CENTER FOR LARGE LANDSCAPE CONSERVATION

PROTECTING ECOLOGICAL CONNECTIVITY ON PUBLIC LANDS

Management Plans and Their Implementation

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INTRODUCTION

The four largest federal land management agencies - National Park Service, U.S. Forest Service, Fish and Wildlife Service, Bureau of Land Management - are responsible for over 630 million acres of public land. Collectively, they have the potential to provide for the protection of both large core wildlife habitats and the lands and waters that link them together.

Our flora and fauna, many which are dependent on federal lands and waters, are increasingly vulnerable given the cumulative challenges from habitat loss and fragmentation, expanding human development, increasing recreational use and other resource demands, all exacerbated by climate change. Therefore, it is timely for the next generation of land management plans to evaluate and conserve ecological connectivity across the federal estate while at the same time partnering with tribal, state, and private land owners in areas where joint efforts are necessary. Conserving an ecological network would entail identifying and managing habitat or potential habitat to facilitate the ability of terrestrial and aquatic wildlife and plants to move within a landscape as needed for migration, gene flow, dispersal, or as a response to climate change.

With these challenges and needs in mind, it would be highly beneficial that future federal land management plans and projects evaluate and conserve ecological connectivity as soon as possible. To do so will require a systematic approach for each plan such as the one suggested below.

PRE-PLANNING

Delineate and assess geographic areas of interest under the current management regime.

1. Identify terrestrial and aquatic target species (i.e., focal species, climate change sensitive species, threatened/endangered species) and determine the ability of these wildlife and plants to move under current conditions and their ability to adapt to climate change based on the available potential core habitats and corridors.

2. Identify potential core habitats on and adjacent to the public lands planning unit. Assess current impacts and stressors as well as the likely impacts of climate change on these core areas.

3. Identify the areas providing connectivity between identified potential core habitats from step 1 above. Assess current impacts and stressors as well as the likely impacts of climate change on these corridor areas.

4. Identify any other ecological connectivity needs not captured by the coarse scale analyses of potential cores and corridors identified in steps 2 and 3 above.

PLAN DEVELOPMENT

Determine species requirements and describe the desired future condition on public lands.

1. Based on the assessment, establish areas to be maintained as core areas on public lands and ways to cooperatively protect core areas on adjacent lands, and then delineate areas needed to provide connectivity between them.

    a. Ensure coarse scale requirements for ecological connectivity are met for the planning unit by a network of cores and corridors.

    b. Ensure any other requirements for ecological connectivity are met for the planning unit not captured in the cores and corridors.

    c. Ensure latitudinal connectivity is maintained under climate change scenarios for at least two decades across the planning area.

    d. Ensure elevational connectivity is maintained under climate change scenarios for at least two decades across the planning area.

2. Develop the desired future condition for the cores and corridors identified in the planning unit.

3. Describe management objectives, guidelines and standards to meet the desired future condition. Include any restrictions on human use or development that are needed.

4. Identify extraordinary ecologically and/or culturally important corridors and provide them with a special administrative designation available in an agency's planning process, so that their primary management direction is to maintain ecological connectivity.

5. Provide a monitoring plan to evaluate the condition of the cores and corridors and adjust management when necessary.

PROJECT DEVELOPMENT & IMPLEMENTATION

Adhere to management plan direction and requirements.

1. Evaluate the effects of agency actions taken pursuant to the management plans on core areas and connectivity, and the effects of the project on wildlife and plants.

2. Consider alternative means of achieving project goals and objectives.

3. Ensure projects adhere to desired future conditions, management objectives, guidelines and standards for cores and corridors.

4. Develop a monitoring and reporting plan with clearly defined thresholds to assess whether the implemented project meets the plan's goals, objectives and standards to protect ecological connectivity.

SUMMARY

Protecting America's natural heritage is central to the mission of each of the four major federal land management agencies. Therefore, implementing a systematic approach to evaluating and conserving ecological connectivity on public lands during the planning process is crucial for federal land managers to successfully secure the persistence of native fish, wildlife and plants. As the next generation of land management plans are developed, incorporating ecological connectivity into each effort will help to address the challenges of habitat fragmentation, human use, development and climate change.

FEDERAL LAND MANAGEMENT PLANS

Bureau of Land Management (BLM): Resource Management Plans.

Area of Land Under Management: 256 million acres

Authority: Federal Land Policy and Management Act of 1976 and its implementing regulations; 36 CFR 1610, Resource Management Planning.

National Forests and Grasslands (USFS): Land and Resource Management Plans.

Area of Land Under Management: 191 million acres

Authority: National Forest Management Act of 1976 and its implementing regulations; 36 CFR 219, National Forest System Land and Resource Management Planning.

National Wildlife Refuges (FWS): Comprehensive Conservation Plans.

Area of Land Under Management: 96 million acres

Authority: National Wildlife Refuge System Improvement Act of 1997 (PL 105–57), Section 7, Refuge Conservation Planning Program.

National Parks (NPS): General Management Plans.

Area of Land Under Management: 85 million acres

Authority: Interrelated provisions of the National Park Service Organic Act of 1916 and the NPS General Authorities Act of 1970, including amendments to the latter law enacted in 1978. US Code, Title 16, Chapter 1, Subchapter I, Section 1a-7.