EXISTING AND POTENTIAL SKI AREAS

Abstract: Downhill skiing is a popular activity in Colorado. The ARNF receives an average of 1,366,230 skier visits annually. Predictions are that the rapid growth of the ski industry in the 1970s and 1980s has ended and that in the next decade skier demand will be met through expansions at existing areas, with few new ski resort communities being established. A trend evident in Colorado is that larger ski areas tend to succeed.

Each alternative provides for the continuing operation of the areas currently operating under special use authorization. Alternatives differ from each other by the number of acres allocated to each of the areas currently authorized as well as by acreages allocated to potential sites. Alternative A allocates 21,685 acres to ski-based resorts, existing and potential (MA 8.22). Alternative B allocates 16,527 acres, apportioned solely among the three areas currently operating under special use authorization. Alternative C allocates 21,544 acres and Alternative E 20,349 acres to develop ski areas. Alternative H allocates 9,101 acres, and Alternative I 22,142 acres.

INTRODUCTION

Developed ski areas are a longterm commitment to the occupancy of National Forest System land. This use was originally authorized under the Act of March 4, 1915, as amended July 28, 1956 (38 Stat. 1101; 16 USC 497.) which authorized term permits for structures or facilities on National Forest System land and set up maximum limits of 80 acres and 30 years and the Act of June 4, 1897 (Ch. 2, 30 Stat. 11, as amended; 16 USC 473-475, 477-482, 551) which authorized annual permits for the land occupied by ski runs and undeveloped portions of the ski areas. The authority for ski areas changed when the *National Forest Ski Area Permit Act of 1986* (16 USC 497b) was passed. This act had three purposes:

1. To provide a unified and modern permitting process for nordic and alpine ski areas on National Forest System Lands

2. To provide for ski area permits which more closely reflect the acreage and other physical requirements of modern ski area development

3. To provide a permit system which will be more commensurate with the longterm construction, financing and operational needs of ski areas on NFS lands.

Downhill skiing is an important recreation activity in the United States. In the 1992-93 season there were 54 million skier visits nationwide. Colorado ski areas have accounted for about 20.5 percent of that market share since the 1990-91 season (see Figure 3.28). The 1991-92 season was the first time Colorado skier visits exceeded 10 million. In the 1992-93 season visitation grew to 11.1 million skier visits, representing the highest annual growth recorded (6.7 percent increase) in the past 11 years (see Figure 3.29, based on data from the Snowmass EIS). Colorado

skier visits increased slightly in the 1993-94 season as well but were projected to decrease to approximately 10.9 million in the 1994-95 season (*Rocky Mountain News* June 9, 1995). Skier visit trends comparing Colorado and national visitation are shown in Figure 3.29. Colorado's growth in skier visits and its share of the national market can be characterized as steady but moderate. Colorado skier visits have increased approximately 2.8 percent, compounded annually. In any year, performance above or below this average will be affected by a number of variables. Weather and snow conditions will continue to be predominant variables, as well as local and nationwide economies, specialized marketing, transportation systems, technological advances and physical improvements made by individual ski areas and resorts. It is assumed that Colorado benefits from the synergistic effects of the high concentration of quality year-round resorts, as well as from a strong collective marketing program implemented by Colorado Ski Country USA. The data indicate that Colorado is likely to grow on a new plateau or base of skier visits in excess of 10 million skiers and to hold greater than 20 percent of the total U.S. skier market (Snowmass EIS).

The Arapaho and Roosevelt National Forests have three downhill ski areas currently operating under special use permit: Eldora, Loveland Basin and Loveland Valley (together called simply Loveland) and Winter Park-Mary Jane. In the last three years these three ski areas have contributed an average of 1,366,230 annual skier visits. This is an average of 12 percent of the 11 million skier visits Colorado receives each year.

CURRENT SITUATION

Loveland, Winter Park-Mary Jane and Eldora currently have a maximum capacity of 4,131,000 skiers per season. The length of season varies between ski areas from the largest average number of days of operation at Loveland (190 days) to the lowest average number of days at Eldora (140 days). In the 1993-94 season these three areas serviced 1,449,413 skiers and paid a total of $854,733.18 in fees to the United States.

Berthoud Pass Ski Area is currently allocated to the management area for potential and existing ski areas but has not operated under permit since the 1990-91 season. Recently, the current owner submitted an application to operate the ski area in the 1997-98 season.

Colorado Ski Country USA reports the Colorado ski industry's number of skier visits annually in three categories: destination resorts, destination Front Range resorts and Front Range areas (see Figure 3.30).

Winter Park-Mary Jane is listed as a Destination Front Range ski resort. It serves the same market as Arapaho Basin, Arrowhead, Beaver Creek, Breckenridge, Copper Mountain, Keystone, Silver Creek, and Vail.

Destination resorts and Front Range destination resorts are located in resort communities that are accustomed to handling mass visitor use and providing support services such as restaurants,

