

CUCHARA MOUNTAIN RESORT  
NEEDS ASSESSMENT  
Pike and San Isabel National Forest

Prepared by David E. Crumley Date 4/15/2002  
DAVID E. CRUMLEY  
Special Uses Program Manager

Prepared by Lance H. Tyler Date 4/15/2002  
LANCE H. TYLER  
Recreation Program Manager

Reviewed by Ed Ryberg Date 4/15/2002  
ED RYBERG  
Rocky Mountain Region Winter Sports  
And Resorts Specialist

Recommended by Paul M. Crespin Date 4/15/2002  
PAUL M. CRESPIN  
San Carlos District Ranger

Concurrence by Abigail R. Kimbell Date 4/16/2002  
ABIGAIL R. KIMBELL  
Forest Supervisor

## CUCHARA SKI AREA NEEDS ASSESSMENT

### 1. PURPOSE OF NEEDS ASSESSMENT

It is Forest Service Policy to prepare a *Needs Assessment* before, or at the time of, expiration of a recreation special use permit, or in conjunction with the sale of a permitted recreation special use enterprise. The purpose of this assessment is to consider if the activities, uses, and developments should be continued, modified, expanded, or otherwise changed in order to best serve the public interest. (FSM 2341.23)

At the present time, the Ski Area Term Special Use Permit for the Cuchara Ski Area is subject to termination because of the failure to operate in the 2000-01, ski season. Additionally, this permit is scheduled to expire on December 31, 2002. Finally, parties interested in purchasing the Cuchara ski area assets have requested that they be allowed to operate the ski area starting with the 2002-03, ski season. Based on this situation, it is timely to prepare a *Needs Assessment* to aid in determining future agency actions with regard to this special use permit.

A key point to be considered in a *Needs Assessment* is agency policy to authorize concession developments only where there is a demonstrated public need for natural resource based recreation opportunities, and not solely for the purpose of establishing a profit-making commercial enterprise. (FSM 2343.03) There are several elements of agency policy, as well as terms and conditions of the special use permit, that relate to the concept of public need. For new concession sites, the needs assessment must determine the likelihood of a sufficient return on investment. (FSM 2341.21) For existing concession sites, policy directs periodic reviews to determine if the services being provided are still necessary. Limited patronage, as evidenced by use records, low sales revenue and low fee payments, indicates a lack of need for the services provided and a justification for changing these services or terminating the permit. (FSM 2343.23 10) Finally, the Ski Area Term Special Use Permit requires that enterprises under permit be continually operated in accordance with all the provision of the permit to qualify for renewal. (FSM-2700-5b, IX. A.) Based on the above, the economic viability of a concession enterprise is a key indicator of the public need for the services provided.

While the lack of economic viability is an indicator of the lack of demonstrated public need, it also results in an administrative burden to the Forest Service. This burden is manifest in the periodic, short interval needs for the agency to engage in permit actions due to the failure to perform in accordance with the provision of the permit, poor public service, or frequent sales requiring analysis of the financial and technical qualifications of prospective permittees as well as permit preparation. With an enterprise that lacks economic viability, these actions consume agency resources but do not result in sustainable recreation benefits to the public.

## **II. NATIONAL SKI INDUSTRY HISTORY AND TRENDS**

The ski industry in the United States may be characterized as mature. The average age of ski areas in this country is 40 years. Over the past 20 years, annual skier visits have been uneven, but essentially level, exhibiting no sustained growth and averaging about 52 million skier visits a year.

In the last 15 years, the number of ski areas operating in the country declined 32% from 735 areas in the 1983-84, ski season to 503 areas in the 1999-00, ski season. One result of this trend is that average skier visits per ski area increased by 50% during this period, from an average of 68,884,359 skier visits per operating ski area in the 1983-84 season to an average of 103,773 skier visits per operating ski area in the 1999-00 ski season, as surviving ski areas expanded their market shares, accommodating skiers who had previously patronized ski areas that ceased operating. (NSAA)

Nationally, day skiers represent about 53% of total skier visits with the remaining 47% being overnight, or destination visitors.

