

Department of the Interior Departmental Manual

Effective Date: 09/28/2023

Series: Public Lands

Part 604: Landscape-Level Management

Chapter 1: Implementing Landscape-Level Approaches to Resource Management

Originating Office: Office of Policy Analysis

604 DM 1

1.1 **Purpose.** This chapter establishes Department of the Interior (Department) policy and provides guidance to Bureaus and Offices on implementing landscape-level approaches to natural and cultural resource management (herein described as landscape-level approaches).

1.2 **Scope.**

A. The policy in this chapter applies to the Department and its component Bureaus and Offices.

B. This chapter does not apply to the Office of the Inspector General.

1.3 **Definitions.**

A. Ecosystem Services. For the purposes of this chapter, an ecosystem service is any benefit that ecosystems provide to society. The benefits can be direct or indirect and vary in size and scope. Ecosystem services include provision of food, fresh water, fuel, fiber, and other goods; regulating climate, water, and diseases; supporting soils and nutrient cycling; and educational, aesthetic, cultural heritage values, recreation, and tourism.

B. High-Quality Information. For the purposes of this chapter, high-quality information is information that promotes reasoned, fact-based agency decisions. Specifically, if the information is relied upon or disseminated by Department Bureaus or Offices, the information must meet the standards for objectivity, utility, and integrity set forth in the Department's Information Quality Guidelines or be exempt from meeting those standards under one of the exemptions set forth in the Guidelines.

C. Indigenous Knowledge (IK). A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Indigenous Peoples through interaction and experience with the environment. It is applied to phenomena across biological, physical, social, cultural, and spiritual systems. IK can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation. IK is owned by Indigenous Peoples and is often intrinsic within

09/28/23 #5151

Replaces 1/19/17 #4071

customary or traditional governance structures and decision-making processes. Other terms such as Traditional Knowledge(s), Traditional Ecological Knowledge, Tribal Ecological Knowledge, Native Science, Indigenous Science, and others, are sometimes used to describe this knowledge system. This chapter uses the term Indigenous Knowledge (IK) throughout.

D. Indigenous Peoples. Native Americans, Alaska Natives, Native Hawaiians, Pacific Islanders, and others whose ancestors have occupied what is now known as the United States and its territories since time immemorial, including members of Tribal Nations.

E. Landscape. For the purposes of this chapter, a landscape is an area encompassing an interacting mosaic of ecosystems and human systems characterized by a set of common management conditions. 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. This term includes aquatic areas such as rivers, estuaries, and ocean environments.

F. Landscape Goals. For the purposes of this chapter, landscape goals are broad statements of present and desired future landscape patterns, condition, function, and services that meet multiple social, environmental, and economic goals of diverse stakeholders. Landscape goals can include desired conditions for commercial or economic practices as well as provisions that support ecosystem services to communities and the protection and conservation of habitats, species, or other resources. Goals may be linked to scale-appropriate measurable objectives.

F. Landscape-Level Approach. For the purposes of this chapter, a landscape-level approach (sometimes called a landscape-scale approach, multi-scale approach, or ecosystem-based approach) is a structured analytical method that informs conservation and resource management decisions at multiple spatial scales. Landscape-level approaches incorporate ecological principles to identify threats to, and opportunities to achieve, resource management objectives and prioritize conservation and resource management actions. Landscape-level approaches can assess landscape goals and critical attributes, resource availability, condition, and trend, and identify explicit resource objectives at multiple scales and often across administrative and political boundaries.

G. Nature-based Solutions. Sustainable management and use of natural features and processes to tackle socio-environmental challenges including, but not limited to, climate change, natural resource management, water security, human health, biodiversity loss, and disaster risk management.

H. Resource Management Objectives. For the purposes of this chapter, resource management objectives provide measurable characterization of a desired outcome for a particular natural or cultural resource. Where appropriate, the Department and its component Bureaus and Offices should develop resource management objectives that incorporate climate change considerations and implement management actions that maximize ecosystem functions and services.

I. Tribal Nation or Tribe. An Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a Federally recognized Tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. § 5130.

1.4 **Policy.** It is the policy of the Department to support conservation and resource management objectives that achieve landscape goals at multiple spatial and temporal scales. Where appropriate, the Department and its component Bureaus and Offices will incorporate conservation and resource management objectives that maintain or enhance ecosystem functions and services. The ultimate objective of this approach is to implement conservation and management actions across spatial and temporal scales, often across administrative and political boundaries, to enhance program and project outcomes in the context of a changing climate.