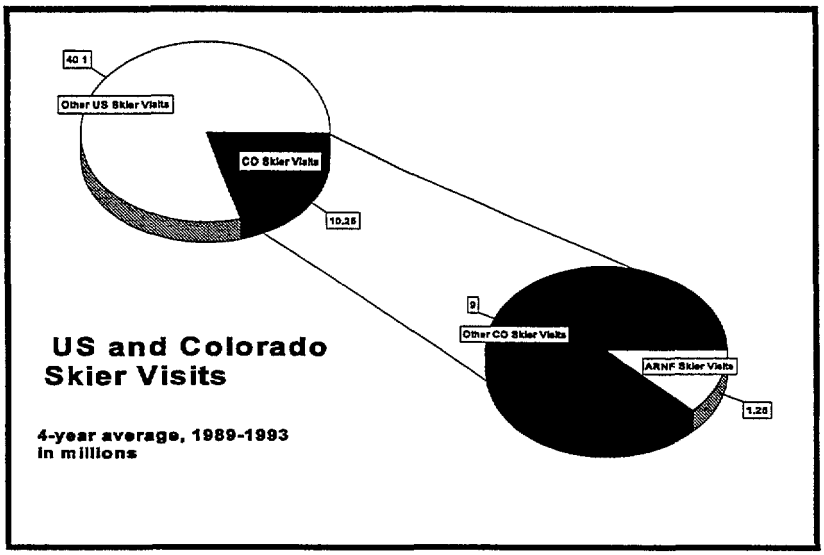


Figure 3.28

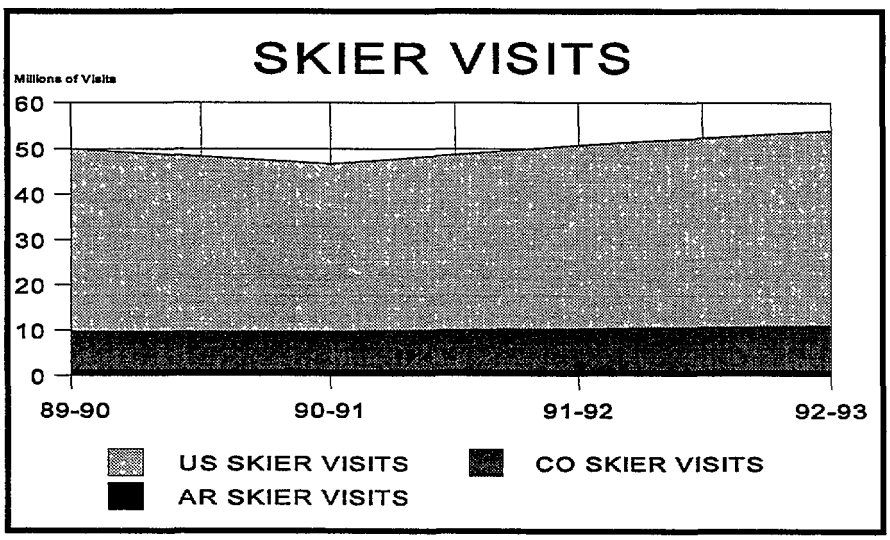


Figure 3.29

motels, lodges and public transportation. These ski areas provide diverse terrain and challenges, and year-round activities, such as mountain bicycling, golf, alpine slides, and concerts. The difference between a destination resort area and the destination Front Range resort areas is that the latter areas are also within one hour to one hour and forty-five minutes of the majority of the Front Range population (Colorado Ski Country USA).

Together destination resort areas and destination Front Range ski areas account for 95 percent of Colorado's 11 million skier visits of which the destination Front Range areas provide 59 percent. Winter Park-Mary Jane provides an average of 15 percent of the skier visits provided by these

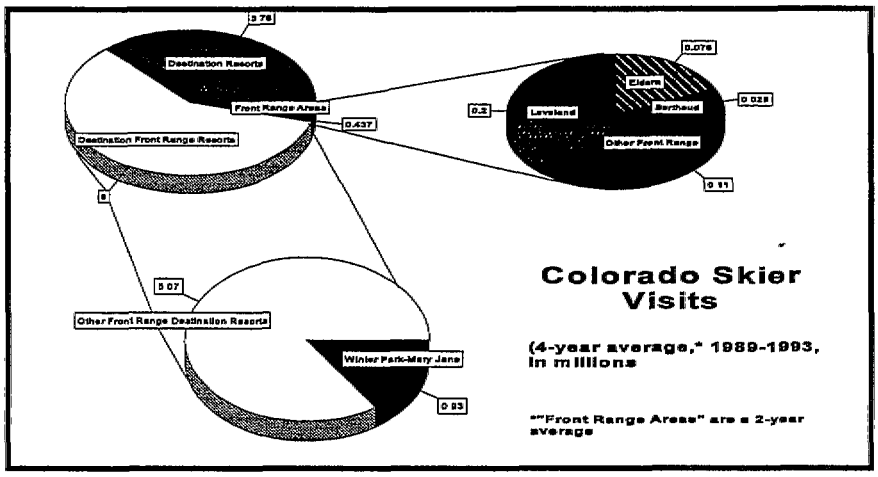


Figure 3.30

destination front range resorts annually. Their visitors come from both the local Front Range population, Colorado and the national market. In the last five years, Winter Park-Mary Jane has averaged an annual increase in skier visits of 3.67 percent.

Eldora, Loveland and Berthoud are listed as Front Range ski areas. They share the local market they serve with the destination Front Range ski resorts and with Ski Cooper, the only other Front Range resort that has remained open and operating in the last four seasons. During the 1993-94 season Eldora and Loveland contributed 84 percent of the skier visits in this category. Front Range areas contribute five percent to Colorado's annual 11 million skier visits.

During the last two seasons before their closing, other Front Range ski areas—Berthoud Pass, Ski Broadmoor, and Ski Estes Park—provided for an average of 20 percent of Front Range skier visits, while Eldora and Loveland combined provided for 65 percent and Ski Cooper contributed 15 percent to the total, for all areas in this category. It appears that the majority of the skiers once served by the closed areas are now being served primarily by Eldora and Loveland, both of which grew significantly in the seasons following the closures.

Eldora Ski Area increased skiers visits by 40 percent between the 1991-92 season and the 1994-95 season. This increase may be due to new ownership with solvent investors, improved lifts, effective marketing to the local population, new facilities for children and skier services, addition of a nordic center, and improved snowmaking capabilities. Eldora is also one of two ski areas providing night skiing. An average increase of 5.84 percent is predicted if growth continues to occur at the same rate.

