



KEYSTONE RESORT

PROPOSED UPPER INDEPENDENCE CAT SKIING

ENVIRONMENTAL ASSESSMENT



MAY 2006



USDA Forest Service
Rocky Mountain Region
Dillon Ranger District

brief discussion of the reasons for their elimination.¹⁸ A discussion of alternatives and design components considered but eliminated from detailed analysis follows the description of alternatives considered in detail.

Both the Federal courts and CEQ have directed agencies to consider the project proponent's goals in developing alternatives.¹⁹ In addition, to be worthy of consideration, each alternative to the Proposed Action must have the potential to minimize or avoid environmental impacts, while achieving the established project purpose.

Alternatives 1 and 2 are depicted on figures 2 and 3, respectively in Chapter 6.

ALTERNATIVE 1 – NO ACTION

Under the No Action Alternative, Keystone would continue current summer and winter operations. No project related activities would be authorized on NFS lands within Keystone's SUP area. On-mountain Comfortable Carrying Capacity (CCC)²⁰ would remain approximately 12,700 skiers-at-one-time (SAOT).

Keystone would continue to operate approximately 580 acres of snowcat and off-piste skiing terrain within Erickson and Bergman bowls, 568 acres of off-piste skiing in North and South bowls, and 164 acres of hike-to terrain for the Windows area. Under the No Action Alternative, no new recreation opportunities would be introduced at Keystone. Erickson and Bergman bowls would remain Keystone's only opportunity for guided snowcat skiing.

The Upper Independence area would remain in Keystone's SUP area. This area is currently, and would continue to be, accessible by foot. The current ski area operational boundary would continue to be signed inter-visibly (i.e., where signs are visible from each other) and roped along the northern ridgeline of Bergman and Erickson bowls. Snow safety studies currently occur and would continue in the Upper Independence area.

No changes to the current backcountry access point and no additional backcountry access points are proposed with this project. Backcountry skiers would continue to use this area.

ALTERNATIVE 2 – THE PROPOSED ACTION

The Proposed Action would increase current cat skiing operations by providing Keystone guests the opportunity to access approximately 278 acres. The new opportunities would consist of guided and non-

¹⁸ 46 Federal Register 18026

¹⁹ 48 Federal Register 34263 and 34267

²⁰ Comfortable Carrying Capacity is defined as the highest level of utilization of a ski area (the number of skiers which can be comfortably accommodated at a given time), which provides a pleasant recreation experience while at the same time not over-burdening the skier service facilities.

guided bowl skiing via snowcat²¹ or hiking in the Upper Independence area off Independence and Bear mountains, within Keystone's existing SUP boundary, adjacent to current cat skiing operations in Erickson and Bergman bowls (Figure 3 in Chapter 6). On-mountain CCC for Keystone Resort would remain unchanged at approximately 12,700 guests.

Terrain

Services would be provided in the upper areas of the north aspect of Keystone Mountain (proper), and the west/northwest aspects of Bear and Independence mountains (Figure 3 in Chapter 6). Proposed skiing and snowcat activities would remain above 11,400 feet elevation, in the open bowls above Jones Gulch. The proposed location of these guided and non-guided skiing opportunities include steeper grades (maximum 50 percent) than Bergman and Erickson bowls, north facing aspects, and areas of snow deposition. Combined with Keystone's 580 acres of existing snowcat skiing (in Erickson and Bergman bowls), the proposed 278-acre project area would increase Keystone's total snowcat skiing acreage to 858 acres. No ground disturbance or clearing would be required for implementation of the Proposed Action.

Access and Egress

Snowcats would pick guests up at either the Summit House on Dercum Mountain, or the Outpost and use the existing over-the-snow route located on the ridgeline of Bergman Bowl. An additional 5,050-foot long, 20-foot wide snowcat route²² along the Alpine ridgeline at the head of Jones Gulch is proposed to access the outermost skier drop-off located along the eastern boundary of the proposed project area (Figure 3 in Chapter 6). Skiers would access the terrain off of Bear and Independence mountains from drop-off locations along the proposed snowcat access route. A pick-up point would be established at approximately 11,400 feet, remaining at or immediately below treeline, in the bottom of the bowl (Figure 3 in Chapter 6).

