United States
Department of
Agriculture

Forest Service

Rocky Mountain
Region

Final Environmental Impact Statement

To accompany the Land and Resource Management Plan - 2002 Revision

WHITE RIVER
NATIONAL FOREST

FINAL ENVIRONMENTAL IMPACT STATEMENT VOLUME 1

for the

WHITE RIVER NATIONAL FOREST

LAND AND RESOURCE MANAGEMENT PLAN 2002 REVISION

Eagle, Garfield, Gunnison, Mesa, Moffat, Pitkin, Rio Blanco,
Routt, and Summit counties, Colorado

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Abstract

This **final environmental impact statement** (FEIS) documents analysis of seven alternatives developed for programmatic management of the 2.3 million acres administered by the White River National Forest. The Forest Service has identified **Alternative K as the selected alternative**.

Note to reviewers

The Forest Service believes that reviewers should be given notice of several court rulings related to public participation in the environmental review process. First, reviewers of Draft EISs must structure their response to the proposal to make clear the reviewer's position and contentions [*Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 US 519, 53 (1978)]. In addition, environmental objections that could be raised at the Draft EIS stage but are not raised until after completion of the FEIS may be waived or dismissed by the courts [*City of Angoon v. Hodel,* 803F.2d 1016, 1022 (9th Circuit 1986) and *Wisconsin Heritages, Inc. v. Harris,* 490. Supp. 1334, 1338 (E.D. Wis. 1980)].

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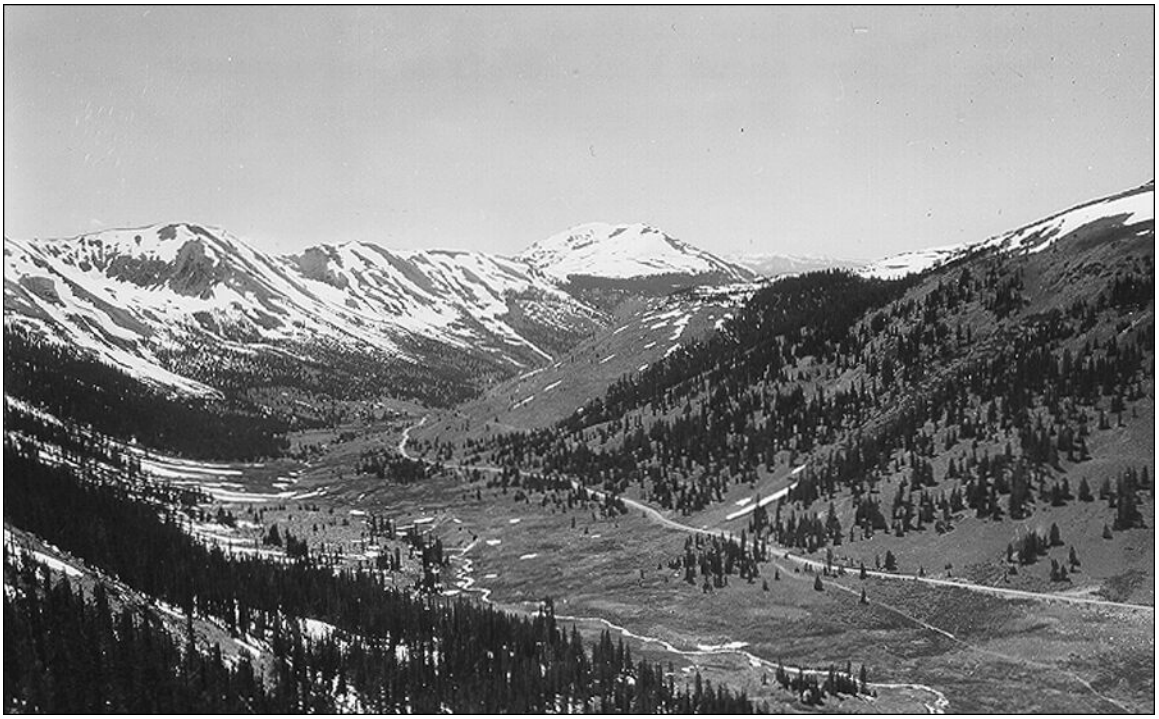


