention: Assistant Regional Directors for Ecological Services

From: **Deputy** Director 

Subject: Interim Guidance on Implementing the Final Endangered Species Act
Compensatory Mitigation Policy

On December 27, 2016, the U.S. Fish and Wildlife Service (Service) published the final Endangered Species Act (ESA) Compensatory Mitigation Policy (81 FR 95316) (Policy) in the Federal Register. The policy steps down and implements recent Executive Office, Department of the Interior, and Service mitigation policies that reflect a shift from project-by-project to landscape-scale approaches to planning and implementing compensatory mitigation. The Policy also improves consistency in the use of compensatory mitigation as recommended or required under the ESA. The Policy covers permittee-responsible mitigation, conservation banking, in-lieu fee programs, and other third-party mitigation mechanisms, and stresses the need to hold all compensatory mitigation mechanisms to equivalent and effective standards.

The Policy is the first comprehensive treatment of compensatory mitigation under authority of the ESA to be issued by the Service. In 2003, the Service issued guidance on the establishment, use, and operation of conservation banks (68 FR 24753, May 8, 2003). In 2008, we issued recovery crediting guidance (73 FR 44761, July 31, 2008). The attached interim guidance implements the new Policy and replaces both the 2003 and 2008 Service guidance documents.

The interim guidance provides Service personnel with detailed information on how to evaluate and implement compensatory mitigation, primarily through encouraging strategic planning at the landscape level and setting standards that mitigation programs and projects must meet to achieve conservation that is effective and sustainable. The interim guidance should be applied to compensatory mitigation proposals submitted on or after the date of this memorandum and to those proposals in early stages of planning or development. It is not intended to be retroactive for compensatory mitigation that has already received agency approval; however, it does apply to amendments and modifications to existing conservation banks, in-lieu fee programs, and other third party compensatory mitigation arrangements unless otherwise stated in the mitigation instrument.

If you have any questions or comments concerning this matter, please contact Mr. Craig Aubrey, Chief, Division of Environmental Review, at (703) 358-2442 or craig_aubrey@fws.gov.

Attachment

U.S. FISH & WILDLIFE SERVICE

Interim Guidance for Implementing the Endangered Species Act
Compensatory Mitigation Policy

January 2017

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

1. Introduction

This document provides interim guidance (guidance) for implementing the Service's Endangered Species Act Compensatory Mitigation Policy (81 FR 95316, December 27, 2016) (CMP). The guidance provides operational detail on the establishment, use, and operation of compensatory mitigation projects and programs as tools for offsetting adverse impacts to endangered and threatened species, species proposed as endangered or threatened, and designated and proposed critical habitat under the Endangered Species Act of 1973, 16 U.S.C. 1531 *et seq.* as amended (ESA). This interim guidance should also be used when establishing mitigation projects and programs for candidate and other at-risk species.

Compensatory mitigation is defined in the CMP as compensation for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or providing substitute resources or environments through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions. This interim guidance clarifies the standards that compensatory mitigation programs and projects must meet in order to achieve conservation that is effective and sustainable. It is also intended to help Service personnel; (1) evaluate proposals for establishment, operation, and use of mitigation projects and programs; (2) fulfill the purposes of the ESA; and (3) apply consistent standards and principles of mitigation to all mitigation projects and programs.

Compensatory mitigation projects and programs are authorized by the Service or a combination of the Service and other federal and/or state regulatory agencies. Compensatory mitigation proposals must meet the minimum criteria described in this interim guidance to be acceptable. Compensatory mitigation programs designed to serve multiple mitigation sites should discuss within the program documents how the minimum criteria described in this interim guidance will be met by the program and should also give specific requirements for each mitigation site. Service regional and field offices (collectively, "Service offices") may provide more specific guidance as needed for species/resources in the areas they serve. Additional guidance, including checklists, templates, or assessment methods, should be posted on the website of any Service office using that guidance and if appropriate, should also be posted on the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS) website. Service offices should strive for consistency within and across boundaries when developing compensatory mitigation programs and species/resource-specific mitigation guidance, to the extent appropriate.

Where mitigation will be established to satisfy multiple authorities, criteria the Service uses for establishing compensatory mitigation projects should be compatible with criteria established by other federal and/or state statutes so that mitigation programs and sites may satisfy the requirements of multiple agencies. While it is our intent to work with other federal, state, and/or local agencies, the Service recognizes that there may be situations in which coordinated multi-agency processes do not exist, and project applicants may need to coordinate with each agency separately.

The Service encourages early coordination on all mitigation proposals. For information regarding species specific requirements and/or templates, contact the local Service office. See

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

also section **5.2.1. Early Coordination and Scoping**.

The use of compensatory mitigation involves issues such as real estate and financial assurances. Service staff should coordinate with the Department of Interior's Office of the Solicitor early in mitigation planning and review processes to ensure that mitigation is consistent with the law.

2. Authorities

Endangered Species Act, 16 U.S.C. Section 1531, *et seq.*, as amended, and other provisions of federal law as articulated by the Service's Mitigation Policy (81 FR 83440, November 21, 2016) and CMP (81 FR 95316, December 27, 2016).

3. Scope

This interim guidance replaces previous Service guidance: "Guidance for the Establishment, Use, and Operation of Conservation Banks" (68 FR 24753, May 8, 2003) and "Guidance on Recovery Crediting for the Conservation of Threatened and Endangered Species" (73 FR 44761, July 31, 2008). The interim guidance discussed herein covers all forms of compensatory mitigation, including, but not limited to, permittee-responsible mitigation, conservation banking, in-lieu fee programs, habitat credit exchanges and other third-party mitigation projects, programs or arrangements (collectively, "mitigation projects"), for all species and habitat protected under the ESA and for which the Service has jurisdiction.

In accordance with the CMP, this interim guidance applies to all proposals for mitigation projects submitted after the date of this interim guidance. It will not apply retroactively to any Service-approved mitigation project established prior to the date of this interim guidance; however, it does apply to amendments and modifications to such projects, including but not limited to: adding sites under an existing agreement or instrument (collectively, "instruments"), expansion of an existing site, or addition of a new type of resource credit (e.g., addition of a new species credit), or to an existing mitigation project where the new activities or changes in activities associated with the original action result in new impacts, or where new authorities, or failure to implement agreed upon recommendations warrant new consideration of mitigation. Service offices may elect to apply this interim guidance to actions that are under review as of the date of this interim guidance.

3.1. Types of Compensatory Mitigation

Permittee-responsible Mitigation (PRM) includes activities or projects undertaken by a permittee or an authorized agent or contractor to provide compensatory mitigation for which the permittee retains full responsibility. PRM projects are typically not established in advance of the impacts they are offsetting, and, while we refer to mitigation "credit" throughout this interim guidance, PRM projects do not have credits that can be used at a later time to offset different impacts, as do conservation banks and in-lieu fee programs.

A conservation bank is a site, or suite of sites (i.e., umbrella bank), that is conserved and managed in perpetuity, and provides ecological functions and services expressed as credits for

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

specified species or resources, that are later transferred or sold to others for use as compensation for impacts occurring elsewhere to the same species. The sponsor of a conservation bank may be a private entity, non-profit organization, or a government agency. Government agencies typically sponsor “single user banks” in which they reserve the credits to use as offsets for their own projects.

In-lieu fee (ILF) programs involve the restoration, establishment, enhancement, and/or preservation of habitat through funds paid to a governmental or nonprofit natural resources management entity (i.e., ILF program sponsor) to satisfy compensatory mitigation requirements for impacts to specified species or habitat (definition adapted from 33 CFR 332.2).¹ ILF programs collect fees from permittees that have been approved by the Service to use in-lieu fee programs instead of providing PRM. ILF program sponsors may be non-profit organizations or government agencies. Fees collected by ILF sponsors are placed in an ILF account, and funds are disbursed from that account to purchase land or perform an activity, as specified in the ILF instrument.

Habitat Credit Exchanges (HCE) are a relatively new concept to the Service and warrant additional care when being considered as a mitigation mechanism. HCEs are an environmental market operating as a clearinghouse in which the exchange administrator, acting as mitigation sponsor, manages credit transactions between compensatory mitigation providers and permittees. Exchange administrators may be public or private entities. HCEs developed for federally-listed species are subject to Service approval through a habitat credit exchange instrument signed by the Service and the exchange administrator, and will be required to meet all of the same standards, and contain the same elements, as all other forms of compensatory mitigation.

We anticipate providing additional guidance regarding the use of ILF and HCE programs in the future, as we gain additional experience using these compensatory mitigation mechanisms.

See also CMP section 7. *Compensatory Mitigation Mechanisms*.

3.2. *Role of Restoration, Enhancement, and Creation of Habitat*

Mitigation projects may rely on a range of strategies including, but not limited to: preservation and management of existing functioning habitat, restoration of degraded habitat, connecting separated habitats, buffering protected areas, creating habitat, and other appropriate actions. Habitat preservation may be employed for species whose habitat is not easily restored or created, or the information on how to accomplish the restoration or creation of habitat is either not known or is unreliable; other mitigation strategies may contain little to no habitat preservation and rely heavily on creation, restoration, or enhancement of habitat. All mitigation sites must include management to maintain the habitat for the species on that site.

Mitigation credit for PRM projects and “credits” for other types of mitigation projects

¹ The Service’s intent in this interim guidance is to provide a framework for ILF programs that is compatible, to the extent appropriate, with the U.S. Army Corps of Engineers (USACE) and U. S. Environmental Protection Agency (EPA) 2008 Compensatory Mitigation Rule (73 FR 19594 April 10, 2008) (USACE-EPA 2008 Rule).

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

may be designated based on the mitigation strategy employed - preservation credits for protecting extant habitat, restoration credits for restoring or enhancing degraded habitat, and establishment credits for creating (i.e., establishing) habitat in areas not currently providing habitat. The need for this type of distinction will vary depending on the specific ecological situation and the conservation strategy being employed. For example, the Service may determine that a species cannot afford any reduction of its total available habitat, and that the species may require a mitigation strategy that provides for one habitat acre to be protected and one or more habitat acres to be established for every acre of habitat destroyed. Taken to its full extent, this conservation strategy would result in half of the existing habitat being protected and destroyed habitat acreage being replaced through habitat establishment.