Guides/ski patrol personnel would accompany paying guests on these tours to assist in route finding, perform first aid if necessary, and to improve the overall experience. Non-guided hikers could access this terrain via the existing and proposed snowcat route and would have the opportunity to utilize the same terrain as guests who make use of the snowcat service. However, terrain use by hike-to skiers would require them to hike to the terrain from Dercum Mountain (approximately 1.45 miles with a 200-foot vertical gain to the closest terrain, with an additional 0.9 mile and 600-foot vertical gain to the proposed skier drop off) or the Outpost (approximately 0.9 mile with a 540-foot vertical gain to the closest terrain), ski, and hike back out without the assistance of snowcats or guides.

²¹ The snowcat skiing program is currently, and would continue to be, offered to guests for a fee.

²² No nighttime grooming or nighttime use of the project area is proposed. Snowcat operation would be conducted within typical daylight hours of resort operation.

Western Ecosystems, Inc.

Ecological Consultants

905 West Coach Road, Boulder, Colorado 80302 (303) 442-6144

July 6, 2004

Mr. Terry Edelman
U.S. Forest Service, Dillon Ranger District
P.O. Box 620
680 Blue River Parkway
Silverthorne, CO 80498

email transmittal only

Re: Biological Assessment/ Biological Evaluation for seven 2004 summer construction projects at Keystone Ski Area resulting in a "no effect" determination for lynx.

Dear Terry:

This document represents the Biological Assessment (BA) and Biological Evaluation (BE) for 2004 summer construction projects at Keystone Ski Area that result in a "no effect" determination for lynx. This document is tiered to other BA/BEs in the Keystone project file. I conducted field surveys of all project areas on September 16-17, 2003 and March 16 and April 28, 2004. Boreal owl surveys were conducted on those forested project areas where potential nesting or foraging habitats could have been affected. Project area maps have been forwarded to the USFS from Se Group.

The projects considered in this document include:

1. Paymaster Re-grading, Project No. 2004-T1
2. Area 51 Pipe Feature Grading, Project No. 2004-T3
3. Spring Dipper Mountain Bike Trail and Drop Zone, Project No. 2004-T6
4. Select Tree Removal on Mozart, Project No. 2004-T7
5. Bergman Bowl and Erickson Bowl Access and Egress Improvements, Project No. 2004-T9
6. Last Alamo Tree Island Removal and Widening, Project No. 2004-T11
7. Vegetation Management for Black Hawk and Geronimo Trails, Project No. 2004-T12

PROJECT DESCRIPTIONS

Paymaster Re-grading, Project No. 2004-T1

This project proposes the re-grading of Upper Paymaster to increase skier visibility and safety. The additional grading would also allow for a reduction in amount of snowmaking and grooming necessary for early season openings. The necessary re-grading would affect approximately 7.3 acres of existing, previously graded ski trail in three different areas. This grading would improve transitions between the existing trail and several abrupt road crossings. There would be no tree clearing. Affected areas are classified (USFS 2002) as "unsuitable" lynx habitat.

Mr. Terry Edelman
July 6, 2004
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All trees affected are mature to decadent individuals, most being spruce with a few lodgepoles. Two trees to be removed are isolated snags, 13-25 feet tall with 14-35 inch dbhs. No cavities are present. Individual trees/ snags to be removed occur along the interior midline of a graded, conventional ski trail that has no winter foraging values and is classified (USFS 2002) as "unsuitable" lynx habitat.