Upper Roaring Fork Valley

Preface

The planning, environmental, and decision processes

This **final environmental impact statement** (FEIS) analyzes seven alternatives for implementation of the **2002 Land and Resource Management Plan** (2002 Forest Plan) for the White River National Forest. A draft environmental impact statement (DEIS) that analyzed six alternatives was issued in **August 1999** and was available for public comment until **May 9, 2001**. Forest planners and interdisciplinary team members reviewed these comments and modified the direction in the forest plan, the alternatives, and the supporting analysis as needed. This FEIS incorporates those changes and identifies the selected alternative that will guide future management of the White River National Forest. The Regional Forester will document the basis of this decision in a **record of decision** (ROD).

A brief history of the forest planning process

Current forest planning regulations are an extension of historical Forest Service experience in land management planning. For many years the Forest Service has prepared plans to guide inventory development, identify special management areas, calculate sustainable use levels, and monitor resource conditions and trends.

In addition, Forest Service planning activities are guided by several key pieces of federal legislation. Under the **Multiple-Use Sustained-Yield Act of 1960** and the **National Forest Management Act of 1976** (NFMA), National Forest System lands are managed for a variety of uses on a sustained basis to ensure, into perpetuity, a continued supply of goods and services to the American people. NFMA amended the **Forest and Rangeland Renewable Resources Planning Act of 1974** (RPA) to specify that land and resource management plans (forest plans) be developed for units of the National Forest System.

Regulations to implement NFMA are set forth in 36 CFR 219. The White River National Forest's first forest plan was issued in 1984, and NFMA regulations state that forest plans should be revised on a 10-year cycle or at least every 15 years.

NFMA regulations establish extensive analytical and procedural requirements for the development, revision, and significant amendment of forest plans. They describe procedures for the formulation and evaluation of alternatives and require that alternatives consider a full range of resource outputs and expenditure levels. NFMA regulations also acknowledge the need to comply with other laws such as the Endangered Species Act, Clean Water Act, National Historic Preservation Act, and Archeological Resources Protection Act.

The landmark 1969 **National Environmental Policy Act** (NEPA) brought environmental analysis and public participation requirements into land management planning. NEPA ensures that environmental information is made available to public officials and citizens before decisions are made and before actions are taken. The aim is to help officials base their decisions on an understanding of environmental consequences, and to take actions that protect, restore, and enhance the environment. Essential to the NEPA process are accurate scientific analyses, expert agency input, and public scrutiny. These all have been part of this forest plan revision.

Relationship of the forest plan to the alternatives

Under NFMA, a forest plan establishes the goals, objectives, standards, and guidelines for management activities on the White River National Forest. It sets both **forest-wide** guidance and the additional direction needed to define each **management area prescription**. Management area prescriptions correspond somewhat to county zoning ordinances because they define the specific uses and conditions emphasized, allowed, or restricted on parcels of land. For this forest plan revision process, the goals, objectives, standards, and guidelines do not vary across alternatives. What does vary across alternatives is where and how extensively each management area prescription is applied over the land area of a forest.

Steps leading to development of the draft forest plan and DEIS

Revision of a forest plan occurs in a number of steps. Preliminary work to revise the 1984 Forest Plan began in 1994. Improved scientific methods and data processing techniques that were not available when the 1984 Forest Plan was developed were used during formal inventories of the forest's natural and environmental resources.

In 1996, the Forest Supervisor published a *Monitoring & Evaluation Five-Year Report*, which reviewed the status of National Forest System lands administered by the White River National Forest. This report found that conditions and public demands had changed significantly since inception of the 1984 Forest Plan and that a need existed to revise it.

The Forest Supervisor then solicited comments from the public on what factors the plan revision process should consider. After a series of open houses and media coverage, the White River National Forest received hundreds of comments from across the nation, but mainly from people who live near the forest. Issues raised by the public and by other agencies were examined by an interdisciplinary (ID) team of planners and resource specialists organized by the forest to spearhead the planning process.