4. Evaluating Mitigation Proposals

The Service will determine the ecological appropriateness of all mitigation project proposals and will evaluate each proposal against the compensatory mitigation standards described in section 5 of the CMP, along with other elements described in this document, to determine whether the proposed mitigation project will provide adequate conservation benefits to the species for which it is intended to provide offsets. The CMPs standards include:

- Siting sustainable compensatory mitigation
- In-kind for species
- Reliable and consistent metrics
- Judicious use of additionality
- Timing and duration
- Ensure durability
- Effective conservation outcomes and accountability
- Encourage collaboration
- Maintain transparency and predictability

In addition to these standards, the Service will evaluate each mitigation proposal for inclusion of the following 12 fundamental elements of a mitigation plan, as identified in chapter 6 of the Departmental Manual (600 DM 6.7A) and the Service's Mitigation Policy. These 12 elements are:

- a. Objectives, including a description of the resource types and amounts to be provided (usually acres, or some other physical measure), the method of compensation (preservation, establishment, restoration, enhancement, etc.), and the manner in which a landscape-scale approach has been considered;
- b. Factors considered during site selection process;
- c. Site protection instrument to ensure durability;
- d. Baseline information;
- e. Mitigation work plan (i.e., development plan), including specifications for constructing, enhancing, restoring habitat (as appropriate), geographic boundaries, construction methods, sequencing and timing, and other considerations;
- f. Credit evaluation, including methodologies;
- g. Maintenance plan, including a description and schedule of maintenance requirements to

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- ensure the continued viability of the resource once initial construction is completed;
- h. Performance standards for habitat establishment, restoration, etc., to determine whether the measure has achieved its intended outcome;
- i. Monitoring requirements;
- j. Long-term management plan, including description of how the compensatory mitigation project will be managed after performance standards have been met, to ensure long-term sustainability of the resource, including long-term financing mechanisms and the entity responsible for long-term management;
- k. Adaptive management plan;
- l. Financial assurances that are sufficient to ensure, with a high degree of confidence, that the compensatory mitigation project will achieve and maintain its intended outcome, in accordance with its performance standards; and
- m. Other information the Service determines is necessary.

Specific requirements for proposals as they relate to these elements are discussed in section **5.2 Proposal Process and Minimum Requirements**, below.

4.1. Selecting Sites

All habitat-based mitigation projects must be sited on ecologically appropriate habitat for the proposed covered species, as determined by the Service. Advanced planning for mitigation projects will include the use of landscape-scale conservation plans and mitigation strategies where such plans exist. We will also rely on regional plans or conservation strategies prepared by the Service and other entities such as states and local jurisdictions, to locate suitable areas in which to site mitigation. Recovery plans prepared by the Service often identify broad areas within which recovery efforts will be focused. Mitigation projects sited in these areas can create opportunities that both increase the options available to regulated interests and contribute to the conservation of the species. Where landscape-level and/or recovery plans do not exist, or with plans that do not clearly identify those areas where recovery efforts will be primarily focused, discussions between the Service and a potential mitigation provider are especially important, to identify areas of particular value in conserving the species.

Service evaluation of sites proposed as mitigation is always on a case-by-case basis, and aside from ecological appropriateness, we may reject a site if issues raised during our due diligence review cannot be resolved. We recommend early coordination so that we may identify the challenges in acceptance of a site as soon as possible. The following sections discuss some of the common issues that arise during Service due diligence review.

See also CMP section **5.1 Siting Sustainable Compensatory Mitigation**

4.1.1. Minimum Size

In general, habitat-based mitigation projects must be of sufficient size to ensure the maintenance of ecological integrity in perpetuity. However, the minimum allowable size of parcels of land designated as mitigation will be determined on a case-by-case basis, depending on the needs of the species proposed to be covered, the mitigation site's location, and the conservation benefits provided by the mitigation project. For many species, individual

mitigation projects may not be large enough by themselves to support a viable population over the long term. But if the mitigation project is located next to an existing protected area managed for the conservation of that species, even a small mitigation project may increase the likelihood that a viable population can be maintained. Similarly, if a mitigation project is sited to encourage dispersal between two areas managed for the conservation of the species, the mitigation project may increase the likelihood of the species surviving at both locations and thus provide a benefit proportionally larger than its actual area. In some instances, mitigation projects may be able to provide replacement habitat for species currently occupying nearby unmanaged habitats at risk of becoming unsuitable because of threats such as succession. Sites that otherwise appear to be good locations for mitigation projects may, upon closer examination, be inappropriate because of anticipated land-use changes in the surrounding area. These and other considerations relevant to the siting of mitigation projects should be taken into account at the outset and discussed with the mitigation sponsor to ensure that the conservation needs of the species are compatible with the sponsor's objectives.

4.1.1.1. Buffer Areas

Mitigation project boundaries must encompass all areas that are necessary to maintain the habitat function specific to the species covered, which may include appropriate buffers against effects from adjacent land use. Buffer areas may not always consist of habitat that is necessary for the species included in the mitigation project. Limited credit may be given for inclusion of these buffer areas only to the degree that such features increase the overall ecological functioning of the mitigation project.

See also section **7.2. Buffers**, for additional discussion of buffers as a risk management tool.

4.1.2. Exclusion Areas

Mitigation project boundaries should be drawn so as to exclude developed areas or other areas that cannot reasonably be protected or restored (exclusion areas). Potential mitigation projects that encompass such areas should only be approved if the activities that will occur on these exclusion areas will not impact the conservation value of the mitigation project, or if the resulting value will yield sufficient conservation benefit in spite of the exclusion areas. However, if the latter is the case, the Service must have the assurance that the impacts will not change over time in a manner that will decrease the value of the mitigation project. Factors to consider include, but are not limited to, activities that may result in incidental take, habitat degradation, and contamination.

4.1.3. Split Estate Lands

The risk of using lands on which mineral or other rights have been severed from the title (split estate lands) as compensatory mitigation must be carefully considered, as laws governing such lands may prevent land protection instruments from providing sufficient protection of conservation values for a mitigation project. Service preference is for severed mineral rights to be acquired by the property owner or mitigation sponsor and reattached to the title of the

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

property that will be used for compensatory mitigation. However, in some cases, we may rely on a mineral assessment report, which can provide a credible analysis of the potential for mineral resources being developed on the site. The assessment must be performed by a registered professional geologist or professional engineer, and must contain their stamp with current certification. The assessment must take into consideration the scope of the rights that have been severed and provide a thorough and rigorous analysis as to why they believe that the minerals would not be accessed, including, but not limited to: (1) discussion of the mineral resources located in the area; (2) discussion of the mining history of the region; and (3) database records, maps, photos, and anything else that would support their findings. The acceptance of any specific real estate assurance or assessment is discretionary on the part of the Service and is subject to approval.

The Service recognizes that many high-value conservation properties across the United States are in split estate, and that mineral assessments alone do not provide protection against development of resources that are not economically viable at the time a mitigation project is established, but may be so in the future. Potential measures that should be explored for managing risk associated with split estates are:

- a. Using crediting methodology to account for future uncertainty,
- b. Establishing a reserve credit account,
- c. Using a subsurface use agreement, and
- d. Using a mineral subordination agreement.

See also CMP section **6.2.1. Lands Eligible for Use as Compensatory Mitigation.**

4.1.4. Due Diligence Review

In addition to ecological considerations, the Service must evaluate proposed mitigation sites with regard to title and environmental issues. Sites without clear title are problematic, and may be rejected by the Service and/or potential conservation easement holders as not defensible. Sites that are contaminated may also be rejected as the conservation value may be compromised. Therefore, the Service should request current preliminary title reports and Phase I Environmental Site Assessments early in the review process. See **Appendices B-1 Mitigation Site Due Diligence – Reviewing Preliminary Title Reports** and **B-2 Mitigation Site Due Diligence – Reviewing Phase I Environmental Site Assessments** for more detailed information.

5. Establishment and Operation of Compensatory Mitigation Projects and Programs

5.1. Agency Review Process

The purpose of the agency review is to provide guidance and feedback to prospective mitigation providers as they develop their mitigation project proposals and instruments, and to project applicants as they develop their conservation plans and measures as part of their proposed actions.

5.1.1. Service Review

The Service will conduct agency review when a mitigation proposal addresses solely

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

Service-administered resources.

5.1.2. Multiple Agency Review

When a mitigation proposal includes mitigation requirements by other agencies, a multi-agency team should be formed to complete the review. To facilitate these reviews, Service offices may develop collaborative review processes through a memorandum of understanding or memorandum of agreement with tribes and/or other federal, state, or local agencies.

For conservation banks, in-lieu fee programs, and habitat credit exchanges in which the sponsor seeks mitigation credits under multiple authorities, including species under Service authority, the Service will serve on the Mitigation Review Team (MRT) as chair or co-chair. MRTs consist of Service and other federal, state, tribal, and/or local regulatory and resource agency representatives that review mitigation documents and advise managers and decision-makers within their respective agencies or tribes on the establishment and management of mitigation programs and projects. Any other agencies that will also issue credits for resources under their jurisdiction and will be signatories to the instrument are designated as co-chairs of the MRT. If a government agency or tribe is the compensatory mitigation project sponsor, that agency or tribe is excluded from the MRT for that project.

For wetland and stream mitigation banks and in-lieu fee programs authorized by the USACE and EPA, in which the mitigation sponsor also seeks mitigation credits for species under Service authority (e.g., joint bank), the Service will serve on an interagency review team (IRT) as co-chair of that IRT, as set forth in the USACE-EPA 2008 Rule (33 CFR 332.8(b)(1)). The Service may also serve on an IRT in an advisory capacity as a member, rather than as a co-chair, when there are no proposed credits that would fall under Service jurisdiction.

To facilitate timely review, and maximize conservation outcomes as well as to ensure consistent application of the Service's compensatory mitigation standards, we recommend that the same MRT or IRT used for banks or ILF programs also review other types of mitigation projects, such as permittee-responsible mitigation and HCEs, etc.

5.1.2.1. Dispute Resolution Process

When co-chairs on the MRT disagree on substantive aspects of a mitigation program or project under review and have exhausted all tools for resolution within the MRT, the issue can be elevated to the appropriate decision makers in their respective agencies. When a dispute arises between co-chairs on an IRT and the bank or in-lieu fee program under review is a joint mitigation-conservation bank or in-lieu fee program to which the Service and USACE are to be signatories, the Service will follow the dispute resolution process described in the USACE-EPA 2008 Rule (33 CFR 332.8(e)). However, in all cases, the Service retains decision-making authority over resources addressed by its authorities.

5.2. Proposal Process and Minimum Requirements

As stated above, this interim guidance identifies the minimum requirements for establishment and operation of mitigation projects requiring Service approval. Service offices

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

may develop more specific guidance or additional requirements. Each stage of the process is subject to approval by the Service, and the mitigation sponsor must obtain Service approval before moving on to the next stage in the process (e.g., proposal to draft instrument). The Service's minimum requirements for compensatory mitigation are described for each stage of the process below.

