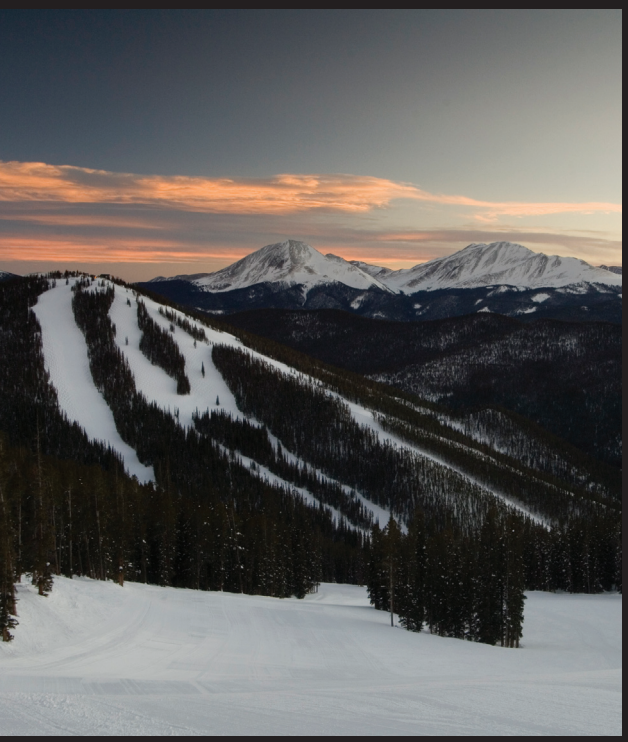
# KEYSTONE
COLORADO

## 2009 MASTER DEVELOPMENT PLAN



**2009 MDP**

Prepared By:

SE GROUP

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# 2009 MASTER DEVELOPMENT PLAN

# CHAPTER 1: INTRODUCTION

# 1. INTRODUCTION

The purpose of this Master Development Plan (MDP) is to provide future direction for the development of Keystone Ski Resort (Keystone) which ensures a balance of facilities and a variety of amenities to afford an exceptional guest experience. This MDP provides a thorough assessment of existing operations and facilities at Keystone and identifies a comprehensive plan for future improvements to the resort. A critical component of this plan is a strategy for Keystone to remain viable in the competitive destination resort and Front Range skier market while accommodating current and future visitation levels.

With the exception of private lands at the River Run and Mountain House base areas, the entirety of Keystone's existing lift, trail and infrastructural network is operated on public lands under a special use permit (SUP) from the White River National Forest. Keystone's SUP area totals 8,536 acres.

The White River National Forest Land and Resource Management Plan – 2002 Revision (2002 Forest Plan) and 2002 Forest Plan Final Environmental Impact Statement (2002 Forest Plan FEIS) provides the following direction for the preparation and utilization of ski area MDPs:

> *"A Master Development Plan (MDP) is part of each ski area's special use permit. MDPs are prepared by the permit holder and accepted by the Forest Service. They describe the improvements and facilities that are authorized at each resort and are the guiding document used to describe the expected future condition for the resort. These plans encompass all the area authorized for use by the special use permit including areas that are, at present, undeveloped. Areas allocated are managed to avoid deterioration of site conditions that may detract from planned uses."*[1]

> *"New technology and changing skier preferences with regard to terrain and on mountain services motivate ski areas to adapt and change in order to remain competitive. Because of this, master development plans are dynamic. The Forest Service participates with ski areas in planning changes to meet public needs. Prior to approval for implementation, the master development plan and its component parts are subject to environmental analysis in accordance with the National Environmental Policy Act and other relevant laws and regulations."*[2]

Forest Service "acceptance" of this document (as used in the connotation above) is consistent with the requirements of Keystone's Forest Service-issued SUP. It is important to reiterate that "acceptance" does not convey "approval" of any projects contained in this MDP. Implementation of any projects on National Forest System (NFS) lands identified in this MDP (excluding those that were previously-approved) is contingent upon site-specific environmental review and approval via the National Environmental Policy Act (NEPA). In reference to the previous excerpt from the 2002 Forest Plan

[1] White River National Forest Land and Resource Management Plan, 2002 Revision, p. 3-81
[2] White River National Forest Land and Resource Management Plan, Final Environmental Impact Statement, p. 3-437

FEIS, this MDP is a dynamic document, which may be amended periodically to accommodate technological innovations and evolved guest expectations over a five- to seven-year planning horizon.