In the past several years, there has been a trend in certain parts of the country of ski areas offering heavily discounted, seasons passes. Frequently, these discounted passes are offered in larger day-skier markets. Nationally, the average number of season passes sold per ski area was 4,005 passes in the 2000-01, ski season. Over the past three years, the average annual growth rate in season pass sales per ski area was 28%.

As stated earlier, over the past two decades, national skier visits have been flat. During this same period the U.S. population grew by 19%. A consideration of national demographic projections and the demographic profile of the skiing public raise questions about the industry's ability to maintain historic levels of skier visits, let alone grow participation in the sport.

In the 1996-97, ski season, it was estimated that the median age of U.S. skiers was 29 years and the mean age was 31 years. (NSAA Demographic Research 1996/97) Eighty seven percent of the skier population is comprised of people in the 12 to 44 year age bracket. Coincidentally, 87% of skiers are also non-Hispanic Caucasians. According to U.S. Census projections; the total White non-Hispanic population is projected to remain flat and grow older over the next 20 years. (Special Report: A Model for Growth, NSAA National Convention and Trade Show, May 4-7, 2000) In this period, the size of the population segment that has been the traditional core market for skiing will decrease with many current skiers attaining the age when they are unable, or less likely, to participate in the sport with no corresponding increase from younger age segments. All of the population increases in the age groups currently most likely to ski will be in ethnic minorities who have historically represented only a small proportion of the participants in the sport.

Weather trends also do not favor skiing. These trends indicate a warming of the earth's climate. Evidence of this, is the fact that the four warmest years on record since 1860 all occurred in the 1990s and the 20<sup>th</sup> century's 11 warmest years all occurred in the last 17 years. Additionally, the year 2001 is on track to be the second warmest year on record. This warming has been most pronounced in winter over land in mid to high latitudes in the northern hemisphere. Additionally, snow cover in the northern hemisphere has been decreasing for the past 100 years (Model for Growth), taken together, these phenomena work to shorten ski seasons and hold down skier visits.

Industry analysts have developed a model to quantify the effects of the demographic projections and weather trends and project that national skier visits will decline by about 12% from the current annual average of 52 million skier visits to about 46 million skier visits by the year 2010.

### **III. COLORADO SKI INDUSTRY HISTORY AND TRENDS**

The Colorado ski industry, like the national ski industry, may be characterized as mature. The average age of ski areas in the state is 43 years, slightly older than the national average. The Sol Vista ski area, located on private land, and Cuchara Mountain Resort, located on the San Isabel National Forest, which both opened in 1982 are the latest ski areas to be developed in Colorado.

Unlike the national skier market, up until four years ago, Colorado skier visits exhibited sustained growth. In the 1979-80, ski season the state experienced 7,887,181 skier visits and from that time, experienced steady growth until the 1997-98, ski season when a record of 11,979,719 skier visits was recorded. Over the past two decades, the Colorado Ski Industry has enjoyed a 2% annual average growth rate. Following the record 1997-98, ski seasons, Colorado's skier visits declined for two seasons then rebounded to 11,527,310 skier visits in the 2000-01 ski season. The state's share of the national skier market increased from 15% in the 1981-82, ski season to 22.1% in the 1997-98 ski season and has declined each succeeding year, registering a 20.1% share of the national skier market in the 2000-01 ski season.

Mirroring the national trend, In the last 20 years, the number of operating ski areas in Colorado has decreased by 22% from 32 ski areas in the 1981-82 season to 25 operating areas in the 2000-01 season. Additionally, the permits for three potential new ski areas (Adams Rib, Catamount and East Fork) were terminated by the mutual consent of the permittees and the Forest Service or as a result of a failure to pursue development in a timely manner. In part, as a result of these phenomena, the number of acres of National Forest System lands in Colorado under permit to ski areas decreased by 15% from 85,130 acres in the 1990-91 season to 72,612 acres in the 2000-01 season.