5.2.1. Early Coordination and Scoping

All prospective mitigation sponsors, federal agencies, and applicants are encouraged to contact the Service early in their site selection and project planning processes. In the case of a conservation bank or ILF program (if the ILF sponsor wishes to include specific sites) the sponsor may engage the MRT or IRT by submitting a draft proposal, which includes enough information for the agencies to give informed feedback on site selection and overall concept. HCE sponsors should also engage the MRT early in the process. This scoping is optional, but highly recommended, as it provides the sponsor with an opportunity to present a site-specific conceptual proposal and obtain feedback from the Service and other applicable regulatory agencies before embarking on costly analyses of their proposed mitigation site(s). Early coordination with the MRT or IRT is especially helpful to mitigation sponsors who have minimal experience with compensatory mitigation projects. Federal action agencies and applicants should also submit a draft proposal that describes their proposed conservation measures for permittee-responsible mitigation early in the planning process.

5.2.1.1 Draft Mitigation Proposal²

In general, a more detailed draft proposal will better enable the Service to render a timely and informed opinion as to the suitability of a proposed mitigation site. A draft proposal is optional, but recommended if the mitigation sponsor wishes to determine if a full proposal as outlined in section 5.2.2. is appropriate. Draft proposals must include at least the following information (ILF and HCE draft proposals may not contain site-specific information):

- a. Objectives of the project or program;
- b. Site selection considerations;
- c. Proposed type(s) and amount(s) of resources to be provided (e.g., acres, credits);
- b. Maps and aerial photos showing the location of the site and surrounding area;
- c. Contact information for the applicant, mitigation sponsor, property owner(s), and consultants;
- d. Narrative description of the property including: acreage, access points, street address, major cities, roads, county boundaries, biological resources (including the resource/species to be mitigated at the site), and current land use;
- e. Narrative description of the surrounding land uses and zoning, including the anticipated future development in the area, where known;
- f. Ownership information, including surface and subsurface mineral and water rights and other separated rights (e.g., timber rights);
- g. Existing encumbrances (e.g., utility rights-of-way);

² The term "proposal" as used in this interim guidance is intended to be analogous to the term "prospectus" in the USACE-EPA 2008 Rule.

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- h. Proposed service area (may not apply to PRM); and
- i. Additional information as determined by the Service office.

Umbrella conservation banks follow the same process as conservation banks, and must include at least one site in the draft proposal. The bank would become an umbrella bank as new sites are added to an existing instrument. All sites added to an umbrella bank must have documentation that conforms to the current standards of conservation banking documentation.

The Service, MRT, or IRT, as appropriate, will review draft proposals and provide feedback to the mitigation sponsor or applicant. The mitigation sponsor or applicant may then choose to submit a complete or full proposal for formal review by the Service, MRT, or IRT, as appropriate.

5.2.2. Mitigation Proposal

All mitigation sponsors must submit a complete proposal describing their proposed mitigation program or project. All proposals must include enough information at a sufficient level of detail for the Service to provide informed feedback. Mitigation sponsors and federal agencies/applicants should be aware the Service has discretion to reject a proposed mitigation site or proposal that is unsuitable, and that Service acceptance of a proposal does not guarantee final approval of a mitigation instrument. ILF programs and HCEs may develop a proposal prior to identifying specific sites, in which case they must include at a minimum, the non-site-specific information listed below.

Proposals must include, but are not limited to, the following:

- a. Name of proposed mitigation site(s), conservation bank, ILF program, etc.;
- b. Contact information for the applicant, mitigation sponsor/provider, property owner, and consultants;
- c. Qualifications of the mitigation sponsor/provider to successfully complete the type of project proposed, including a description of past such activities by the mitigation sponsor/provider;
- d. Objectives of the project;
- e. Site selection considerations;
 - i. Explanation of how the site contributes to conservation of the species regionally and locally, including any recovery plan goals, regional conservation/mitigation strategies, etc.;
 - ii. Ecological suitability of the site to achieve the objectives, including physical, chemical, and biological characteristics (i.e., inventory), of the site and how the site will support the planned mitigation;
- f. Baseline information
 - i. Narrative description of the property including: acreage, access points, street address, major cities, roads, county boundaries, biological resources, and current land use, surrounding land uses and zoning, including the anticipated future development in the area, where known;
 - ii. Maps and aerial photos showing the location of the site(s) and surrounding area;

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- g. Credit evaluation, including credit table and credit release schedule;
- h. Mitigation work plan (development plan);
- i. Proposed ownership arrangements and long-term management strategy for the site;
- j. Preliminary title report showing all encumbrances on the proposed mitigation site;
- k. Phase I Environmental Site Assessment evaluating the proposed site for any recognized environmental condition(s);
- l. Assurances of sufficient water/water rights to support the long-term sustainability of any proposed aquatic habitat(s);
- m. Additional information as determined by the Service's regional and/or field office.

In addition, a conservation bank, ILF program, or HCE proposal must also include:

- a. Description of the general need for the bank, ILF program, or HCE, and the basis for such a determination;
- b. Proposed service area(s) with map(s) and narrative(s); and
- c. Proposed type(s) and number of credits to be generated by the program or project.

ILF programs and HCEs that do not provide mitigation in advance of impacts must also include:

- a. Prioritization strategy for selecting mitigation sites and compensatory mitigation activities;
- b. Description of any public and private stakeholder involvement in plan development and implementation, including any coordination with federal, state, tribal, and local resource management authorities; and
- c. Description of the ILF program or HCE account.

5.2.3. Draft Mitigation Instrument

A draft mitigation instrument is applicable to all forms of compensatory mitigation, and may be developed by the mitigation sponsor after the Service has provisionally approved a full proposal. This instrument sets forth the basis on which the Service can approve the mitigation project and the conditions to which it is subject. The Service's signature on the final instrument constitutes the Service's regulatory conclusion that the mitigation project meets the applicable standards subject to any conditions. The sponsor's signature constitutes agreement to those terms. The final mitigation instrument may only be submitted subsequent to Service acceptance of, and agreement to, the draft instrument. The draft instrument must be based on the proposal and must describe in detail the physical and legal characteristics of the mitigation site(s), conservation bank, in-lieu fee or habitat credit exchange program, and how it will be established and operated. The instrument must also include a closure plan that specifies responsibilities once all credits are transferred and/or forfeited, performance criteria are achieved, and financial obligations are met. The draft instrument must include the following items:

- a. Objectives
- b. Mitigation work plan (development plan)

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- i. Baseline information
- ii. Site selection
- iii. Performance standards
- c. Service area maps
- d. Credit evaluation/credit table/credit release schedule
- e. Management plan(s)
 - i. Maintenance plan
 - ii. Adaptive management plan
- f. Real estate assurances
- g. Financial assurances
- h. Additional requirements for business entities
- i. Closure plan

5.2.3.1. Mitigation Work Plan

A mitigation work plan, also known as a restoration or habitat development plan, is required if habitat is to be enhanced, restored, or established. This plan is typically submitted as an exhibit attached to the mitigation instrument. Minimum requirements for this plan include:

- a. Baseline conditions of the mitigation site, including biological resources; geographic location and features; topography; hydrology; vegetation; past, present, and adjacent land uses; species and habitats occurring on the site;
- b. Surrounding land uses and zoning, including anticipated future development in the area;
- c. Historic aerial photographs and/or historic topographic maps (if available), especially if restoration to a historic condition is proposed;
- d. Discussion of the overall habitat development goals and objectives;
- e. Description of activities and methodologies for establishing, restoring, and/or enhancing habitat types;
- f. Detailed anticipated increases in functions and services of existing resources and their corresponding effect within the watershed or other relevant geographic area (e.g., habitat diversity and connectivity, floodplain management, or other landscape-scale functions);
- g. Habitat establishment performance standards. Ecological performance criteria and a discussion of the suitability of the site to achieve them (e.g., watershed/hydrology analysis and anticipated improvement in quality and/or quantity of specific functions, specific elements in recovery plan goals expected to be accomplished);
- h. Maps detailing the anticipated location and acreages of habitat developed for species;
- i. Monitoring methodologies to evaluate habitat development and document success in meeting performance criteria;
- j. An approved schedule for reporting monitoring results;
- k. A discussion of possible remedial actions; and
- l. Additional information as determined by the Service office.

5.2.3.2. Service Area Maps

The service area of a mitigation project defines the geographic area (e.g., recovery unit, watershed, county, etc.) in which the mitigation project may be used as an offset. The primary basis of the service area is the conservation needs of the covered species. Recovery plans, conservation strategies, and plans prepared by the Service and other agencies, if available, should be used in developing service areas. The map(s) and narrative description(s) should clearly define any constraints that are found within the service area. These might include exclusion of areas that are key to a regional reserve system, such as projects that occur within corridors or core reserve areas. A mitigation project may have a service area corresponding to a regional plan boundary, yet limit projects using the mitigation credits to certain criteria such as those that are in fragmented, isolated, highly urbanized areas not contributing to the regional reserve system.

Service areas are an important component for the mitigation sponsor, who will need to evaluate the marketability of their projects, i.e., the potential demand for their conservation credits. The mitigation sponsor is responsible for determining whether or not a project will be profitable; however the Service acknowledges that multiple factors must be considered when designating service areas so that mitigation projects will be successful.

The minimum documentation requirement to establish a service area is a map or maps depicting the service area for each species or credit type proposed. The map(s) must be at an appropriate scale to determine the boundaries at street level and contain a narrative description of the limits. The mitigation sponsor may propose a service area, which is subject to approval by the Service. For a mitigation project to gain Service approval, the Service (working collaboratively with other agencies, as applicable) and the mitigation sponsor must ultimately agree on the service area.

Service offices may develop standardized service area maps for different species under their jurisdiction, which may be useful for project applicants when siting PRM projects.

See also CMP section **6.3** *Service Areas*.

5.2.3.3. Credit Evaluation/Credit Table/Credit Release Schedule

A credit evaluation is an explanation of the assessment undertaken to formulate the habitat value and total number of each type of credit. Credit evaluations are developed for all types of mitigation projects. Credit evaluations for banks and ILF programs should include a credit table showing the number and type(s) of credits proposed for approval by the Service. Any spatially overlapping credits or mitigation resources must be clearly shown in the table with an explanation as to how these credits will be debited from a credit ledger, if applicable. Overlapping, bundled, or stacked credits can be used only one time and for a single impact project.

Credit tables and ledgers for conservation banks must be compatible with the RIBITS ledger so that credit releases and credit usage can be tracked. If ILFs and other compensatory mitigation mechanisms are tracked in RIBITS in the future, their credit tables and ledgers will

also be required to be compatible with the RIBITS ledger.

See also CMP sections **6.4** *Crediting and Debiting*, and **8.3** *Credit Stacking and Bundling*.

