

Department of the Interior Departmental Manual

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Part 600: Public Land Policy

Chapter 6: Implementing Mitigation at the Landscape-scale

Originating Office: Office of Policy Analysis

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6.1 **Purpose.** This chapter establishes Departmental policy and provides guidance to bureaus and offices to best implement mitigation measures associated with legal and regulatory responsibilities and the management of Federal lands, waters, and other natural and cultural resources under the jurisdiction of the Department of the Interior, including use of the best available science and landscape-scale approaches. This policy is intended to improve permitting processes and help achieve beneficial outcomes for project proponents, impacted communities, and the environment. In doing so, the Department will effectively avoid, minimize, and compensate for impacts to Department-managed resources and their values, services, and functions; provide project developers with added predictability, efficient, and timely environmental reviews; improve the resilience of our Nation's resources in the face of climate change; encourage strategic conservation investments in lands and other resources; increase compensatory mitigation effectiveness, durability, transparency, and consistency; and better utilize mitigation measures to help achieve Departmental goals.

6.2 **Scope.**

A. This chapter applies to all bureaus and offices responsible for managing water, lands, air quality, infrastructure, and natural, scenic, recreational, and cultural resources under the jurisdiction of the Department.

B. This chapter does not apply:

(1) where the Secretary does not have discretionary control over, or otherwise lacks authority to manage, the resources in furtherance of this chapter;

(2) when implementation costs are reimbursable under Reclamation laws; and

(3) to the Office of the Inspector General.

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New

6.3 **Authorities.** This chapter is consistent with Federal laws and other authorities, including the following:

- A. National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. § 4321 et seq.
- B. Federal Land Policy and Management Act (FLPMA), 43 U.S.C. § 1701 et seq.
- C. Endangered Species Act (ESA), 16 U.S.C. § 1531 et seq.
- D. Mineral Leasing Act of 1920, as amended, 30 U.S.C. § 181 et seq.
- E. Clean Water Act; 33 U.S.C. § 1251 et seq.
- F. National Landscape Conservation Systems (NLCS, Organic Act) – 16 U.S.C. § 7201 et seq.
- G. National Historic Preservation Act (NHPA) – 54 U.S.C. § 300101 et seq.
- H. Archaeological Resources Protection Act of 1979 (Public Law 96-95; 16 U.S.C. § 470aa-mm).
- I. Clean Air Act – 42 U.S.C. § 7401, et seq.
- J. Native American Graves Protection and Repatriation Act, 25 U.S.C. 3000-3013.
- K. Protection of Historic Properties, 36 CFR Part 800.
- L. National Park Service (NPS) Organic Act of 1916 and General Authorities Act of 1970, as amended – 54 U.S.C. § 100101.
- M. Paleontological Resources Preservation Act (PRPA) – 16 U.S.C. § 470aaa, et seq..
- N. Federal Power Act; 16 U.S.C. § 791-828c.
- O. Fish and Wildlife Conservation Act (16 U.S.C. § 2901-2912).
- P. Fish and Wildlife Coordination Act (FWCA)[16 U.S.C § 661-667(e), as amended].
- Q. Migratory Bird Treaty Act (16 U.S.C. § 703-7120) (MBTA).
- R. Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. § 668-668c) (BGEPA).

- S. The Wyden Amendment, 16 U.S.C. § 1011.
- T. Council on Environmental Quality (CEQ) NEPA Regulations, 40 CFR § 1500-1508.
- U. Department of the Interior (DOI) NEPA Regulations, 43 CFR Part 46.
- V. Bureau of Land Management Planning Regulations, 43 CFR Part 1600.
- W. Executive Order 13604, *Improving Performance of Federal Permitting and Review of Infrastructure Projects*, issued March 22, 2012.
- X. Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, issued January 17, 2001.
- Y. Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*, issued November 6, 2013.
- Z. Presidential Memorandum – *Modernizing Federal Infrastructure Review and Permitting Regulations, Policies, and Procedures*, issued May 17, 2013.
- ZZ. Presidential Memorandum – *Transforming Our Nation’s Electric Grid Through Improved Siting, Permitting, and Review*, issued June 7, 2013.

6.4 **Definitions.**

A. Mitigation. The Council on Environmental Quality (CEQ) defined mitigation in its regulations at 40 CFR 1508.20 to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing or eliminating impacts over time, and compensating for remaining unavoidable impacts. Mitigation as enumerated by CEQ is compatible with this policy, however, as a practical matter, the mitigation elements are categorized into three general types that form a sequence: avoidance, minimization, and compensatory mitigation for remaining unavoidable (also known as residual) impacts.