An *Identification of Purpose and Need* document, issued in August 1996, summarized how public comments and monitoring and evaluation efforts were used to determine what areas of the existing plan were most in need of revision. After extensive review, the interdisciplinary team identified six areas, called *revision topics*, on which to base the planning process: (1) biological diversity, (2) travel management, (3) recreation, (4) roadless areas, (5) special areas, and (6) timber suitability and allowable sale quantity. Many different issues fall within these broad categories. Other issues are addressed in Forest Service guidance. The 1984 Forest Plan was revised using guidance provided by the *1992 Rocky Mountain Regional Guide* (USDA Forest Service 1992), as well as staff, stakeholder, other agency, and public input.

In July 1997, the forest released a report called *Analysis of the Management Situation* (AMS), which assessed the ability of the forest to supply goods and services in response to the public's demand for them. The AMS also provided a foundation for developing a broad range of reasonable alternatives to the existing plan. The report reviewed the current and expected level of goods and services provided by the forest, made projections of public demands for resources, and discussed the need to establish or change management direction in response. Complete reports and details of these findings are available at the Supervisor's Office, 900 Grand Avenue, Glenwood Springs, Colorado.

In the summer of 1997, the revision topics were presented to the public in a series of 10 open houses held in Aspen, Avon, Carbondale, Denver, Eagle, Frisco, Glenwood Springs, Grand Junction, Meeker, and Rifle. Forest managers solicited comments from the public at these open houses and through media disclosures.

After completing the AMS, forest planners turned their attention to formulating a preliminary array of forest management alternatives that responded to the six initial issues. These alternatives were based on the public comment received as well as on improved knowledge of the forest's resources recorded in its Geographic Information System (GIS) database.

By July 1998, six alternatives had been developed. They were described in depth in **Chapter 2** of the DEIS. By design, each alternative meets legal and administrative requirements and can be implemented if selected.

The next step in the revision process was to evaluate the environmental consequences of the alternatives presented in the DEIS. A summary of these effects was presented in **Chapter 3** of the DEIS. For each forest resource, resource specialists described its existing condition and discussed how the alternatives would affect it.

The DEIS was made available for public comment in August 1999. Based on public and congressional requests, the original 90-day comment period was extended to 9 months, closing May 9, 2001. Nearly 14,000 individual responses were received from the public, city, county, state, and federal officials, public interest organizations, and private businesses. A specialized Forest Service unit, the Content Analysis Team (CAT), reviewed all responses, organized them all into an electronic database by subject, and generated public concern reports. This helped the White River National Forest interdisciplinary team and decision-makers to systematically consider the voluminous public input and respond to it (see Appendix A—*Response to Public Comment*).

Steps between draft and final forest plan and FEIS

After considering public comments on the draft forest plan and DEIS along with changes in national policy and other new information, the interdisciplinary and leadership teams made necessary changes and revisions. These are presented in the FEIS volumes and the 2002 Forest Plan. One change of note is the formulation of a **new alternative**, **K**, which is described in **Chapter 2**. This was developed in response to public comment and new Forest Service policies since the DEIS was released. Analysis of all seven alternatives is presented in **Chapter 3** of the FEIS. This analysis has made use of improved mapping and updated analytical tools, processes, and information.

The FEIS also identifies the alternative selected for implementation. Reasons for this decision will be documented by the Regional Forester in a record of decision. A response to public comments is provided in Appendix A. Following approval of the forest plan and selected alternative, specific activities and projects will be planned and implemented as part of ongoing management activities on the forest.

Understanding the White River National Forest

The White River National Forest is one of the nation's largest and oldest national forests. Established in 1891 as the White River Plateau Timber Reserve, the forest later incorporated several other reserves to reach its current expanse of 2,270,000 acres. The White River National Forest is located in north-central Colorado west of the Continental Divide (**Figure 1**). The divide marks most of the forest's eastern boundary, which is about 60 miles from Denver. Ready access to the forest by residents of Denver and other Front Range communities is provided by Interstate 70, which enters the forest at the Eisenhower Memorial Tunnel.

The forest boundary encompasses National Forest System lands within nine different Colorado counties: Eagle, Garfield, Gunnison, Mesa, Moffat, Pitkin, Rio Blanco, Routt, and Summit. **Table 1** provides the official acreages of National Forest System lands within each of these counties.