5.2.3.3.1 Credit Release Schedule

Credit release schedules are one way the Service can manage the risk of a mitigation project not meeting its habitat establishment performance standards, by making credits available for transfer upon meeting certain performance milestones. Credit releases should be tied to ecological performance standards related to habitat establishment, and to administrative performance standards such as percent of endowment funded and submittal of complete annual and biological monitoring reports. Credit release schedules apply to banks and ILF programs, and may apply to HCEs.

See also section **7.3**. *Credit Release Schedules*, for further discussion of risk management tools.

5.2.3.4. Management Plans

All mitigation projects require a management plan. Species needs are rarely met on a completely unmanaged piece of property. More commonly, an active management program that addresses issues such as controlling invasive exotic species, replicating natural disturbance regimes, preventing unauthorized use of off-road vehicles, and illegal garbage dumping, is essential to ensure that the potential conservation value of a particular mitigation property is realized and maintained.

Management plans prescribe the management, monitoring, and reporting activities to be conducted for the term of the mitigation site, and the funding required to carry them out (see section **5.2.3.6.**, *Financial Assurances*). The management plan is often separated into two plans: the interim management plan and the long-term management plan. The interim management plan contains the requirements for managing and monitoring a mitigation site from establishment until all habitat establishment performance criteria have been met, and the endowment fund has matured (at least 3 years after it has been fully funded) and can be drawn upon for long-term management expenses. The long-term management plan contains the requirements for managing and monitoring a mitigation site from the time interim management ends.

5.2.3.4.1. Interim Management Plan

Requirements for the interim management of a site may be the same or very similar to those for long-term management; this is often the case for sites that are preserved, and on which no habitat restoration or establishment is undertaken. In such cases, the interim management requirements may be included with the long-term management requirements in one management plan. A combined interim and long-term management plan must make clear that this is the case, and must cover the period from establishment of a mitigation site or bank through the required duration of the mitigation project (e.g., in perpetuity for most compensatory mitigation sites). When the requirements for the interim management of a site differ from those for long-term

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

management, the interim management plan may be a separate plan or a separate section within the long-term plan. When working on multi-agency review teams, other agencies may have firm requirements for separate interim and long-term management plans. At a minimum, the interim management plan should include a description of:

- a. All management actions to be undertaken on the site during this period;
- b. All habitat establishment performance criteria and any monitoring necessary to gauge the attainment of habitat establishment performance criteria;
- c. Reporting requirements;
- d. Monitoring and reporting schedule; and
- e. A cost analysis to implement the plan.

Reporting requirements for interim management plans should include:

- a. Copies of completed data sheets and/or field notes, with photos;
- b. Monitoring results to date; and
- c. A discussion of all monitoring results to date to achievement of the performance criteria.

5.2.3.4.2. Long-term Management Plan

The long-term management plan is intended to be a living document based on adaptive management principles and should be revised as necessary to respond to changing circumstances (e.g., changed conditions as a result of climate change). Site management will depend on the specific needs of the covered species and existing landscape; every site may not need the same level of management. Revisions to the long-term management plan are subject to Service approval.

The long-term management plan must be incorporated by reference into the conservation easement or other site protection mechanism and should include at a minimum:

- a. Purpose of mitigation site establishment and purpose of long-term management plan;
- b. Baseline description of the setting, location, history and types of land use activities, geology, soils, climate, hydrology, habitats present (after the mitigation site meets performance criteria), and species descriptions;
- c. Overall management, maintenance, and monitoring goals; specific tasks and timing of implementation; and a discussion of any constraints which may affect goals;
- d. Biological monitoring scheme including a schedule, appropriate to the species and site; biological monitoring over the long term is not required annually, but must be completed periodically to inform any adaptive management actions that may become necessary over time;
- e. Reporting schedule for ecological performance and administrative compliance;
- f. Cost-analysis of all long-term management activities, cross-referenced with the tasks described in paragraph c. above and including a discussion of the assumptions made to arrive at the costs for each task. These itemized costs are

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- g. used to calculate the amount required for the long-term management endowment;
- g. Discussion of adaptive management principles and actions for reasonably foreseeable events, possible thresholds for evaluating and implementing adaptive management, a process for undertaking remedial actions, including monitoring to determine success of the changed/remedial actions, and reporting;
- h. Rights of access to the mitigation area and prohibited uses of the mitigation area, as provided in the real estate protection instrument;
- i. Procedures for amendments and notices; and
- j. Reporting schedule for annual reports to the Service.

Annual reports to the Service are necessary for the Service to fulfill its due diligence responsibilities in ensuring that authorized mitigation programs are successful and continue to meet their stated objectives. To that end, the reports must contain the appropriate level of detail, and at a minimum, must include:

- a. Description of mitigation area condition, with photos;
- b. Description of management activities undertaken for the year, including adaptive management measures, and expenditure of funds to implement each of these activities;
- c. Management activities planned for the coming year; and
- d. Results of any biological monitoring undertaken that year, including photos, copies of data sheets, and field notes. This level of documentation is important in verifying the conclusions reached by report preparers and can be essential in informing necessary adaptive management actions. In the interests of reducing paperwork, the Service may require that annual reports be submitted in electronic form and uploaded into RIBITS.

ILF programs and any other compensatory mitigation mechanisms that do not provide mitigation in advance of impacts must also include:

- a. ILF or HCE program account description, including the specific tasks, equipment, etc., for which funds are to be used;
- b. Methodology for determining the fee schedule(s);
- c. Methodology and criteria for adding mitigation sites;
- d. Timeframe in which the funds must be used for their intended purpose; and
- e. Timeframe in which conservation must be implemented.

5.2.3.5. Real Estate Assurances

Real estate assurances ensure that a compensatory mitigation project or site will be available for use as mitigation for the duration specified in the permit or consultation, and will protect the site from development or other incompatible uses that are inconsistent with the conservation goals of the mitigation project. Proposed mitigation sites must be vetted prior to acceptance by the Service to ensure they are biologically appropriate and legally able to be encumbered with a site protection instrument. A perpetual conservation easement, where not prohibited by law, granted to a qualified third party (grantee) is the required site protection instrument when mitigation is to be permanent. Conservation easements and other site protection

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

instruments are generally governed by state laws and vary from state to state. Where conservation easements are of limited duration by law (e.g., 30 years), a clear schedule for re-recording the easement prior to expiration should be identified. The property owner and easement grantee should identify and address this task in the conservation easement. The grantee's purpose is to monitor compliance of, and sometimes enforce, the terms of the conservation easement. The grantee reports compliance and enforcement matters to the Service within a time period specified in the conservation easement.

Granting a conservation easement on tribal land poses unique challenges due to tribal sovereignty. If state and local governments and nonprofit organizations are not acceptable to a tribe, a supportive service organization created by a consortium of tribes may be acceptable as an easement holder if the organization's representative for the tribe proposing the mitigation program abstains from decisions concerning matters arising from the mitigation program's conservation easement. The Lummi Nation's Wetland and Habitat Bank provides an example (Terzi 2012).

Land may be held in fee by the United States and managed by federal agencies. The U.S. generally cannot acquire land encumbered by a conservation easement; however exceptions can be made with approval from the U.S. Department of Justice.

If mitigation land is transferred from U.S. ownership, the transfer must contain covenants, conditions, or restrictions, to the extent allowed by law, sufficient to manage, protect, and maintain the land in a condition to meet its original mitigation purpose. A conservation easement may meet this purpose, however where conservation easements are prohibited by law, perpetual or otherwise, another and/or additional long-term site protection mechanism approved by the Service must be used.

Site protection instruments must meet the following requirements and are subject to Service approval:

- a. The site protection instrument must designate the Service as a third-party beneficiary with rights of enforcement (this may not apply to federal land protection mechanisms);
- b. The site protection instrument must incorporate the interim and long-term management plans for the mitigation site;
- c. The site protection instrument must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise compromise the objectives of the compensatory mitigation project;
- d. Where appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used;
- e. The site protection instrument must contain a provision requiring 60-day advance notification to the Service before any action is taken to void or modify the instrument or other site protection mechanism, including transfer of any title to or establishment of any other legal claims over the compensatory mitigation site.
- f. If changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands that have been set aside for compensatory mitigation through a management plan or other similar mechanism, the public

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- agency authorizing the incompatible use is responsible, subject to applicable law, for providing alternative compensatory mitigation that is acceptable to the Service. The alternative compensation must be commensurate with and proportional to the loss in functions and services resulting from the incompatible use;
- g. Service approval of a site protection instrument for permittee-responsible mitigation must be obtained in advance of, or concurrent with, the activity causing the authorized or permitted impacts; and
 - h. The Service will require a preliminary title report and title insurance for the mitigation site and will consider, at a minimum, the following attributes of the property (see Appendix B for information regarding review of preliminary title reports):
 - i. Title/ownership;
 - ii. Existing liens, mortgages, and other financial encumbrances on the site;
 - iii. Existing easements, rights-of-way, and other real property encumbrances on the site;
 - iv. Split estates (properties where the surface and subsurface mineral rights are under separate ownership);
 - v. Ownership of water rights, timber rights, and any other severed rights; and
 - vi. Other attributes of the proposed mitigation site that may be incompatible with the purposes of the mitigation.

5.2.3.6. *Financial Assurances*

Financial assurances are necessary to ensure that compensatory mitigation projects will be successfully completed in accordance with a permit, consultation, or instrument, and any associated performance criteria. The amount of the financial assurances will be reviewed by the Service and is expected to be based on the size and complexity of the compensatory mitigation project, the likelihood of success, the past performance of the project applicant or mitigation sponsor, and any other factors the Service deems appropriate to consider for any specific project. Financial assurances may be in the form of an endowment, performance bonds, escrow accounts, casualty insurance, letters of credit, or other appropriate instruments, depending on the purpose, duration, and entity providing the compensatory mitigation. The acceptance of any financial assurance is discretionary on the part of the Service and is subject to approval.

While Service offices have discretion to determine which forms of short-term financial assurance are acceptable, the long-term financial assurance must be in the form of an endowment for permanently protected sites. The mitigation provider must provide documentation of the rationale for determining the amount of the required financial assurance. In reviewing the proposed financial assurance, the Service will consider the security and accessibility of the funds (if needed), as well as the cost of providing replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, mobilization, construction and monitoring, and long-term stewardship. Financial assurances should be in place prior to commencing the action authorizing the impact action. The Service is not a beneficiary of any financial assurances, and

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

does not hold the financial assurance instruments or funds.

