

## **CHAPTER 2: THE PROPOSED ACTION AND ALTERNATIVES**

### **2.1 INTRODUCTION**

This chapter describes the Proposed Action, the alternative formulation process, the alternatives analyzed in detail, and those considered but dropped from detailed analysis. The chapter concludes with a summary and comparison of the environmental impacts of the Proposed Action and alternatives. Note that the term “skiing” is used in this document to include alpine skiing, alpine touring, telemark skiing, snowboarding, and any other snow-sliding sports that could occur at a lift-served ski area.

### **2.2 PROPOSED ACTION**

The Proposed Action, as requested by SOLRC, is intended to complement the private-land-based operation by committing the requested public lands to long-term use by SOLRC. This long-term commitment of public resources would allow the center to provide a more comprehensive program to a larger public clientele (see Chapter 1, Purpose and Need). SOLRC’s request is for a 40-year authorization, but the term and other administrative details of the authorization would be at the discretion of the agency, documented in the ROD or subsequent agreements between the BLM and SOLRC. The Proposed Action is issuance of BLM authorization of the following elements (see Figure 2-1), which would augment the private-land development that has been approved by San Juan County and would occur regardless of BLM decisions regarding use of public lands (see section 2.3.2, No-Action Alternative):

- Use of approximately 1,300 acres of BLM administered land for skiing in the winter, hiking in the summer, and educational programs year-round. The educational programs would include but not be limited to field sessions in avalanche safety, backcountry ski travel, mountaineering, mountain rescue, environmental studies, adventure writing, backcountry medicine, and nature photography.
- Unrestricted skier access to all permit-area terrain not closed by SOLRC for snow safety reasons. SOLRC would provide snow safety conditions similar to other developed ski areas (described below, following the bulleted list of alternative elements). Guided skiing on the same terrain open to unguided skiing would be available to guests desiring this service.
- Use of the permit area by up to 475 SOLRC guests per day.
- Up to 17 temporary foot/skier bridges across Cement Creek within the permit area of which six would be on BLM land. These bridges would be installed by hand or light equipment prior to the ski season and removed in the spring. No alteration of the stream channel or deposition of fill material would be involved. These bridges would allow skiers to cross the creek to shuttle stops and return to the SOLRC base area.
- A 1.5-mile hiking trail (Colorado Basin Hiking Trail) beginning at the upper lift terminal, continuing south up the ridge about 1,000 feet, dropping east into Colorado Basin, then turning north to tie into CR 52. This trail would allow summer lift riders an option to riding the lift back down or walking down the trail adjacent to the lift. This trail would be mostly

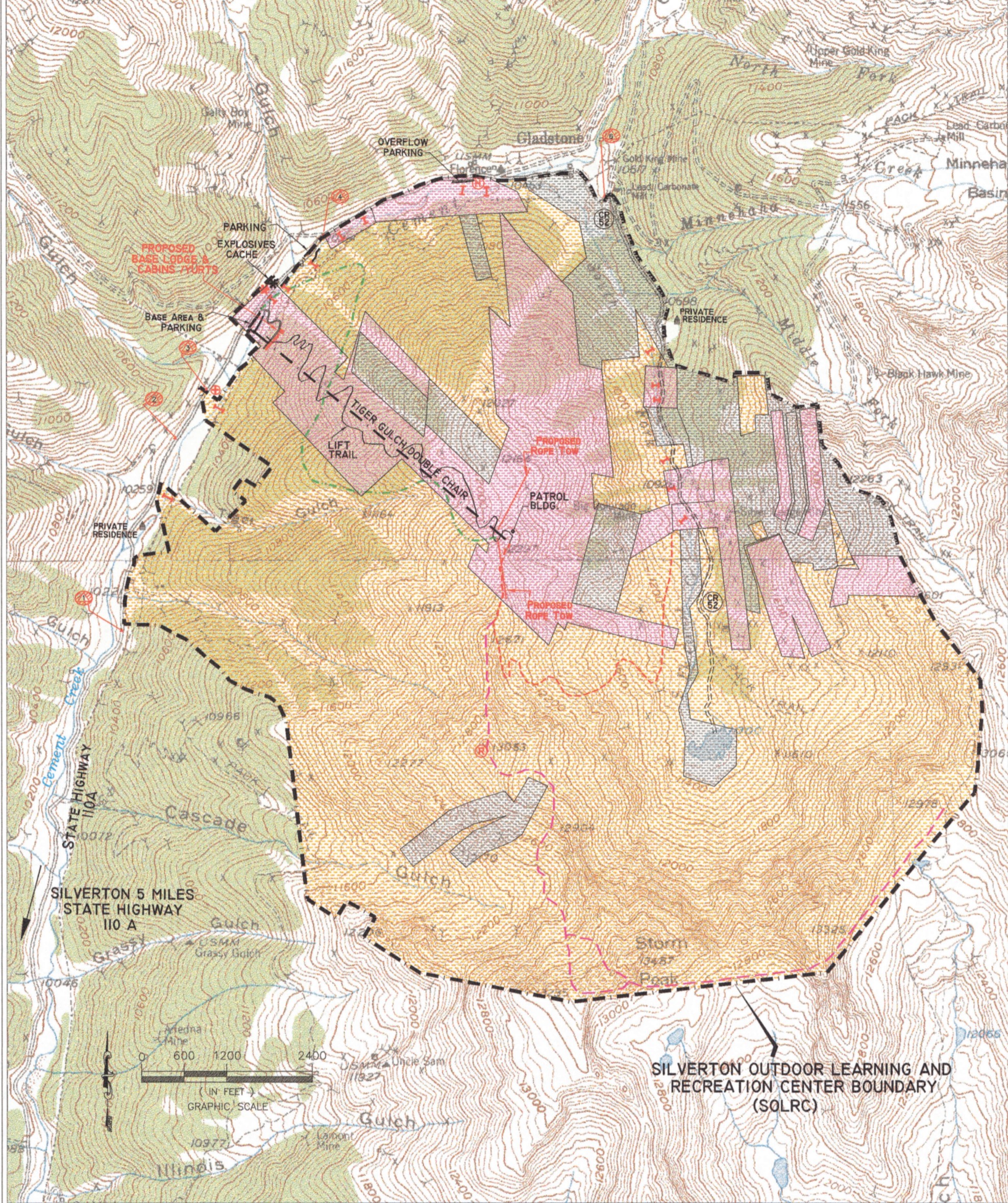
on public land. It would be constructed in accordance with applicable agency trail standards and would be open to the public.

- A 2.6-mile summer and winter mountaineering route beginning where the hiking trail drops into Colorado Basin, following the ridgeline south then east across the top of Storm Peak, following the permit area boundary to tie into an existing pack trail. The pack trail drops into Colorado Basin, connecting with CR 52 near the cirque lake. Due to the extremely steep and rugged terrain traversed by this route and its intended, limited use, it would not be a constructed trail. Its primary use would be for SOLRC's guided mountaineering educational programs. This route would be entirely on public land.
- A small solar-powered radio repeater on public land near the existing radio reflector on 13,053 Peak (an unnamed peak northwest of Storm Peak, within the permit area). This would improve radio communications for SOLRC within the permit area.

As discussed in Chapter 1, Public Involvement and Issues Identified, snow safety – particularly in regard to avalanche hazard – was the only alternative-driving issue identified through scoping and internal agency review. The Proposed Action and alternatives vary in the type of skiing opportunities they comprise and the associated approach to snow safety. Under the Proposed Action, SOLRC would offer unguided skiing in the permit area, and their snow safety program would be similar to those in place at other developed ski areas. Such programs focus on hazard reduction, employing terrain closures, avalanche control (which may involve explosives for stability testing and control work, in combination with other standard methods for testing and control), hazard marking/padding, and directional signage. Avalanche hazard is assumed to be controlled prior to opening an area to skiing.