Figure 1
Location of the White River National Forest in Colorado

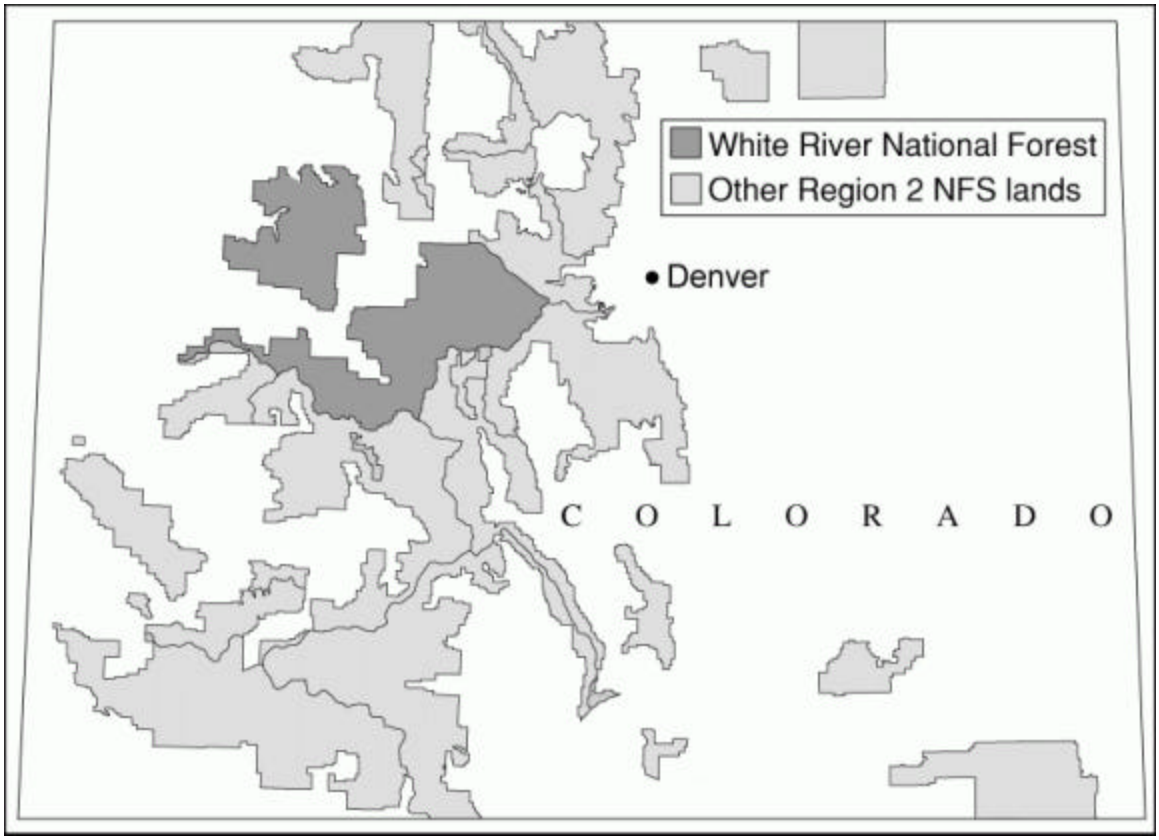


Table 1
Acres of National Forest System lands, by county, within the White River National Forest as of September 1997

	County								
	Eagle	**Garfield**	**Gunnison**	**Mesa**	**Moffat**	**Pitkin**	**Rio Blanco**	**Routt**	**Summit**
Acres	595,542	478,628	60,880	83,069	3,679	490,911	247,318	6,128	309,671