A. Where appropriate, it is the Department's policy to work with other Federal, state, Tribal, local, private partners, and stakeholders to:

- (1) Deploy landscape-level approaches to deliver habitat conservation and manage resources under the Department's authority.
- (2) Evaluate cost effective approaches to increase ecosystem resilience.
- (3) Enhance opportunities to best achieve the missions and goals of the Department and to avoid, minimize, or offset landscape-level impacts, such as habitat loss, fragmentation, and degradation; biodiversity loss; sea level rise; and other climate change effects and ecosystem stressors on natural and human communities.
- (4) Sequester greenhouse gases and protect ecosystem services.

B. Consistent with existing laws and regulations, it is the Department's policy to:

- (1) Promote and advance landscape-level approaches, and where appropriate:
 - (a) Develop approaches that meet conservation and resource management goals and objectives and identify opportunities to address climate change effects as well as atmospheric carbon reduction.
 - (b) Coordinate and implement nature-based solutions, or similar strategies, to reduce human and ecosystem vulnerabilities to climate change effects.
 - (c) Prioritize landscapes for conservation, improve conservation and management science, make resource management decisions, prioritize budget allocations, or establish voluntary and compensatory mitigation priorities.
- (2) Coordinate with diverse stakeholders. Where appropriate, the Department and its component Bureaus and Offices will support an inclusive approach when engaging with partners and stakeholders, including under-represented communities. This level of coordination will improve the transparency and maximize outcomes among the partners and stakeholders.
- (3) Use high-quality information.
 - (a) The Department and its component Bureaus and Offices are committed to incorporating high-quality information into decisions and will develop scientific

information and tools to provide better information in areas of greatest uncertainty. This includes development, maintenance, and utilization of geospatial information systems and a common set of data and tools, and the training necessary to promote their effective use in development of landscape-level approaches.

(b) Include IK, social science, and other high-quality information, where appropriate and available to inform understanding of climate change effects, baseline climate and ecosystem conditions, future conditions, ecosystem thresholds, and scenario selection.

(4) Consider actions at multiple scales. Where appropriate, the Department and its component Bureaus and Offices will consider conservation and resource management actions at multiple spatial and temporal scales to achieve key social, ecological, and economic goals. Specifically, consider how decisions at one scale may affect resources at other scales and can inform and achieve multiple resource objectives.

(5) Use high-quality information from multiple sources to develop interdisciplinary, science-based understanding of landscape dynamics. Integrate this information into a suite of tools useful to managers and decision makers. Conservation and resource management planning and decisions will incorporate risk management, appropriate methods and tools to consider potential future climate conditions, adaptation costs, and prioritize options to reduce vulnerability to environmental, social, and economic impacts of climate change.

(6) Integrate science, management, and monitoring efforts.

(a) Landscape-level approaches will be based on scale-appropriate, high-quality information that support efforts, including:

- (i) Synthesis of existing high-quality information.
- (ii) Identification and prioritization of outstanding questions that merit scientific investigation.
- (iii) Implementation of research efforts to address priority questions.
- (iv) Establishing a structure for delivering or reporting timely science and data.

(b) Where appropriate, Bureaus and Offices will use adaptive management principles, as outlined in 522 DM 1, *Adaptive Management Implementation Policy*, to evaluate the effectiveness of conservation and resource management actions.

(7) Respond to environmental change. Where appropriate, landscape-level approaches will incorporate decision support tools to improve the durability and transparency of Bureaus' and Offices' decision-making processes. These tools, along with robust stakeholder and public engagement, will inform and improve conservation and resource management actions in the

face of ecosystem transformation, and economic and societal changes that are driven by climate change.

(8) Maximize ecosystem functions and services for natural and human communities. Where appropriate, landscape-level approaches will support other Department priorities and initiatives, particularly where such strategies can improve ecosystem functions and services for natural and human communities.

(9) Address climate change. The Department and its component Bureaus and Offices will use landscape-level approaches, where appropriate, to respond to climate change effects, as directed by 523 DM 1, *Climate Change Policy*.

C. Where appropriate, when implementing voluntary and compensatory mitigation projects, the Department and its component Bureaus and Offices will:

(1) Coordinate to strategically leverage resources and implement complementary projects that maximize ecosystem functions and services.