A snow safety plan that addresses these concerns in detail is part of a ski area's operating plan. Operating plans are a requirement of federal agency permits for ski area's using National Forest System lands (Forest Service Manual 2340) and the BLM has adopted this requirement for this project. Preparation of operating plans often occurs after a ski area is permitted, and thus after any associated NEPA analysis has been done. However, given the importance of the snow safety issue in this analysis, SOLRC's snow safety planning has been accelerated. A snow safety plan has been prepared by SOLRC and submitted to the BLM. It has guided SOLRC's snow safety program for the past three seasons when guided skiing has been allowed under annual special recreation permits. The long-term implementation of this plan is being reviewed as part of this analysis. The major elements of SOLRC's snow safety plan are identified and assessed in the Safety section (section 3.8) of this EIS. That section also addresses potential revisions to the snow safety plan associated with the alternatives under consideration.

Implementation of agency approved snow safety plans is the responsibility of the permittee. The agency monitors implementation primarily through snow rangers and permit administrators. On the basis of this monitoring, the agency can require changes to snow safety plans or to the permittee's procedures for implementing them at any time. Failure to adequately provide for snow safety can be grounds for permit revision or revocation.



**LAND OWNERSHIP:**

- SOLRC LAND  
(PRIVATE PROPERTY SOLRC OWNS OR HAS RIGHTS TO USE)
- BLM LAND
- OTHER PRIVATE LAND  
(PRIVATE INHOLDINGS NOT AVAILABLE FOR USE)

**PROPOSED ELEMENTS:**

- COLORADO BASIN HIKING TRAIL
- ALTERNATIVE LIFT TRAIL (ALT. C ONLY)  
OR ACCESS ROAD (SAFETY MITIGATION MEASURE)
- MOUNTAINEERING ROUTE
- ✦ EXPLOSIVES CACHE
- ⊕ MAINTENANCE/STORAGE BUILDING
- Ⓜ HELICOPTER LANDING AREA
- ↔ ROPE TOWS
- Ⓜ SHUTTLE STOP
- ↔ FOOT BRIDGES
- Ⓜ RADIO REPEATER

NOTE: EXISTING PROJECT INFRASTRUCTURE SHOWN IN BLACK.

**FIGURE 2-1. SOLRC PROJECT ELEMENTS**



Another operational consideration addressed in a ski area's operating plan is boundary management. A boundary management plan stipulates how access across the permit boundary is controlled. In the case of SOLRC, three factors increase the importance of boundary management. First is the number of private in-holdings within the proposed permit boundary. Second is the easier access to public lands outside the permit boundary resulting from SOLRC's proposed infrastructure (particularly the chairlift), coupled with the increased number of people on site to take advantage of this easier access. Third is the number of people who may wish to ski permit-area terrain without using SOLRC's facilities.

SOLRC's operating plan will include boundary management terms that address these factors. The plan will identify private in-holdings used by SOLRC in accordance with agreements made with landowners. Where such arrangements are not in place, the boundary management plan will demonstrate compliance with applicable state laws regarding trespass. Closed boundaries that have been delineated by private property owners will be roped off and/or clearly posted, and any SOLRC visitors who cross such boundaries will be guilty of trespass and subject to prosecution by county authorities.

In regard to public lands outside the permit boundary, SOLRC's boundary management plan will comply with the following Forest Service, Region 2, policy regarding ski area boundary management. As the BLM administrates few ski area permits and therefore has no policy specific to this issue, the Forest Service policy provides a useful model (see section 1.6.2).

Reduce public exposure to avalanche hazards adjacent to both downhill alpine and nordic ski areas; provide a reasonable degree of opportunity for backcountry skiing for those directly seeking such experiences; gain consistency in boundary management practices for the benefit of all concerned; and minimize public exposure to known avalanche risk zones by restricting access through ski operator "boundary closures" and Forest Supervisor "area closures." (FSM 2340, R2 Supplement 2300-94-5.)

This policy calls for marking and signing of the permit boundary, providing backcountry access points with advisory notices for those wishing to leave the permit area, applying area closures to high-hazard zones adjacent to permit areas, regulating or prohibiting yo-yo skiing (skiers repeatedly leaving then re-entering the permit area), and coordinating boundary management planning and enforcement with local authorities.

The timeframe for completion of the proposed development at SOLRC would be 5 to 10 years from the date the requested authorization was issued. The actual development schedule for specific elements of the Proposed Action cannot be predicted with certainty because it will be subject to forces outside the control of the permittee or the agency (e.g., customer preferences, economic trends, and weather).

Because the RMP does not identify commercial skiing operations as an authorized use, and because the RMP focuses on dispersed recreation instead of developed recreation, it will have to be amended accordingly if the Proposed Action or any alternative under which the BLM authorizes the proposed land use is selected.

## **2.3 ALTERNATIVES**

NEPA requires that federal agencies preparing EISs develop and analyze a reasonable range of alternatives to a Proposed Action. These must include the No-Action Alternative. Other alternatives should be developed to insure that options to meet the stated purpose and need while protecting, enhancing, or restoring the environment are not foreclosed. In addition to meeting purpose and need and having a desirable environmental effect relative to the Proposed Action, alternatives other than the No-Action Alternative must be technically, operationally, and economically feasible. Alternatives that are considered but not carried into detailed analysis in an EIS must be identified and the reasons for not analyzing them explained.

### **2.3.1 Alternative Formulation Process**

The required No-Action Alternative provides for analysis and disclosure of the impacts of not implementing the Proposed Action or an alternative action. In this case, as discussed in detail below (section 2.3.2), Alternative A, the no-action scenario, is defined as the BLM not issuing the requested authorization.

In terms of action alternatives, as discussed in section 1.8, Public Involvement and Issues Identified, only one alternative-driving issue was identified through scoping and internal, agency review: snow safety, particularly in regard to avalanche hazard. On the basis of public input and internal ID team review, Alternatives B and C were developed to address the snow safety concern (sections 2.3.3 and 2.3.4).

Public input and ID team discussion generated a number of other alternatives that were considered but then dropped from detailed analysis for the reasons outlined below (section 2.3.5).

### **2.3.2 Alternative A – No Action**

The No-Action Alternative is the scenario that would occur if the Proposed Action or an action alternative were not taken. In this analysis, that means that the requested authorization would not be issued, and SOLRC's commercial activities would be restricted to private lands owned by SOLRC and other private lands used by SOLRC through arrangements made with the owners. Activities and currently approved facilities that SOLRC plans to develop on private land in coming years are depicted in Figure 2-1 and include:

- Unrestricted, chairlift-served, unguided skiing on private land owned by SOLRC or used by SOLRC through arrangements made with the owners. Guided skiing on the private terrain would be available to guests desiring this service.
- Use of SOLRC land and facilities by up to 475 guests per day.
- Continued winter educational programs on private land owned by SOLRC or used by SOLRC through arrangements made with the owners, including but not limited to avalanche safety and winter backcountry skills.
- Expanded summer programs on private land owned by SOLRC or used by SOLRC through arrangements made with the owners, including educational programs such as mountain ecology, mountaineering, photography, nature hikes, and continued summer scenic lift rides.
- Continued hiking, mountain biking, and winter access on the 1.6-mile trail that roughly parallels the lift alignment, on private land owned by SOLRC (Lift Trail).