Source: *USDA FS-383*

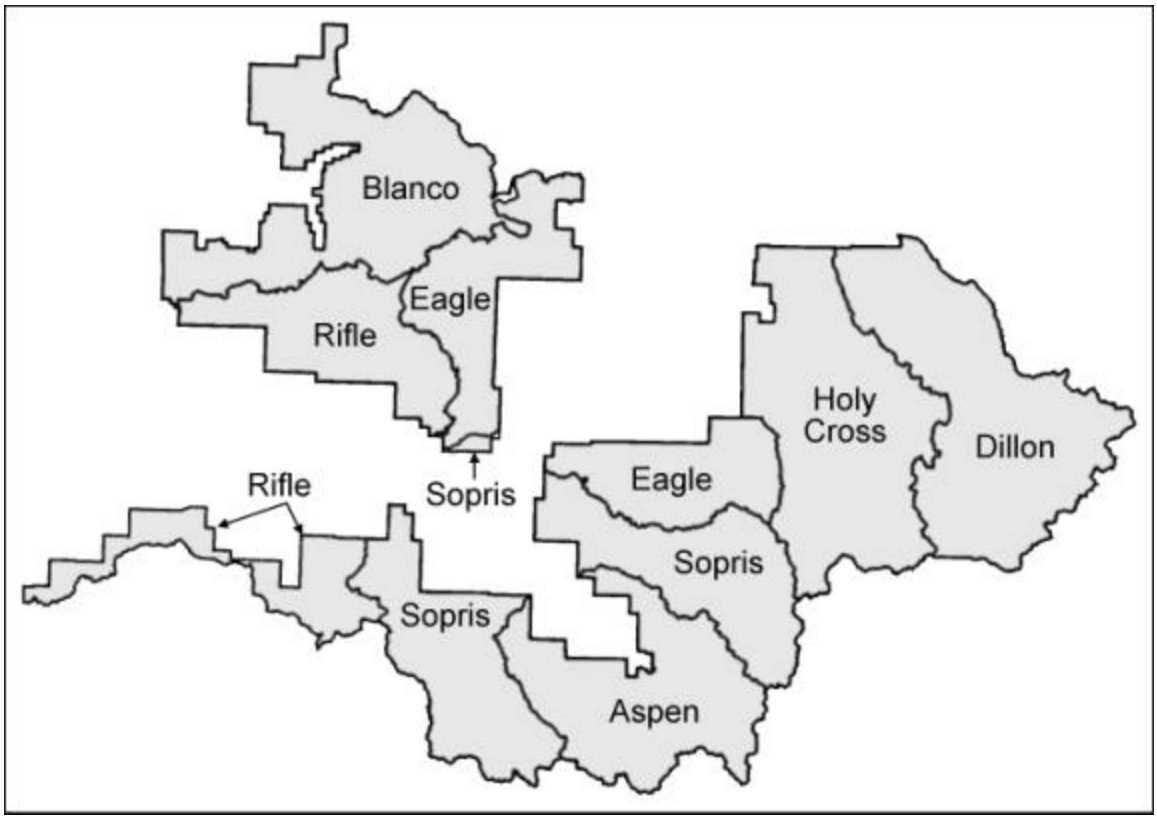
Figure 2 shows the location of these nine counties (and several others that border the forest) in relation to the forest boundary.

Figure 2
County boundaries in relation to the White River National Forest

In terms of recreational visitor days, the White River National Forest ranked fifth in the nation in 1995. Best known for its world-famous ski areas such as Aspen, Vail, and Breckenridge, the forest also features the beauty and solitude to be found in some 750,000 acres of wilderness; outstanding scenic vistas such as Hanging Lake and the Maroon Bells; and the nation's largest herd of elk. Another key forest attraction is the Colorado River, a boon to rafters, kayakers, and anglers.

Administration of the forest is handled by seven ranger districts: Aspen, Blanco, Dillon, Eagle, Holy Cross, Rifle, and Sopris. Each of these districts has a district office located, respectively, in the towns of Aspen, Meeker, Silverthorne, Eagle, Minturn, Rifle, and Carbondale. **Figure 3** shows the location of these ranger districts.