5.2.3.6.1. Short-Term and Interim Financial Assurances

Short-term financial assurances are required in an amount adequate to guarantee performance of measures such as construction of habitat or initial fencing of the mitigation site. Short-term financial assurances are intended to be phased out once the compensatory mitigation project has been determined by the Service to be successful in accordance with its performance criteria. The Service-approved document must clearly specify the conditions under which the financial assurances are to be released to the project applicant, mitigation sponsor, or other financial assurance provider, including linkage to achievement of performance criteria specified in the mitigation instrument or management plan, and in compliance with the permit or biological opinion, as appropriate.

Interim financial assurances are required in an amount adequate to fund management and operation of the mitigation site until long-term stewardship funds (i.e., endowment) are available. The amount is expected to be calculated based on the projected cost of managing and monitoring the mitigation site for a period of no less than 3 years after the long-term management endowment has been fully funded, to allow the endowment to grow as a buffer against future market fluctuations. Interim financial assurances are intended to be phased out once the endowment fund becomes available and may be released to the project applicant, mitigation sponsor, or other financial assurance provider, or may be used to fund the initial years of long-term management, as applicable. The mitigation instrument, habitat conservation plan or other federal permit must clearly specify the conditions under which the financial assurances are to be released to the project applicant, sponsor, or other financial assurance provider.

The following apply to short-term and interim financial assurances:

- a. Each form of financial assurance must include a provision that states the Service will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the Service at least 120 days before the assurance is revoked or terminated.
- b. In the event a mitigation project has not met performance criteria as specified in the mitigation instrument or management plan, the financial assurance will be used for corrective action. Specific instructions for use must be included in the financial assurance instrument (i.e., letter of credit, performance bond, escrow account, casualty insurance, etc.). These funds will be spent in accordance with the provisions of the instrument. When a standby trust is used (e.g., performance bonds or letters of credit), all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with instructions in the mitigation enabling instrument, conservation easement, or other controlling document. Generally the entity holding the easement or long-term management endowment is an appropriate designee.

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

5.2.3.6.2. Long-term Financial Assurances

Long-term financial assurances are required to ensure long-term stewardship of compensatory mitigation sites and must be in the form of an endowment account. Endowments may be funded over time only when the mitigation project is established in advance of its use as an offset, and the funding source is the sale of mitigation credits or when the funding source is through legislative appropriation for government agency-sponsored projects. In cases of phased funding, a schedule and a target date for fully funding the endowment must be specified in the instrument. Mitigation project endowments that are not fully funded by the target date represent a risk to the long-term durability of the mitigation site (e.g., necessary habitat management or monitoring surveys may not be completed in the future). If a mitigation project endowment is not fully funded within 30 days after its target date has passed, then the instrument must require 100% of all subsequent credit sales to be deposited into the endowment until it is fully funded. The method and timing for endowment funding should be criteria for compliance with a permit or mitigation instrument. If the criteria are not met, the Service could ultimately suspend the permit or suspend credit sales, as applicable.

Endowments must be held by qualified third parties who are subject to approval by the Service (see section **5.4.**, *Qualifications for Holders of Site Protection and Financial Assurance Instruments*). To be approved by the Service, the endowment holder must:

- a. Hold, invest, and manage the endowment to the extent allowed by law and consistent with modern “prudent investor” and endowment law, such as the Uniform Prudent Management of Institutional Funds Act of 2006 (UPMIFA) or successor legislation. UPMIFA incorporates a general standard of prudent spending measured against the purpose of the fund and invites consideration of a wide array of other factors. For states that have not adopted UPMIFA, such as Pennsylvania, analogous state legislation (e.g., the Pennsylvania Uniform Trust Act) can be relied upon to achieve this purpose, and must be cited in the instrument.
- b. Disburse funds on a timely basis to meet the stewardship expenses of the entity holding the property consistent with UPMIFA.
- c. Use accounting standards consistent with standards promulgated by the Financial Accounting Standards Board or any successor entity (if a nonprofit) and with standards promulgated by the Governmental Accounting Standards Board or any successor entity (if a governmental entity).
- d. Provide the Service with an annual fiscal report that contains at least the following elements:
 - i. Balance of each individual endowment at the beginning of the reporting period;
 - ii. Amount of any contribution to the endowment during the reporting period including, but not limited to gifts, grants, and contributions received;
 - iii. Net amounts of investment earnings, gains, and losses during the reporting period, including both realized and unrealized amounts;
 - iv. Amounts distributed during the reporting period that accomplish the purpose for which the endowment was established;
 - v. Administrative expenses charged to the endowment from internal or third-

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- party sources during the reporting period;
- vi. Balance of the endowment or other fund at the end of the reporting period;
- vii. Specific asset allocation percentages, including, but not limited to, cash, fixed income, equities, and alternative investments; and
- viii. Most recent financial statements for the organization audited by an independent auditor who is, at a minimum, a certified public accountant.

5.2.3.7. Additional Requirements for Business Entities

If the mitigation sponsor or owner of the mitigation site is a business entity, such as a Limited Liability Company (LLC), the sponsor/owner must provide the following documentation:

- a. Articles of incorporation or equivalent documents;
- b. Bylaws or other governing documents; and
- c. List of board members, including biographies.

5.2.3.8. Closure Plan

The instrument must include a closure plan that describes at what point a mitigation project or program is “closed” and what responsibilities remain. Upon closure, the long-term stewardship phase begins, where the property owner is primarily responsible for managing the site as described in the long-term management plan, the easement holder is responsible for oversight as described in the real estate protection instrument, and the endowment holder is responsible for managing and making disbursements from the endowment fund as described in the endowment funding and management agreement or declaration of trust. Once a mitigation project or program is closed, it can no longer be used as mitigation for new impacts, and no further credit transfers may occur. Minimum criteria for closure for mitigation programs or sites are:

- a. Transfer of all credits or forfeiture of any remaining credits;
- b. Attainment of all performance criteria;
- c. Endowment maturation (i.e., no less than three years has passed since full funding);
- d. Compliance with all terms of the mitigation instrument; and
- e. Written acknowledgement from the Service that all closure criteria have been met.

5.3. Amendment and Modification of Instruments

Amendments and modifications of instruments (including any exhibits or attachments thereto) are subject to approval by the Service. Amendments and modifications are subject to current standards of documentation and Service review at the time the amendment or modification is proposed; amendment and modification proposals that remain inactive due to mitigation sponsor non-response for six months or longer will be subject to any updated or new standards.

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

5.4. *Qualifications for Holders of Site Protection and Financial Assurance Instruments*

Qualifications for entities entrusted with holding real estate protection instruments and/or financial assurance instruments intended to fund the stewardship of compensatory mitigation sites are essential in ensuring that mitigation is carried out for the duration specified in the permit or consultation. Holders of these instruments are proposed by the mitigation sponsor and are subject to approval by the Service. Minimum qualifications (listed below) must be met prior to Service approval of a mitigation program, project, or site.

Land trusts and other entities that are accredited by the Land Trust Accreditation Commission (Commission) and are in good standing will automatically meet the minimum requirements for holding real estate and financial assurance instruments and be approved by the Service. The Commission has developed national standards for excellence, upholding the public trust, and ensuring that conservation efforts are permanent. Organizations successfully completing this rigorous process will meet the needs for long-term stewardship of mitigation lands. Therefore, the use of an entity that is accredited by the Commission, as holder or grantee of a conservation easement, is required in those areas where accredited entities are available and willing to hold easements for Service-approved mitigation sites. In the event that an organization acting as grantee on a conservation easement or holding stewardship funds fails to maintain accreditation or otherwise loses accredited status, the Service may require that the conservation easement and/or endowment fund be transferred to another entity. Should other national or state accreditation programs that use the same rigorous criteria as the Commission be developed in the future, the Service may consider entities qualifying in those programs for an expedited approval process.

The Service recognizes that accredited organizations willing to hold easements for Service-approved mitigation sites are not available in all areas. For those areas in which accredited entities are not available, holders of real estate and/or financial assurance instruments must meet the following minimum qualifications prior to Service approval of a mitigation program or site:

- a. A nonprofit organization or government entity having as its principal purpose and activity the direct protection or stewardship of land, water, or natural resources, including, but not limited to agricultural lands, wildlife habitat, wetlands, and endangered species habitat;
- b. Adoption and demonstrated implementation of the Land Trust Alliances' Land Trust Standards and Practices (LTA Standards);
- c. For holders of easements or other long-term site protection mechanisms, an organization with a history of successfully holding land or easements in long-term stewardship for the above purposes that:
 - i. has been incorporated (or formed as a trust) for at least five years,
 - ii. is named as the grantee on at least two conservation easements, and
 - iii. has successfully upheld their responsibilities under the conservation easements which they hold as grantee as demonstrated by:
 - a. annual monitoring of each of its conservation easements,
 - b. baseline documentation reports for each of its conservation

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- easements,
- c. an easement enforcement policy and demonstrated responsible application of such policy if the organization has identified violations on its easements,
- d. an easement amendment policy and demonstrated responsible application of such policy if the organization has completed any amendments;
- iv. is a third party organizationally separate from (having no corporate or family connection to) the mitigation sponsor, property owner and project applicant or permittee. The purpose of this requirement is the avoidance of conflict of interest issues that can cause the grantee to act in a manner inconsistent with, or contrary to, the purpose and/or terms of the conservation easement in an effort to benefit itself;
- v. in accordance with LTA Standards, has funds sufficient for defense of conservation easements they hold as grantee.
- d. For holders of financial assurances:
 - i. a successful history of holding and managing funds for the above purposes consistent with requirements under UPMIFA, and in accordance with state law, and generally accepted accounting practices promulgated by the Financial Accounting Standards Board (FASB);
 - ii. adequate internal controls and ability to manage restricted funds as verified by a third party certified public accountant; and,
- e. A non-profit, non-governmental organization must also:
 - i. qualify for tax exempt status in accordance with Internal Revenue Code (IRC) section 501(c)(3);
 - ii. be a public charity under the IRC and in good standing with the relevant state public charity bureau for the state in which the mitigation area is located, or otherwise comply with applicable state laws;
 - iii. is a third party organizationally separate from (having no corporate or family connection to) the mitigation sponsor, property owner, and project applicant or permittee; and
 - iv. adhere to generally accepted accounting practices that are promulgated by the Financial Accounting Standards Board, or any successor entity.

The National Fish and Wildlife Foundation (NFWF) is approved by the Service to hold financial assurance instruments. NFWF is organized under IRC section 501(c)(3), and was established by Congress in 1984 to support the Service's mission to conserve fish, wildlife and plant species. NFWF is one of the nation's largest non-profit funders for wildlife conservation, is transparent, and accountable to Congress, federal agencies and the public, and has a record for successfully managing endowments for permanent conservation. NFWF generally does not hold conservation easements.