## A. Background

Keystone is located on the Dillon Ranger District of the White River National Forest (WRNF), approximately 85 miles west of Denver, the largest metropolitan area in Colorado. The resort is situated approximately 6 miles south from the Silverthorne/Dillon Interstate 70 exit.

The history of Keystone began in 1941 when Max Dercum purchased the Black Ranch along the Snake River and began his vision of creating a ski area. Max and his wife Edna founded the Ski Tip Lodge, which opened to guests in 1949 and was named for the ski tips that were used as the door handles. Over the next twenty years, Max and Bill Bergman actively pursued their dream of developing Keystone Mountain into an international ski area. In 1967 they acquired more than 500 acres of private land.

In November 1970, the Keystone ski area opened with four lifts under the ownership of Keystone International, Inc. The ski trails were named after the local mines in the Snake River Valley. The cost of a lift ticket was $5.00 and the area received over 75,000 visitors.

In 1972, Keystone installed a snowmaking system, making it one of the first Colorado ski areas to offer machine-made snow.

In May of 1974, Ralston Purina acquired Keystone and invested twenty million dollars to develop the Keystone Lodge, tennis center and condominiums. Keystone purchased some ranchland to the west of the ski mountain and began planning an 18-hole golf course development. By November of 1978, skier visits had increased to more than 550,000 and the lift ticket cost $12.00.

In 1980, the 18-hole championship Ranch golf course opened, designed by Robert Trent Jones, Jr. Development improvements continued throughout the 1980s with the installation of Keystone's first gondola and two triple chairlifts, as well as twelve new ski runs. By 1985, Keystone's annual visitation reached the one million mark. The $10 million Conference Center opened in December of 1989, becoming the largest conference facility in the Colorado Rocky Mountains.

In 1996 Vail Resorts purchased Keystone from Ralston Purina.

In June of 2000, the Keystone Conference Center expansion was completed and the second 18-hole golf course opened (River Course). A new cross-country center opened at the River Course with 25 kilometers of snowshoeing trails and 16 kilometers of cross-country trails.

The most recent improvements at Keystone include the addition of approximately 311 acres of snowcat skiing/riding terrain in Bergman, Erickson and Independence bowls (an additional 266 acres of undeveloped forested areas below the alpine bowls became accessible), improvements to the terrain park, and replacement of the River Run Gondola. Keystone now includes three villages with a wide variety of shops, restaurants/bars and accommodations which support skiing, snowboarding, golf, mountain biking, horseback riding and many other activities on a year-round basis.

Keystone stretches 7 miles along the Snake River, over three mountains. It is an all season resort offering shops, stores, bars, restaurants, conference facilities, spas, and accommodations. Beyond skiing and riding, Keystone offers alternative winter and summer activities – two world-class golf courses, renowned mountain biking terrain, and horse stables.

## B. Keystone's Niche

Over the past ten seasons, Keystone has consistently ranked among the top three Colorado ski resorts in terms of annual visitation – behind Breckenridge and Vail. Keystone has historically been one of Colorado's primary Front Range destination resorts. Like all Summit and Eagle County resorts, Keystone capitalizes on its easy access via Interstate 70; nearby population centers in Denver, Boulder, Fort Collins, and Colorado Springs; and its proximity to Denver International Airport.

Keystone is well known for offering something for everyone. Defining characteristics include: a prime location, abundant annual snowfall, variety of terrain, range of guest amenities, and a comfortable atmosphere. These factors combine to make Keystone attractive to a range of guests and all ability levels – from families and destination guests seeking a relaxed and fun atmosphere, to locals and Front Range skiers and riders in search of advanced opportunities.

As much as weather and snow conditions affect the quality of the skiing/riding experience, technological innovations constantly redefine the ski industry. Obvious examples include the evolution of snowboarding from a fringe sport in the late 1980s to a considerable component of the market today, or the complete transformation of ski equipment from long/straight skis to those that are shorter/fatter and more versatile in all conditions. Generally speaking, the types of terrain that guests demand evolve along with technology – e.g., unique terrain types, high-elevation bowls, terrain park features, etc. Therefore, as noted in the Introduction, this MDP will be amended periodically over time commensurate with evolving guest expectations and equipment technology.