Figure 3
White River National Forest ranger districts



Physical environment

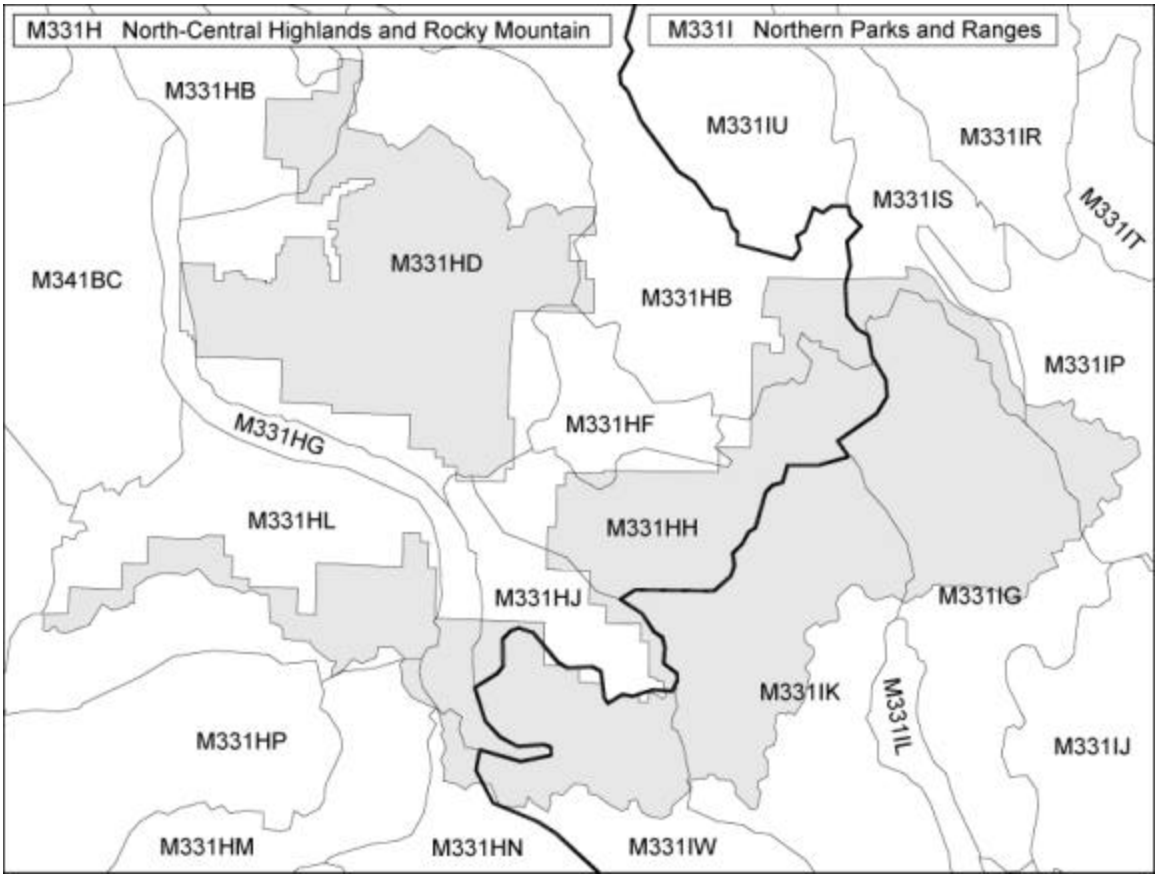
Few places in the United States feature as much topographic relief as the region of the White River National Forest. Its majestic mountain ranges attract visitors from throughout the world for sightseeing, skiing, and backcountry recreation. The forest rises from an elevation of about 5,800 feet in Glenwood Canyon to the summits of eight peaks higher than 14,000 feet. This wide range in elevation provides the White River National Forest with climate, soils, and plant and animal communities that are more diverse than those found in many other parts of the country. Measured annual precipitation ranges from less than 12 inches on the forest's western margin to more than 40 inches at higher elevations.

Mountain ranges include the Gore Range in the northeastern portion of the forest, the Elk Mountains along its southern margin, and the towering Sawatch Range in the southeast. In the northwestern portion of the forest are the Flat Tops, which are a series of high-elevation plateaus. The headwaters of the Eagle, Roaring Fork, Fryingpan, Crystal, Blue, and White rivers originate entirely on the forest.

Biological environment

The White River National Forest lies within two ecological sections—North-Central Highlands and Rocky Mountains, and Northern Parks and Ranges—as defined by the National Hierarchy of Ecological Units (ECOMAP 1993). **Figure 4** shows the forest boundaries in relation to these two sections. For a more detailed description of the ecological hierarchy with respect to the forest, refer to Appendix E in Volume 3 of the FEIS.

