

Draft Berthoud Pass Assessment

Arapaho and Roosevelt National Forests
Clear Creek and Grand Counties, Colorado

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Chapter I – Characterization

The purpose of this assessment is to:

- facilitate future management of the Berthoud Pass area by providing recommendations that define a desired management direction for the area.
- Identify facilities and services appropriate for the Berthoud Pass area based on the recommended management direction.

This assessment is not a decision making document, but develops a management concept from which additional planning and analysis can evolve.

Location

The Berthoud Pass assessment area is located in north central Colorado, within northern Clear Creek County and southern Grand County (see Appendix B, Vicinity Map). It lies about 60 miles west of Denver, Colorado and about 25 miles south of Granby, Colorado. The assessment area lies on the Continental Divide and is bisected by U.S. Highway 40 and the Continental Divide National Scenic Trail (CDNST). The James Peak Wilderness lies due east from the assessment area, and the Vasquez Wilderness lies due west (T.35 N., R. 75 W., Sec. 9, 10, 16, 15, 6th Principle Meridian).

The Berthoud Pass assessment area was designated under the 1997 Revised Land and Resource (Forest Plan) for the Arapaho-Roosevelt National Forests and Pawnee National Grassland (ARP) Management Plan as a developed ski area. The assessment area is about 730 acres and is completely on public lands administered by the USDA Forest Service. The assessment area drains into two watersheds: the headwaters of the Fraser River, tributary to the Colorado River; and Hoop Creek, tributary to Clear Creek in the South Platte basin.

Background Information

SolVista Inc. most recently operated the Berthoud Pass Ski Area and owns most of the permitted facilities at Berthoud Pass, including the ski lodge. The Forest Service (FS) administers the public land the ski area occupied and authorized the ski area operation through a special use permit that expired on October 22, 2003. The permit was an agreement between the Forest Service and SolVista that outlined terms and conditions of operating a commercial activity on National Forest System lands. One of the conditions in the permit required that SolVista remove all infrastructures related to the ski area operation at the termination of the permit. SolVista removed the lift towers in April 2003 and is currently developing a removal plan for the lodge and other improvements associated with the ski area.

Current Forest Plan management direction for the Berthoud Pass area is for a ski based resort. The Forest Service has completed a draft *Berthoud Pass Ski Area Needs Assessment* of the special use permit to determine if the area should continue to be managed as a ski area. SolVista is the fourth group who failed to run a profitable ski operation at Berthoud Pass since 1987. This assessment recommends a change in the management direction for the area (from ski based resort to other management direction), which will require a Forest Plan amendment.

Major Characteristics

The Berthoud Pass ski area is rich in history and was one of the first ski areas in Colorado. Berthoud Pass was the first ski area to offer a ski lift (tow rope) in Colorado and was the first ski area in North America to have a double chairlift. Despite its history, Berthoud Pass ski area may no longer be a viable operation as evidenced by the failure of the past four groups. In addition to a failed ski business, additional factors that preclude the continued designation of Berthoud Pass as a developed ski area are:

- limited space at the base for parking and additional facilities;
- cost of maintaining and operating the lodge, which was constructed in 1949; and
- competition from larger ski areas during a National and State trend of decreasing skier visits.

Currently, the area receives high use (average of 40 people weekdays and 150 people weekends) during the winter months and serves as an access point for a variety of non-motorized backcountry activities including snowshoeing and skiing. The slopes adjacent to the lodge and parking area is being used daily for snowplay. A major safety concern on weekends is the use adjacent to the lodge and parking area, which is predominantly sledding and tubing. These slopes were not designed for this type of activity and injuries associated with snowplay frequently occur.

The area also receives year-round use from motorists traveling along Highway 40. The Berthoud Pass parking area is an easy location to stop, so motorists often pull over for a rest break or to enjoy the scenic overview. The CDNST can also be accessed from this location. The recreational use of this area creates ongoing safety and sanitation concerns. Highway 40 is a major travel way for tourists going to Rocky Mountain National Park, Arapaho National Recreation Area, and Winter Park. In addition, residents utilize this route to travel to and from the Front Range urban corridor and the Granby area. Historically, Highway 40 was the main east-west route across the State until the construction of Interstate 70.

The Berthoud Pass assessment area is of high value for wildlife as well as sensitive plants. Berthoud Pass is an identified lynx linkage zone in the Canada Lynx Conservation Assessment and Strategy (LCAS). The Berthoud Pass linkage zone is one of a few linkage zones in Colorado for Canada lynx.