Loveland has also increased the number of skier visits over the last five years at an average rate of 4.3 percent annually, with a significant jump in the number of skiers from the 1992-93 season (232,723) to the 1993-94 season (295,000), an increase of 62,377 skiers. The 1994-95 season projects a drop in the number of skiers. This can be attributed to a combination of many factors

such as the lack of early snowfall, and Interstate 70 being closed 25 days by adverse weather conditions during the ski season.

The October 1994 issue of *Ski Magazine* (Gosselin 1994) conducted a nationwide survey which identified readers' preferences for the most desired elements in a ski area. The three most important items cited were snow conditions and grooming, terrain, and value. Other important items listed were lifts and lines, challenge, fair weather, accessibility, lodging, food, apres-ski and family programs. Two of the Arapaho and Roosevelt ski areas ranked in this survey. Winter Park-Mary Jane rated twelfth (Gold Medal) and Loveland came in thirty-eighth (Silver Medal).

FUTURE TRENDS

The 1992 *Rocky Mountain Regional Guide* and the *Planning Considerations for Winter Sports Resort Development* predicted that the rapid growth of the ski industry in the 1970s and 1980s has ended and that in the next decade skier demand will be met through expansions at existing areas, with few new ski resort communities being established.

The number of downhill ski areas has declined in recent years, and larger resorts have increased their capacities. According to the United Ski Industries Association in 1991, the overall trend has been a reduction in skier capacity and a gradual decline in the annual number of skier visits. This has not been the case in Colorado, however. While the number of ski areas has decreased, the current trend is to expand capacity and improve the quality of services and equipment in order to retain present customers and attract new ones. There will also be more effort to attract international visitors to the United States.

A trend evident in Colorado is that larger ski areas tend to succeed and expand while smaller, marginal areas struggle to stay in business and many fail. Since 1982, 224 small ski areas (nationwide) have been forced to close due to an inability to compete with larger ski areas (Clear Creek County Economic Diversification Study 1994, Draft). Nine smaller Colorado ski areas that operated in the 1982-83 ski season did not operate in the 1993-94 season. Some of these areas still have ski lifts and facilities in place, but most are in a deteriorated condition. The cost of operation could continue to force increases in lift ticket prices, closing the gap between ticket prices at larger resort areas and smaller day use areas, and making smaller areas' survival still more difficult.

Currently, the three operating ski areas on the Arapaho and Roosevelt National Forests (Eldora, Loveland and Winter Park-Mary Jane) can provide for a 75 percent increase over the 1994 capacity by completing expansions that are currently in master development plans, expansions proposed in new master development plans and/or through development of potential expansion capacity listed in the Rocky Mountain Region Colorado Ski Area Capacity Table (see Table 3.142). Most of the development listed in ski areas' master development plans should be completed by 2005. These expansions could provide additional capacity for 1,375,600 skiers per season, with limited expansion still possible at all three operating ski areas. By 2005 Winter Park's proposed expansion will have increased capacity to accommodate 851,200 additional

skiers per year. Loveland's master development plan (currently under NEPA analysis) calls for a capacity to accommodate 524,400 additional skiers per year. The revival of the Berthoud Pass ski operation could contribute an additional capacity of 25,000 skiers per season. Capacity is also available at other Front Range destination ski resorts and Front Range areas (listed in Table 3.142), which serve the same markets as the Arapaho and Roosevelt National Forest ski areas.

Table 3.142 Rocky Mountain Region, Colorado Ski Area Capacity

REGION 2 NATIONAL FOREST	SAOT CAPACITY 89-90 (COMFORTABLE) BY AREA	ADDITIONAL SAOT EXPANSION CAPACITY WITHIN PERMIT BOUNDARY		POTENTIAL SAOT EXPANSION CAPACITY OUTSIDE PERMIT BOUNDARY
		Approved	Potential	
Arapaho and Roosevelt	28,675	6,975	2,800	
Berthoud Pass	400		100	
Loveland	5,000		2,700	
Winter Park-Mary Jane	21,275	6,275		
Eldora	2,000	700		
GM/Unc/Gunn[a]	17,800	16,400		
Pike/San Isabel	9,700	3,250	1,600	11,130
Rio Grande	3,345	2,221	7,708	
Routt	14,500	1,600		16,000
San Juan	6,800	13,500	2,200	5,700
White River	93,637	29,000	19,150	10,350
COLORADO TOTALS	174,457	72,946	33,458	28,780

[a] Grand Mesa/Uncompahgre/Gunnison National Forests

POTENTIAL SKI AREAS AND REGIONAL GUIDANCE

The 1992 *Rocky Mountain Regional Guide* identifies four categories of ski area sites which include developed and potential ski areas. Category 1 ski areas are divided into three groups: 1) existing areas with expansion potential; 2) areas committed to project planning; 3) good sites served by existing ski areas or resort communities.

Category 2 ski areas are inventoried downhill ski sites that are rated as good and have adequate transportation systems in place. Category 3 ski areas are inventoried downhill ski sites rated as good but have inadequate transportation systems, and Category 4 sites are inventoried downhill ski sites rated as marginal. The total capacity for Category 1 areas exceeds the projected growth

demand for the next decade. The direction in the regional guide is to not process applications for potential ski areas rated as Categories 2 through 4, unless state and local governments concur with the proponent's statement of need.

This inventory was completed in 1990. At that time it listed Berthoud, Eldora, Loveland, and Winter Park-Mary Jane as Category 1 areas (existing with expansion potential). Berthoud Pass, however, has not operated since the 1990-91 season. Devils Thumb, also Category 1, was rated as a good potential site served by existing ski areas or resort communities.