Figure 4
Location of the White River National Forest in relation to the two ecological sections



About two-thirds of the area is forested. The main cover types on these forested lands are Engelmann spruce-subalpine fir, lodgepole pine, and aspen. Most of these stands are in older age classes. Nonforested land makes up about 30 percent of the forest. These lands include grassy meadows, shrublands, alpine tundra, and rocky areas.

The White River National Forest provides habitat for about 300 wildlife and fish species, including common species such as elk, mule deer, and rainbow trout, and less common species such as the peregrine falcon and the Colorado River cutthroat trout.

Historical human use and occupation

From about 12,000 years ago, the area of the White River National Forest was frequented by bands of hunters known as paleo-Indians, who left signs of their passage throughout the region. In more recent times, western Colorado was the domain of the Ute Indians who occupied the area for several centuries if not longer. The Ute people were skillful nomadic hunters who followed herds of elk and bison on their seasonal migrations and established an elaborate network of foot trails that criss-crossed the area.

Exploration of the area of the forest by people of European origin began in the 1700s by a handful of Spanish missionaries. During the mountain man era of the 1820s and 1830s, fur traders traveled throughout western Colorado in search of beaver and other animals. The fur trade lasted only a few decades.

The nation's westward expansion came late to Colorado because its towering mountain ranges were a barrier to travel. But when gold fever struck in 1859, thousands of people came to Colorado to seek their fortunes. The 1870s brought the mining boom into lands of the White River National Forest, starting with the establishment of Breckenridge in 1869 and Aspen in 1879. During this period, numerous mining camps were built near timberline in the drainages of the Blue, Eagle, and Roaring Fork rivers. Miners and settlers made extensive use of nearby stands of trees as raw material for structures, mine props, and railroad ties.

The mining era was accompanied by a steady influx of farmers and ranchers, who, by 1881, had displaced the Utes from their homeland and from the forest. During the settlement period that followed, ranchers introduced thousands of head of cattle and sheep to the rangelands. In the same period, market hunting of deer and elk led to their near-extirpation from the forest by about 1910.

Unregulated exploitation of timber, range, and wildlife resources in the public lands of the West prompted the designation of national forest reserves. The White River Plateau Timber Reserve of 1891 was the second such reserve to be named. Authority over the reserve was granted to the newly established Forest Service in 1905.

Livestock grazing continued as the primary use of the forest for several decades. Severe overgrazing by 1930 led forest managers to greatly reduce permitted livestock numbers. This period also saw the introduction of protection for deer and elk to restore their numbers.

In the 1920s, the forest acquired national significance as the site of Mount of the Holy Cross, known for a large cross formation that appears on its northeast face. This feature attracted thousands of visitors to viewpoints near the mountain.

The U.S. Army's construction of its Camp Hale base along the Eagle River, where 16,000 10th Mountain Division troops were trained during World War II, played a major role in the forest's future. After the war, some of these veterans returned to establish the downhill ski areas that today are the source of most of the forest's recreation use. The Aspen ski areas were first established in the 1940s and 1950s, with Vail and the Summit County ski areas following in the 1960s. As the ski resorts grew, so did nearby communities.

The 1964 passage of the Wilderness Act was later followed by designation of about one-third of the forest as wilderness, making it a popular destination for hikers and campers.

Present social and economic environment

Communities adjacent to the White River National Forest include Aspen, Avon, Basalt, Breckenridge, Carbondale, Dillon, Eagle, Edwards, Glenwood Springs, Gypsum, Meeker, Minturn, New Castle, Rifle, Silt, Silverthorne, and Vail. In recent years, some of Colorado's highest growth rates have been in parts of the forest's five-county planning area. Most of this growth has occurred near the forest's ski areas. In the 1990s, these ski areas evolved into four-season resorts that attract visitors throughout the year. This change has greatly boosted employment in the tourism and commercial sectors of local economies and has led to population growth throughout the area.