- A permanent, 2,200 square-foot-footprint base lodge and 10 small cabin or yurt units for overnight rental accommodations on private land at the current base area, with a culinary water well and wastewater treatment systems. An access road is already in place.
- Two 0.2-mile rope tows to facilitate skier access along the ridge from the top of the chairlift.
- An approximately 2,400-square-foot maintenance/storage shed on a private land site about 1,000 feet south of the base area.
- An additional, 64-square-foot, subterranean explosives cache, near the two existing caches on private land northeast of the base area. (Note: this cache may not be needed if SOLRC use of public lands is not authorized.)
- Up to six temporary foot/skier bridges across Cement Creek on private land. These bridges would be installed by hand prior to the ski season and removed in the spring. No alteration of the stream channel or deposition of fill material would be involved. These bridges would allow skiers to cross the creek to shuttle stops and return to the SOLRC base area. (Note: The reduction of private-land foot/skier bridges from up to 11 under the Proposed Action is due to the reduced extent of ski terrain under the No-Action Alternative.)
- Note that the additional explosives cache on private land listed under the Proposed Action is not included under this alternative as it would not be necessary with the reduced extent of ski terrain.

A 100-car parking lot has been completed at the existing base area. Additional parking capacity for 77 cars in plowed turnouts along SH 110A will become available under county authorization once the county takes jurisdiction over the road. Initial plans called for construction of an overflow lot north of the base area, adjacent to SH 110A and Cement Creek. Since the original plan was submitted, SOLRC has made arrangements to use an existing parking lot at the Sunnyside Mine site, about 1.0 mile north on SH 110A. Total available parking capacity for that lot is approximately 85 cars. The SOLRC shuttle service will transport visitors from remote parking areas to the base area.

In terms of snow safety, under the No-Action Alternative SOLRC would offer unguided skiing on their private land. Their snow safety program would be similar to those in place at other developed ski areas. As discussed above under the Proposed Action, such programs focus on hazard reduction, employing terrain closures, avalanche control, hazard marking/padding, and directional signage. Avalanche hazard is assumed to be controlled prior to opening an area to skiing.

However, snow safety on public lands adjacent to SOLRC's private holdings is the main safety concern in this analysis. SOLRC's private-land development, particularly the existing lift, will significantly increase access to backcountry ski terrain on the surrounding public lands. In fact, many of SOLRC's future visitors could use SOLRC's facilities primarily to access these public-land backcountry areas. As a result, a key aspect of the no-action scenario would be a boundary management arrangement to control access from SOLRC to adjacent public lands.

Since no BLM land use authorization would be issued to SOLRC under this scenario, boundary management planning would be the BLM's responsibility. Enforcement authority would lie with

the BLM as well as SOLRC and the County Sheriff's Department. The agency would work with SOLRC to develop and implement a boundary management policy and plan to provide for the safety of everyone using public lands surrounding SOLRC's private land operation, SOLRC visitors, and other members of the public alike.

The timeframe for completion of development under the No-Action Alternative would likely be shorter than the 5 to 10 years projected above for the Proposed Action because the scope of development would be smaller. However, since the actual development schedule cannot be predicted with certainty because it will be subject to forces outside the control of the permittee (e.g., customer preferences, economic trends, and weather), this analysis assumes the same 5-to-10-year development timeframe for the No-Action Alternative.

Since no authorization would be issued, no amendment to the RMP would be necessary under the No-Action Alternative.

### **2.3.3 Alternative B – Guided-Only Operation**

This alternative was developed because a guided-only operation would entail a different approach to management of snow safety in the permit area. Alternative B would include all elements of the Proposed Action and the No-Action Alternative, with the following exceptions (see Figure 2-1):

- SOLRC skier access to public land in the permit-area limited to up to 100 guests accompanied by SOLRC guides. This would make guides with snow safety expertise responsible for all activities from daily stability assessment, through route selection, to avalanche rescue and first aid. The maximum skier:guide ratio would be 8:1. (Note: Unguided skiing could still occur on SOLRC's private land.)
- Optional use of a helicopter to access permit-area terrain. This would allow wider skier distribution, more extensive skier compaction in the permit area, and more rapid and wide ranging stability testing and avalanche control activities. Any helicopter assisted operations would involve helicopters contracted on an as-needed basis, providing their own fueling and mechanical support, and flying from a temporary heliport at the overflow parking area or from an existing heliport east of Silverton on SH 110B, near Middleton.

The guided-only option is associated with a different snow safety approach to that undertaken by ski areas. While the ski area approach discussed above under the Proposed Action focuses on risk reduction, the guided-only approach is based on risk avoidance. Under this standard, skier safety is dependent primarily on the expertise and professional judgement of the guide to accurately assess potential hazards in the backcountry, to direct and control clients accordingly, and thereby avoid risks. Explosive use under this approach is generally focused on slope stability evaluation as opposed to avalanche control. As under the ski-area snow safety approach, high-hazard areas are closed until more stable conditions develop.

Under this alternative, the snow safety element of SOLRC's operating plan would address primarily the guided approach to snow safety on public land in the permit area, and the practices necessary to maintain the ski area approach would be included for application on private lands. However, given the severe nature of potential avalanche hazard in the permit area, some of the major avalanche paths within the ski area boundary would be controlled in a manner similar to the Proposed Action.



For SOLRC visitors, boundary management would not be an issue because access to the permit area would be restricted to guided SOLRC visitors, and guides would keep their parties within the permit area. Unguided skiers using SOLRC’s chairlift would not be allowed to leave SOLRC’s private land. SOLRC would implement and enforce “operator boundary closures” to unguided skiers. Violators would be guilty of trespassing and subject to prosecution by county authorities. However, a boundary management plan would still be needed to manage public access to the permit area and surrounding public lands.

### **2.3.4 Alternative C – Integrated Guided and Unguided Operation**

This alternative was developed to blend the unguided skiing authorized under the Proposed Action with the guided-only operation comprised by Alternative B, incorporating the snow safety approaches appropriate to both. Alternative C would include all elements of the Proposed Action and the No-Action Alternative, with the following exceptions (see Figure 2-1).

- SOLRC skier access to public lands in the permit area staged according to snow safety hazard. Areas where risks were adequately reduced, due to SOLRC control efforts and/or naturally evolving snowpack conditions, would be open to unguided skiing. Areas where hazards existed but could be avoided would be open to guided skiing, and areas where hazard was too high to reliably avoid would be closed.
- Limited tree thinning, limbing, and cleanup on forested, north-facing slopes within the permit area (Zones 1 and 3, see Figure 2-2). This would involve some removal of conifer regeneration (i.e., seedling and sapling sized trees and brush) in avalanche chutes, limbing and/or falling of select seedling to pole sized trees along emerging tree skiing routes, limbing of fallen trees so they lie flat on the ground, and removal of hazard trees. The objective would be to increase safe tree-skiing opportunities, primarily for unguided skiers, during periods of high avalanche hazard above timberline. Any material cut would be scattered on site; no timber would be removed. This work would be done by hand each year, a little at a time, as preferred tree-skiing runs evolved and problem trees were identified. Fewer than 20 percent of the trees in the areas identified for thinning would be affected.
- A 1.7-mile trail (Alternative Lift Trail), less steep and including fewer switchbacks than the existing lift trail on private land. This trail would be developed to facilitate skier, snowmobile (SOLRC operational/emergency use), hiker, and biker access between the top of the lift and the base area. The trail would cross public and private land and would replace winter use of the existing lift trail.

This alternative would incorporate both approaches to snow safety, from resort-style risk reduction, as described above under the Proposed Action, to the risk-avoidance approach typical of guided operations, described under Alternative B. Determination of which areas were open for unguided skiing and for guided skiing – and which areas were closed to skiing of any type – would be made on the basis of snow-stability criteria detailed in SOLRC’s snow safety plan, coupled with the professional judgement of SOLRC’s snow safety personnel. As noted above under the Proposed Action, implementation of an agency approved snow safety program would be the responsibility of SOLRC, but the agency would monitor the adequacy of the plan and its implementation. Changes to the plan, to implementation procedures, or to the land use authorization – even revocation of the authorization – could result if monitoring indicated that snow safety was not being adequately addressed.

