

# Information about | roadless areas and wildlife

**Colorado's national forests provide habitat, forage, shelter, and water for a remarkable abundance of wildlife. Protection of roadless areas — the last unspoiled portions of our National Forests — supports the continued strength and vitality of wildlife. The presence of robust wildlife populations is integral to Colorado's economy, recreation, and environment.**



Roadless areas provide essential habitat for a broad range of species.

Photo courtesy of Colorado Division of Wildlife



Photo courtesy of Colorado Division of Wildlife

Large, unbroken tracts of undisturbed habitat have been critical to the successful re-introduction of the endangered Canada lynx in Colorado.

## Hunting and Big Game Habitat

Roads reduce both the size and ecological health of wildlife habitats of a number of species including popular game species such as elk and deer that are so important to Colorado's hunting traditions.

- Recreation in large protected areas free of roads and other disturbances contribute to Colorado's economy, bringing thousands of both local and out-of-state visitors to National Forest roadless areas every year. In 2004, almost \$2.3 billion was spent in Colorado by hunters, anglers, and wildlife watchers. Total spending in Colorado on outdoor equipment and gear that same year was \$1.3 billion.<sup>1</sup>
- Elk populations decline with increased road density. Research has found that two miles of roads per square mile leads to a 50% reduction in elk populations, while six miles of roads per square mile eradicates virtually all elk in that area.<sup>2</sup>
- Deer hunting opportunities may be significantly reduced as roads are developed in what is currently undisturbed backcountry. Restricting use of existing roads and enforcing limitations on building new roads can be important parts of improving buck deer age diversity.<sup>3</sup>

## Fishing and Wildlife Watching

Both recreational anglers and successful fisheries depend on reliable sources of clean water and minimal stream channel disruptions that result from motor crossings, pollution, and accelerated erosion. Protecting roadless areas becomes important, therefore, both for providing fishing opportunities themselves and as the source for clean water downstream. In addition to providing some of the best native fisheries in the state, roadless areas offer some of the more exciting wildlife viewing opportunities, as well.

- Trout fishing in Colorado attracts and challenges anglers daily. In addition to offering unbeatable fishing close to home for local citizens, Colorado's clean and healthy streams are waded by thousands of fly rod visitors each year. The recreational value of quality fishing streams is enormous; one study in Colorado's Upper Gunnison River Basin reported streamflow value estimates for recreation at \$810 to \$940 per acre-foot.<sup>4</sup>
- "Several important Colorado game and non-game species, including elk, bighorn sheep, and black bear, exhibit road avoidance or rely on remoteness from human activity as a key habitat characteristic."<sup>5</sup> Even road-side wildlife viewing depends on animals' ability to enjoy large and healthy habitat well away from roads.

**Some of the most exciting wildlife viewing opportunities are found in the undisturbed backcountry.**

**Expanded road networks and other encroachments on the landscape increase the fragmentation and destruction of natural habitats.**

**Habitat Fragmentation**

Over the past 150 years, expanded road networks and other encroachments on the landscape have increased the fragmentation and destruction of natural habitats. Such disturbances to the land are isolating many areas important to wildlife, creating “islands” in a sea of inhospitable habitat.<sup>6</sup> Roadless areas on national forests, as some of the largest tracts of relatively undisturbed land in the country, are often regarded by wildlife experts as critical linkages between “islands,” allowing wildlife relatively undisturbed land through which they can migrate and in which they can find refuge.

- Smaller, more isolated roadless areas may contain rare species, protect certain dwindling habitat types, and function as stepping stones or corridors to connect larger pieces of conservation lands.<sup>7</sup>
- More than one-third of inventoried roadless areas in National Forests are adjacent to federal conservation units – places like National Wildlife Refuges, National Parks, and Wilderness. By protecting larger complexes of land, we increase the viability of wildlife populations by facilitating migration and protecting interior habitats that have minimal disturbance. Preservation of the remaining roadless lands will increase the ability of conservation lands to support wildlife and the natural processes important to them.

**Protecting Colorado’s Diverse Species**

Roadless areas provide key wildlife habitat by providing networks of large intact areas needed by wide-ranging animals like elk and black bears. They also provide the diversity of ecosystems needed for shorter-ranging species of birds, mammals, reptiles, and amphibians, including at-risk species such as the boreal toad. Because of their size and location, roadless areas contain enormous potential for the conservation of the native biodiversity so important to Colorado’s traditions and economy.

- “Inventoried roadless areas alone and/or in combination with protected areas (e.g., Wilderness) function as a biological strongholds supporting a diversity of species. Biological strongholds play a key role in maintaining native species and biodiversity.”<sup>8</sup> A 2000 study showed that currently only 3 of Colorado’s major ecosystem types have 10% or more of their acreage in a protective status; by conferring protection to roadless areas, 10 of the 13 ecosystems would have at least 10% of their total area in a protective status.<sup>9</sup>
- Ecologists and wildlife managers suggest that a full range of ecological communities and elevation ranges should be protected. Currently, about 70% of Colorado’s well-protected lands lie at about 10,000 feet. To protect Colorado’s full suite of biodiversity, we should try to confer high levels of protection to large undisturbed areas at a mix of lower elevations, as well.<sup>10</sup>



Photo courtesy of Colorado Division of Wildlife

Fishing, hunting, and wildlife-watching are time-honored Colorado traditions, and bring billions of dollars into the state every year.

1 Statewide Comprehensive Outdoor Recreation Plan 2004

2 Lyon, L.J. (1983). Road density models describing habitat effectiveness for elk. *Journal of Forestry* 81: 592-595.

3 Mackie, Pac, Hamlin, & Dusek

4 Moskowitz, K and Talberth, J. 1998. *The Economic Case Against Logging Our National Forests*. Forest Guardians, Santa Fe, New Mexico.

5 Forest Service Roadless Area Conservation Final EIS 3-144 (2000)

6 Harris, L.D. 1984. *The Fragmented Forest: Island Biogeography Theory and the Preservation of Biotic Diversity*. Chicago, IL: University of Chicago Press.

7 Strittholt and DellaSala 2001

8 Forest Service Roadless Area Conservation Final EIS 3-125 (2000)

9 Southern Rockies Ecosystem Project. 2004. *The State of the Southern Rockies Ecoregion*. Colorado Mountain Club: Golden, Colorado.

10 Southern Rockies Ecosystem Project, 2005

For more information, visit [www.roadless.net](http://www.roadless.net) or contact:

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**Colorado's Forest Legacy**  
Protecting our wild forests, wildlife, and water