Keystone's core market is made up of intermediate skiers and riders, with intermediate terrain composing the bulk of the ski area's offerings on Dercum Mountain. However, in the absence of major infrastructural or terrain projects in the past decade, Keystone has made great strides in catering to the needs of more advanced skiers and riders. The *A-51 Terrain Park*, which has evolved over the past decade, was ranked as one of Transworld Snowboarding's Top 10 Parks in both 2007 and 2008. High Alpine snowcat skiing and riding in Bergman and Erickson bowls, as well as in

Independence Bowl, began in 2003 and 2006, respectively. Finally, the 284 acres of illuminated trails at Keystone offer an experience that can be found at only one other Colorado ski area. Because of this, Keystone offers the longest ski day in Colorado – twelve hours. Lighting further compliments the *A-51 Terrain Park* for a unique experience.

## C. Abstract of Master Development Plan Projects

The following summary of proposed projects at Keystone has been organized by location throughout the SUP area – Dercum Mountain, North Peak, The Outback, and Erickson/Bergman/Independence Bowls. All projects are described in detail in Chapter 5.

### 1. Dercum Mountain

#### *a. Lifts*

- Install the Ski Tip Lift
- Upgrade the A-51 lift, moving the bottom terminal downhill approximately 1,200 feet
- Upgrade the Argentine Lift to a detachable quad. Construct a mid-load station at the existing top terminal, and extend the lift to the top of *Paymaster*
- Construct a Ski School Learning Center at the River Run Gondola mid-terminal. Install two surface conveyors
- Install a teaching carpet adjacent to the Ranger Lift
- Install a ski school lift at *Schoolmarm.* The bottom terminal will be adjacent to the proposed Argentine top terminal and top terminal will be adjacent to Kokomo Carpet

#### *b. Trails*

- Construct a low-intermediate trail to the east of *Spring Dipper* connecting to the upper half of *Sante Fe* (this is a bypass of the steep faces on *Jackface* and *Burro Alley*)
- Construct trail connections from the Ski Tip Lift top terminal and the previously-mentioned low-intermediate trail to the Montezuma Express and River Run Gondola mid-terminal
- Construct a skier/rider bypass on the steep face on *Beger*
- Construct three new trails between *Wild Irishman* and *Paymaster* to help reduce trail densities on Dercum Mountain
- Construct the *Schoolmarm* bypass and tunnel to separate novice skiers/riders from guests who are heading to the advanced intermediate runs (*Frenchman* to *Paymaster*) and to the A-51 terrain park

- Construct a trail connection between *Silver Spoon* and *Paymaster* to better access *Paymaster* from Peru Express
- Construct a new trail segment and perform trail widening to separate A-51 egress traffic from *Schoolmarm* and *Ballhooter* traffic
- Construct a connector trail from the proposed Argentine Lift top terminal, along the western slope of Dercum Mountain, to *Diamond Back* and continuing on to *Mineshaft*
- Construct a groomable gladed trail to skier's right of *Spring Dipper*
- Glade the northern portions of 'The Windows' terrain
- Close and revegetate three areas of trail: between *Schoolmarm* and *Paymaster*, *Schoolmarm* and *Silver Spoon*, *Silver Spoon* and *Paymaster*
- Miscellaneous trail grading and widening

### *c. Snowmaking*

- Upgrade existing snowmaking infrastructure on *Ballhooter*, *Upper Last Hoot*, *Jackstraw*, *Mineshaft*, and *Lower Mozart*
- Install additional snowmaking infrastructure and provide coverage on proposed new trails as well as on *Schoolmaster*, *Go Devil*, *Bobtail*, *Sante Fe*, and *Swandyke*
- Address the need for additional sources of snowmaking water
- Upgrade/install snowmaking infrastructure

### *d. Facilities*

- Construct A-51 User Education Center and viewing deck
- New on mountain restaurant and guest services facility at the summit of Dercum Mountain (remove the existing Summit House facility, construct new building in different location)
- Construct a permanent tubing/summer operations facility
- Relocate the maintenance shop to an on-mountain location
- Upgrade the maintenance shop at CB 2
- Reconfigure River Run guest service facilities in conjunction with the gondola replacement (private lands)
- Mountain House Redevelopment (private lands)