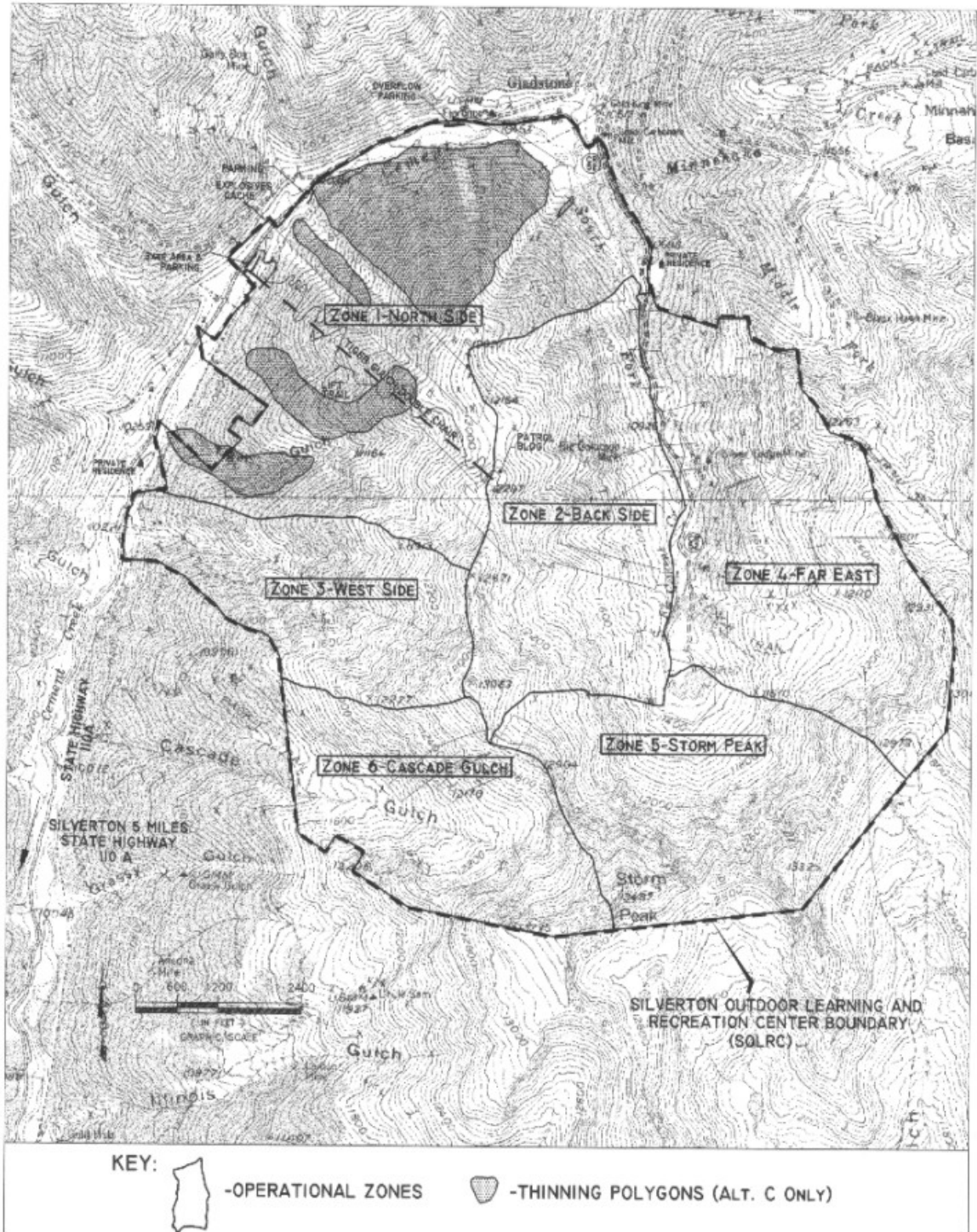


Figure 2-2. SOLRC Operation Zones.

As unguided skiing would be authorized under this alternative, boundary management as described under the Proposed Action (section 2.2) would be employed.

### **2.3.5 Alternatives Considered but Not Analyzed in Detail**

Several other alternatives were identified through scoping and internal agency review but were subsequently eliminated from detailed analysis because they did not meet purpose and need, did not have a desirable environmental effect relative to the Proposed Action, or were not technically, operationally, and economically feasible. These alternatives, and the reasons they were not analyzed in detail, are discussed below.

Reduce the size (acreage) of the permit area. This alternative was dropped from detailed analysis for snow safety reasons. It would be necessary to control avalanches in all of the proposed permit area to provide safe skiing in the areas that would be skied. The proposal would also be less economically feasible if the amount of ski terrain were reduced.

Increase the size (acreage) of the permit area. The Proposed Action is based on providing access to terrain adjacent to SOLRC's base-area facilities. It is also intended to provide the permittee the opportunity to economically manage skiers and snow safety in a logical geographic area. This alternative was eliminated from detailed analysis because a larger permit area would not meet these management and safety criteria.

Decrease the term of the land use authorization to 1 year or 5 years. These alternatives were suggested to allow additional time to monitor the impact of the proposed activities. They were not analyzed in detail because: (1) as discussed in Chapter 1, section 1.3, SOLRC has operated under annual permits in various capacities since 1999, generating information that is central to the BLM's consideration of the current proposal, particularly in the area of snow safety; and (2) longer-term permits, currently 40 years, are the norm for ski areas operating on federal lands. The BLM decision maker will determine the length of any authorization issued.

Limit SOLRC to 20 – 50 guided skiers per day on the permit area. This alternative was suggested to reduce the impact of SOLRC's operation on public land. It was not analyzed in detail because: (1) as outlined in section 2.3.3 above, Alternative B calls for guided-only skiing in the permit area; and (2) no impacts have been identified that warrant capping SOLRC use at these levels; (3) the analysis indicates that increased skier compaction would help stabilize the snow pack and reduce avalanche hazard; and (4) these caps would limit the public-land recreational opportunity made available by SOLRC.

Include additional ski lifts in Zones 2 and 4 (Colorado Basin). This alternative would provide increased opportunities for lift-accessed skiing in Colorado Basin and reduce skier/shuttle traffic on Cement Creek Road. It was eliminated to minimize development and associated environmental impacts on public lands.

Winter-only use of the permit area. This alternative was dropped from detailed analysis because it would be inconsistent with the stated purpose and need for the project, which includes a major component of summer activity. The BLM endeavors to provide a broad range of recreational opportunities on public lands during all seasons. Summer use of the chairlift to provide visitors access to high-elevation scenic vistas and to provide increased access for hiking and SOLRC's other summer programs would help further this agency objective.

Summer-only use of the permit area. This alternative was not analyzed in detail because it would eliminate the central recreational benefit of the project, the opportunity for lift-served, backcountry-type skiing. It would also not provide any stimulus for development of San Juan County’s winter economy.