Government agencies are limited in their ability to accept, manage, and disburse funds for the purposes described here and must not be given responsibility for holding endowments or other financial assurances for compensatory mitigation projects. These funds must be held by a third party as described in this section. One exception is made for public agencies that meet stringent requirements to hold funds for mitigation projects on public lands, see section 6.

Ensuring Durability on Public Lands, below.

6. Ensuring Durability on Public Lands

Ensuring the durability of compensatory mitigation on public lands presents particular challenges, especially regarding site protection assurances, long-term management, and funding assurances for long-term stewardship. Mechanisms available for ensuring durability of land protection for compensatory mitigation on public lands vary from agency to agency, are subject to site-specific limitations, and are likely to be politically and administratively challenging to secure. Some mechanisms may require a legislative act while other mechanisms can be achieved administratively at various levels of an agency's organization. Tools such as protective designations, right-of-way grants, withdrawals, disposal or lease of land for conservation, conservation easements, cooperative agreements, and/or agreements with third parties (e.g., conservation land use agreement or multiparty agreement), in combination with land use plans, may assist in providing durable site protections. Designations made through land use plans alone are not adequate to provide durability as they are subject to modification. Durability on public lands may require layering of tools to preclude conflicting uses and assure that protection and management of the mitigation land is commensurate with the scope, scale, and duration of the impacts to the species.

To ensure the durability of long-term management on public lands, there should be a high degree of confidence that incompatible uses are removed or precluded to ensure that uses of the public lands do not conflict with or compromise the conservation of the species for which the compensatory mitigation project was established. If the compensatory mitigation obligation will be met by the federal agency or applicant, the authorization, permit, or license should include in whole or by reference a final mitigation plan as a formal condition of the authorization, permit, or license. If the compensatory mitigation obligation will be satisfied through use of a conservation bank or other third-party mitigation provider, then the authorization, permit, or license should identify the party responsible for providing the compensatory mitigation and the type(s) and amount(s) of credits that must be secured. Any agreements enabling mitigation on public lands should include provisions for equivalent alternative mitigation if subsequent changes in public land management directives result in actions on public land that are incompatible with the conservation needs of the species. These provisions should also be identified in the administrative and regulatory documents (e.g., records of decision) that accompany the mitigation enabling agreements.

Ensuring funding to accomplish long-term management of compensatory mitigation on public lands is generally the same mechanism used for compensatory mitigation on private lands. Government agencies are limited in their ability to accept, manage, and disburse funds for this purpose and must not be given responsibility for holding endowments for compensatory mitigation sites on public or private lands. These funds must be held by a qualified third party as described in section 5.4. *Qualifications for Holders of Site Protection and Financial Assurance Instruments*. An exception may be made under the rare circumstance where a government agency is able to demonstrate, to the satisfaction of the Service, that they are acting as a fiduciary for the benefit of the mitigation site essentially as if they are a third party, and can show that they have the ability to:

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- a. collect the funding,
- b. protect it from being used for purposes other than the management of the mitigation site, and
- c. disburse the funds to the entities conducting the management.

Generally, either an organization that is accredited by the Land Trust Accreditation Commission or the National Fish and Wildlife Foundation may serve as fiduciary for long-term management of funds for mitigation projects on public lands.

7. Criteria for Use of Third-party Mitigation

7.1. Project Applicability

Activities regulated under section 7 or section 10 of the ESA may be eligible to use third-party-sponsored mitigation if the adverse impacts to the species from the particular project can be offset by transfer of the appropriate type and number of credits provided by the third party-sponsored mitigation program. The impacts for which third party sponsored mitigation is sought must be located within the service area for the species provided by the third party-sponsored mitigation program unless otherwise approved by the Service. In no case may the same credit(s) be used to compensate for more than one action. However, the same credit(s) may be used to compensate for a single action that requires authorization under more than one regulatory authority (e.g., a vernal pool restoration credit that provides mitigation for a listed species under the ESA and wetlands under section 404 of the CWA).

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

7.2. Transfer of Liability

The mitigation sponsor assumes liability for success of the mitigation through the transfer (usually a purchase by the permittee) of credits or other quantified amount of compensatory mitigation documented in a mitigation instrument. The credit sale must be recorded in a fully executed sales contract between the permittee and the mitigation sponsor that specifically states the transfer of liability to be legally binding. Service offices must retain a copy of the executed sales contract in the project file and maintain a copy in RIBITS (if the bank or mitigation project is tracked in RIBITS) or in the file for the authorized in-lieu fee program or habitat credit exchange.

The Service's role is regulatory. The Service must approve credit transactions as to their conservation value and appropriate application for use related to any authorization or permit issued under the ESA. Service approval is usually through signature; however, the Service's signature as an approving entity on the sales contract does not mean the Service is party to the contract. 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.

7.3. Credit Stacking and Bundling

The Service recognizes the inherent efficiencies in leveraging multiple conservation

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

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

Ideally, compensatory mitigation projects will be designed to holistically address requirements under multiple programs and authorities for the same action and use bundled credits to accomplish this goal. For example, a stream credit may satisfy mitigation requirements for an USACE section 404 Clean Water Act permit for impacts to a stream and an ESA section 10(a)(1)(B) incidental take permit for impacts to a federally listed mussel species occurring in that stream. As another example, a county government may establish an in-lieu fee program as part of its county-wide HCP to collect a fee from project applicants for projects covered under their incidental take permit to address multiple mitigation obligations under federal, state, and local authorities. In both these examples, the bundled credit is used as a single commodity (i.e., it is not unbundled or unstacked) and is only used once.

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

Compensatory mitigation projects established for use under one Service program (e.g., Ecological Services) may also be used to satisfy the environmental requirements of other Service programs (e.g., Migratory Birds or Refuges) or other federal, state, or local agency programs consistent with the laws and requirements of each respective program. The same credits may not be used for more than one authorized or permitted action (i.e., no double counting of mitigation credits); all credit transfers must be tracked in the same credit ledger to demonstrate that this is not the case.

8. Managing Risk and Uncertainty

The following risk management tools should be considered when developing proposals for compensatory mitigation programs and projects.

8.1 Adaptive Management

Adaptive management is an iterative approach to decision-making, providing the opportunity to adjust initial and subsequent decisions in light of learning with an overarching goal of reducing uncertainty over time. Frameworks such as the Service's strategic habitat conservation (SHC) model (USFWS and USGS 2006) and the Department's technical guidance regarding adaptive management (Williams et al. 2009) should be used both in the assessment of models used to inform metrics for compensatory mitigation programs as well as development and implementation of long-term management plans for individual compensatory mitigation projects.

The management of natural resources can be complex, and it will be even more challenging to make sound resource decisions in a structured and transparent way based on science to account for uncertainty in an environment that has always been dynamic but is now experiencing accelerated climate change. Incorporating adaptive management strategies into compensatory mitigation site management plans can help to manage risk and uncertainty for any type of mitigation project if clear goals, objectives, and measurable success criteria are defined in the management plan. The monitoring data can be used to determine if the desired results are being achieved or if management actions need to be modified. Adequate long-term funding assurances are also necessary for successful implementation of adaptive management.

8.2. Buffers

Buffers may be necessary to protect compensatory mitigation sites from edge effects. Undesirable edge effects may include increased opportunities for the introduction of invasive species, garbage dumping, erosion due to damaging runoff or other hydrological conditions on adjacent lands, noise, or a variety of other activities or conditions that would adversely affect the species. Small mitigation sites or sites with a high edge-to-area ratio are generally the most vulnerable to edge effects. Buffers may be able to reduce these risks when properly located, sized, and managed. If buffers also provide functions and services for the species or other resources of concern, compensatory mitigation credit will be provided at a level commensurate with the level of functions and/or services provided to the species.

8.3. Credit Release Schedules

One way to manage risk associated with the establishment of compensatory mitigation sites is by designing credit release schedules that only allow credit releases when specific performance criteria are met. Performance criteria should be designed with clear milestones that identify when risk and uncertainty have been substantially reduced. Phased credit release based on both ecological and administrative performance is highly recommended. This approach will buffer situations in which default or other unintended events occur, allowing for mitigation project remediation rather than failure. Administrative performance relative to credit release is usually based on durability such as funding a specific percentage of the endowment required for long-term site management, and on timely submission of complete reports. The mitigation instrument should provide a schedule for credit releases that are tied to achievement of appropriate milestones. The credit release schedule should reserve a significant share of the total credits for release until after full performance has been achieved. Failure to meet these

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

milestones requires compliance actions such as suspension of further credit releases to reduce risk and incentivize compliance.

8.4. Mitigation Ratios

Mitigation ratios can be used as a risk-management tool to address uncertainty, ensure durability, or implement policy decisions to meet the net gain or no net loss goal. However, ratios should be reserved for dealing with the true uncertainty of any mitigation program or for policy-based incentives and not to compensate for limited understanding of species' conservation needs. Mitigation ratios should be developed within the context of a landscape conservation plan and mitigation strategy that is designed to meet specific conservation goals for the species. The rationale for the required mitigation ratio must be justified and documented. Mitigation ratios must be based in science, readily explained and understood, and consistently applied. Factors contributing to the need for mitigation ratios may include, but are not limited to:

- a. Type of compensatory mitigation (preservation, restoration, enhancement, establishment, or some combination of these types);
- b. Temporal loss due to loss of functions and services to the species;
- c. Temporal loss due to interruption of breeding and/or impaired fecundity as a direct or indirect result of the proposed action;
- d. The likelihood of success of the mitigation site (e.g., past permittee-responsible mitigation has been shown in many cases to have a low likelihood of success);
- e. Degree of threat to the mitigation site by existing or anticipated future land use at adjacent sites;
- f. Differences in the functions and services to be lost at the impact site and projected to be gained at the mitigation site;
- g. Scarcity of the species or resources at the impact and mitigation sites;
- h. Projected change in physical parameters affecting habitat condition as a result of processes such as climate change; and/or
- i. Distance from the impact site.

Mitigation ratios can be adjusted to achieve conservation goals. For example, mitigation ratios may be adjusted upward to create an incentive for avoidance of impacts in areas of high conservation concern (e.g., a zoned approach). Or they may be adjusted downward to provide an incentive for project applicants to use conservation banks or in-lieu fee programs that conserve habitat in high priority conservation areas rather than PRM, which is likely to be of lower quality due to smaller parcel size. Mitigation ratios may also be adjusted upward to move from a no net loss goal to a net gain goal. Such adjustments in mitigation ratios should be transparent, reasonable, and scientifically justified, as well as consistent with applicable laws and regulations.

