

Chapter 3 Conservation

Introduction

The Department of the Interior (DOI or Interior) supports conservation efforts across the United States through activities on public lands, scientific research, and grant programs, among others. Conservation of landscapes and ecosystems help support numerous activities, such as tourism, outdoor recreation, cultural observances, and working landscapes that all make significant contributions to the well-being of the nation and local communities. Interior's efforts help support species and habitat protection, the maintenance of working landscapes, and the provision of ecosystem services such as clean water, timber, fisheries habitat, and carbon sequestration.

The value added, economic contributions, and employment supported by DOI's conservation related activities are difficult to isolate because conservation could be a component of recreation, ecosystem restoration, water management, and even some mineral development activities. Many of the benefits of nature to households, communities, and economies are not defined with a set of consistent metrics nor are they bought and sold in markets. This creates challenges in the valuation of these goods and services.

Outputs

Figure 3-1 shows the location of conservation lands managed by the Bureau of Land Management (including BLM lands in the National Landscape Conservation System), the National Park Service (including all NPS lands), and the U.S. Fish and Wildlife Service (including National Wildlife Refuges and associated Waterfowl Production Areas) in the continental United States.

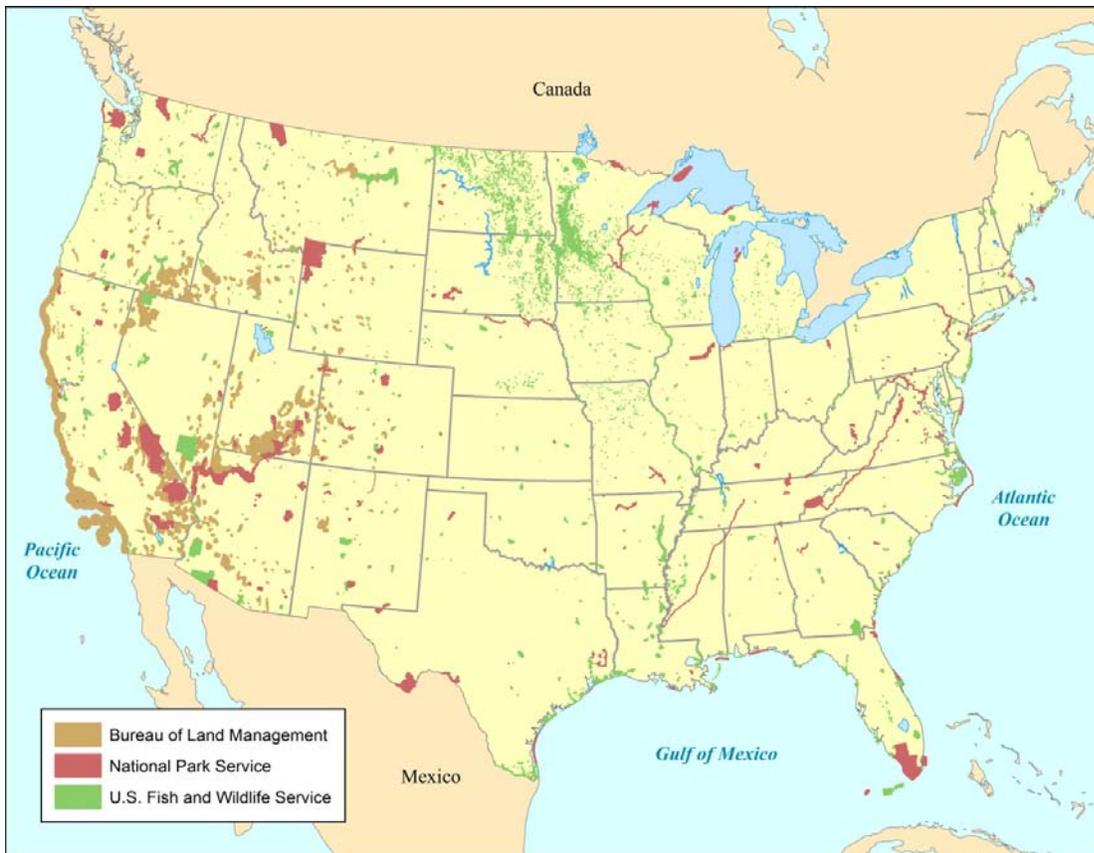


Figure 3-1. BLM, NPS and USFWS Conservation Lands in the continental United States