**2.3.6 Alternative Summary**

<b>Table 2-1. Summary of public-land elements of Proposed Action and alternatives.</b>				
	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided Only</b>	<b>Alt. C – Guided and Unguided</b>
Approximate acreage of public land in permit.	1,300	None.	1,300	1,300
Snow safety approach.	Resort style hazard reduction, focusing on avalanche control.	Same as Proposed Action.	Backcountry style hazard avoidance, focusing on stability testing.	Integrated resort style and backcountry style.
Projected daily visitation on BLM land.	475	0	100 (based on skier:guide ratio of 8:1)	475
Adjunct facilities on public land.	Mountaineering route, hiking trail, foot/skier bridges, and radio repeater.	None.	Same as Proposed Action.	Same as Proposed Action, plus alternative skiing, hiking, and biking trail from lift top to base area, including portions on public land.
Helicopter use on public land.	No.	No.	Yes.	No.
Tree thinning on public land.	No.	No.	No.	Yes.

**2.3.7 Mitigation Measures**

NEPA requires that an EIS identify and assess a full range of mitigation measures to avoid or reduce the adverse environmental effects of a proposed federal action. The agency decision maker then adopts the identified measures, and may add other mitigation requirements, in the ROD. The following mitigation measures were identified and assessed in the course of this analysis. In general, the impacts to be mitigated and the effects of the identified mitigation measures are discussed in the context of the environmental consequences of the Proposed Action (see Chapter 4). Any or all measures may be required by the decision maker under the Proposed Action or any alternative selected in the ROD.

Watershed Resources:

1. Locating the proposed culinary well upgradient (with respect to groundwater flow) from the proposed septic system would minimize the potential risk of coliform contamination.

2. Adequate signs and other appropriate information indicating the location of restroom facilities would reduce the potential impacts of human sources of coliform in backcountry areas.
3. If soil textures in and around the septic absorption field were too coarse, soil replacement in these areas would ensure the proper effluent infiltration rates.
4. The use of grease traps and other appropriate filters to treat grey water volumes would help ensure the proper long-term functioning of the septic system and reduce the potential for failure and subsequent coliform contamination of water resources.
5. Trail design, use of surface grading, and placement of water bars in accordance with agency guidelines (FSH 2309.18 – Trails Management Handbook) would reduce the amount and velocity of runoff generated by trail surfaces and would minimize potential sediment impacts to downslope areas including South Fork Cement Creek.
6. Locating temporary foot/skier bridges in areas with stable channel banks and at locations where planks could span adjacent floodplains and riparian corridors, would minimize disturbance impacts with potential to produce sediment loads and unstable channel banks.
7. Using control measures including silt fencing, straw-bale dikes, check dams, and water bars would reduce sediment impacts during construction of buildings, trails, and roads. Prompt reclamation efforts following construction would continue to mitigate sediment impacts and could include measures such as reapplication of stockpiled soil, roughening of disturbed slopes to create microsites for moisture conservation and seedling establishment, reseeding, mulching, and covering over-steep slopes with mulch blankets.

Vegetation:

8. Educating summer guests about the sensitivity of alpine vegetation to trampling and the slow recovery of damaged communities, and requiring visitors to remain on designated trails and within established use areas would reduce the impact to alpine vegetation due to summer recreation use.
9. Implementation of the BMPs listed in Chapter 5: Reclaiming the Land, as detailed in the publication *Ski Area BMPs* (Forest Service 2001) would reduce the impacts to vegetation resulting from the proposed activities.
10. Development of a vegetation management plan for the ski area would ensure that all vegetation types, both forested and non-forested, were managed to maintain their health and vigor.
11. Developing and implementing an integrated weed management plan for the SOLRC permit area, which would include monitoring of sites disturbed by construction activities for a period of 10 years and aggressively treating any new populations of noxious or invasive species with the most appropriate measures given the size of the population and the nature of the species, would address and reduce the long-term risk of introduction and establishment of weeds.
12. Reseeding disturbed areas with BLM approved seed mixes designed for either alpine or montane settings that emphasize native grasses and forbs and are certified to be weed free

would reduce the risk that weedy species would be introduced during the revegetation process.

13. Minimizing surface grading in areas that are cleared would facilitate natural regrowth.
14. Selecting temporary foot/skier bridge placement sites in areas where wetlands adjacent to Cement Creek are less developed/expansive would avoid or minimize wetland impacts.

Wildlife:

15. Restricting nighttime activities to those associated with the overnight base-area facilities would decrease potential impacts to Canada lynx.
16. Restricting avalanche control activities to the period between 1 hour after sunrise and 1 hour before sunset, scanning the surrounding terrain for animals before using explosives, and not using explosives for 4 hours after an animal is spotted would minimize potential impacts to lynx and wolverine due to avalanche control.
17. If lynx or wolverine individuals, tracks, or dens were sighted within the project area, notifying the Columbine Field Office recreation planner and/or wildlife biologist and coordinating with CDOW biologists would assist agency monitoring of lynx and wolverine use of the area and devising appropriate management practices.
18. Posting information at the base area explaining the potential presence of forest carnivores in the area, describing what to do in the event of a wildlife encounter, and requesting that wildlife sightings be reported would increase the guest awareness and assist the BLM in managing these species.
19. Establishing a 1/4-mile no-mechanized-activity buffer around known or detected active goshawk nests from March 1 to August 15 would protect nesting birds from disturbance. Establishing a 30-acre no-habitat-alteration buffer around known or detected active or suitable inactive goshawk nests year-round would maintain stand structure and would not reduce habitat suitability around the nest. Suitability of inactive nest sites would be determined by a wildlife biologist.
20. Restricting tree thinning to areas outside of the riparian zones and to species other than willow would protect habitat for snowshoe hare, ptarmigan, and southwestern willow flycatcher. (Note that this measure is only applicable to Alternative C, as forest thinning is not proposed under the other alternatives.)

Land Use:

21. Maintaining the boundary management plan implemented during the 2001/2002 season would provide for winter access to public lands and private inholdings within and adjacent to the permit boundary while affording protection from avalanches triggered by SOLRC's avalanche control, stability testing, and commercial skiing activities. This boundary management plan is described in Appendix C.

Recreation:

22. Providing restroom facilities at the bottom of Colorado Basin would result in a more comfortable recreational experience for SOLRC visitors, as well as reducing potential water quality impacts.

Safety:

23. If the No-Action Alternative were selected, closing public lands adjoining SOLRC's private lands to winter access by SOLRC visitors would eliminate the possibility of their being harmed by avalanches in the surrounding, unmanaged terrain.
24. Continuing the ongoing snow safety study for at least the next several seasons would insure that expanded, up-to-date information on the area's snowpack and avalanche dynamics was available to aid in effective snow safety planning.
25. Regular updating of the snow safety plan, through end-of-season meetings of SOLRC snow safety personnel and BLM permit administrators would insure that the snow safety plan remained an effective tool for management of public risk. Documented criteria for determining when operations in a given area can be shifted from closed, to guided, to unguided will be essential.
26. An access road between the base area and the top of the chairlift, passable by tracked vehicles in the winter and wheeled vehicles in the summer, would improve emergency access and egress if the agency deemed it was necessary in the future. This road could be constructed along the alignment of the alternative lift trail proposed under Alternative C by blading a full-bench cut wide enough to accommodate a snowcat to groom the road in winter.
27. Standard flagging of hazards at mine sites, or avoidance of such sites by guided groups, would minimize any risk skier collisions with buildings, structures, or machinery remaining at these sites.
28. Collaboration by the BLM, San Juan County, the Silverton Snowmobile Club, and SOLRC on a plan for management of CR 52 would reduce the risk of collisions between skiers and snowmobiles on CR 52.

Transportation:

29. If peak-day parking proved to be inadequate due to lower than anticipated vehicle occupancy rates, instituting a shuttle service between Silverton and SOLRC would reduce parking requirements at the ski area.