Mineral Point-Bowen Gulch was rated as a Category 2 site, and inventoried both as a good site with an adequate transportation system. St. Marys Glacier was rated as a Category 3 site, with good physical features but an inadequate transportation system. Twin Sisters and Comanche Peak were rated as Category 4, ski areas with marginal potential.

POTENTIAL SKI AREA SITE DESCRIPTION

Devils Thumb

Devils Thumb, although rated as a Category 1 site, is no longer under consideration due to a land exchange in which the majority of the lands suitable for ski area development passed to private ownership. The new owners of the land have notified the Forest Service that they do not wish to develop a ski area.

Mineral Point-Bowen Gulch

Mineral Point-Bowen Gulch, the only Category 2 site on the Forests, is no longer a viable potential site because of the 1993 Wilderness Bill which included the site in the Never Summer Wilderness (Bowen Gulch Study Area).

St. Marys Glacier

St. Marys Glacier has good snowfall and other physical attributes that are, however, limited in scale. The major drawback is that public transportation systems are inadequate to accommodate expected use. Antiquated lifts, a small parking lot and deteriorated facilities currently located on private land are obsolete by today's standards. It would require substantial start up and development investments to bring them up to today's standards and to develop slopes on National Forest System lands. This area was previously contained on private land and operated marginally as a ski area. It has not operated in the last 8 to 10 years.

In the 1984 *Forest Plan*, acres were allocated on National Forest System lands as a potential expansion of this area. Allocation of NFS land adjacent to St. Marys would assist in maintaining the potential economic opportunity on private land described in the Clear Creek County Economic Diversification study. The NFS land required to maintain this opportunity is small in acreage and surrounded by private land. The allocation in the revised *Forest Plan* is much smaller than in the 1984 plan due to the designation of James Peak as a Special Interest Area. If

St. Marys is developed in the future, it will most likely be a relatively small ski area serving beginners and families.

St. Marys Glacier would share the Front Range ski area market and compete with well-established areas such as Eldora and Loveland, as well as with the ski areas along the I-70 corridor. Its ability to compete effectively and draw enough visitors from the Front Range and the established clientele of other areas would be hindered by an inadequate transportation system (a long, steep and winding road), high sewage treatment costs and terrain insufficiently diverse to draw enough skiers to become financially sound and recover investment dollars. St. Marys Glacier, although rated as a good site for physical attributes, such as snow, is thus considered financially marginal. The proposed area is also located in an existing residential area where many residents could oppose development and the impact that associated traffic would have on their solitude--often cited as the reason they moved there.

Twin Sisters and Comanche Peak

Twin Sisters, near Estes Park, is a marginally rated area, based on both the physical potential of the mountain and adverse weather conditions. Natural snowfall is limited, and snow making would be a requirement for, rather than a supplement to, normal operations. The cost of snow making and the development of the ski area would make operation costly ($800-$1200 per acre). The adverse weather conditions and the lack of natural snow would make competing with other larger day-use areas difficult. In 1984 a prospectus was issued to determine interest in preparing a master development plan for eventual development of the ski area. The Forest received no response.

Comanche Peak has marginal potential based on the physical characteristics of the mountain, a lack of adequate snowfall and inadequate public transportation systems. There has been no interest in development since 1980. The once-proposed ski area is located next to the Comanche Peak Wilderness, and potential development could affect the quality of the scenic and solitude elements of the wilderness. Access to the area is limited to the Pingree Park Road, a long dirt road.

Both Comanche and Twin Sisters were originally under consideration to provide day-use ski area opportunities to the residents of Northern Colorado. This area was partially serviced at one time by Hidden Valley Ski Area in Rocky Mountain National Park and Ski Estes Park. Since the removal of Hidden Valley in the early 1990s there has been no documented interest in developing any additional sites.

The Northern Colorado population targeted by these areas is now being served by Steamboat Springs, approximately 3 hours away, the Snowy Range near Laramie, Wyoming (1 3/4 hours), Eldora (1 to 2 hours), Winter Park-Mary Jane (2 ½ hours), Loveland (2 hours) and other Front Range and Front Range destination resort areas. Given the history of other small ski areas in Colorado, the cost of development, snowmaking and providing for an adequate transportation system, would not result in economic stability for either Comanche or Twin Sisters.

Squaw Pass

Squaw Pass was not allocated as a potential ski area in the 1984 *Forest Plan* nor brought forward in the Rocky Mountain Regional Guide. There has been interest by Clear Creek County to consider this ski area as a potential site in the *Forest Plan* revision. Squaw Pass currently has no developed ski area facilities on either public or private land, and would have to be developed from scratch. To develop the area to today's standards would require development and investment in lifts, parking, ski runs, sanitation systems, water systems, snowmaking, roads, and base-area structures. There is no current application on file to determine the feasibility of the site. The site's low elevation, low average snowfall (2 to 3 feet), short snow cover season (3 months), marginal weather for snowmaking, inadequate slope protection, occasional high winds, low vertical rise (1,000 to 2,000 feet), high development costs, and access problems rated it as a marginal site in 1975. During an inspection of this area in 1965, bare ground was showing in a year considered to have good snowfall, indicating problems with snow retention. Attaining enough water to ensure an adequate base for this area would be very costly and perhaps difficult. The low elevation could make snowmaking impossible at times. The area would have to draw a substantial number of users to cover investment and high operation costs. Squaw Pass would be in direct competition with other well established Front Range areas such as Eldora and Loveland, which offer more diverse terrain, better snowfall, and established clientele.

See Figure 3.31 ARNF Ski Areas map at the end of this section for the location of existing and potential ski areas.

