

### Indicator 1.06.

#### Status of Onsite and Offsite Efforts Focused on Conservation of Species Diversity

##### What is the indicator and why is it important?

This indicator provides information that describes onsite and offsite efforts to conserve species diversity. Onsite conservation efforts are those implemented within the forest. Offsite conservation efforts are usually measures of last resort which may move a species from its natural habitat or range to specially protected areas or into captivity as part of a breeding program or collection.

Some forest species and habitats may have declined to such an extent that intervention is required to safeguard them for the future. As a result of the biological diversity losses caused by human pressure, different sectors of society (governments, nongovernmental organizations (NGOs), and individual citizens) are increasingly involved in conservation measures. These conservation initiatives include scientific studies about species at risk, keystone species assessments, laws, and projects that reinforce conservation of biological diversity, forest restoration, and connectivity.

It is more practical to estimate expenditures associated with efforts to conserve biological diversity than to directly measure the results of those efforts. Expenditures by public agencies directed at conservation of biological diversity fall into four broad categories: (1) research associated with biological diversity, including among others, knowledge about keystone species, threatened species, functional groups, and spatial distribution; (2) environmental education and information about the importance of biological diversity, and (3) conservation projects related to habitat restoration and biological diversity management. A fourth category of this indicator is (4) the proportion of forest area managed for biological diversity conservation, outside of protected areas, relative to total forest area. This indicator is closely related to Indicators 1.02 and 1.09.

##### What does the indicator show?

Federal expenditures for research, education, and management associated with conservation of forest biological diversity are concentrated in five Federal agencies:

1. Forest Service
2. National Park Service
3. Bureau of Land Management

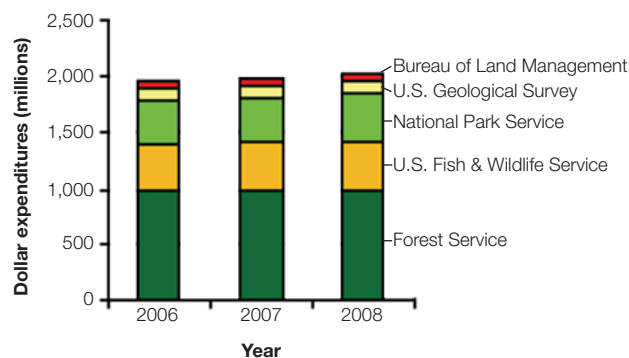
4. U.S. Fish and Wildlife Service

5. U.S. Geological Survey

In combination, those agencies spent approximately \$2 billion in 2008 on research, education, and management that fosters conservation of forest biological diversity (fig. 6-1). These expenditures are the equivalent of \$2.68 for every acre of forest land in the United States. State natural resource agencies and hundreds of NGOs make additional expenditures associated with research, education, and management for conservation of species diversity. Although the expenditures made by these groups for biological diversity conservation are impractical to compile and track separately over time, collectively, they represent significant investments that are assumed to have significant effects.

Most public forest land is managed with a priority on the conservation of species diversity but that objective is usually pursued as an integral part of a multiobjective management strategy. Of the 751 million acres of forest land in the United States, 328 million acres (44 percent) are in public ownership (fig. 6-2) (also see Indicator 1.01). Nationally, 106 million acres of predominantly public forest land are classified as

**Figure 6-1.** Expenditures by five U.S. agencies on research, education, and management associated with conservation of forest species diversity, 2008. Expenditures for conservation of biological diversity in general or conservation of species diversity in particular are not tracked separately in agency budgets. Therefore, values for each agency are a compilation of activities closely aligned with conservation of biodiversity and adjusted for relative proportion of forest versus nonforest land affected.



protected (see Indicator 1.02). At least 37 million additional acres of private land are protected in conservation trusts and similar instruments; however, insufficient data exist to tally only the forested acres under private protection.

Protected areas are integral parts of a national and global strategy to conserve biological diversity, but management of some species of concern requires management prescriptions that are incompatible with protected area regulations. Consequently, forest land outside of protected areas is also essential to conservation of species diversity.

### What has changed since 2003?

This indicator was not reported in 2003.