B. Mitigation Hierarchy. The elements of mitigation, summarized as avoidance, minimization, and compensation, provide a sequenced approach to addressing the foreseeable impacts to resources and their values, services, and functions. First, impacts should be avoided by altering project design, location, or declining to authorize the project; then minimized through project modifications and permit conditions; and, generally, only then compensated for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied. This policy affirms this hierarchical approach, while recognizing that in limited situations, specific circumstances may exist that warrant an alternative from this sequence, such as when seeking to achieve the maximum benefit to impacted resources and their values, services, and functions.

C. Compensatory Mitigation. Compensatory mitigation means to compensate for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or providing substitute resources or environments (See 40 C.F.R. § 1508.20.) through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions. Impacts are authorized pursuant to a regulatory or resource management program that issues permits, licenses, or otherwise approves activities. While the term “mitigation” can be used as shorthand for “compensatory mitigation,” in this chapter, “mitigation” is a deliberate expression of the full mitigation hierarchy and “compensatory mitigation” describes only the last phase of that sequence.

D. Landscape. For the purposes of this policy and related Departmental efforts, a “landscape” is as an area encompassing an interacting mosaic of ecosystems and human systems 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. The term “landscape” is not exclusive of areas described in terms of aquatic conditions, such as watersheds, which may represent the appropriate landscape-scale.

E. Landscape-Scale Approach. For the purposes of this policy and related Departmental efforts, the landscape-scale approach applies the mitigation hierarchy for impacts to resources and their values, services, and functions at the relevant scale, however narrow or broad, necessary to sustain, or otherwise achieve established Departmental 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.

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

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

H. Durability. A compensatory mitigation measure is “durable” when the effectiveness of the measure is sustained for the duration of the associated impacts (including direct and indirect impacts) of the authorized action. 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.

6.5 **Policy**. It is the policy of the Department to use the principles in paragraph 6.6 when evaluating and implementing mitigation when carrying out its legal and regulatory responsibilities and in the management of Federal lands, waters, air quality, and other resources and infrastructure under its jurisdiction. Consistent with applicable legal authorities, the Department affirms its authority to identify and plan for the extent, nature, and location of mitigation, including compensatory mitigation, and to require the implementation of effective mitigation. With this policy, and consistent with applicable authorities, for resources and their values, services, and functions that are considered by the Department as important, scarce, sensitive, or otherwise suitable to achieve established goals, or that have a protective legal mandate, each bureau and office should seek to achieve, through application of the mitigation hierarchy, a no net loss outcome for impacted resources and their values, services, and functions, or, as required or appropriate, a net benefit in outcomes.

6.6 **Principles**. In carrying out the policies set forth in paragraph 6.5 and consistent with applicable authorities and regulations, it is the Department’s policy to use the following set of principles when implementing mitigation:

A. Authorities. Make maximum use of applicable authorities to develop and apply policies that utilizes the full mitigation hierarchy to achieve the goals for Departmental managed resources and their values, services, and functions. Such use includes authority to decline authorization of projects if applicants cannot adequately mitigate impacts to levels required to achieve established goals and legal mandates for Departmental managed resources and their values, services, and functions.

B. Avoidance and Minimization. To avoid and minimize impacts to resources and their values, services, and functions across landscapes and over time, apply best management practices as identified in regulation, policy, plans, strategies, and project-level NEPA analysis. Seek to avoid authorizing activities that adversely impact units of the National Park System, National Wildlife Refuge System, National Landscape Conservation System, Areas of Critical Environmental Concern, and other special status areas. Avoidance should also be sought for resources and their values, services, and functions with protective legal mandates and those

considered important, scarce, sensitive, or otherwise suitable to achieve goals as identified through landscape-scale strategies, plans, and approaches.

C. Compensatory Mitigation. Consistent with the mitigation hierarchy, compensatory mitigation measures generally should not be considered until after all appropriate and practicable avoidance and minimization measures have been applied.

(1) When compensatory mitigation is necessary, the Department denotes a preference for compensatory mitigation measures that: (a) maximize the benefit to impacted resources and their values, services, and functions; (b) are implemented and earn credits in advance of project impacts; and (c) reduce risk to achieving effectiveness, such as through the use of a performance-based credit release.

(2) Compensatory mitigation measures should be derived from transparent methodologies that are consistent with methods used to determine impacts.

(3) To implement effective and consistent compensatory mitigation measures, bureaus and offices should: (a) hold all mechanisms for compensatory mitigation (e.g. mitigation banks, in-lieu fee programs, permittee-responsible mitigation, and others) to high, and equivalent standards; (b) clearly identify the party or parties responsible and liable for all aspects of the implementation and performance of compensatory mitigation measures; and (c) establish monitoring requirements to determine the effectiveness of compensatory mitigation measures in meeting identified performance standards.