ENVIRONMENTAL CONSEQUENCES

CONSEQUENCES COMMON TO ALL ALTERNATIVES

Development of any of these potential sites without ensuring that there was a strong enough demand to provide economic stability would be highly unlikely in today's financial markets. In the unlikely event that this were to occur and the areas failed, there would be a short-term impact on visual quality, wildlife habitat capability, undeveloped recreation opportunities, and other valuable resource needs. Failure of these areas would be likely considering the recent history of smaller ski areas where physical attributes for either snow, terrain, or amenities were marginal. This could result in abandoned and deteriorated improvements on National Forest System lands that require extensive rehabilitation, pose a health and safety danger to the public, and place the burden of removal on the United States Government.

The supply of skier opportunities through expansion of existing areas seems to be adequately keeping up with the increase in the number of skiers in the Front Range ski area market. The expansions under current analysis at Loveland combined with growth at Eldora and the permitting of Berthoud Pass, will provide an adequate supply for the expected increase in the number of skiers by 2005. If skier numbers continue to grow at the current rate for Loveland and Eldora (4 to 6 percent annually) in 2005 these areas will be utilizing approximately 60 percent of their combined capacity, which is within the range of comfortable skiing capacity. If hard economic times or low snowfall years occur, the rate of increase in use at these areas may slow

and come closer to the average Colorado ski visitation growth rate of 2.8 percent annually, with a lower percent of capacity utilized.

ALTERNATIVE A

Alternative A allocates 21,684 acres to management area (MA) 8.22 developed ski areas (potential and existing). It allocates acres to the existing operating ski areas of Lake Eldora, Loveland and Winter Park-Mary Jane. It also allocates acres to potential ski area sites at Comanche Peak, Berthoud Pass, Bowen Gulch, St. Marys Glacier, Devils Thumb and Twin Sisters.

ALTERNATIVE B

Alternative B allocates sufficient acres to Lake Eldora, Winter Park-Mary Jane, Loveland, and Berthoud Pass to support expansion outlined in current or proposed master development plans. It also allocates a small acreage to St. Marys, maintains the terrain necessary on NFS lands to support development of a ski area on the adjacent private lands. Skier demand will be met for the Front Range through the continuance of these areas as well as other Front Range and Front Range Destination resorts.

ALTERNATIVE C

Alternative C allocates more acres to the existing Eldora Ski Area and to potential areas at St. Marys Glacier and Berthoud Pass. It would provide greater expansion potential for Eldora. It would provide greater expansion potential for Berthoud in terms of skiable terrain, but that might exceed what the current base area could provide in skier support. An increase in acreage for St. Marys would reduce the acres available for dispersed recreation. The allocation does, however, maintain the availability of terrain necessary on NFS land to support development of a ski area on the adjacent private lands. If the area were developed to this size it would put even a greater demand on the existing and inadequate transportation system. Squaw Pass Ski Area is allocated under Alternative C, but development could detract from the current wildlife habitat use and old-growth stands.

ALTERNATIVE E

Alternative E provides for greater expansion opportunities at Eldora Ski Area and more skiable terrain at Berthoud Pass and St. Marys Glacier. Expansion would be available beyond the capability of the base area at Berthoud, and beyond the transportation system limits at St. Marys Glacier. Allocation of St. Marys maintains the availability of the terrain necessary on NFS land to support development of a ski area on the adjacent private lands. Squaw Pass is allocated at the same acreage as in Alternatives C and I, and, as in those alternatives, development could detract from the current wildlife habitat use and old-growth stands.