(2) Support a landscape-level approach that maximizes mitigation outcomes.

(3) Implement mitigation for proposed actions that is durable and resilient to climate change effects and other ecosystem stressors.

D. To advance this policy and initiate implementation, the Department and its component Bureaus and Offices will:

(1) Foster a community of practice by establishing a Department-wide Landscape-Level Working Group (LLWG) comprising experts from each of the Bureaus and Offices subject to this policy. The LLWG will collaborate with other relevant working groups to efficiently carry out their mission.

(2) Work with the LLWG to develop resources, such as guidance and planning tools that assist Department Bureaus and Offices to implement landscape-level approaches. Resources may include development of nature-based solutions and decision support tools that incorporate climate change adaptation strategies such as managed species relocation.

(3) Work with the LLWG to identify landscapes to evaluate and improve the practice of a landscape-level approach that may benefit multiple Bureaus and Offices, re-evaluating and updating the priority landscapes and practices at least once every four years.

(4) Work with the LLWG to establish goals that may be useful for multiple landscapes, re-evaluating and updating goals at least once every four years.

(5) Integrate landscape-level approaches into Departmental strategic plans and budget submissions, where appropriate, and include measurable goals, data collection, analyses, and performance metrics to apply the principles of adaptive management (522 DM 1, *Adaptive Management Implementation Policy*).

(6) Deliver scientific and other information at scales and in forms that support and enable landscape-level approaches to management, adaptive management, and climate change adaptation strategies.

(7) Invite other departments and agencies (e.g., U.S. Department of Agriculture, National Oceanic and Atmospheric Administration, Environmental Protection Agency, and Department of Defense) to participate in the LLWG.

1.5 Responsibilities.

A. The Assistant Secretary – Policy, Management and Budget.

(1) Oversee the Department’s compliance with this policy, and provide staff support to monitor this policy’s implementation and coordinate budgets and practices supporting this policy.

(2) Establish an LLWG and designate a chair for the LLWG.

B. Assistant Secretaries. Ensure that their subordinate Bureaus and Offices comply with the policy in this chapter.

C. The Office of Policy Analysis (PPA).

(1) Serve as the lead Office for revising this policy when warranted by changes in technical information, Federal statutes, regulations, Department policy, or other conditions. Any Bureau or Office can initiate changes by contacting the PPA.

(2) Solicit and consider the views of all interested Departmental Offices and Bureaus when the Department contemplates changes to this policy. In recommending revisions to this chapter, Bureaus and Offices will provide the PPA with appropriate supporting information.

(3) When requested, provide technical assistance and guidance to Departmental Offices and Bureaus in understanding and implementing this policy.

D. Heads of Bureaus and Offices.

(1) Ensure that their organizations comply with this policy; report on a regular basis the progress made in implementing this policy to their respective Assistant Secretary; and communicate the requirements of this policy effectively to stakeholders.

(2) Ensure effective Bureau or Office participation in interagency landscape-level working groups.

(3) Identify an individual or individuals to participate in the LLWG and incorporate that role into their performance plan. Responsibilities include:

(a) Developing and periodically updating Bureau or Office policy and guidance to address landscape-level approaches; and preparing an annual report, if appropriate, on the application of this policy as it relates to Bureau or Office-specific missions and authorities, consistent with existing Departmental performance metrics.

(b) Working collaboratively with other Bureaus or 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 this policy.

(c) Ensuring that persons conducting activities related to implementation of landscape-level approaches have the appropriate experience and training to implement this policy.

E. The Landscape-Level Working Group.

(1) Update the charter, as needed, to direct the operations of the LLWG.

(2) Provide communication, coordination, and oversight of landscape-level activities across the Department including updating technical guidance, coordinating training and technical assistance, and supporting capacity building by:

(a) Synthesizing and integrating into guidance and trainings new research, best practices, case studies on landscape-level approaches to natural or cultural resource management, decision science, and climate adaptation.

(b) Developing landscape-level reporting metrics for Bureaus and Offices, collecting reporting data, and sharing reporting and lessons learned within and across Bureaus and Offices and among partners, Indigenous Peoples, and other collaborators.

(c) Preparing a biennial report on the application of this policy as it relates to Bureau or Office-specific missions and authorities, consistent with existing Departmental performance metrics.

(d) Developing strategies to promote Bureau and Office engagement and investment in the implementation of landscape-level approaches to natural or cultural resources management.

1.6 **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.