- Ski Tip Portal guest services
- Construct a Ski School Learning Center adjacent to the River Run Gondola mid-terminal (including two carpets, a yurt with a deck and pit toilets)

***e. Roads & Utilities***

- Improve the summer road from CB 1 to Summit House
- Install sewer and water lines from CB 2 to Summit House and decommission the sewage lagoon
- Increase Summit House water tank storage capacity from 50,000 gallons to approximately 100,000 gallons
- Install underground power lines to service the proposed Ski Tip Lift

**2. North Peak**

***a. Lifts***

- Upgrade the Wayback Lift to a high-speed, detachable quad

***b. Trails***

- Construct a trail connection between *Powder Cap* and *Bullet*
- Construct a trail connection between *Geronimo* and *Cat Dancer*
- Miscellaneous trail widening and grading

***c. Snowmaking***

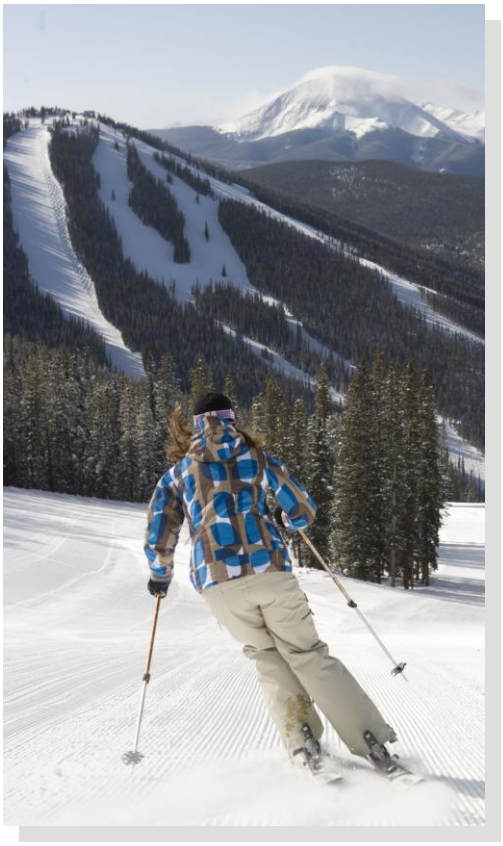
- Upgrade existing snowmaking infrastructure on *Ambush* and *Geronimo*

***d. Facilities***

- Increase seating capacity at the Outpost by 350 seats, remodel the AlpenGlow, and enclose outdoor seating

***e. Roads & Utilities***

- Upgrade the existing underground power lines



### 3. The Outback

#### *a. Lifts*

- Construct the Outback Surface Lift to access North and South Bowls
- Upgrade the Outback Express lift to a higher capacity (previously approved)

#### *b. Trails*

- Construct two new groomable gladed trails on the north side of the Outback
- Miscellaneous trail widening
- Complete additional glading along the trail entry into *Timberwolf*, *Bushwacker*, and *Badger*
- Glade the slope to the east of *Timberwolf*
- Construct a groomable gladed trail at the *Tele Trees* in South Bowl

#### *c. Snowmaking*

- Install additional snowmaking infrastructure on *Oh, Bob!*

#### *d. Facilities*

- Construct the "Outback Deck" with public BBQ area and permanent bathrooms – near bottom terminal of the Outback Express

#### *e. Roads & Utilities*

- Improve/connect old logging roads from the Outback Express bottom terminal to top terminal
- Upgrade the existing underground power lines that supply power to the Outback Express
- Install underground power lines to service the proposed Outback Surface lift

### 4. Erickson/Bergman/Independence Bowls

#### *a. Lifts*

- Install the Windows Fixed Grip Lift providing access to Windows, Bergman and Independence Bowls
- Install the Bergman Bowl detachable quad
- Install the Independence Bowl fixed grip lift

#### *b. Trails*

- In addition to lift-served, open bowl terrain, construct 10 traditional trails in Bergman Bowl

- Conduct trail clearing associated with the Windows and Independence lifts
- Glade the slope to skier's right of *Little Taos* in Independence Bowl

#### *c. Facilities*

- Construct a Ski Patrol/Lift Operations building at the top of the Bergman Bowl lift

#### *d. Road and Utility Projects*

- Construct a road from the Outpost restaurant to the proposed Bergman lift bottom terminal
- Install underground power lines to service the Windows, Bergman, and Independence lifts

### 5. Previously Approved Lift Projects

- Install additional chairs on the Outback Express

## D. Ski Industry Trends

Table 1-1 provides an overview of total annual skier visits based on national, Colorado, WRNF, Summit County, and Keystone data.