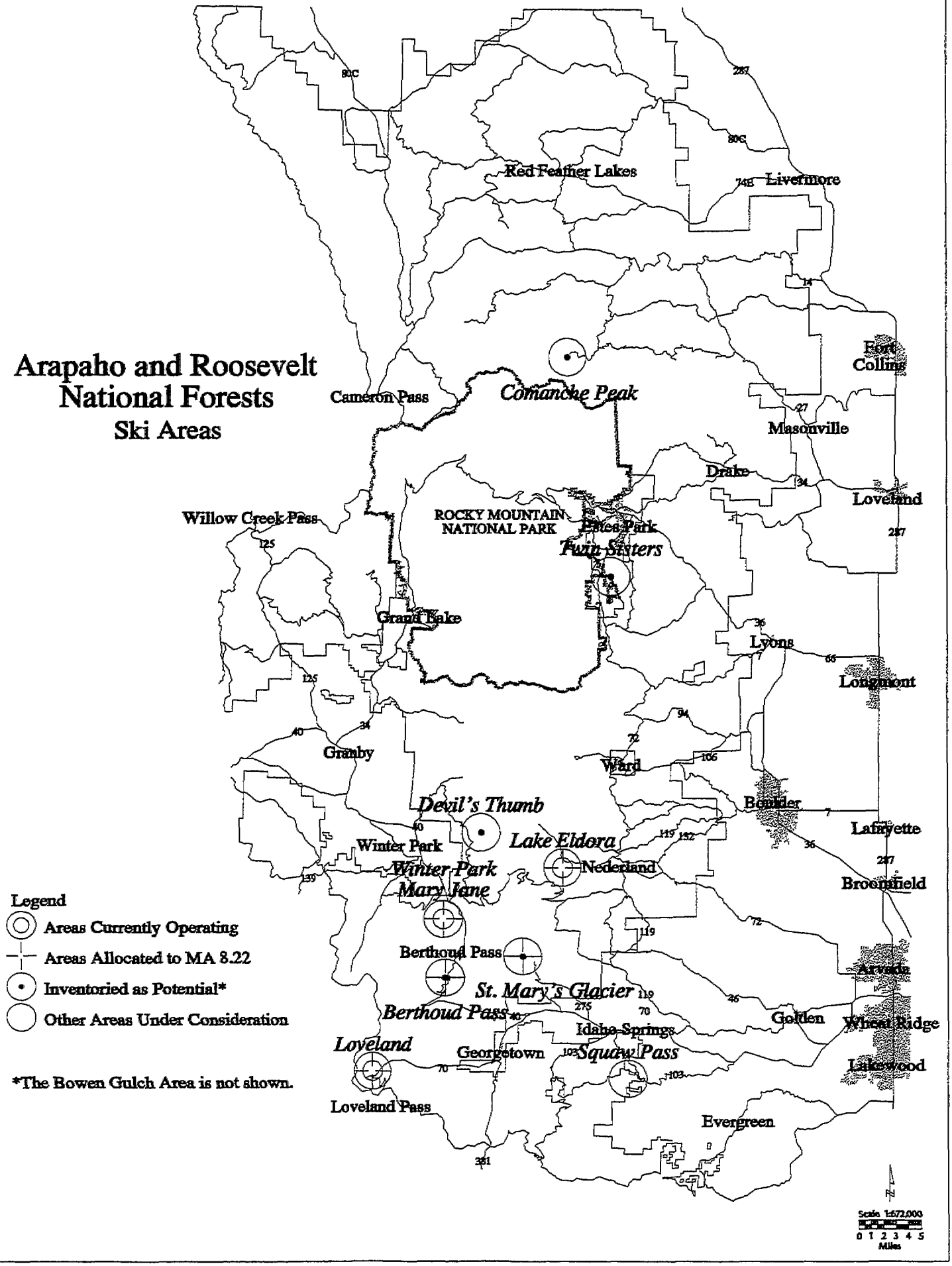
ALTERNATIVE H

Alternative H reduces the expandable acres for Loveland, but allocates current acres to Lake Eldora, Winter Park-Mary Jane, and Loveland. Skier demand will be met for the Front Range through the continuance of these areas as well as other Front Range and Front Range destination resorts.

ALTERNATIVE I

Alternative I is the same as Alternative C except for a small strip of land allocated to Devils Thumb that could not adequately support a ski area without the addition of private adjacent land.

Figure 3.31


Arapaho and Roosevelt National Forests
Ski Areas
Red Feather Lakes
Livermore
Fort Collins
Cameron Pass
Comanche Peak
Masonville
Drake
Loveland
Willow Creek Pass
ROCKY MOUNTAIN NATIONAL PARK
Estes Park
Twin Sisters
Grand Lake
Lyons
Longmont
Granby
Ward
Boulder
Devil's Thumb
Lafayette
Winter Park
Lake Eldora
Nederland
Winter Park
Mary Jane
Broomfield
Berthoud Pass
Arvada
St. Mary's Glacier
Berthoud Pass
Golden
Wheat Ridge
Idaho Springs
Loveland
Georgetown
Squaw Pass
Lakewood
Loveland Pass
Evergreen
Legend
Areas Currently Operating
Areas Allocated to MA 8.22
Inventoried as Potential*
Other Areas Under Consideration
*The Bowen Gulch Area is not shown.
Scale 1:672,000
0 1 2 3 4 5
Miles

TRAVEL MANAGEMENT

Abstract: Travel management consists of providing safe and adequate access for administration, various forms of recreation, hunting, access to private lands, grazing, fire suppression, and extraction of oil, gas, minerals and timber. The goal of successful travel management is to provide this broad spectrum of travel opportunities in response to identified needs and demands while balancing resource protection needs.

In the 1984 *Forest Plan*, analysis of travel management was too general to establish priorities for best meeting the needs of most Forest and Grassland users. Since then, demand for all travel modes has increased and new ones have arisen. This Revision process analyzes the suitability of roads and trails in response to management area direction. Some of the impacts analyzed in response to public demand and need are wildlife conflicts, soil and watershed damage potential, historical use, adjacent land use, right-of-way needs, safety, travelway condition, and costs to manage and maintain the transportation system.

Summaries of mileages and opportunities are shown in Tables 3.148 and 3.149 near the end of this section.

Travel management in itself is a key *revision topic*, and is linked to other *revision topics* or items as well.

LEGAL FRAMEWORK

FSM 7700 (Transportation System Manual) contains objectives, policies, responsibilities, and requirements for transportation planning and for documenting system roads. Direction for forest development trails (FDTs) is in *FSM 2350* (Trail, River and Similar Recreation Opportunity Manual) and *FSH 2309.18 (Trails Management Handbook)*. The objectives of transportation planning are:

1. to efficiently provide facilities that will achieve Forest management direction and that are appropriate for their intended purpose;

2. to direct the orderly development and management of the transportation system and to ensure the documentation of decisions affecting the system.

INTRODUCTION

The Arapaho and Roosevelt National Forests and Pawnee National Grassland transportation inventory consists of all travelways under Forest Service jurisdiction and other jurisdication (federal, state, county, private). Travelway mileage summaries were produced for three types of land basis depending on impacts to resources. For example, the wildlife analysis was generated

from miles of all travelways (FS and all other jurisdictions) within NFS lands, the soils and water analysis used all travelways (FS and all other jurisdictions) within the watershed analysis area and finally, travel management analysis consisted of travelways under FS jurisdiction within the Forest boundary. Each resource analyzes the transportation inventory differently, yet expected changes in the Forest Service jurisdiction system (FDRs, FDTs and ways) were consistent across the resources.

Travel is an important part of a Forest user's recreational experience. Travel occurs on highways, gravel roads, primitive roads, designated trails, crosscountry over snow and on waterways.