Bergman Bowl and Erickson Bowl Access and Egress Improvements, Project No. 2004-T9

Due to the success of cat skiing in Little Bowl and Erickson Bowl this past season, Keystone will continue this service next season. After the initial operation, Keystone has identified the need to improve both the access and egress for Bergman and Erickson Bowls along existing corridors. This past season snowcat operators used existing roads, over-the-snow routes, openings, and clearings to access these areas. However, this proved extremely difficult in localized areas (i.e., where clearance on each side of the snowcat is a matter of a few feet) and resulted in costly damage to equipment. Keystone proposes the removal of up to 18-20 trees over the entire length of each individual route. With limited tree removal in these areas, the passengers skiing experience will be greatly improved and further damage to equipment will be eliminated.

The access to the cat skiing area from Dercum Mountain needs limited tree removal to allow cat operators improved access to both Bergman and Erickson Bowls. Proposed tree removal along this existing route consists of four trees (including one, 3-stem tree) on two sharp corners, approximately 30 feet apart. All trees are live spruce, <12 inches dbh, with no nest cavities. The existing route crosses through a large block of habitat classified (USFS 2002) as "winter foraging habitat". Winter foraging values associated with this forest stand near treeline would be unaffected by the proposed removal of four trees.

The Bergman Bowl cat skiing egress improvements would also involve the selective removal of individual and tight clumps of trees mostly on sharp corners of the existing route. Most trees to be removed are already stripped of bark and limbs on the trail side as a result of close encounters with snowcats. In some areas, small trees on the opposite side of the trail would be removed in favor of retaining a larger number of large diameter trees or snags on the opposite side of the trail. Two snags would be removed. One 10-foot snag has a small diameter, decadent nest cavity at nine feet. A total of approximately 20 trees would be removed from the edge of the trail running through a 4B spruce stand. Most are mature spruce and all are <18 inches dbh. The existing route crosses through a large block of habitat classified (USFS 2002) as "winter foraging habitat". Winter foraging values associated with this forest stand would be unaffected by the proposed tree removal.

The Bergman Bowl cat skiing egress route follows the existing Erickson Mine Road. Over the years, lodgepole pine (at lower elevations) and spruce saplings (at upper elevations) have recolonized some of the road's cut and fill slopes. Now that snowcats are using this road in winter, these trees (all <4 inches dbh) hamper egress. Most of the trees to be removed are scarred and limbed on the road side from being hit by snowcats. The existing route crosses through a large block of habitat classified (USFS 2002) as "winter foraging habitat". No snags or winter foraging habitat would be affected by the proposed tree removal.



*2003 Little Bowl / Erickson Bowl
Snowcat Skiing and Sightseeing Proposal
Environmental Assessment
October 2003*



**USDA Forest Service
White River National Forest
Dillon Ranger District**

ALTERNATIVE 2 – PROPOSED ACTION

General

Keystone 1

On-mountain CCC would remain approximately 12,700 skiers-at-one-time (SAOT).

Increased Recreation Opportunities

To provide better access to alpine bowls within Keystone Resort, a snowcat skiing and sightseeing operation is proposed. Both Little Bowl and Erickson Bowl are currently located within the Keystone SUP area; however, they are not within the current ski area administrative boundary. The proposed snowcat skiing operation would transport up to twelve individuals per trip via snowcat from the Summit House, along the ridge to the upper portion of Little Bowl (when snow and weather conditions allow). Ski Patrol personnel would accompany guests on these tours to assist in route finding, perform first aid as necessary, and to improve the overall recreational experience.

Skiers and riders would ski the bowls from the drop off point to treeline where they would meet the snowcat and be transported back to the top of the bowl for another run. For the last run, skiers would have the option to ride the snowcat back to Summit House or access developed ski terrain below treeline by skiing through the trees to trails on North Peak.