Colorado has a higher proportion of destination or out-of-state skiers than the national average. However, the percent of Colorado skier visits attributable to out-of-state or destination visitors, has been declining. In the 1993-94 season, 65% of the state's visits

were attributed to out-of-state skiers while in the 2000-01 season the percent attributable to out-of-state visitors had decreased to 60% of total skier visits.

Seven percent of Colorado's skier visits in the 2000-01 season were attributable to foreign skiers. This represents a continuation of a declining trend. International visits made up 8.9% of Colorado skier visits in the 1996-97 season, 8% in the 1997-98 season and 7.8% in the 1998-99 season (Colorado Ski Country USA 1998/99 Season Review, May 1999, RRC Associates and Nolan Rosall's presentation to the 2001 Colorado Ski Country USA Annual Convention).

The 1998-99, ski season saw the introduction of heavily discounted season passes in Colorado. The large resorts on the I-70/US-40 corridors offered season passes selling for approximately \$200 - \$250. In this year, smaller Front Range ski areas that did not offer such passes experienced a 8.4% decline in visits from Front Range skiers, Destination ski areas that did not offer such passes experienced a 6% decline in visits from Front Range skiers, and Front Range Destination ski areas that did offer such passes experienced an increase of about 10% in total Front Range skier visits (Colorado Ski Country USA 1998/99 Season Review, May 1999, RRC Associates). Discounting has continued and taken various forms such as the "Four Pack" (a package of four ski tickets at one half to a third of the advertised ticket window price) offered by various Colorado resorts. For example, this year the Aspen Ski Company offered 4 individual day passes, good at any of its four ski areas, for a package price of \$100.00 or \$25.00/ticket, a \$39.00 savings from Aspen's advertised window price of \$64.00/ticket. In December 2001, Copper Mountain offered four ticket packages for \$79.00, or 19.75 per ticket.

Several of the trends discussed earlier have a direct bearing on the future growth potential of the Colorado ski industry. As discussed earlier, national demographic trends, the demographic profile of the skier market, and climate change are projected to depress future national skier visits absent successful market interventions. Additionally, Colorado has been losing national market share in recent years. This has been most pronounced in the decline in the number of out-of-state and international visitors to the state's ski areas. The Colorado industry has been able to maintain roughly level skier visits in recent years by attracting more in-state skiers. Most of these additional in-state-skier visits have been experienced at Front Range Destination ski areas that have offered heavily discounted season passes.

As a result of the trends discussed above, most Colorado ski areas have seen an erosion of revenue/skier visit and have taken actions to reduce expenses and trim operating cost. Several of these ski areas are experiencing severe problems. Crested Butte has experienced a continual decrease in skier visits over the past four years resulting in a 34% decrease in skier volume in this period. Both Winter Park and Steamboat are in the process of restructuring in attempts to remain competitive in response to the changing market place for skiing. Berthoud Pass has elected to cease operating as a lift served ski area because of its inability to compete with other ski areas serving Front Range skiers.

As the above discussion illustrates, both the National and Colorado Ski Industries are facing difficult times characterized by increased competition for a share of a shrinking market decreased revenue per skier visit, and unfavorable weather trends.

#### **IV. CUCHARA SKI AREA HISTORY AND TRENDS**

The Cuchara Ski Area was originally developed and opened during the 1981-82, ski season as the Panadero Ski Resort. It was developed and constructed by a partnership/management group made up of local entrepreneurs and Texas developers. The original loan was in the amount of \$22,000,000. During the 1985-86 ski season the resort's Texas lender (Summit Savings & Loan) refused to advance further operating funds which caused the resort to close in February instead of its announced date of April. This caused problems with the general public who had purchased season lift passes. At that time foreclosure procedures were implemented. The value of the area was determined to be between \$8-\$10,000,000 less than one half the original loan.