Aesthetic Resources:

30. Utilizing Best Management Practices (BMPs) and designing facilities to blend with the natural background to insure facilities meet Class II VRM objectives would minimize the visual impact of restrooms on BLM lands.
31. Implementing a dust suppression program, including careful scheduling of equipment use, wetting of exposed soil, and use of magnesium chloride, would mitigate any short-term

impacts on air quality associated with construction activities. Note that no water from Cement Creek would be withdrawn for this purpose.

32. Using EPA approved wood-burning devices would mitigate long-term impacts from wood-burning stoves.

Cultural Resources:

33. Rerouting proposed trails and relocating proposed facilities to avoid historic sites that could be identified during future archaeological surveys would reduce potential impacts to these sites.
34. Restricting tree thinning under Alternative C around known historic sites would reduce potential direct impacts to these sites. Buffer size would be determined on a site-by-site basis, as appropriate to limit visibility of selected sites.
35. Insuring that tree thinning under Alternative C would not facilitate access to select historical sites would help protect these sites from vandalism and souvenir collection.
36. Design and implementation of an archaeological site management plan that includes an annual site monitoring program, a Historic American Buildings Survey and Historic American Engineering Record (HABS/HAER) documentation schedule, and an in-field artifact analysis of prioritized eligible sites, in consultation with the BLM, would protect the historic value of the project area.
37. Design and implementation of a public education plan for on-site interpretation of prioritized eligible sites, in consultation with the BLM, would educate the public about the historic value of the project area and enhance the summer programs offered by SOLRC.
38. Providing information to guests regarding the importance of historical sites, the public's responsibility to avoid disturbing such sites, the laws protecting cultural resources would help minimize impacts and further educate the public about the historic value of the project area.

## **2.4 CUMULATIVE ACTIONS**

NEPA requires that an EIS analyze and disclose a proposed action's direct, indirect, and cumulative effects. Cumulative impacts are those resulting from the combination of the proposed action and other past, present, or reasonably foreseeable actions with the potential to impact the same resources (40 CFR 1508.7). Cumulative effects are analyzed for this project within a defined analysis area specific to each resource. In this analysis, cumulative actions by the BLM and other entities were identified that have the potential to interact with the Proposed Action's direct and indirect effects. These actions are identified below, and applicable actions are analyzed in the Chapter 3 Cumulative Effects section for each resource.

### **2.4.1 Snowmobile Use**

Snowmobile use is a major winter recreational activity in the Silverton area. Snowmobile trails are located in and around Silverton in the San Juan National Forest and Resource Area. Over 148 miles of snowmobile trails are groomed and maintained by the Silverton Snowmobile Club and can be accessed from Silverton and from several points between 2 to 4 miles north and south of



town. One popular trail includes CR 52 within the permit area. This road has been used by snowmobiles for over 20 years and is used for the annual snowmobile event, "The Hill Climb" (Huffman 2003). Further discussion of snowmobile use in the Silverton area is provided in section 3.5, Land Use, and section 3.7, Recreation.

#### **2.4.2 Four-Wheel-Drive Use**

The project area lies within the BLM's Alpine Triangle SRMA, where off-highway vehicle (OHV) use is the dominant summertime recreational activity. The SRMA includes the only designated four-wheel-drive routes on Colorado's Western Slope. One of the most popular routes is the 78-mile Alpine Loop Backcountry Byway, linked to the project area by the Cement Creek spur. The rocky roads of the Alpine Loop were first used in the 19<sup>th</sup> century by miners who carted ore on mule-drawn wagons to Silverton, Ouray, and Lake City. Currently, the roads receive extensive summer and fall use by four-wheel-drive vehicles, ATV's, motorcycles, and two-wheel-drive vehicles where accessible. The area is also linked to the San Juan Skyway National Scenic Byway via the Corkscrew Gulch road. This important form of recreation has been increasing dramatically in the area over the past decade and is projected to continue to increase in the future.

#### **2.4.3 Durango Mountain Resort Development**

Durango Mountain Resort (formerly called Purgatory) is a four-season mountain resort community located about 25 highway-miles southwest of Silverton on U.S. Highway 550, and provides commercial, lift-served skiing. Durango Mountain Resort is currently finalizing a new master development plan for the ski area. Implementation of the plan could begin as early as 2005, contingent upon completion of the NEPA process. The resort would be upgraded from the current skier capacity of about 5,000 to accommodate 9,800 skiers within the existing 2,500-acre permit area. The plan calls for upgrades and improvements of existing lifts and trails, development of two new facilities, and snowmaking. No expansion of the existing permit boundary is proposed.

Durango Mountain Resort has current plans for a residential and commercial build-out that includes 1,649 dwellings, including single and multi-family units and hotel rooms, and 410,000 square feet of commercial space in a series of "villages" on both sides of Highway 550 in La Plata and San Juan counties. The development would occur on private land adjacent to the ski area, and would take place over a 25-year period with construction starting in La Plata County in 2003. Construction will not begin in San Juan County for at least 5 to 10 years and will include approximately 170 single-family dwellings (Tookey 2003b).

#### **2.4.4 Telluride Expansion**

Telluride Ski Area is a four-season mountain resort community located about 73 highway-miles northwest of Silverton off of Highway 145, and provides commercial, lift-served skiing. The ski area is currently completing construction of facilities approved under their 2000 Master development plan. The resort will be expanded from the current skier capacity of about 6,900 to accommodate 10,000 skiers within a 3,461-acre special use permit area. Five lift pods have been approved for development under this plan (Forest Service 1999). Of these, the Prospect Basin, Gold Hill, and Novice lift pods have been built.

#### **2.4.5 Mining**

The town of Silverton was built around the mining industry after gold was discovered in the surrounding mountains in 1860. Mining reached its peak between 1900 and 1912 and the town population peaked accordingly. The closest mine to the proposed permit area with recent

production history is the Sunnyside Mine. This mine has been operational off and on since 1875, producing primarily lead, zinc, and copper, as well as some gold and silver. The mine produced more than 1,000 tons of ore daily when it was last active. Sunnyside Gold Corporation's mining operations ceased in 1991, and currently the corporation is completing reclamation efforts specified under their mining permit. All portals have been sealed, and reclamation activities will be complete and terminate by the end of 2003.

Gold King Mines Corporation currently has an active mining permit adjacent to the permit area. Gold King is planning to begin commercial operations in 2003. The mining operation is projected to have 40 to 50 people working year-round at the Gladstone mine site, and approximately 15 to 25 loads of ore will be trucked from the mine site to Howardsville Mill each day on SH 110A. See section 3.5, Land Use, for further discussion of mining operations.

The aftermath of mining can also contribute to cumulative effects. The BLM has identified several mine closure and remediation projects that may affect the Cement Creek watershed. The most visible will be the construction of a couple of settling ponds by the Elk Tunnel on Cement Creek about 2 miles south of the SOLRC project area. In Prospect Gulch there are two projects, a mine closure and tailings-pile regrading project and a tailings-pile consolidation and regrading project (Odell 2003).

#### **2.4.6 Jurisdiction Change of State Highway 110A**

San Juan County and the town of Silverton have signed an agreement with CDOT to take over SH 110A in October 2003. The highway is currently under the jurisdiction of the Colorado Department of Transportation (CDOT). After October, the portion of road that runs through Silverton will be transferred to the town and the remainder of the road will be transferred to San Juan County. CDOT currently holds a FLPMA right-of-way authorization from the BLM to use and maintain the road. Prior to the transference of the road from CDOT to San Juan County, both parties will work with the BLM to assign the rights vested to CDOT under the right-of-way authorization to the county. Under the agreement with the town and county, CDOT will undertake some road repairs (culvert replacement/installation, road re-paving, etc.) that will be completed by the end of 2003.