**Table 1-1:**
**Annual Skier Visitation Comparison: National, Colorado, WRNF, Summit County, & Keystone**

| Season | Annual National Skier Visits (in millions) | Annual Colorado Skier Visits | Annual WRNF Skier Visits | Annual Summit County Skier Visits | Annual Keystone Skier Visits |
|---|---|---|---|---|---|
| 2007/08 | 60.1 | 12,540,603 | 8,166,932 | 4,125,481 | 1,129,608 |
| 2006/07 | 55.7 | 12,566,299 | 8,302,503 | 4,228,237 | 1,170,710 |
| 2005/06 | 58.9 | 12,533,108 | 8,612,690 | 4,171,169 | 1,106,634 |
| 2004/05 | 56.9 | 11,816,193 | 7,747,289 | 3,866,523 | 1,041,395 |
| 2003/04 | 57.7 | 11,250,761 | 7,325,803 | 3,557,043 | 944,433 |
| 2002/03 | 57.6 | 11,605,777 | 7,608,549 | 3,840,424 | 1,038,942 |
| 2001/02 | 54.4 | 11,128,131 | 7,309,540 | 3,695,077 | 1,069,111 |
| 2000/01 | 57.3 | 11,666,672 | 7,707,986 | 3,871,611 | 1,230,100 |
| 1999/00 | 52.2 | 10,892,263 | 7,080,048 | 3,660,812 | 1,192,528 |
| 1998/99 | 52.1 | 11,389,561 | 7,295,697 | 3,773,900 | 1,259,479 |
| 1997/98 | 54.1 | 11,979,719 | 7,596,793 | 3,586,500 | 1,149,270 |

Source: National Ski Areas Association, 2008; Colorado Ski Country USA, 2008

### 1. National/Regional

Nationally, the U.S. ski industry rebounded dramatically from the difficult 2006/07 season to set an all-time record in annual visits in 2007/08, with 60.1 million. This represents a 9.1 percent increase

from 55.1 million visits recorded in 2006/07, and a 2.0 percent rise from the prior record of 58.9 million visits set in 2005/06. Over the last 10 seasons (1998/88 – 2007/08), the average number of visits recorded nationally was 56.2 million. The 2007/08 season, at 60.1 million visits, represents a 7.0 percent increase from this ten-year average.

Exceeding the 60 million visit threshold is a milestone for the 2007/08 season. This extends an era of strong performance which the U.S. ski industry has exhibited since the 2000/01 season, in which visits have reached 57 to 60 million in good years and 54 to 55 million in poor years – both significantly above the levels recorded in previous decades.

The 2007/08 results were clearly aided by snow conditions, which were largely favorable across the country and throughout the season. (Overall, average snowfall was up 40 percent in the 2007/08 season from 2006/07.) However, the industry also showed resilience by growing strongly despite a deteriorating economic climate marked by rising unemployment, sinking consumer confidence, a housing slump, mortgage and credit crises, rising gas prices, and other obstacles.

Within the Rocky Mountain Region, Colorado, Utah and New Mexico each had relatively minor changes from the 2006/07 season, with Colorado essentially flat, Utah up slightly, and New Mexico down slightly. The northern Rockies states (Idaho, Montana, and Wyoming) were all up more strongly – between 11 and 17 percent.

### 2. Colorado/WRNF

Colorado ski areas averaged approximately 11.8 million annual visits between the 1997/98 and 2007/08 seasons, with a high of 12.6 million in 2006/07. Colorado accounts for roughly 22 percent of the national skier visit total. With a combined average of approximately 7.7 million skier visits recorded annually between the 1997/98 and 2007/08 seasons, the 12 ski areas in operation on the WRNF account for approximately 66 percent of the skiing in Colorado and 14 percent of the national total. In the recent past, skier visits on the WRNF increased most rapidly in Summit and Eagle Counties.