During the ski season of 1986-87 the area was operated by Summit Savings & Loan, this year had the highest snowfall (see Appendix C) of any year since the area opened but the skier count was very small (see Appendix A). Shortly after this ski season Summit Savings & Loan was taken over by Sunbelt Savings & Loan.

During the ski season of 1987-88 Sunbelt Savings & Loan hired Club Corporation of America (CCA) of Dallas, Texas to manage the ski area. This company had no experience in ski area management their normal forte being the management of golf courses and country clubs. Once again a poor showing was made at the area during this season. At this time the Resolution Trust Company (RTC) assumed control of Sunbelt Savings & Loan.

During the ski season of 1988-89 RTC managed the ski area and had the third highest skier count since the area was opened (see Appendix A). However RTC announced the week before Thanksgiving of 1989 that it would not provide operating funds for the 1989-90, season.

Ski season 1989-90 ski area closed.

Ski season 1990-91 ski area closed.

Ski season 1991-92 ski area closed.

In 1992 Cuchara was purchased from RTC for \$800,000 by a Texas businessman who owned a residence in the area. This new owner operated the ski area during the 1992-93 and the 1993-94 seasons. After two seasons this owner was forced to find additional funds for operations. Another investor was brought in prior to the start of the 1994-95 season.

The new investor who assumed financial and operating responsibility for the ski operations for the 1994-95, ski season ran out of operating funds before the first snowfall of the season. In addition he not only failed to open the resort for business, but he also made off with the funds from pre-season ticket sales and left many employees and local merchants unpaid for their services including fees owed to the Government. With legal help the Texas businessman regained full control after several months but the season was over by this time. New owners were found, the area was sold to two brothers from Texas who paid approximately \$1,800,000 for the base property.

During the ski season of 1995-1996 the area was opened but again had a poor year and low skier turnout. The two brothers along with a few other named partners did not open the area for the 1996-97 season. However, they did cause a problem when they invited some friends to the area and started up and used one of the lifts without benefit of a state tram board inspection certification violating Colorado law and the terms and conditions of the special use permit.

In the spring of 1997 the Forest Service was contacted by a group of investors (the current permit holders), again from Texas who proposed to take over the area. They purchased the base property for \$2,800,000 and were issued a permit by the Forest Service just in time to open for Thanksgiving, the blizzard of 1997 struck during that weekend and the area had the best snow in 20 years that season and had a high number of skiers, for Cuchara (see Appendix A). In addition to winter skiing the new owners decided to make the area a four-season resort. To that end they held activities during the summer of 1998, in addition these owners invested money into fixing up the area (approximately \$1,000,000) and had intentions of constructing a motel with 120-160 rooms over a period of time. The ski area was again open during the season of 1998-99. However for the later part of the season it was only open four days a week. Again during the summer of 1999 activities were held on the area. During the season of 1999-00 the area was again open, but only on the four day a week modified schedule. Even at that the reported skier visits were the second highest count ever in the history of the ski area (see Appendix A). An analysis of Cuchara's sales revenue and land use fees indicates that the skier visits they reported were either grossly inflated, or that the revenue reported for fee calculation was understated. Specifically, in FY-00 they reported an increase of 10,476 skier visits over FY-99, but a decrease in lift ticket revenue. The reported FY-00 skier visits also appear to be high based on limited snowfall and the periods that the area was actually open. The area again planned for summer activities during the 2000 off-season, however on July 4, 2000 the area closed its doors and shut down all operations including their base property land sales.

The Forest Service received and approved an operating plan for the 2000-01, ski season for the area. However, rumors were also heard that the area was for sale with an anticipated sale closure date, which came and went numerous times in the next few months. In addition there appeared to be no preparation taking place at the area, that would indicate that the Dec.15, 2000 opening date contained in the operating plan would be followed. The district permit administrator anticipated that the area would not open for the 2000-01, ski season. This proved to be the case and the permit was in non-

compliance with the required minimum 90-day use period during a year/season as contained in the terms and conditions under which it was issued.