The annual maintenance contract with CDOT will be terminated at the end of June 2003. However, the county will perform the same routine maintenance as they do under the current contract. The CDOT permits held by SOLRC for road access and road closures associated with avalanche control work will also terminate at the time of the jurisdiction shift. Agreements will be made with the county with similar terms and conditions as the state permits. CDOT will continue to monitor the road for avalanches and, under an agreement with the county, will still regulate avalanche control mitigations and cleanup, while the county will pay for the cost of explosives. See section 3.9, Transportation, for information on current permits.

#### **2.4.7 Livestock Grazing**

Livestock grazing occurs in the permit area, which is part of the Gladstone sheep allotment. This allotment has been grazed seasonally by 900 to 1,200 sheep since the 1940s. No other livestock species have grazed in this area or are projected to in the future. Sheep grazing is anticipated to continue within the permit area in the foreseeable future. Further discussion of the grazing allotment is presented in section 3.5, Land Use.

## 2.5 IMPACT SUMMARY

The environmental impacts of the Proposed Action and the alternatives addressed in this EIS (see Chapter 3) are summarized in Table 2-2. Note that the impacts outlined under Alternative A – No Action would also occur under the Proposed Action and the action alternatives.

## 2.6 PREFERRED ALTERNATIVE

The BLM's *National Environmental Policy Act Handbook* (H-1790-1) directs that the manager responsible for preparing an EIS should select the agency's preferred alternative, and that the selection should be based on the results of the environmental analysis as well as other factors that influence the decision or are required under other statutory authority (Chapter V, B.2.b).

Alternative C – Integrated Guided and Unguided Operation has been selected as the agency's preferred alternative. The rationale for this selection is as follows:

- This alternative would provide the greatest recreational opportunity. In terms of diversity, it would authorize both guided and unguided options, each of which constitutes a distinctive recreational experience. In terms of the amount of terrain made available, it is projected to maximize the useable portion of the permit area. In terms of the number of people served, providing diverse opportunities on the largest land area possible would meet the desires of the greatest number of skiers.
- This alternative would best address public safety concerns. The main, alternative driving issue addressed in this EIS is snow safety, given the inherently high avalanche hazard in the San Juan Mountains. This alternative would combine the two approaches to snow safety associated with guided and unguided operations (hazard avoidance and hazard reduction, respectively), and the combination would be more effective at reducing risks to the public than either approach alone. Further, because this alternative is projected to attract more skiers than the other alternatives, it would generate more revenues to fund what will undoubtedly be an expensive snow safety program.
- This alternative would not result in any notable environment impacts beyond those associated with the Proposed Action and Alternative B.

<b>Table 2-2. Summary of impacts of Proposed Action and alternatives.</b>				
<b>Alternative/ Impact Type</b>	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided-Only Operation</b>	<b>Alt. C – Integrated Guided and Unguided Operation</b>
<b>Watershed Resources</b>	In addition to watershed impacts described under the No-Action Alternative, disturbance on public land would occur during trail construction (about 0.5 acres) and placement of up to six temporary foot/skier bridges. Explosives use and residue would be the most extensive under the Proposed Action, but notable adverse water quality impacts are not anticipated. The safety mitigation measure calling for an access road would create an additional 3 acres of surface disturbance (about 60 percent on public land). Impacts to sediment concentrations manageable with suggested mitigation.	Adequate culinary water supply would be available for base-area facilities. Most watershed impacts would occur under this alternative. Construction of base area structures and rope tows would disturb a total of about 0.4 acres of private land. A total of six temporary foot/skier bridges would be placed on private land. The extent of impacts from explosives residue would be limited to private land and would consequently be less than any other alternative.	Impacts from explosives residue would be somewhat less extensive than the Proposed Action due to the reduced level of avalanche control associated with guided-only operation. Otherwise similar to the Proposed Action.	Construction of the alternative lift trail for hiking/biking would disturb an additional 0.6 acres. Otherwise similar to the Proposed Action.
<b>Vegetation</b>	In addition to vegetation disturbance described under the No-Action Alternative, hiking trail construction would disturb 0.5 acres of alpine vegetation. Summer recreation activities could result in additional trampling disturbance. The access road proposed as safety mitigation would result in 1.8, 0.5, and 0.7 acres of cut-and-fill disturbance on a steep slope in the upper montane spruce forest, forest clearings, and alpine communities, respectively. No	Most project elements generating vegetation impacts would occur under this alternative. Construction would disturb 0.4 acres in the base area, in addition to the 7.4, 1.3, and 3.9 acres of clearing and grading that have previously occurred on private land in the upper montane spruce forest, forest clearings, and alpine communities, respectively. Summer recreation impacts to alpine communities would be reduced by restricting trails and organized	Similar to the Proposed Action.	About 0.4, 0.1, and 0.1 acres of additional disturbance in the upper montane spruce forest, forest clearings, and alpine communities, respectively, due to construction of the alternative lift trail for hiking/biking. In addition, thinning (up to 20 percent stem removal) would take place on 182 acres of montane spruce forest.

<b>Table 2-2 (cont'd). Summary of impacts of Proposed Action and alternatives.</b>				
<b>Alternative/ Impact Type</b>	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided-Only Operation</b>	<b>Alt. C – Integrated Guided and Unguided Operation</b>
<b>Vegetation (cont'd)</b>	impacts to wetlands, and no known impacts to Special Status plants are projected.	activities to private land, although some guests would likely follow the ridgeline up from the top of the lift. No impacts to wetlands, and no known impacts to Special Status plants are projected.		Otherwise, similar to the Proposed Action.
<b>Wildlife</b>	Project may affect, but is not likely to adversely affect, Canada lynx. Potential impacts would be minimized by suggested mitigation. Potential impacts to other federal, state, and BLM species of concern would be minor or nonexistent, depending on species presence. Short-term impacts and potential displacement of species of high public interest could occur. Potential impacts to aquatic species would be negligible and mitigable. Impacts to subnivean species would not change notably from natural conditions.	Human-wildlife encounters and other associated recreation disturbances are not anticipated on public land, as the project area would be limited to SOLRC land. Snow-compacted corridors could increase due to concentrated use of terrain. Minor water depletions associated with the culinary well would contribute to cumulative downstream impacts to endangered fish species. Potential impacts to aquatic habitat and subnivean species would be less than under the Proposed Action. Otherwise, similar to the Proposed Action.	Potential noise disturbance to wildlife from helicopter use. Potential human-wildlife encounters on public land in the winter would be less than under the Proposed Action because winter recreation on public land would be more dispersed and involve fewer people. Otherwise, similar to the Proposed Action.	Human-wildlife encounters and other associated winter recreation disturbances would be greatest under Alternative C, because of the large amount of available ski terrain and high number of skiers anticipated. Thinning could affect forested habitat to some degree. In summer wildlife encounters on public land could increase with the construction of a new hiking/biking trail under the chair lift. Otherwise, similar to the Proposed Action.
<b>Land Use</b>	Winter recreational access to public land would be restricted. Summer access would not be affected. Road access would be affected during closures of SH 110A or CR 52 for	Public lands surrounding the permit area would be available for public use, but access would be periodically limited by temporary closures of SH 110A and CR 52. Road closures and	Potential for private property closure violations would be less than under the Proposed Action since skiers would be guided. Potential impacts to	Similar to the Proposed Action.