### 3. Summit County/Keystone

In the 2007/08 season, at just over 1.1 million skier visits, Keystone accounted for approximately 9 percent of the 12.54 million skier visits recorded in Colorado and almost 27 percent of Summit County's total skier visits. In Summit County, skier visits have been fluctuating each year since the mid 1990s. Between the 1997/98 and 2007/087 seasons the Summit County ski areas (Keystone, Arapahoe Basin, Breckenridge, and Copper Mountain) accounted for approximately 34 percent of the total Colorado skier market.[3]

Between the 2004/05 and 2006/07 seasons, Keystone experienced notable growth in the number of skiers recorded on the busiest days. Visits on the top 10 days and top 20 days grew by over 1,000 skiers per day in that time period. The top 10 days in 2004-05 and 2005-06 ranged between 13,000 and 17,000 skiers per day.

[3] Summit County Planning Department, 2005

With annual skier visitation just shy of 1.13 million in 2007/08, Keystone was the third busiest resort in Colorado and the United States (behind Breckenridge and Vail, respectively). Furthermore, the 2002 Forest Plan FEIS anticipates that projected population growth in Colorado (in particular, the Front Range) will translate to an annual growth rate in the ski industry of 0.25 percent.[4]

## E. Recently Approved and Implemented Projects

Over the past decade, the Forest Service has approved and Keystone has implemented several projects on NFS lands, snowcat skiing in Bergman (Little), Erickson and Independence bowls; and the upgrade of the River Run Gondola. Snowcat skiing in Bergman/Erickson bowls and Independence Bowl were approved via Decision Notices in December 2003 and July 2006, respectively. Snowcat skiing is discussed in further detail in Chapter 4. The River Run Gondola upgrade was approved via a Categorical Exclusion in 2008.

Subsequent to a NEPA approval involving the Outback in the early 1990s, Keystone implemented many projects and invested much capital during a 3-year period, including:

- trail clearing on the Outback,
- Outback Gondola and cabin storage facility,
- the original yurt at the bottom of the Outback,
- Sewer line up Keystone Gulch road,
- Outback chairlift,
- Outpost restaurant,
- Deck and restroom facility at bottom of Outback, and
- Upgrade of Montezuma lift with detachable technology.

## F. Goals and Objectives of the 2009 Master Development Plan

This five- to seven-year MDP presents a strategy for capitalizing on Keystone's current recreational and operational assets and opportunities while addressing constraints. In assembling this Plan, numerous factors were considered, including those that are specific to Keystone, as well as some that are more common to the ski industry as a whole. These factors include, but are not limited to: recreational offerings; variety of experiences; quality of guest services; and changing guest expectations.

Through a variety of projects and improvements, this MDP addresses five main themes at Keystone:

[4] White River National Forest Land and Resource Management Plan, Final Environmental Impact Statement, p. 3-442

### 1. Skier/Rider Circulation

As noted, Keystone's core market is made up of low-intermediate, intermediate, and advanced-intermediate skiers and riders. The quality of the recreational experience for this core segment of skiers and riders is highly dependent on the current configuration of the lift and trail network on the front side of Dercum Mountain. This Plan aims to address identified skier/rider circulation issues on intermediate terrain on the front side of Dercum Mountain (and throughout the SUP area, as well) through a variety of projects. These include: strategic trail widening/grading projects; constructing new trails on Dercum Mountain and in Bergman Bowl; creating trail bypasses and connectors; lift replacements; snowmaking projects; and reconfiguration of teaching terrain.

Trail widening projects will decrease skier/rider densities while increasing trail capacities. The construction of trail bypasses, connectors, and reroutes will improve circulation on Dercum Mountain by better separating user groups and allowing lower ability level guests to avoid steeper sections of trails that are currently regarded as obstacles. In addition, new lift served high-Alpine terrain in Bergman Bowl will help address circulation issues by distributing skiers / riders across the increased amount of intermediate terrain that they desire.

The addition of the Ski Tip Lift and realignment of the Argentine Express will improve guest access to, and use of, Dercum Mountain. In particular, the construction of mid-terminal load stations on the River Run Gondola and Argentine Express will allow guests to repeatedly use intermediate terrain on the upper three-quarters of Dercum Mountain without needing to descend the steeper sections to the base areas for lift service. Upgrading the Outback Express and Wayback lift will reduce congestion at the bottom terminals.

Teaching terrain will be reconfigured and consolidated to capitalize on existing and proposed infrastructure. Teaching terrain will ultimately be composed of three distinct areas – the Mountain House base area, the River Run gondola mid-terminal, and the summit of Dercum Mountain. This will provide a logical and comfortable learning progression for guests who are new to the sports of skiing and snowboarding.