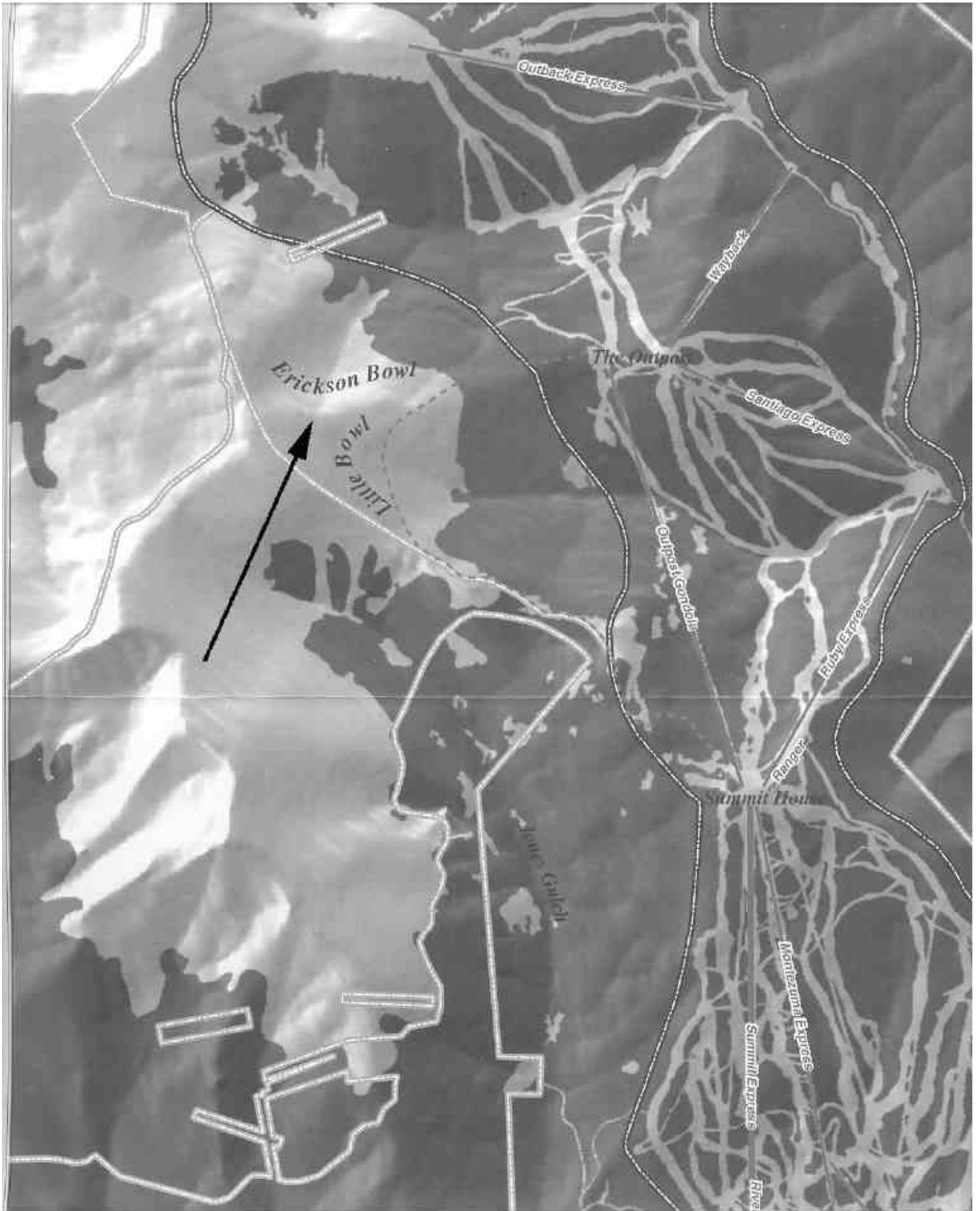
When conditions permit, the snowcat would continue past Little Bowl to offer skiing in Erickson Bowl. The operation would be similar to that proposed in Little Bowl, with round-trip skiing in the bowl for three hours. Upon completion of the tour, guests could either ride the snowcat back to Summit House or ski through the trees to access developed terrain on North Peak.

No nighttime grooming or nighttime use of Little Bowl or Erickson Bowl is proposed. Snowcat operations would be conducted within typical daylight hours of resort operation (daily and seasonally). Both Little Bowl and Erickson Bowl would remain open to hike-to skiing. The approximate area of bowl skiing accessed by snowcat would be 311 acres. An additional 266 acres of undeveloped forested areas (below the alpine bowls) would also be accessible.