As of the date of this document no operation has taken place since the 1999-00, season the Forest Service gave the owner until the 2001-02, season to operate in compliance with the terms and conditions of their permit, failure to do so by the end of this season would result in automatic termination of the existing permit without the need to go through revocation procedures.

#### **V. CUCHARA SKI AREA'S COMPETITIVE POSITION IN THE SOUTHERN COLORADO SKI MARKET**

Over its 20 year history, Cuchara has performed poorly, operating in 14 of these years averaging less than 22,000 annual skier visits. During this same period the Colorado Ski Industry as a whole was enjoying steady 2% annual growth. Also during this period, Cuchara's two closest competitors, Wolf Creek and Monarch have operated every year and enjoyed significant growth in annual skier visits. Since the 1981-82 ski season Wolf Creek has increased annual skier visits by 109,000 while Monarch has increased skier visits by almost 30,000.

Cuchara, Monarch and Wolf Creek are all traditional "value" ski areas competing for the same customers: families and church groups from Southeast Colorado, Texas, Kansas and Oklahoma. Both Monarch and Wolf Creek enjoy significant advantages over Cuchara in terms of snow quantity and quality and established bed bases and amenities in nearby communities.

Natural snowfall patterns and resulting snow conditions have contributed strongly to the repeated business failures of Cuchara. Cuchara receives the majority of its snowfall in March and April during storms that originate with low-pressure areas passing across the Four Corners region and Northern New Mexico. These storms result in "upslope" conditions with heavy wet snow followed by a high-pressure ridge with warm, sunny weather. Combined with the orientation of several of the ski runs to the east and southeast where solar insolation is high, this results in "boom and bust" skiing conditions. On many occasions the area has not been able to open as scheduled, and has often closed early only to have a significant snowfall occur after closing. The greatest need for snowmaking occurs in November-January, but at this time local surface water sources are greatly diminished due to typically dry conditions. Storms at this season generally pass further north, or further south, on the two branches of the jet stream, and there is commonly a lot of wind and little or no snow in this area until mid-December or later. Snowmaking is also required during the February-April period to fill in between periods of heavy snow, but is severely hampered by temperatures often slightly above the minimum requirements for snowmaking. Wind scour is a common occurrence with warm down slope winds causing significant erosion of the snow pack. While snowmaking equipment is available, it has never been able to cover more than 75% of the slopes with artificial snow, and has never had sufficient water to operate more than 8 hours in a 24-hour period.



Not only do Monarch and Wolf Creek receive more snow than Cuchara, 100 inches and 215 inches respectively, their base areas are both over 1,000 feet higher in elevation than Cuchara's. Additionally, both of these areas are located adjacent to the Continental Divide and do not suffer from the warm down slope winds that routinely erode the snow pack at Cuchara. Taken together with more favorable orientation of their ski runs, these areas have a significant competitive advantage over Cuchara in their ability to provide reliable high quality snow cover.

Cuchara itself is small (population 250), as is nearby LaVeta (population 900) and neither community has the bed base or amenities needed by destination skiers. In contrast both Monarch, near Salida, and Wolf Creek, near both South Fork and Pagosa Springs, have ample established bed bases and other amenities needed by destination skiers.

Contributing to Cuchara's inability to attract significant local day skiers is the fact that Eastern Colorado is a lightly populated rural, agricultural and generally economically disadvantaged area of farm and ranch communities with significant Hispanic populations. These are not areas likely to provide many skiers based on the demographics of downhill skiing participants. Pueblo (population 103,000) is the nearest large city, but it also is a poor market due to demographic factors. It's population is nearly half Hispanic, with a low participation rate in skiing. The next closest city is Colorado Springs, but the same three-hour drive time can take those residents to Monarch, Ski Cooper, or the many areas along the I-70 corridor where snow conditions are more consistent and predictable and discounted lift tickets are available.