Finally, the replacement of existing snowmaking infrastructure, as well as installation of new snowmaking lines, will address issues associated with high-use areas and early season snow quality on intermediate terrain on Dercum Mountain and North Peak.

### 2. Underutilization of High Alpine Terrain

High Alpine (above treeline and/or open bowl), lift-served terrain was historically reserved for advanced skiers and riders. However, recent advances in equipment technology, coupled with industry-wide trends towards providing inbounds, "off-piste" experiences have made lift-served, high Alpine terrain important for intermediate and advanced intermediate skiers and riders, as well.

Keystone has an abundance of high Alpine terrain within its SUP area that is well suited to providing quality intermediate and advanced-intermediate skiing and riding. This terrain is located in Erickson/Bergman/Independence Bowls off North Peak and in North/South Bowls adjacent to The Outback. This terrain is currently accessible via hiking and through Keystone Adventure Tours

(KAT) snowcats; however, it is not readily accessible for the majority of Keystone's core market due to its undeveloped nature. Therefore, high Alpine terrain off North Peak and The Outback is highly underutilized given the quality of the terrain and the latent demand that currently exists for it.

Terrain in Bergman Bowl is categorized as low-intermediate, and due to its elevation and topography, has a "high Alpine feel." Creating lift-served, low-intermediate skiing and riding in Bergman Bowl will fill the need for a natural learning progression and will allow for access to more advanced terrain available in Erickson and Independence Bowls as well as in North and South Bowls.

### 3. Circulation on the Summit of Dercum Mountain

The summit of Dercum Mountain is the hub of Keystone's lift and trail network with the convergence of five high capacity lifts (River Run Gondola, Summit Express, Montezuma Express, Ruby Express, and Outpost Gondola), two beginner lifts (Kokomo and Ranger), Adventure Point, and the Summit House restaurant. All guests moving between the base areas (River Run and Mountain House) and North Peak/The Outback must transition through the summit of Dercum Mountain. However, a finite amount of space at the summit of Dercum Mountain, coupled with the concentration of people, six lift terminals, the Summit House facility and Adventure Point, creates congestion and circulation issues.

Due to the ease of lift access, the Summit House could accommodate a substantial amount of the resort's mid-day capacity. However, current limitations in seating capacity and efficient use of space prevent the Summit House from maximizing the service opportunities presented by its central location. The Summit House is an older facility, and has been expanded and retrofitted several times, resulting in a series of disconnected and inefficient spaces.

The Summit House is situated in an illogical location – at the center of skier/rider routes and blocking the entrance to one of the best trails on the upper mountain - *Frenchman*. Because it obstructs the logical entrance to *Frenchman* and makes it more difficult to see other entrances to trails under the Montezuma Express, its presence also directs more people onto *Schoolmarm*, which is one of the busiest trails on the mountain.

Therefore, a reconfiguration of the interface between guest services provided at the Summit House and the lift and trail network is called for in this Plan.

### 4. Advanced Skiing and Riding Terrain throughout the SUP Area

Although the majority of projects contained in this Plan are aimed at accommodating Keystone's core market of low- through advanced-intermediate skiers and riders, numerous opportunities for addressing the needs of more advanced guests have been identified. Lift-served, high Alpine terrain classified as expert has been identified on the northern aspects of Erickson and Independence bowls, with some opportunities in North and South bowls, as well. In addition, the creation and improvement of glades throughout the SUP area will further capitalize on Keystone's existing supply of advanced terrain.

### 5. Operations and Infrastructure

Given the age and extent of Keystone's infrastructure and operational activities, numerous projects have been identified as necessary to ensure that the resort is operated efficiently while accommodating guests' needs and expectations. These strategic upgrades, additions and relocations include, but are not limited to: relocating/upgrading maintenance shops; road improvements; upgrading water, wastewater and power systems; reconfiguring guest seating at The Outpost; and constructing restroom and a barbeque deck at the base of the Outback Express.