Because of high housing costs near the ski resorts, however, many of these new residents must commute long distances to their jobs. As a result, many towns that historically served only the local ranching and farming population are experiencing rapid residential growth. This growth is accompanied by an influx of retail and service businesses. In the same period, the area's scenic and cultural amenities have prompted the development of vacation homes, second homes, and golf courses. As private lands near the forest are converted to these residential and commercial uses, the traditional agricultural economic base is increasingly supplanted.

Urbanization has posed new problems for forest managers. Development of private lands and the increased number of visitors to the forest have combined to:

- Reduce traditional points of access;
- Reduce or restrict wildlife habitat, migration corridors, and winter range;
- Increase the risk to human safety (from wildfire); and
- Increase the impacts that visitors have on trails, recreation sites, and other national forest resources.

Distinctive roles and contributions

The White River National Forest is . . .

Global/intercontinental/national scope

- A leading destination for skiing, tourism, and backcountry recreation;
- The setting for about 750,000 acres of wilderness;
- The setting for several world-famous resort communities, which host 13 percent of the nation's downhill skiing;
- The location of the renowned Mount of the Holy Cross; and
- The domain of the nation's largest elk herd.

Multi-state/regional scope

- The site of the most recreation use of any national forest in the Rocky Mountain Region;
- The location of eight of Colorado's 54 'fourteeners'—mountain peaks taller than 14,000 feet;
- Host to 30 percent of Colorado's recreation on National Forest System lands; and
- Host to 64 percent of the downhill skiing in Colorado.

Forest scope

- The centerpiece of a growing central Colorado economy and population base;
- The scenic backdrop for local communities; and
- A source of support for local industries and businesses.

Factors that may affect the White River National Forest

Global/intercontinental/national scope

- Changes in skiing demand;
- Changes in off-road vehicle technology; and
- Changing demographics of recreationists.

Multi-state/regional scope

- Population growth throughout the Rocky Mountains;
- Shifts in employment; and
- Shifts in management emphasis to ecosystem management.

Forest scope

- Population growth along the Interstate 70 corridor in Western Colorado;
- Changes in ecological conditions; and
- Changes in local industries.

Resource commodities and services from the White River National Forest

Recreation. Outdoor recreation, including skiing and other winter activities, is the primary use of the White River National Forest. In 1997, more than 8.9 million people visited the forest, which provides 13 percent of the nation's downhill skiing.

Dispersed recreation. About 44 percent of recreation on the forest is dispersed, which occurs without constructed facilities. Demand is projected to increase for trails and scenic resources that provide opportunities for hiking, backpacking, horseback riding, mountain biking, all-terrain vehicle and snowmobile use, sightseeing, and pleasure driving.

Developed recreation. Developed recreation includes all activities that take place on developed recreation sites, which have constructed facilities. Use of developed facilities currently is at 81 percent of practical capacity and is expected to increase to well beyond this current capacity.

Leasable minerals. Leasable minerals are those deposits of oil, gas, coal, etc. that are available for development under various laws. These deposits are generally located on the western side of the forest and are apart of the Piceance Basin. Production in the Divide Creek Unit has been ongoing since the mid 1950's. The Wolf Creek Storage Unit supplies natural gas to the Roaring Fork and Eagle Valleys. Demand for fossil fuels will increase over the life of the plan and development of resources on National Forest will increase. There are also significant geothermal resources yet to be developed. Demand for this resource will increase along with demand for fossil fuels.

Locatable minerals. Locatable minerals are those deposits subject to exploration and development under the Mining Law of 1872 and its amendments. About 42 percent of the forest outside of wilderness can be classified as having a moderate-to-high potential for locatable minerals.

Timber production. From 1940 to 1999, timber volume harvested averaged 15.2 million board feet (MMBF) per year, with an annual average of 22.4 MMBF between 1984 and 1999. About 37 percent of the forest's land base is 'tentatively suitable' for timber management. Only about 4 percent of the forest's total land area has been affected by harvest activities since 1900.

Livestock grazing. Permits are required for domestic livestock grazing on the forest. During the past 10 years, numbers have fluctuated annually depending on economics and weather. In 1998, 22,700 head of cattle and 51,500 head of sheep grazed on the forest. About 830,800 acres of land are considered suitable for grazing on the White River National Forest.