D. Use of Landscape-Scale Approaches. Bureaus and offices should utilize landscape-scale approaches when developing, approving, and implementing strategies and plans, reviewing projects, and issuing permits. In doing so, bureaus and offices should produce NEPA documents that implement the policy (paragraph 6.5) and principles (paragraph 6.6) in this chapter.

E. Use of Landscape-Scale Strategies and Plans. Whenever possible, landscape-scale strategies and plans should be developed and utilized. When such strategies or plans are being developed, they should be established in coordination with Federal and state partners, tribes, and stakeholders, such as through Landscape Conservation Cooperatives and other multi-partied entities. Strategies and plans should be developed with meaningful, strategic, and deliberate engagement from stakeholders in advance of impacts, and wherever possible use existing plans, assessments, tools, models, and data.

F. Addressing Climate Change Impacts and Resilience. Identify and promote mitigation measures that help address the effects of climate change and improve the resilience of our Nation's resources and their values, services, and functions. Such efforts include:

(1) Protecting diversity of habitat, communities, and species, with specific consideration to conditions of topography and elevation;

- (2) Protecting and restoring core, unfragmented habitat areas, and the key habitat linkages among them;
- (3) Anticipating and preparing for shifting wildlife movement patterns;
- (4) Maintaining key ecosystem services;
- (5) Monitoring, preventing, and slowing the spread of invasive species (defined in Executive Order 13112 as alien species whose introduction does or is likely to cause economic, environmental or other harm to human health);
- (6) Focusing development activities in ecologically disturbed areas when possible, and avoiding ecologically sensitive landscapes, culturally sensitive areas, sensitive viewsheds, and crucial wildlife corridors.
- (7) Considering greenhouse gas emission in project design, analysis, and development of alternatives;
- (8) Protecting and restoring habitats and ecosystems that store carbon; and
- (9) Developing, analyzing, and using mitigation measures that account for uncertainty and risk, as needed, particularly when considering change agents such as climate change.

G. Timely and Transparent Processes. With appropriate public participation, use timely and transparent processes that provide predictability and uniformity through consistent application of standards, protocols, and metrics for avoidance and minimization measures, to register impacts, consider compensatory mitigation measures for remaining unavoidable impacts, and establish clear and measurable mitigation outcomes.

H. Durability and Additionality. Use compensatory mitigation measures that are durable and additional to existing conditions, as defined in this policy, and employ rigorous monitoring, adaptive management, and site protection measures to make certain that mitigation measures achieve their intended outcomes.

I. Budgetary and Financial Assurances. Confirm the availability and use of sufficient budgetary and financial assurances (whether the responsibility of the project developer, bureau, office, or third party) to make certain, with a high degree of confidence, the durability and effectiveness of mitigation measures.

J. Best Available Science. Incorporate best-available science into mitigation decisions, and continually seek better information in areas of greatest uncertainty. Develop and utilize scientific information and tools necessary to best determine baseline and future conditions, how to convert remaining unavoidable impacts to compensatory mitigation measures, and monitor and evaluate mitigation effectiveness.

K. **Monitoring and Evaluation.** Use rigorous compliance and effectiveness monitoring and evaluation to make certain that mitigation measures achieve their intended outcomes, or that necessary changes are implemented to achieve them.

6.7 **Equivalency Principles.**

A. As denoted in the principles (paragraph 6.6.), when requiring compensatory mitigation measures for remaining unavoidable impacts, bureaus and offices should hold all mechanisms for compensatory mitigation (e.g. mitigation banks, in-lieu fee programs, permittee-responsible mitigation, and others), including internal compensatory mitigation mechanisms of the Department and its bureaus and offices, to high, and equivalent standards. This includes, but is not limited to, confirming that the following is identified in decision documents or formal and binding agreements with compensation mitigation providers (e.g. mitigation banking instruments): (1) type of resource(s) and/or its values(s), service(s), and function(s), and amount(s) of such resources to be provided (usually expressed in acres or some other physical measure), the method of compensation (restoration, establishment, preservation, etc.), and the manner in which a landscape-scale approach has been considered; (2) factors considered during the site selection process; (3) site protection instruments to ensure the durability of the measure; (4) baseline information; (5) the mitigation value of such resources (usually expressed as a number of credits or other units of value), including a rationale for such a determination; (6) a mitigation work plan including the geographic boundaries of the measure, construction methods, timing, and other considerations; (7) a maintenance plan; (8) performance standards to determine whether the measure has achieved its intended outcome; (9) monitoring requirements; (10) long-term management; (11) adaptive management commitments; (12) financial assurance provisions that are sufficient to ensure, with a high degree of confidence, that the measure will achieve and maintain its intended outcome, in accordance with the measure's performance standards, and; (13) potentially additional information as necessary to determine appropriateness, practicability, and equivalency of compensatory mitigation projects, particularly as they relate to the principles (paragraph 6.6) in this chapter.