### Are there important regional differences?

Most of U.S. public forest land is in the West where much of that public forest is managed for conservation of species diversity as part of a multiobjective management strategy (fig. 6-2). Conservation of species diversity and habitat restoration are

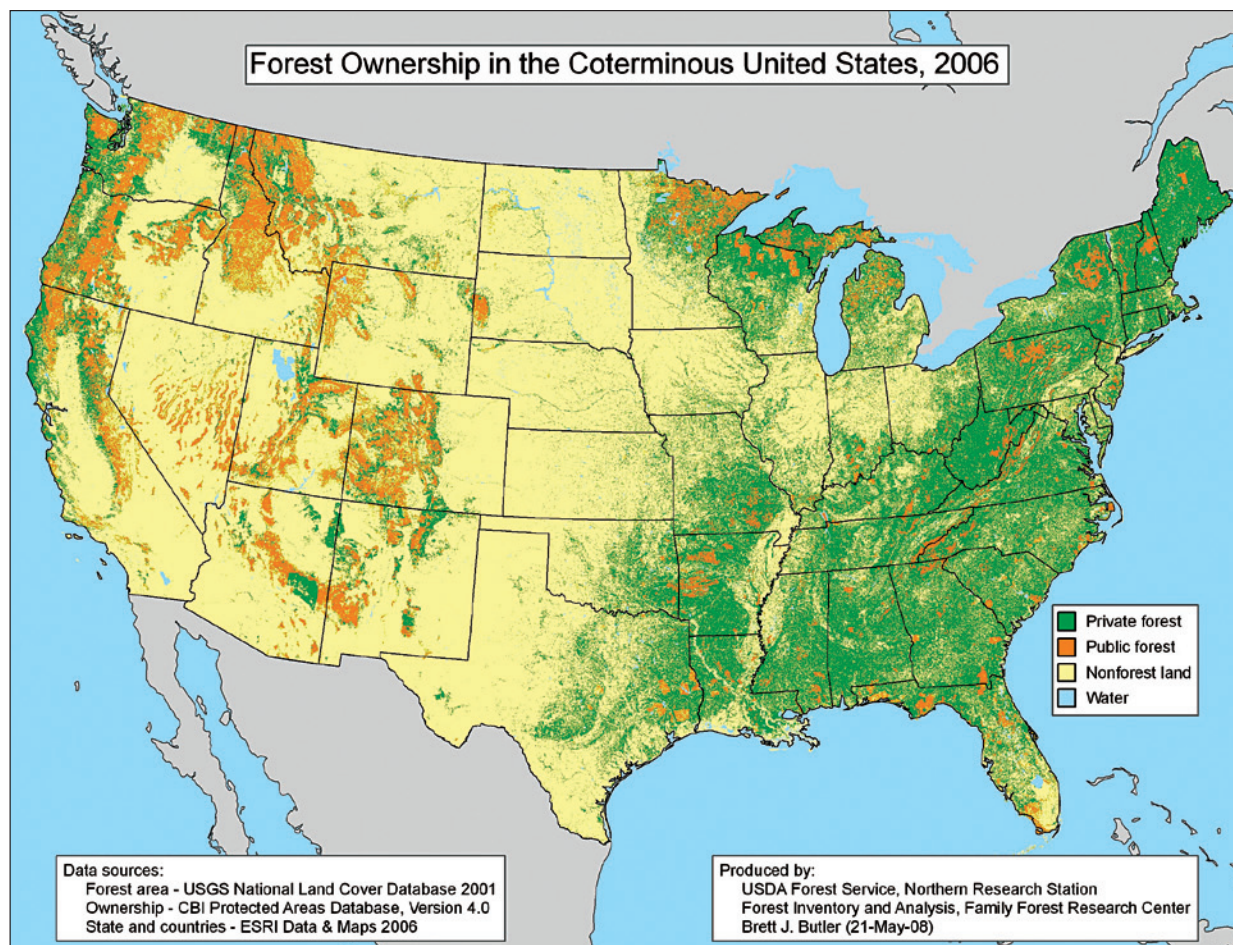
priorities for much of the public forest land in the East, but 87 percent of eastern forest land is privately owned. Consequently private forest owners in the East are important in large-scale efforts to conserve species diversity.

Private landowners play a large role in many aspects of species diversity conservation research, education, and management. Consequently, this indicator underestimates the full magnitude of efforts directed at conservation of species diversity.

### Why can't the entire indicator be reported at this time?

Conservation of species diversity is often linked with other management objectives, so associated Federal expenditures are impossible to fully separate from other objectives. Moreover, States, school districts, NGOs, and private landowners play a large role in many aspects of species diversity conservation research, education, and management. Consequently, this indicator underestimates the full magnitude of efforts directed at conservation of species diversity.

**Figure 6-2.** Forest land ownership in the conterminous United States. Public forest land is managed to conserve biological diversity, usually as part of a multiobjective management strategy. Public forest land is concentrated in the West. Alaska (72 percent) and Hawaii (34 percent) also have large proportions of their forest land in public ownership.



CBI = Conservation Biology Institute. ESRI = Environmental Systems Research Institute, Inc. USGS = U.S. Geological Survey.