<b>Table 2-2 (cont'd). Summary of impacts of Proposed Action and alternatives.</b>				
<b>Alternative/ Impact Type</b>	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided-Only Operation</b>	<b>Alt. C – Integrated Guided and Unguided Operation</b>
<b>Land Use (cont'd)</b>	avalanche control. Private property rights and development potential would not be impacted. Private property boundary management would continue as under current permit. Grazing and mining operations would not be impacted. Use of the project area for commercial recreation could potentially be impacted.	associated access impacts would be less frequent than under the Proposed Action. Otherwise, similar to the Proposed Action.	commercial recreation would be less. Otherwise, similar to the Proposed Action.	
<b>Socio- economics</b>	Annual visitation projected to reach 15-25,000 skier visits, with increased demand for goods and services and population increases due to increased employment. Direct winter employment: 24 full-time and five part-time. Direct summer employment: 14 full-time and one part-time. Short-term and long-term housing needs would be met by surrounding communities. Impacts to community services would be met by existing infrastructure. Skier spending and summer visitation would strengthen local economy.	Annual visitation less than Proposed Action projection, with slightly increased demand for goods and services and slight population increase. Direct winter employment: six full-time and four part-time. Direct summer employment: 10 full-time and 2 part-time. Slightly increased demand for housing and community services. Local economy strengthened less than under Proposed Action and action alternatives.	Annual visitation less likely to reach upper range of skier visits projected under Proposed Action, with less demand for goods and services and less population increase. Direct winter employment: 17 full-time and 10 part-time. Direct summer employment: 14 full-time and one part-time. Skier spending and summer visitation would strengthen local economy less than Proposed Action. Otherwise, similar to the Proposed Action.	Annual visitation more likely to reach or exceed 15-25,000 skier visits than under Proposed Action, with highest demand for goods and services and greatest population increases. Direct winter employment: 28 full-time and seven part-time. Direct summer employment: 14 full-time and one part-time. Skier spending and summer visitation would strengthen local economy the most. Otherwise, similar to the Proposed Action.

<b>Table 2-2 (cont'd). Summary of impacts of Proposed Action and alternatives.</b>				
<b>Alternative/ Impact Type</b>	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided-Only Operation</b>	<b>Alt. C – Integrated Guided and Unguided Operation</b>
<b>Recreation</b>	<p>Annual visitation projected at 15-25,000 skier visits per season. SOLRC would offer a unique skiing product that would dovetail with current market trends indicating that skiers are seeking a backcountry skiing experience.</p> <p>Summer demand would be increased by addition of hiking trail, mountaineering route, and expansive terrain for educational programs.</p> <p>Adequate balance between ski area capacity and infrastructure.</p>	<p>Skiing would be limited to private land. Limited terrain would result in high skier densities on trails, packed snow conditions, and long lift lines. Base facilities would be inadequate to serve peak day visitors.</p> <p>SOLRC would be unlikely to attract the number of guests projected under the Proposed Action because the type of recreation product offered would be better provided by regional resorts.</p> <p>Summer demand largely restricted to scenic lift rides.</p> <p>Base area capacity potentially in excess of on-mountain capacity.</p>	<p>Up to 100 skiers would use public land in guided parties (based on 8:1 skier:guide ratio). A helicopter would be authorized to transport skiers and conduct snow safety work. Low skier density and professional assistance from guides would provide a desirable skiing product for those in the guided skiing groups.</p> <p>The remaining 375 guests would be required to remain on private land. Lower skier densities would result in a better skier experience than under the No-Action Alternative, but this experience would be similar to that at regional resorts, and SOLRC would be unlikely to achieve the visitation levels projected under the Proposed Action.</p> <p>Otherwise, similar to the Proposed Action.</p>	<p>Use of the entire permit area for unguided or guided skiing would be authorized based on snow safety conditions. Using both options would attract more visitors and make more terrain open, in general. SOLRC would be able to offer a unique skiing experience, and visitation would be similar to or exceed the Proposed Action. Addition of alternative hiking/biking trail would add to summer recreational opportunities. Otherwise, similar to the Proposed Action.</p>

<b>Table 2-2 (cont'd). Summary of impacts of Proposed Action and alternatives.</b>				
<b>Alternative/ Impact Type</b>	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided-Only Operation</b>	<b>Alt. C – Integrated Guided and Unguided Operation</b>
<b>Safety</b>	Snow safety risk to public safety somewhat greater than under other alternatives but manageable through effective implementation of snow safety plan and suggested mitigation measures. Abandoned mine risk, potential for skier/snowmobile collisions on CR 52, and fire hazard all manageable with suggested mitigation.	All potential impacts reduced by smaller scale of operation. Lowest snow safety risk to public safety because of terrain limits, but effective external boundary management to reduce risk to skiers in unmanaged terrain around ski area essential. Otherwise similar to Proposed Action.	Snow safety risk to public safety somewhat less than Proposed Action because of inherent safety of guided operation on public land and higher likelihood of effective boundary management. Risk higher than under the No-Action Alternative. Otherwise similar to Proposed Action.	Snow safety risk to public safety less than Proposed Action, mainly because of inherent safety of guided operations, greater visitation, and thus revenue generation to fund snow safety program. Alternative Lift Trail would facilitate emergency snowmobile access. Risk still somewhat higher than under the No-Action Alternative. Otherwise similar to Proposed Action.
<b>Transportation</b>	Capacity of SH 110A and available parking spaces would accommodate traffic and vehicles related to SOLRC operations. Road closures would be managed similarly to current conditions, with cooperation between SOLRC, San Juan County, and CDOT. Avalanche hazard index would be slightly elevated. Because of expanded avalanche control activities, road closures would likely be more frequent, and impacts to parking areas would be potentially less. Emergency access to SH 110A would continue to be provided on the basis of urgency and safety.	Road closures would likely be less frequent than under the Proposed Action because of reduced avalanche control activities. Otherwise, similar to the Proposed Action.	Road closures could be less frequent than under the Proposed Action because potentially fewer explosives used for avalanche control. Otherwise, similar to the Proposed Action.	Similar to the Proposed Action.



<b>Table 2-2 (cont'd). Summary of impacts of Proposed Action and alternatives.</b>				
<b>Alternative/ Impact Type</b>	<b>Proposed Action</b>	<b>Alt. A – No Action</b>	<b>Alt. B – Guided-Only Operation</b>	<b>Alt. C – Integrated Guided and Unguided Operation</b>
<b>Aesthetic Resources</b>	In addition to the visual impacts on private land under the No-Action Alternative, facilities authorized on BLM lands under the Proposed Action and as mitigation would be visible to the public. With suggested mitigation in place, SOLRC infrastructure constructed on public land would be consistent with applicable BLM Visual Quality Management objectives. The main noise impact would be avalanche control explosives, and this impact is not projected to change notably from current levels. Air quality impacts would be restricted to minor, temporary, construction dust. Suggested mitigation would reduce this impact.	Most visual impacts would occur under this alternative, associated with base area construction. No visual standards are in place for private lands. Development would change the visual character of the base area site but would not be inconsistent with mining and residential development in the Cement Creek watershed. Noise associated with avalanche control would continue but at reduced levels due to restriction to private land. Air quality impacts associated with construction and heating would be minor and mitigable.	Operation of a helicopter would add substantially to noise in the Cement Creek watershed. Otherwise, similar to the Proposed Action.	Similar to the Proposed Action.
<b>Cultural Resources</b>	There are 11 known historic mining sites and 15 isolated finds in the SOLRC project area. Seven of the 11 historic sites are recommended as eligible for inclusion in the National Register of Historic Places. There would be no direct impacts to these identified cultural resources. Indirect impacts could occur due to increased visitation and associated vandalism and souvenir collection. Mitigation measures have been suggested to protect sites.	The potential for indirect impacts to public-land sites would be reduced because the SOLRC operation would be restricted to private land and there would likely be fewer guests. Otherwise, similar to the Proposed Action.	Similar to the Proposed Action.	The potential for indirect impacts could increase under this alternative if tree thinning facilitated access to historical sites. Otherwise, similar to the Proposed Action.