B. Additional conditions may apply to third party compensatory mitigation providers (e.g., mitigation banks, in-lieu fee programs, and others) as they can provide compensation for multiple impacting projects, and because they assume the legal responsibility for providing compensatory mitigation. These additional requirements include, but are not limited to, credit release schedules, service areas, accounting procedures, provisions assuming mitigation responsibility, default and closure provisions, and supplemental reporting protocols.

6.8 **Implementation.** The Department and its bureaus and offices will implement existing policies and practices and, when necessary, institute new policies and practices to:

A. Develop, or better utilize existing geospatial information systems that permit identification of existing and potential conservation priorities and development opportunities at the landscape-scale, and the tools and training necessary to promote their effective use in the development of landscape-scale mitigation strategies and plans.

B. Establish guidance for bureaus and offices and interested parties to develop landscape-scale strategies and plans that effectively implement the mitigation hierarchy to achieve the policy (paragraph 6.5) and employ the principles (paragraphs 6.6 and 6.7) in this chapter when developing and approving strategies and plans, reviewing projects, and issuing permits, particularly for major development activities such as energy and infrastructure, mineral, timber, and water resources extraction, among others.

C. Develop a template to inform future compensatory mitigation efforts. The purpose of this template will be to ensure that compensatory mitigation advances landscape-scale mitigation strategies and plans; provides effective means for addressing the remaining unavoidable impacts associated with development or use; frames the management of compensatory mitigation funds; set criteria for the certification of mitigation and/or conservation banks and others; and provides for periodic reporting on the effectiveness of completed mitigation measures.

D. Develop a monitoring and evaluation framework to determine the effectiveness of mitigation measures and progress toward the goals and objectives established by landscape-scale strategies and plans, and to direct adjustments when necessary to correct mitigation reversals and adapt to changing conditions.

E. Utilize the policy (paragraph 6.5) and principles (paragraphs 6.6 and 6.7) of this chapter when developing and approving strategies or plans, reviewing projects, and issuing permits that impact Departmental-managed resources and their values, services, and functions.

F. Support the concept and practice of mitigation and restoration banking as tools to expedite restoration implementation pursuant to Natural Resource Damage claims.

G. Conduct a periodic review of the execution of mitigation measures in existing land, air quality, and water management, permitting, environmental review activities and science and data investments, along with corresponding regulations and guidance, in order to fully implement the policy (paragraph 6.5) and principles (paragraphs 6.6 and 6.7) in this chapter.

6.9 Responsibilities.

A. Deputy Secretary. Oversees the Department's compliance with this chapter.

B. Assistant Secretary – Policy, Management and Budget. Provides support staff to monitor implementation of this chapter.

C. Program Assistant Secretaries. Confirm that their bureaus and offices comply with this chapter.

D. Heads of Bureaus and Offices.

(1) Report to their respective Program Assistant Secretary on the implementation of this chapter.

(2) Designate a Program Manager for advancing the goals of this chapter and overseeing program implementation.

D. Program Managers.

(1) Review and update existing regulations, policy, guidance, processes, and plans to confirm consistency with this chapter.

(2) Work collaboratively across bureaus and offices and with the Department to develop, use, and institutionalize policies and practices to implement this chapter, including efforts to conduct a periodic review of the execution of mitigation activities to confirm consistency with the policy (paragraph 6.5), principles (paragraphs 6.6 and 6.7), and implementation (paragraph 6.8) in this chapter.

(3) Confirm that persons conducting mitigation activities, including non-Federal persons, have the appropriate experience and training in mitigation best practices, and where appropriate, include measures in employee performance appraisal plans or other personnel or contract documents, as necessary; and coordinate with the Office of Acquisition and Property Management with regard to experience and training for contractors.

(4) Develop rigorous, clear, and consistent guidance, suitable for field staff to implement this chapter.

(5) Establish guidance for denying authorizations in decision documents when impacts to resources and their values, services, and functions are not acceptable.

7.0 Legal Effect. This policy is intended to improve the internal management of the Department. It does not create any right or benefit, substantive or procedural, enforceable at law or in equity by any person against the United States, its agencies, its officers or employees, or any other person. It does not alter or affect any existing duty or authority of individual bureaus or offices.