One of the primary ways federal land management agencies promote conservation efforts is through land and easement acquisition. The Land and Water Conservation Fund (LWCF) is the principal source of funding for federal public land and easement acquisition. The LWCF Act of 1965 was enacted to help preserve, develop, and assure access to outdoor recreation resources. Figure 3-2 shows Interior LWCF appropriations for land acquisition from FY2008 through FY2012 (all values have been converted to 2012 US\$, totals do not include Forest Service funding or LWCF funds not used for land acquisition).

The Migratory Bird Conservation Fund (MBCF) provides funding for FWS land acquisition programs to purchase waterfowl habitat in major migratory bird conservation areas and Waterfowl Protection Areas (WPAs). One of the major sources of funding for the MBCF is the sale of Federal Duck Stamps, which are required to hunt migratory waterfowl and can be used for admission to NWRs. In FY 2011 (the most recent year currently available), \$19.4 million of MBCF funding was disbursed for the acquisition of land and interests in land totaling 29,683 acres at major migratory bird conservation areas, and \$33.8 million for land and interests in land totaling 51,511 acres at WPAs.



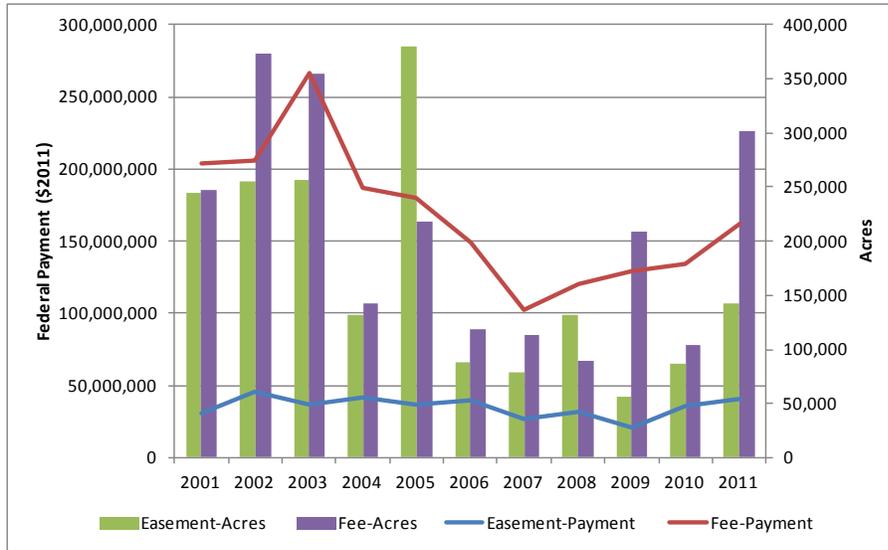
Source: DOI data.

Figure 3-2. Department of the Interior LWCF Land Acquisition Appropriations, FY 2008–FY 2012

Interior acquires land through a combination of fee purchase and easements. Figure 3-3 shows the trend (from 2001 to 2011) of payments and acres acquired for both fee simple purchases and easements for NPS, BLM and USFWS. Although variation from year to year can depend on a number of factors including land prices and the location of individual purchases, total payments for easement purchases have been significantly less than fee payments over the period.

In addition to land acquisition, DOI bureaus provide funding for conservation efforts through a number of grant programs. For example, the USFWS supports conservation through Coastal Wetlands Conservation grants, Cooperative Endangered Species Funds, the Multi-State Conservation Grant Program, and a number of other conservation grant programs. The NPS also provides grant funding for several natural and historical conservation programs.