On days when snowcat skiing is not desirable due to snow or weather conditions, and demand exists, Keystone would operate snowcat sightseeing tours. Guests would be transported via snowcat from the Summit House, along the ridge around Little Bowl, over the knob and around Erickson Bowl, down the Erickson Mine Road, and to the Outpost. From this point, the sightseeing tour would be over. The next tour would start at the Outpost and travel the same route in reverse order back to Summit House. Trip tours are anticipated to take approximately one hour.

Boundary Management

With the Revised 2002 White River Forest Plan decision to expand the Special Use Permit area at Keystone Resort, the current ski area administrative boundary (the operational limits within





KEYSTONE

May 9, 2000

W12882

Box 38 Keystone, CO 80435

PHONE (970) 496-2316

FAX (970) 496-4080

Planning Team
White River National Forest
P.O. Box 948
Glenwood Springs, Colorado 81602-0948

Re: Comment Package

This comment package contains:

1. Cover letter from John W. Rutter, Senior Vice President and Chief Operating Officer of Keystone Resort.
- 2. Comments on the White River National Forest Plan.
3. Maps of the Keystone Permit and surrounding area .
4. Photographs of Independence Mountain.
5. 1-Economic Effects of Management for Alternative D.
6. 1-Report on the White River National Forest Ski Area and Ski Area Trends...
7. 1-Review of Lynx Behavior and Ecology...

Thank you,

J. Boyd Mitchell
Keystone Resor

1. Management Area 8.25

Keystone recommends that the Forest Service designate Management Area 8.25 as shown on the map that accompanies these comments. As discussed below, the suggested 8.25 acreage would approximate 8,826 acres which would *reduce* the present 1B area of 9,616 acres by 790 acres. Keystone's 8.25 recommendations are founded on long-term planning needs. Keystone's special use permit authorizes it to operate the resort on WRNF lands for 40 years. Given the 40-year term of our permit and the likelihood that the revised Forest Plan will guide actions on the WRNF for at least the next two decades, we have taken a long-term view in formulating our 8.25 recommendation to the Forest Service. This planning horizon is appropriate here. Given that it is difficult to predict with certainty future recreational trends at Keystone by 2020, we believe that the Forest Service should allocate sufficient acreage to Management Area 8.25 to retain future options.

Designating an area as Management Area 8.25 does not approve a terrain expansion or ski operations on such lands. Indeed, many of the lands designated 1B for downhill skiing under the present Forest Plan have not been developed for skiing. An 8.25 designation merely represents a decision by the Forest Service that the lands are suitable for consideration for future use for downhill skiing and that they should be managed in a manner that does not preclude that potential use. Before a ski area expansion and ski operations may occur on lands designated 8.25, the Forest Service undertakes a full site-specific environmental review and determination of purpose and need under the National Environmental Policy Act. Designating an area 8.25 merely allows the Forest Service to retain the flexibility to consider use of the lands for skiing in the future. See DEIS at 3-299 to 3-300. In that context, Keystone suggests that the Forest Service designate Management Area 8.25 as explained below.

Keystone

1

a. 1B Areas to Exclude From Management Area 8.25

The areas that Keystone recommends be excluded from Management Area 8.25 are depicted on the attached map. As noted above, Keystone's 8.25 recommendation would decrease the area presently allocated to the 1B ski designation by about 790 acres. The areas to exclude from the present 1B allocation include two parcels in or adjacent to Keystone Gulch and other areas depicted on the map. These areas are unnecessary for existing or potential resort operations during the planning period and should be excluded from Management Area 8.25 at Keystone.

b. Terrain to Allocate to Management Area 8.25

The acreage that Keystone recommends that the Forest Service allocate to Management Area 8.25 is depicted on the attached map. This includes terrain within Keystone's special use permit as well as three additional areas identified below as Independence Mountain, the Exit Route, and Keystone Gulch Road. The majority of the acreage in the recommended 8.25 area is presently designated 1B. Of course, the suggested 8.25 allocation would reduce by approximately 790 acres lands presently