Table 3.143 Travelway Types and Mileages on the ARNF-PNG

Type	Description	Miles
Primary Highways	All Interstate, State, or Federal Highway systems (Non Forest Service Jurisdiction)	168
Secondary Highways	All paved County Roads (Non Forest Service Jurisdiction)	21
Light-duty, Paved	All paved Forest Development Roads (FDRs) (Forest Service Jurisdiction)	15
Light-duty, Gravel	All gravel FDRs	302
Light-duty, Dirt	FDRs with pickup trucks as a prime travel mode and cars as acceptable mode	242
Unimproved Road	Native surfaced FDRs with moderate to high challenge to 2-wheel drive traffic	797
4-wheel Drive Road	FDRs with 4-wheel drive as a prime mode and no other 2-wheel drive traffic as prime or acceptable	1,191
Trail - Motorized	Forest Development Trails (FDTs) open to off highway vehicles (OHVs)	65
Trail - Nonmotorized	Forest Development Trails (FDTs) closed to OHVs	656
"Way," Nonsystem Route	Nonsystem travel routes (ways) which exist but were created by both nonmotorized and motorized users traveling off FDRs and FDTs	690

Modes of travel vary from large commercial trucks, high- and low-clearance personal vehicles, off-highway vehicles (OHVs), to foot and horse travel, mountain bicycles, crosscountry skis and snowshoes, snowmobiles, rafts, kayaks and just about any other type of overland or water-surface travel.

The key to proper travel management planning is to achieve a balance of uses on a landscape basis. As shown in Table 3.143, the current Forest and Grassland Transportation Inventory reflects the variety of travelway classes and associated mileages which provide access to and through the Forests and Grassland.

The impacts of increased use are becoming more noticeable to both users and resources. The diversity of Forest users and the experiences that are expected and demanded of the Forests and Grassland are increasing. This is largely due to the Forests' proximity to nearly two million people along Colorado's Front Range and to the ease of access from major highways. Each individual has a preferred form(s) of travel and a perceived recreation experience related to travel to and through the Forests or Grassland.

The Forests have exceeded their fiscal capability to maintain all existing travelways. Any significant increase in roads and trails would require corresponding increases in funding or partnerships to maintain travelways in appropriate condition. Priorities have been established to provide a travel system that balances user needs, funding capabilities, and resource protection. Forestwide standards and guidelines describe conditions under which newly constructed roads would be closed to public motorized use, managed for seasonal closure or obliterated. Site-specific environmental analysis will incorporate forestwide standards and guidelines, and management area and geographic area guidance in developing each Ranger District's travel management plans.

Travel management must be cost effective and provide for needs of dispersed recreationists, including differing challenge levels for motorized and nonmotorized uses while protecting wildlife habitat and soil and water resources. Sometimes the values of Forest users conflict when it comes to their preferred modes of travel and the experiences they expect. Any time a particular type of travel is restricted, some users will gain and others will lose. For instance, when an area restricts motorized travel to protect wildlife, there is a secondary effect on people: the closure not only shuts out motorized travel, but it also limits access for persons with disabilities, limits firewood gathering, and may reduce some forms of recreation. On the other hand, the closure to motorized travel provides increased solitude for hikers and crosscountry skiers.

Impacts to both users and resources are becoming more noticeable and conflicts are occurring. Management of the transportation system includes analyzing the suitability of roads and trails for their diverse use by identifying the public's desires and considering associated resource impacts, all in the context of management area direction. Some of the impacts analyzed are wildlife conflicts, soil and watershed damage potential, recreation setting, safety, public demand and need, historical use, adjacent land use, right-of-way needs, travelway condition and cost to manage and maintain. Since the 1984 *Forest Plan* was prepared, demand for all travel modes, both motorized and nonmotorized, in different settings with different challenge levels, has

increased on the Forests and Grassland. Foot and horse travel have continued to be popular travel modes for nonmotorized use, but the use of mountain bicycles and OHVs has increased dramatically on the Forests.

Probably the most difficult task in travel management planning is to find an acceptable balance of uses on a landscape basis. In a multiple use Forest, it is not appropriate to provide all uses on every acre, but to allocate the land base to the best combination of uses each area can support, while still looking "holistically" at all uses. Geographic area descriptions focus on a few key priorities in order to provide effective guidance to project level decisions. This includes but is not limited to travel management.

CURRENT USE AND MANAGEMENT

Many existing roads lie in the lower-elevation areas of the Forests. Prior to the 1984 *Forest Plan*, roads constructed for management activities were left open for motorized public use. Since that time, some roads have been obliterated or closed and use restricted. Permanent or seasonal restrictions provide alternative recreation opportunities, reduce disturbances to wildlife, reduce damage to roads, protect soil and water resources, and reduce maintenance costs.

Current management direction is to provide the minimum road facilities to accommodate the expected traffic. Maintenance has been reduced to the minimum levels suitable for the intended use and site conditions. Local road departments are encouraged to take over maintenance of roads serving private developments. Landowners and landowner groups are required to maintain roads serving their lands. Recreational groups, such as four-wheel-drive and trail clubs, have been encouraged to enter into partnerships to "adopt" roads and trails of specific interest to their organizations.

The Forests and Grassland currently have six designated scenic byways, some of which are also Forest Highways. These are the Peak-to-Peak, Cache la Poudre-North Park, Colorado River Headwaters, Pawnee Pioneer Trails, Mt. Evans, and Guanella Pass Byways. Under the 1984 *Forest Plan*, two existing roads crossing the Roosevelt National Forest have been included in the Forest Highway System by the Federal Highway Administration and will receive consideration for future Forest Highway funding for upgrading. They are the Deadman Road from Colorado Highway 14 at Rustic to the Laramie River Road at Four Corners (County Road 162), and the Laramie River Road from Colorado Highway 14 at Chambers Lake north to the Wyoming state line (County Road 103).