8.5. Reserve Credit Accounts

A reserve credit account can spread the risk among mitigation providers and provide added assurance that the goal for the mitigation project or program is achieved. It may be appropriate to establish a "reserve credit account" to manage risk associated with mitigation projects or programs that require additional assurances for contingencies. Potential uses of these accounts may include offsetting catastrophic natural events such as wildfire or flooding, adjacent

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

land use that may negatively affect a mitigation site, or risk associated with split estates, as agreed to by the Service and defined in the mitigation instrument. In such cases, the use of reserve credits would allow the mitigation program to continue uninterrupted (i.e., prevent the need for temporary suspension of credit transfers while the landscape recovers or the situation is resolved). Reserve credit accounts are not to be used as a substitute for site protection or financial assurances required under the standards set forth in the CMP or to offset impacts of development projects or to otherwise balance credit-debit ledgers due to lack of mitigation provider participation or compliance. Remedial processes and actions for dealing with unsuccessful management actions or lack of compliance by mitigation providers must be clearly described in the mitigation instrument.

The number of reserve credits in the account should reflect a conservative estimate of the anticipated risk as determined by best available science and should be managed adaptively to changing conditions on the landscape. If expended, reserve credits should be replenished in accordance with a process and schedule clearly described in the mitigation instrument. Reserve credit accounts may also be created to contribute to a net gain goal for a project or program. In this case, the reserve credits are not used, but are immediately retired to provide an overall benefit. If both types of credits exist within a reserve credit account, then each type of credit must be accounted for separately and used for its intended purpose.

9. Compliance and Tracking

A tracking system is essential in ensuring compliance with the mitigation instruments used to implement compensatory mitigation programs described in this policy. Tracking systems also facilitate consistency in the implementation of compensatory mitigation programs and projects. It is vital that the Service track compliance directly for permittee-responsible mitigation and, at a minimum, through third-parties responsible for operating compensatory mitigation programs or projects such as ILF programs and HCEs. Minimum requirements for compliance and tracking are described below. More specific guidance (e.g., monitoring report outlines or templates) may be developed or additional requirements may be set by Service offices. Conservation banks are required by the Service to be tracked in RIBITS (USFWS Director's Memorandum: New Tracking Tool—Regulatory In-lieu fee and Bank Information Tracking System (RIBITS)—for Conservation Banks and In-lieu Fee Programs, November 02, 2011).

Transactions (credit withdrawals) at a Service-authorized mitigation program or project that are not related to ESA compliance and are not approved by the Service must be tracked in the same tracking system. The Service is not liable for any event or transaction that eludes detection through the Service's tracking function.

9.1. General Compliance

9.1.1. Conservation Banks, In-lieu Fee Programs, Habitat Credit Exchanges

Conservation banks, ILF programs, and HCEs must comply with the terms of their instruments, including meeting performance criteria and submitting required reports. Appropriate action will be taken if the Service determines a compensatory mitigation project is not meeting performance criteria or complying with the terms of the enabling instrument or site protection

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

instrument. Such actions may include decreasing available credits, suspending the use of credits as mitigation, and/or determining that financial assurance resources should be used to perform remediation or alternative mitigation as provided by the mitigation instrument.

9.1.2. Permittee-responsible Mitigation Projects

Permittee-responsible mitigation projects are linked to one permitted action, therefore no credits are available to reduce or suspend. Failure to complete mitigation or failure of a mitigation site to meet performance criteria may trigger reinitiation of consultation under 50 CFR 402.16 or suspension of a section 10(a)(1)(B) permit under 50 CFR 13.27. If the Service determines that a permittee-responsible mitigation site is not meeting performance criteria, appropriate corrective actions will be taken. Such actions may include determining financial assurance resources (e.g., construction, performance or interim management security) should be used to perform remediation or alternative mitigation, as provided by the mitigation instrument.

9.2. Reporting

Reports will be required at least annually; to document the compensatory mitigation program's or project's performance. Reports generally include a description of the mitigation site conditions, attainment of performance criteria, status of the endowment fund or other financial assurance mechanism, expenditures, and management actions taken and expected to be taken in the future. Conservation banks, ILF programs, and HCEs must also include a copy of the ledger with a record of all credit transactions to date.

Conservation banks, ILF programs, and HCEs often have requirements for reaching milestones which lead to the release of credits to be made available for use as mitigation. Annual monitoring reports document the condition of the sites and the achievement of these milestones. Credits should not be released until complete reports are submitted and verified by the Service.

See also section **5.2. Proposal Process and Minimum Requirements** and **Appendix C. Example checklist for monitoring and reporting.**

9.3. Third-party Monitoring of Real Estate Protection

Third-party monitoring of the real estate protection instrument (e.g., conservation easement) is necessary to ensure the conservation values of the mitigation site are protected for the required duration. Annual reports to the Service, describing the site conditions and compliance/non-compliance with the site protections, must be built into the real estate protection instruments. The Service must be designated as a third-party beneficiary with rights of enforcement in the easement or similar site protection instruments. This is necessary to allow the Service continued access to the site and oversight authority after the conservation bank has closed or the ILF program or other compensatory mitigation mechanism has terminated. This third party beneficiary right shall not involve the Service in project management or receipt or management of financial assurance mechanisms.

9.4. Credit Transfers

Each use of credits as compensatory mitigation is subject to authorization by the Service. The Service will review each proposed use of credits to determine if the mitigation program is in good standing (i.e., is in compliance with the instrument and site protection mechanism) and has the appropriate available credits. The criteria that determine whether a bank, ILF program, or HCE is in good standing will be contained in its instrument and can include, but is not limited to meeting performance criteria, submitting reports, and funding the management endowment on schedule. If upon review, the Service determines that the mitigation program is not in good standing or does not have the appropriate available credits, then the sponsor will be notified of such determination. In such case, the use of the credits as compensatory mitigation will not be authorized until the sponsor corrects the deficiency. If upon review, the Service determines that the mitigation program is in good standing and has the appropriate available credits, the Service will provide authorization in writing approving the pending credit transfer. If there is a substantial delay between the Service's authorization of a pending credit transfer and the actual transfer of credits, an updated review of the mitigation program's standing may be conducted. It is the responsibility of the permittee to secure the transfer of credits in a timely manner or contact the Service and request reauthorization of the pending credit transfer.

9.5. Tracking Compensatory Mitigation

Monitoring reports and other documents used to evaluate compliance will be uploaded into the Service's Environmental Conservation and Online System (ECOS) or the Regulatory In-lieu fee and Bank Information Tracking System (RIBITS), as appropriate. Permittee-responsible mitigation will be tracked in ECOS. Conservation banks are tracked in RIBITS. We anticipate that ILF programs and HCEs will be tracked in RIBITS when sufficient modifications to RIBITS have been made to accommodate these mitigation mechanisms. Until that time, ILF programs and HCEs must be accessible to the Service and the public, as appropriate. RIBITS can be accessed at: <https://ribits.usace.army.mil/>.

Documents uploaded into the RIBITS cyber repository will be available to the public to the extent allowed by law and in accordance with the requirements of mitigation instruments approved by the Service. At a minimum, mitigation instruments and credit ledgers will be visible to the public. Service offices will determine the types of additional documents to be uploaded to RIBITS and made visible to the public. Service offices will coordinate with mitigation sponsors to ensure that credit ledgers are updated as needed.

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

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Appendix A: Glossary of Terms Related to Compensatory Mitigation

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

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 the resource functions and services are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and implementation of measures identified to rectify those problems (modified from 33 CFR 332.2).

Additionality—conservation benefits of a compensatory mitigation measure that improve upon the baseline conditions of the impacted resources and their values, services, and functions in a manner that is demonstrably new and would not have occurred without the compensatory mitigation measure (600 DM 6.4G).

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

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

Avoidance—avoiding the impact altogether by not taking a certain action or parts of an action

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

(40 CFR 1508.20).

Bank Sponsor—any public or private entity responsible for establishing and, in most circumstances, operating a conservation bank. Bank sponsors are most often private individuals, companies, or Limited Liability Corporations, but they may also be nongovernmental organizations, tribes, or government agencies. See also “*mitigation sponsor*.”

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

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

Compensatory mitigation (compensation)—compensation for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or providing substitute resources or environments (see 40 CFR 1508.20) through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions (600 DM 6.4C).

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

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

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

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

Conservation measures (conservation actions)—measures pledged in the project description that the federal agency or applicant will implement to minimize, rectify, reduce, and/or compensate for the adverse impacts of the development project on the species. Conservation measures designed to compensate for unavoidable impacts may include the restoration, enhancement, establishment, and/or preservation of species habitat or other measures conducted for the purpose

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

of offsetting adverse impacts to the species. Upon issuance of a permit, license, or other such authorization associated with the proposed project, implementation of that project requires implementation of the conservation measures as well as any other terms and conditions of the permit.

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

Covered species—species specifically included in a conservation bank, habitat conservation plan, safe harbor agreement, candidate conservation agreement with assurances, rangewide conservation plan, or other such conservation plan for which a commitment is made to achieve specific conservation measures for the species.

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

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

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

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

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

Critical habitat—specific areas within the geographical area occupied by the species at the time it is listed as endangered or threatened under the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

geographical area occupied by the species at the time it is listed, which are determined by the Secretary of the Department of the Interior to be areas essential for the conservation of the species (16 U.S.C. 1532(5)(A)).

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

Double-counting (double-dipping)—using a credit, however defined, representing the same unit of ecosystem function or service on a mitigation site more than once. This is not allowed.

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

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

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

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

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

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

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

Functions—the physical, chemical, and biological processes that occur in ecosystems (33 CFR

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

332.2); functions are the ecological processes necessary for meeting species' habitat and lifecycle needs.

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

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

Habitat credit exchange (habitat credit exchange program)—a market-based system that operates as a clearinghouse in which an exchange administrator, acting as a mitigation sponsor, manages credit transactions between compensatory mitigation providers and permittees or others authorized to implement actions that adversely affect protected species.

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

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

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

In-lieu fee program sponsor—any government agency or nonprofit natural resources management organization responsible for establishing, and in most circumstances, operating an in-lieu fee program. See also, “*sponsor*.”

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

Instrument, agreement – the document that reflects the regulatory decision by the Service that the conservation bank or other compensatory mitigation program or project satisfies applicable biological and durability standards and can, therefore, be used to provide compensatory mitigation under the ESA in appropriate circumstances. The instrument must be signed by the mitigation sponsor and landowner to reflect their acceptance of the terms. The instrument is not a contract between Service and any other entity. Any dispute arising under the instrument will not give rise to any claim for monetary damages by any party or third party.

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

Interagency Review Team (IRT)—an interagency group of federal, Tribal, State, and/or local regulatory and resource agency representatives that reviews documentation for, and advises the district engineer for the U.S. Army Corps of Engineers on, the establishment and management of a wetland or stream mitigation bank or an in-lieu fee program (33 CFR 332.2 and 332.8(b)). When the wetland or stream mitigation bank or in-lieu fee program sponsor also seeks credits authorized by the Service, then the Service becomes a co-chair of the IRT. See also, “*Mitigation Review Team.*”

Joint bank—a mitigation bank that has been designed to holistically address mitigation requirements under multiple programs and authorities for the same types of actions or activities.