The remaining undeveloped areas within Keystone's special use permit area will not provide sufficient terrain to accommodate existing and future skiers and snowboarders based on projected visitation and winter recreation trends. There are only two remaining areas of any significance that are suitable for expansion of resort operations at Keystone: Jones Gulch and West Ridge.

a. Jones Gulch

The Forest Service is presently reviewing Keystone's modified proposal to expand resort operations into Jones Gulch. If authorized after full site-specific review under the National Environmental Policy Act, Jones Gulch will offer a new portal for ingress and egress to the resort, two lifts, and approximately 90 acres of skiable terrain. This would increase the daily capacity of Keystone from 12,700 to 14,500 based on the 1,800 increase in skiers at one time ("SAOT") anticipated at Jones Gulch in the 1984 Master Development Plan for Keystone. This would help relieve existing crowding and congestion but would not be sufficient to accommodate the projected growth in visitation at the resort. Taking into account the additional capacity at Jones Gulch, Keystone would experience a utilization rate of 56% of its total theoretical annual capacity of 2,755,000 (14,500 SAOT x 190 day operating season) based on visitation in 2010 of 1,537,415. This shows that Jones Gulch is a modest terrain expansion that will not itself accommodate the additional 312,000 skiers that the Forest Service expects to visit Keystone by 2010.

b. West Ridge

West Ridge is along the southwest boundary of Keystone's special use permit area west of the Outback. Although West Ridge offers the potential for one or two lift pods that would be contiguous to the Outback and North Peak, it has a vertical drop of about 1,100 feet from ridge to valley floor. This area offers "benchy" intermediate terrain that is very similar to existing terrain at Keystone. As a result, West Ridge would not add variety to the resort. West Ridge also does not contain the adventure skiing component described in the next section that skiers and snowboarders seek. Together with Jones Gulch, West Ridge would be inadequate to accommodate the 2.3% compound annual growth rate and 312,000 additional skiers anticipated by 2010.

5. Terrain & Winter Recreation Trends

Winter recreation trends effect the type of terrain which is suitable for future consideration for expansion at Keystone. Since the existing Forest Plan was finalized, a revolution in alpine ski design has changed the downhill skiing experience and the type of terrain skiers demand. See Resort Trends Report. Purchasers of downhill skis now choose from shaped skis, fat skis, freestyle skis, short skis, and other specialty equipment. Shaped skis make it easier for skiers to carve turns with less effort on a wider range of terrain and snow conditions than on traditional skis. Fat skis (as well as shaped skis) make it easier for skiers to ski ungroomed and deep snow with less effort. Fat and shaped skis are designed for wider arc turns, thus requiring additional space. Shaped and fat skis have virtually displaced traditional skis among new skis sold. The changes in alpine ski

New lifts and trails planned at Keystone

Timing of base-area development projects dependent on economy, execs say

BY BOB BERWYN

SUMMIT DAILY NEWS

SUMMIT COUNTY, CO COLORADO,

KEYSTONE – The new River Run gondola is just the first step in a slew of mountain projects planned for Keystone, Vail Resorts executives said this week at a meeting of the Keystone Citizens League.

The resort plans to add:

- A new lift from the Ski Tip area up the east side of the mountain;
- New lifts in Bergmann Bowl and Independence Bowl replacing current cat-skiing operations;
- A replacement of the Wayback chair;
- New trails on the front side, as well as on North Peak and the Outback.

1, 2c



Keystone last updated its master plan with the U.S. Forest Service in the mid-1980s, so the resort now is ready to lay out conceptual lay plans for new lifts and trails, said Doug Lovell, head of mountain operations.

The improvements listed are for a projected 10-year span, though Lovell said it's not likely the resort implement all the projects.

"Hopefully, we'll implement the first projects in the summer of 2010," Lovell said. A Ski Tip lift was in the works several years ago, touted as a new portal for the resort close to a planned satellite parking area along Montezuma Road.