KEYSTONE
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2009
MDP

**Project Area**
Figure 1.1

North

0 1400 2800'

Prepared By:

SE GROUP

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# 2009 MASTER DEVELOPMENT PLAN

# CHAPTER 2: DESIGN CRITERIA

# 2. DESIGN CRITERIA

A variety of facility design criteria – each of which contributes to the recreational experience – influence four season resort upgrades and improvements. A destination resort must offer a multitude of services, amenities, and experiences designed to accommodate a range of guests and meet their needs/expectations. Design parameters that guide the development of everything from the pedestrian-oriented, social environment, to the Alpine experience, all contribute to the success of a destination resort.

## A. REGIONAL/DESTINATION RESORTS

Destination mountain resorts can be broadly defined by the visitation they attract - in most instances regional and/or national and international. Within these categories are resorts that are purpose-built and others that are within, or adjacent to, existing communities. Keystone is an example of a resort constructed within an existing community – Summit County – which is rich in history and provides a destination guest with a sense of the Mountain West and the mining history of Colorado.

### 1. Regional Destination Resorts

Regional destination resorts largely cater to a "drive" market. While day-use guests play a large role, the regional destination resort also appeals to vacationers. Where the regional destination resort has evolved from within, or adjacent to, an existing community, services are often supplied by proprietors in the existing community.

### 2. National and International Destination Resorts

National and international destination resorts cater to a significant "fly-in" market, due to a combination of the unique character and level of services offered by either or both the base area and on-mountain facilities. A destination resort's national/international guest expectations are typically higher than for many of its regional destination guests. These guests expect abundant opportunities to participate in a variety of vacation experiences. This guest mind-set stems from the expectation that their destination vacation will likely represent the apex of their skiing/riding season. In addition to a weeklong visit, guests may also hope to engage in the resort and surrounding community on a more regular or permanent basis (through ownership of real estate and part-time residency).

There is a growing demand for mountain destination resorts to provide activities outside of snow sports. At some of the more mature mountain destinations, non-skiing wintertime guests account for a substantial percentage of the overall guest population. Furthermore, many of the guests who ski will not use the mountain facilities every day of their visit. Thus, the ratio of total days skied to total room-nights can be as low as 1:2. Even for the day-use guest at a destination resort, skiers spend less of their day on the mountain. This is due to several factors, including: (1) shifting expectations of what a mountain vacation is about (participation in a variety of experiences - not just skiing and riding); (2) the advent of high-speed lift technology (allowing guests to ski more vertical in a shorter period of time); and (3) an aggregate population of guests that is aging and which has less vertical demand. In the summer, it is typical for the resort and community to have very high utilization due to a variety of recreational opportunities that drive summer mountain vacations and weekend getaways. Hence, all

of these trends add up to a significant demand for attractions and amenities that complement a resort's skiing and riding facilities.

National and international destination resorts offer a wide variety of lodging types, including hostels, motels, hotels, inns, bed and breakfasts, townhomes, condominiums, and single family chalets. Visitor participation in the real estate market has diversified substantially in the last two decades and includes ownership – either whole or fractional – as well as "usage," which comes in forms such as timeshares and club participation. Typically, where the mountain facility is a primary driver for visitation, lodging is clustered at or near the mountain's base area. Amenities usually include a wide variety of restaurants, lounges, shops, conference facilities, and perhaps theatres or concert venues, recreation centers (e.g., swimming, fitness equipment, and indoor courts), etc. Aside from skiing and riding, recreational activities in winter and non-winter seasons may include (but are not limited to) snow tubing, Nordic skiing, snowshoeing, sleigh rides, snowmobiling, mountain and road biking, walking/hiking, golf, tennis, horseback riding, angling, swimming, spa treatments, etc.

## B. Base Area Design

### 1. Overall Layout

Base area facilities/portals play a vital role in the operation of Keystone and in the overall guest experience. Design of the base lands for a destination mountain resort involves establishing appropriate sizes and locations for the various elements that make up the development program. The complexion and interrelationship of these elements varies considerably depending on the type of resort and its intended character.

Planners rely on resort layout as one tool to establish its character. The manner in which resort elements are both inter-organized both inside the resort core and within the landscape setting, along with architectural style, help to create the desired character.

## C. Mountain Design

### 1. Trail Design

#### *a. Slope Gradients and Terrain Breakdown*

Terrain ability level designations are based on slope gradients and terrain features associated with the varying ability terrain unique to each mountain. Ability level designations for this analysis are based on the maximum sustained gradient calculated for each trail. Short sections of a trail can be more or