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

Landscape-scale approach—an approach to conservation planning that applies the mitigation hierarchy for impacts to resources and their values, services, and functions at the relevant scale, however narrow or broad, necessary to sustain, or otherwise achieve established goals for those resources and their values, services, and functions. A landscape-scale approach should be used when developing and approving strategies or plans, reviewing projects, or issuing permits. The approach identifies the needs and baseline conditions of targeted resources and their values, services and functions, reasonably foreseeable impacts, cumulative impacts of past and likely projected disturbance to those resources, and future disturbance trends. The approach then uses such information to identify priorities for avoidance, minimization, and compensatory mitigation measures across that relevant area to provide the maximum benefit to the impacted resources and their values, services, and functions, with full consideration of the conditions of additionality and durability (600 DM 6E).

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

Management plan—the stewardship plan prepared to instruct the land manager in the operations and biological management for the compensatory mitigation site to, at a minimum, maintain the functions and services for specified species and other resources on the mitigation site. These may be short-term (“interim”) to last between the time a mitigation project is approved, its performance standards are met and its endowment fund has matured, or they may be long-term plans that include a detailed estimate of the itemized costs for all management actions required by the plan. These annual costs are used to estimate the size of the endowment that will be needed to maintain and monitor the mitigation site for the intended duration.

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

- Avoid the impact altogether by not taking the action or parts of the action;

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- Minimize the impact by limiting the degree or magnitude of the action and its implementation;
- Rectify the impact by repairing, rehabilitating, or restoring the affected environment;
- Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action; and
- Compensate for the impact by replacing or providing substitute resources or environments.

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

Mitigation bank—a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by Department of the Army permits (33 CFR 332.2).

Mitigation banks may include credits authorized by other agencies to compensate for impacts to other (non-Clean Water Act 404) resources. The term “mitigation bank” is sometimes used in the broad sense to include mitigation and conservation banks.

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 Review Team (MRT)—an interagency group of federal, state, tribal and/or local regulatory and resource agency representatives that reviews mitigation documents for, and advises their respective agency decision-makers on, the establishment and management of a compensatory mitigation program or project. See also, “*Interagency Review Team.*”

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

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

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

Performance criteria (also Performance standards)—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. Performance criteria are developed to measure success of habitat establishment or restoration at a mitigation site, as well as for long-term performance of habitat. The latter are tied to long-term management objectives and require less intensive monitoring over the long-term.

Permittee—any person who receives formal approval or authorization, generally in the form of a

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

permit or license, from a federal agency to conduct an action. See also, “*applicant*.”

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

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

Practicable—available and capable of being done after taking into consideration existing technology, logistics, and cost in light of a mitigation measure’s beneficial value and a land use activity’s overall purpose, scope, and scale (81 FR 83440; November 21, 2016).

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

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

Proposal—a compensatory mitigation project proposal that includes a summary of the information regarding a proposed conservation bank, in-lieu fee program, or other compensatory mitigation project or program at a sufficient level of detail to support informed comment by the Mitigation Review Team (MRT).

Release of credits—a determination by authorized decision-makers within agencies that are signatories to a compensatory mitigation project instrument, in consultation with the MRT, that credits associated with the approved instrument are available for sales or use. Credits are released in proportion to milestones specified in the credit release schedule as specified in the instrument.

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

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

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

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

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

Scoping—informal process whereby mitigation providers can get early feedback from the MRT on a mitigation proposal. This is not related to the NEPA process.

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

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

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

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

Threatened species—any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)).

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

Appendix B-1. Mitigation Site Due Diligence – Reviewing Preliminary Title Reports

Purpose: Identify any encumbrances and exceptions to title that could preclude protecting the conservation values of a site.

The title report includes the legal description of the property, including plat maps. If legal descriptions and plat maps are not included, then the title report should be rejected. The review should be focused on the list of exceptions to title and the legal description of the property.

What to look for:

- Existing easements or leases – *copies should be provided*
- Mortgages, liens, debts against the property
- Severed mineral or water rights – *check legal description*
- Language in the legal description: “Excepting therefrom.....” means that something is not included in the title; it could be property area (such as an inholding), or a right to something. This is often the wording used to describe severed mineral rights. This may not show up in the list of exceptions to title, so it is very important to read the legal description.

The fact that some of the items above exist may not preclude protection of the conservation values of a site, and you will need to understand the terms to make that determination. However, severed water and/or mineral rights are not conducive to protection of conservation values, unless the rights holder (and every subsequent rights holder in perpetuity) agrees to do so.

Why is this important?

Existing encumbrances or exceptions to title will take precedence over any subsequent conservation easement placed on a site, unless they are specifically subordinated to that conservation easement. The Service expects the conservation easement to be the primary encumbrance on a mitigation site, and this can be accomplished in such cases with a subordination agreement.

**Appendix B-2. Mitigation Site Due Diligence – Reviewing Phase I Environmental Site
Assessments**

Purpose: Identify any Recognized Environmental Condition(s) (REC) per American Society for Testing and Materials (ASTM) standard E1527-13, which standard has been adopted by the U.S. EPA. REC is defined as the “...presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment, (2) under conditions indicative of a release to the environment, or (3) under conditions that pose a material threat of a future release to the environment.”

The Phase I Environmental Site Assessment should include site photos, including historic aerials, and historic topographic maps. If these items are not included, and if database query results are not included, then it will be difficult to verify whether the preparer followed the ASTM standards.

The review should focus on the recommendations made by the preparer.

What to look for:

- Statement of Qualifications that the preparer meets the requirements to prepare Phase I ESA reports:
 - current Professional Engineer or Professional Geologist registration by a state, tribe, or U.S. territory (verify with current registration stamp and signature on report) AND have 3 years full-time relevant experience, or
 - Four-year Baccalaureate degree in engineering or science AND 5 years full-time relevant experience, or
 - 10 years full-time relevant experience
- The report should state that it was prepared to the current ASTM standard(s).
- The report should state whether or not any RECs are present on the site.
- Recommendations made by preparer – does the Phase I ESA report include recommendations for further testing (Phase II) or cleanup?

Updated Phase I Environmental Site Assessment:

There is often a gap in time between provisional and final approval of a mitigation proposal. In cases of 6 months or more elapsed time, the ASTM Standard requires the Phase I Environmental Site Assessment be updated. This is an abbreviated assessment, whereby the assessor verifies that no new RECs have been identified on the site since they prepared the original Phase I ESA report. This is less costly to the mitigation provider than repeating the full assessment.

Why is this important?

The presence of an un-rectified REC could render a site unsuitable for mitigation (i.e., would affect the conservation values), and could preclude easement-holder acceptance of a conservation easement, or government agency acceptance of a site in fee title, if that is called for in the mitigation proposal or plan.

Appendix C: Example checklist for monitoring and reporting

A checklist such as this should be included as an attachment or exhibit to a mitigation instrument. Its purpose is to remind the land manager or mitigation provider of the monitoring survey and reporting requirements, and it can be tailored to specific mitigation projects. It is also helpful for Service staff when reviewing the reports.

**Site Name
Monitoring and Reporting Checklist**

Please include the following information in the report, as applicable to the type of habitat/species on the conservation bank or mitigation site. Biological Monitoring Reports may be included as a subpart of the Annual Report, in those years where biological monitoring is required. **The checklist does not replace the report.** Reports should be submitted in bound hard copy and on a cd, with a completed copy of this checklist included. Reports for conservation banks should also be uploaded into the RIBITS cyber repository.

- Site Management** (site is in Interim Management Period Long-term Management
 - Photos documenting the current condition of the site;
 - Grazing (include supporting data and current photographs, RDM monitoring, etc.);
 - Other Vegetation/Thatch Management (include details of all actions taken or explain why no action was taken);
 - Mowing;
 - Prescribed Burn;
 - Herbicide Application;
 - Exotic/Invasive/Non-Native Species Management (including amount of such species, maps indicating where the species are present, and actions taken/to be taken- if no action is to be taken explain and include supporting data);
 - Fencing/Signage/Unauthorized Access (include description of actions taken/to be taken and a description and photos of current fencing and signage condition and any evidence noted of unauthorized access);
 - Trash Removal;
 - Authorized Visitation/Use of the Site (Please include an explanation of authorized visitation/usage of the site including dates, description of visit/usage, effect on the Bank);
 - Hunting/Fishing;
 - Education;
 - Easement Holder/Agency Visits;
 - Agricultural (non-grazing);
 - Mining/Drilling;
 - Recreation;
 - Other Authorized Tours;
 - Discussion/schedule of actions/tasks to be undertaken in the coming year;
 - Expenses incurred in carrying out management plan and monitoring activities;

2017 Interim Guidance: Implementing the Endangered Species Act Compensatory Mitigation Policy

- Species and Performance Monitoring- Methodologies, Results, and Photos** – Check all that apply (if this report is for a year requiring performance monitoring, please include data collected during surveys, success criteria, and discussion relating observations to achievement of performance standards and reference sites);

For mitigation sites with Vernal Pools (check all that apply):

- Large Branchiopod Surveys;
 - California Tiger Salamander Surveys;
 - Vernal Pool Floristics;
 - Vernal Pool Hydrology;
 - Plant Species (please list species below):
-

Non-Vernal Pool Species (check all that apply):

- San Joaquin Kit Fox;
 - Giant Garter Snake;
 - California Tiger Salamander;
 - CA Red-legged Frog;
 - Alameda Whipsnake;
 - Callippe Silverspot Butterfly;
 - Valley Elderberry Longhorn Beetle;
 - Plant Species (please list species below):
-

- Other (Please list species below):
-

- If no species monitoring was required please indicate if:

- Monitoring is not required at this site this year at all;
- What years monitoring has been/will be done: _____;

Financial

- Is endowment fully funded? Yes No;
- Current Balance (as of submittal);
- Deposits and/or withdrawals made to/from the Endowment Account;
- Expenses and Reimbursements;
- Interest and earnings on endowment account;

Construction Security - indicate whether: funded released not applicable;

Performance Security - indicate whether: funded released not applicable;

Interim Management Security - indicate whether: funded released;

Banks only: credit sale reporting - indicate whether: included in report provided separately;

**2017 Interim Guidance: Implementing the Endangered Species Act Compensatory
Mitigation Policy**

Documentation

- Photo Point Photos, with a map of the photo points;
- Copies of completed data sheets and/or copies of field notes for all surveys;
- Other: _____