The area has generally been unprofitable, and due to many conditions such as inconsistent snowfall, lack of water rights for snow making, high cost of snow making, location, elevation and climate of area, lack of places for skiers to stay (i.e. motels, rooms), or interact away from the slopes (night life, shopping), will continue to have problems. In 1995 a financial analysis was prepared for the area by a CPA/Business Manager for a prospective purchaser. He used financial data from the 1992-93 and the 1993-94 seasons which combined (two years) which showed a small profit above the cost of operating (this profit was on paper only and did not include additional costs such as advertisement, or maintenance etc). This individual was very knowledgeable about the area and he determined at that time that a minimum of 33,000 (this count would have increased in the last six years) skier visits would be the bottom line breakeven point needed for the area. The area has had that many skier visits only once in its 20-year history. In addition if the current owners couldn't make it with the financial backing that they appeared to have when the permit was issued and the fact that they had summer operations including music festivals, horse rides, mountain bike rentals, etc. it appears it would be very difficult to make it profitable. The idea of a motel on the base property was also nixed due to lack of water and a suitable construction site. The continuation of the area being open one year and closed the next has an adverse affect on the recreating public as well as the local area businesses and is not in the public interest.

A review by the Forest Service's Regional Auditor of Cuchara's financial performance over the past four years of operations reveals that the ski area had negative net income in each of these years. An analysis comparing average revenue per skier visit and expenses indicates that at a minimum 50,000 skier visits would be required for Cuchara to meet its operating expenses. Sources in the ski industry, with experience operating small ski areas, estimate that 70,000 annual skier visits is the threshold at which ski area can be profitable. Berthoud Pass and Cuchara are the only ski area on NFS lands in Colorado that average less than 70,000 skier visits and both of these areas have experienced significant operating losses in recent years.

## **VI. CONCLUSIONS**

- ?? Cuchara has low annual skier visits, revenues and fee payments as compared to other Colorado ski areas on NFS lands.
- ?? In order for Cuchara to become financially viable, it must generate between 50,000 and 70,000 skier visits, two to three times the amount of use in its best year.
- ?? National and Colorado Ski Industry trends are unfavorable, with industry projections indicating a decrease in skier visits over the next 20 years.
- ?? With no likely growth in overall skier visits, any gains by Cuchara must come at the expense of other established ski areas serving their market. There is no indication, given the past operation, weather, snow, and location, that Cuchara has the ability to greatly increase its competitiveness.
- ?? Cuchara's primary competitors in its defined market enjoy substantial competitive advantages with respect to quality and reliability of the product they provide, reputation, bed base and amenities. Within Southern Colorado and Northern New Mexico there is intense competition for the same market – all are “low cost family resorts” – Red River, Angel Fire, Sipapu, Wolf Creek.
- ?? Based on its demonstrated and repeated failures, the unfavorable business climate, and the established market advantages of its competitors, Cuchara will be unable to attract sufficient market share needed to become a viable ski area.
- ?? There is no demonstrated public need for additional skiing opportunities in Southern Colorado.

- ?? The site has physical characteristics that have turned out to be unfavorable for downhill skiing development (orientation, elevation, snowfall pattern, snowmaking opportunity etc). The significance of these adverse factors may have been underestimated when the permit was issued and when this area was allocated to “ski area development” in the Pike and San Isabel Forest Plan.
- ?? Cuchara matches the pattern of numerous small ski areas that have closed and gone out of business in Colorado over the last 15 years; poor snow, poor location, low use, frequent turnover, etc. (see Berthoud Pass, Mountain Cliffe, Geneva Basin, Pikes Peak, Broadmoor, Squaw Pass, Arapaho East, St. Mary’s Glacier, Stagecoach, Stoner, etc). Its similarity to these areas would not bode well for a major turnaround.

## **VII. RECOMMENDED ACTIONS BY THE FOREST SERVICE:**

Based on the conclusions above, the permit should be allowed to terminate by its terms and conditions for non-use, as detailed in the Forest Service letter June 13, 2001 to Mr. George Wollman, Project Director for the current permittee, Mr. Lau, should the area remain closed to the public during this current (2001-02) ski season.