But critics said the chair was primarily designed to serve a small high-end residential development, and that development in that part of the resort could encroach on an important wildlife-movement corridor. The resort ultimately withdrew the proposal.

"There are valid concepts for improvements," Lovell said, explaining the projects need would need approval from the Forest Service after site-specific studies and environmental analyses.

New trails

High on the list of priorities are improvements to front-side trails, Lovell said.

The new gondola, set to open Nov. 7, will double the uphill capacity from the River Run base, so Keystone will consider adding a Spring Dipper bypass to create more green terrain and a better skier flow on the east side of the mountain.

Keystone 1

A Schoolmarm bypass would allow intermediate-level skiers to access favored front-side cruisers like Wild Irishman and Paymaster without mingling with beginners on Schoolmarm, Lovell said.

Eventually, the resort wants to replace the Argentine Chair, incorporating a midway unloading station and new trail access from the top down the backside of the mountain. Lovell said. That could help ease congestion on Mozart, the primary access trail to the backside.

A new lift in Bergman Bowl would give Keystone some above-treeline skiing and open up new terrain for people who are intimidated by North Peak and the Outback, according to Lovell.

The Bergman Bowl project would also include new trails extending down to the Outpost area, Lovell said.

A lift in Independence Bowl is also on the conceptual drawing board, replacing the resort's snowcat operation in that area.

Various other improvements are also being considered for Keystone's backside, including more chairs on the existing Outback lift to up capacity, a surface lift to the Windows area (not a high priority, according to Lovell) and new trails and glading. A comprehensive vegetation-management plan is also part of the picture.

"We're always hearing people ask: 'What are you going to do about the pine beetle?'" said Keystone vice president and chief operating officer Pat Campbell. "We literally counted every tree on the mountain last summer."

The goal is not only to determine what to do with beetle-killed trees, but how to plan for reforestation and encourage regrowth. That includes trying to figure out how to manage north-facing slopes, where stands of mature spruce trees are threatened by a new insect invasion, Campbell said.

Base-area projects

About 170 new residential units are planned for the base area around River Run as part of the proposal.

"The new gondola sets a benchmark for Keystone. As a real-estate guy, it increases the value of the real estate sitting next to it," said Alex Iskenderian, vice president of development for Vail Resorts.

But the timing is up in the air, pending economic developments, Iskenderian acknowledged.

"When are we going to get into sales and marketing? We need to make sure we get it right, with this economy," Iskenderian said.

Keystone 1, 2a

The first phase of the One River Run project is still on track, with 95 percent of the design work complete and county site-plan approvals in place, Iskenderian said. Some infrastructure work was done in conjunction with the gondola project, he added.

The first phase of the development on what is now the 4.8-acre Hunki Dori parking lot would include about 66 units managed as a high-end Rock Resorts brand property, along with resort support services like ski school and rentals.

In what could be a test of the market, Vail Resorts may roll out some sales and marketing materials as soon as this winter, Iskenderian said, asking the Keystone Citizens League to "help ... build the hype."

On the Mountain House side, Iskenderian said that, when Vail Resorts sought county approval for a redistribution of existing development rights, the company got more than it bargained for.

"We were asking for what I thought were minor adjustments to the master plan. The county said, while you're here, let's talk about affordable housing. I hoped we could avoid that discussion, because we have a solid affordable-housing plan," Iskenderian said, slapping a fist into his palm for emphasis.

"It slowed the (approval) process, but we will be getting back to the county soon," Iskenderian said.

[http://www.summitdaily.com/apps/pbcs.dll/article?AID=/20081030/NEWS/810299939/1078&ParentProfile=1055&title=New lifts and trails planned at Keystone&template=printart](http://www.summitdaily.com/apps/pbcs.dll/article?AID=/20081030/NEWS/810299939/1078&ParentProfile=1055&title=New%20lifts%20and%20trails%20planned%20at%20Keystone&template=printart)