DOI has made funding available for adaptive management efforts including Landscape Conservation Cooperatives. Other DOI investments that support conservation efforts include science research, fish hatcheries, and conservation management activities. One recent effort is on-going climate research led by USGS which addresses carbon sequestration and other aspects of climate science. DOI conservation efforts also include activities involving ocean issues and invasive species. For example, Interior played an important role in the development of the recently released National Ocean Policy Implementation Plan, as a key member of the National Ocean Council. The National Invasive Species Council (NISC) works to ensure that Federal programs and activities to prevent and control invasive species are coordinated, effective and efficient.



Source: DOI data.

Figure 3-3. Land Acquisition Payments and Acreage, 2001-2011

Value Added, Economic Contributions and Economic Values

The value added, economic contributions, and employment supported by DOI's conservation related activities are difficult to isolate because conservation could be a component of recreation, ecosystem restoration, water management, and even some mineral development activities.

One discrete aspect of DOI's conservation activities is related to land acquisition. In FY 2012 DOI's land management bureaus were appropriated \$146 million for land acquisition. These funds are estimated to be associated with \$65 million in value added, \$128 million in economic output, and to support 900 jobs. DOI also administers grant and payment programs that support conservation. Their economic contributions are discussed in Chapter 11.

Investments in conservation through land acquisitions and grant programs provide benefits to society in the form of species and habitat protection, maintenance of working landscapes, and the provision of ecosystem services (such as clean water, timber, fisheries habitat, and carbon sequestration). The measurement of benefits from conservation investments can provide important information to policymakers for future decisions. Economic techniques allow the benefits and costs of conservation investments to be represented in monetary terms, enabling comparison across locations or projects in a common metric. Absent the ability to quantify benefits in monetary terms, physical measures of benefits (e.g., number of species conserved) can be substituted, where either measure of benefit can be used to calculate a return on investment. Such calculations can provide valuable information to evaluate, target and prioritize land acquisition decisions or other conservation activities.

Some studies have estimated values for ecosystem services at specific locations. Interior has been involved in a number of recent studies that quantify ecosystem services and provide information for decision makers. For example, in the context of determining whether to support removing four dams on the Klamath River, DOI estimated nonuse values to capture the benefits that would accrue to society

from fish habitat and river ecosystem improvements in the Klamath River Basin.¹⁶ The BLM and USGS recently completed a pilot project on the San Pedro River watershed that evaluated alternative methods and tools that quantify and value ecosystem services, and assessed the tools' readiness for use in BLM's decision making process.¹⁷ USGS and Colorado State University have developed a public domain tool called Social Values for Ecosystem Services (SolVES) that uses data from public attitude and preference surveys to assess, map, and quantify social values for ecosystem services.¹⁸

Numerous factors can affect biological and ecological functions such as climate change, pollution, and changing land uses. These factors in turn can affect the conservation values and the net economic value of conserved lands. Additional research into the value of ecosystem services provided by conservation lands could provide additional information useful to policymakers when considering future public land acquisitions.

¹⁶ Benefit Cost and Regional Economic Development Technical Report For the Secretarial Determination on Whether to Remove Four Dams on the Klamath River in California and Oregon. U.S. Department of the Interior Bureau of Reclamation, July 2012.

¹⁷ Bagstad, K.J., Semmens, Darius, Winthrop, Rob, Jaworski, Delilah, and Larson, Joel, 2012, Ecosystem services valuation to support decision-making on public lands—A case study of the San Pedro River watershed, Arizona: U.S. Geological Survey Scientific Investigations Report 2012–5251, 93 p.

¹⁸ Sherrouse, B.C., and Semmens, D.J., 2010, Social Values for Ecosystem Services (SolVES)—Using GIS to include social values information in ecosystem services assessments: U.S. Geological Survey Fact Sheet 2010–3118, 2 p.