Upon termination, require removal of facilities from the National Forest.

Should the base area be sold prior to the effective date of termination, the existing permit will automatically terminate and the Forest Service must consider a transfer to the new owner and evaluate the purchasers financial and technical ability. If the permit terminates prior to a sale, then require any actual or potential purchaser of the area to apply for a new permit and require that the purchaser specifically address the issues raised in the “Needs Assessment” as part of his or her proposal.

In the event there is no sale prior to termination, and no proposal comes forward that fully addresses the issues identified in the Needs Assessment, then amend the Forest Plan to de-allocate this site as a winter sports site and allocate it to another resource emphasis.

end

## Appendix A

### Skier Use 1981-2001

SEASON	COLORADO SKIERS	CUCHARA
1981-82	7,616,699	12,567
1982-83	8,200,442	22,263
1983-84	8,617,318	35,337
1984-85	9,052,345	31,232
1985-86	9,110,597	12,998 -½ SEASON
1986-87	9,453,359	16,495
1987-88	9,557,002	16,383
1988-89	9,981,916	25,055
1989-90	9,703,927	CLOSED -1
1990-91	9,788,467	CLOSED -2
1991-92	10,427,994	CLOSED -3
1992-93	11,111,290	22,775
1993-94	11,164,232	17,300
1994-95	11,105,106	CLOSED -4
1995-96	-----	21,000
1996-97	11,706,656	CLOSED -5
1997-98	11,884,304	27,500
1998-99	11,349,525	21,678
1999-00	10,784,804	31,500
2000-01	11,582,631	CLOSED -6
2001-02	Not available at this time	CLOSED -7

\* Numbers have a potential for a small amount of error

## Appendix B

### Distances to Major Cities

<u>City</u>	<u>Cuchara</u>	<u>Monarch</u>	<u>Wolf Creek</u>
Denver	186 Miles	168 Miles	240 Miles
Colorado Springs	114 Miles	130 Miles	170 Miles
Amarillo	281 Miles	390 Miles	380 Miles
Albuquerque	297 Miles	400 Miles	390 Miles
Dallas/Ft. Worth	640 Miles	750 Miles	740 Miles
Oklahoma City	540 Miles	650 Miles	640 Miles
Wichita	507 Miles	620 Miles	610 Miles

### Comparison of Ski Areas

#### **Cuchara**

Top Elevation	10,810 feet
Bottom Elevation	9,248 feet
Ave. Annual Snowfall	250 inches (estimate only)

#### **Monarch**

Top Elevation	11,950 feet
Bottom Elevation	10,350 feet
Ave. Annual Snowfall	350 inches

#### **Wolf Creek**

Top Elevation	11,775 feet
Bottom Elevation	10,350 feet
Ave. Annual Snowfall	465 inches

## Appendix C

### Snow Depths for Cuchara Ski Area (Snowfall in Inches)

Minimum base depth needed to open and operate the ski area is 30" (inches) compacted base. Snowfall less than adequate to compact to this depth of base will result in the need for an additional amount obtainable only through snowmaking.

Season	January	February	March	April
1981-82	19	32	30	16
1982-83	22	37	44	42
1983-84	28	46	58	41
1984-85	24	35	35	12
1985-86	16	18	21	14
1986-87	26	48	68	40
1987-88	22	26	27	12
1988-89	25	34	19	0
1989-00	16	22	21	14
1990-91	19	24	31	22
1991-92	24	42	32	2
1992-93	24	37	42	27
1993-94	27	28	40	28
1994-95	17	20	34	35
1995-96	16	20	28	1
1996-97	21	49	29	25
1997-98	26	34	37	37
1998-99	24	21	20	18
1999-00	23	21	34	18
2000-01	17	19	23	0
Monthly Ave.	18.4	30.7	33.7	20.2