About five miles of road have been constructed or reconstructed annually, usually as a result of intensive rehabilitation of developed recreation facilities.

The Forest Development Trail System consists of 656 miles of nonmotorized trails and 65 miles of motorized trails on the Forests and Grassland. Approximately half of the total mileage occurs in wilderness, which includes about 23 percent of the Forests' area. The majority of the current trail system are old routes that were developed to travel to specific locations rather than for

recreation opportunities. Many are poorly located with little or no drainage and show the wear of many decades of hard, heavy use.

Use of existing lower-elevation trails for hiking and mountain biking in the spring and fall, and the use of higher-elevation trails for crosscountry skiing is increasing rapidly. Most trails are located at the higher elevations and tend to be at the easy end of the challenge scale. Only a few trails provide a more or most difficult challenge. There are few loop trails for day hikes and they are associated with developed or dispersed recreation facilities. Some new low-elevation trails have been constructed in the Boulder, Estes Park, and Redfeather areas, but trail mileage near the Front Range cities remains insufficient to satisfy the State's recommendations and public demand.

Four trails (Mount Evans, Grays Peak, Greyrock, and Round Mountain) are designated National Recreation Trails. The proposed Continental Divide National Scenic Trail corridor, a portion of which already exists on the Sulphur District, runs through the western side of the Forests.

In conformance with the *Forest Plan* and as part of the Forests and Grassland travel management efforts, the Ranger Districts have inventoried all nonsystem "ways". This "way" category is considered a "holding category." Ways have been preliminarily analyzed at the geographic area level as to whether they may have potential to be converted to the transportation system or obliterated. Specific decisions will be made at the project level and ultimately, all "ways" not converted to the transportation system as FDRs or FDTs will be scheduled for obliteration so that disturbed areas may return to vegetative production. Many of these "way" routes are merely short dead-end spurs that parallel nearby system roads and trails.

DEMAND TRENDS

There is a high level of demand for access to the ARNF. Travel congestion occurs mostly at the beginnings and ends of weekends. Sightseers want improved roads with good driving surfaces. Owners of private inholdings want access to their properties. OHV users want more opportunities for use of primitive road and trails. Four-wheel drive users want differing challenge levels on high-clearance roads which require specially-equipped vehicles and experienced drivers. Against these demands, many nonmotorized recreationists want fewer roads.

Projected demand for trails of all types is expected to increase along with the demand for dispersed recreation opportunities. Mountain bicycling use on the ARNF has almost doubled every other year. Much of the existing trail system restricts motorized use and most of the trails outside wilderness are open to mountain bicycles. The only "exclusive use" trails on the Forests exist on a few wilderness trails where horse use has been excluded and only foot traffic is allowed. There are no trails designated exclusively for horse, mountain bicycle or motorized use. Ties to county and state trail systems are needed. Trail use will be managed according to the desired future condition of the area, resource needs, and the expectations of users.

The ARNF-PNG, unlike National Parks and most State Parks, provides opportunities for OHV experiences. Currently on National Forest System lands, OHVs are permitted on maintenance level 2 roads, which are primarily light duty dirt, unimproved and four-wheel-drive roads. OHV use is also allowed on designated (signed) light duty paved and gravel roads, on 65 miles of designated (signed) trails and on a limited area open to use on the Pawnee National Grassland. Crosscountry travel by motorized vehicles is not permitted, except for snowmobiles operating on snow, where motorized use is allowed. Decisions to designate or restrict use on a given road or trail are based on the goals for the specific management and geographic areas, and specific resource concerns for each travelway. OHV use on the Forests was very low and not mentioned in the 1984 *Forest Plan*. Since then, OHV use of the Forests has increased dramatically. At the geographic area level, each District has proposed areas which currently provide or can potentially provide a variety of OHV opportunities. Specific OHV challenge and loop routes will be considered as district travel management plans are developed.

About 19 percent of the inventoried transportation system is maintained at minimally acceptable levels each year, while the total need is 50 percent or more. In 1994, 54 miles of FDRs were maintained with Forest funds and local counties maintained approximately 294 additional miles. Many trails are maintained by user groups and volunteers, and this is expected to increase in the future. In 1994, nine miles of trail were reconstructed by the Forest Service and ten miles were reconstructed by volunteer groups; 439 miles of trail had some type of minimal maintenance performed. Most roads and trails are maintained on a periodic basis, with the frequency determined by use and weather conditions. The current maintenance budget has been insufficient to properly maintain the entire transportation system without a significant drop in standards. Due to lack of funds, maintenance has not always been performed to standard or within the scheduled maintenance interval. As a result, much of the road and trail system now requires significant maintenance or reconstruction. All alternatives emphasize heavy road and trail maintenance and some reconstruction of existing roads and trails to meet this deficit.

ENVIRONMENTAL CONSEQUENCES AT EXPERIENCED BUDGET LEVEL

In the following discussion the "cumulative" effects of travel management are covered by each resource. The comparison of alternatives shows how the achievement and manipulation of the proposed trasnsportation system for each of the six alternatives produce a range of combinations of diverse travel opportunities expected by Forest users.

ROADS

The major high standard access roads, known as arterial and collector roads, make up about 12 percent of the FDR system. This system is now in place with little or no new construction of roads anticipated. Approximately one mile of arterial/collector road is reconstructed per year and is the same in all alternatives, under experienced budget levels. It is assumed that all other federal, state and county roads will remain open to public travel (except those subject to seasonal closures) regardless of the land allocation theme in each alternative. Improvements along federal, state and county highways will be done in accordance with corridor management plans