Chapter II – Issues

Issue Identification Process

Key issues are defined as major concerns that are relevant to the purposes of this assessment (identified in Chapter I). Key issues can be biophysical, social, or managerial in nature. Key issues are the focus points for the interdisciplinary team (IDT). The key issues were identified by the IDT at two Forest Service meetings held on February 6, 2004 and February 10, 2004. Key issues were identified by the IDT based on professional judgment, resource knowledge, site-specific knowledge of the Berthoud Pass area, and comments from the public.

Public comments were solicited in two public meetings held on October 9, 2003 and December 16, 2003. In addition, letters, e-mails and conversations with the IDT leader throughout the assessment process were considered.

Key Issues

Wildlife – The Berthoud Pass area is an important wildlife corridor and is identified as a statewide lynx linkage area under the Lynx Conservation Assessment and Strategy (see Appendix B, Lynx Habitat map). Alpine wildlife species such as mountain goat and bighorn sheep utilize the area as a key east-west corridor. Forested wildlife species such as lynx, elk, deer, bear, and marten utilize the area as a key north-south corridor. Some uses, such as motorized recreation or night use, could degrade the quality of this wildlife corridor.

Recreation – Current unmanaged recreational uses and lack of trailhead and information facilities at Berthoud Pass are causing safety and sanitation problems. Future management of the area should account for the high year-round recreation demand.

Scenery – Users of Highway 40 and the CDNST have a high expectation for scenic quality in the Berthoud Pass area, yet scenic quality has been degraded by past activities and uses. There are opportunities to improve the visual condition through revegetation efforts and removal of obsolete facilities and structures. Facility design should be consistent with the high concern for scenic quality along Highway 40 and the CNDST.

Land Uses – Current land use authorizations in the Berthoud Pass assessment area include State Highway 40, Hoop Creek Ditch, Mines Peak electronic site, and a Continental Divide historic marker. Changes in future management standards and guidelines of the area should be consistent with the existing land uses.

Facilities – The lodge and other ski related facilities at Berthoud Pass are scheduled to be removed in 2004. The Counties and local communities believe the lodge, or other facilities developed in its place, could enhance local economies. Any future facility at Berthoud Pass would need to meet the Forest Service basic recreation management objectives for the area. The Forest Service believes the existing facility would need extensive refurbishing to meet accessibility and fire standards as well as the Forest Service Built Environment Image Guidelines and it may be more economical to replace the structure

with new facilities to meet current user needs. The Forest Service is also concerned with the agency's limited financial ability to maintain facilities to provide basic public services in a sustainable manner.

Other Issues

[This section to be completed between draft and final]

Chapter III – Existing & Reference Conditions

Biological and Physical Environments

Setting – The assessment area consists of high elevation, montane lands. Elevations range of 10,600 feet to 12,500 feet. Annual precipitation is approximately 35 inches per year. Most precipitation falls as snow. Approximately half of the area is alpine, located above timberline. Engelmann spruce and sub-alpine fir forests occupy the lower half of the assessment area.

Vegetation – Alpine vegetation is predominantly grass and other herbaceous vegetation (forbs). Other important habitats in the alpine include fell fields, boulder fields, and solifluction terraces.

Fell fields are windswept areas characterized by rocky ground and low-growing cushion plants at high elevation. Soils are rudimentary and gravelly, and snow is scoured off through much of the winter. Dominant species include club mosses, alpine grasses, forbs, and low growing shrubs. Trees are not present above approximately 11,400 feet.

Boulder fields contain plants that are not commonly found in other alpine habitats. Plants establish in small pockets where windblown soil has been deposited and where rocks offer protection from wind. Dwarf columbine (*Aquilegia saximontana*) is a Colorado National Heritage Program (CNHP) species of concern that is often found in this habitat. Occurrence of this species has been recorded less than one mile west of the assessment area.

Solifluction terraces are small soil terraces formed by the downhill creep of soil particles. The terraces often are wet and support plant communities adapted to high soil moisture. Kotzebue's grass of Parnassus (*Parnassia kotzebuei*), a Forest Service sensitive species, may occur on these sites.

Krummholtz are tree islands that occur at the interface of the alpine and forested ecosystems. The predominant tree species in krummholz within the assessment area are Engelmann spruce and subalpine fir. Scattered bristlecone pine krummholz occur where soils are rocky.

The dominant vegetation types in the forested subalpine area are Engelmann spruce and subalpine fir, with minor components of lodgepole and bristlecone pine. This area also contains riparian areas along stream corridors and fens. Fens are peat-forming wetlands. Because of their hydrology and chemistry, fens contain unique vegetation communities. At least one fen is known to occur within the assessment area and it contains rare orchids.

Natural disturbance events occur less frequently in subalpine and alpine ecosystems than in lower elevation ecosystems. Fire, insects, and diseases are rare in an alpine/sub-alpine ecosystem. Avalanches occasionally cause disturbance, but this phenomenon probably has remained more or less constant.

Current risks to vegetation include insects, sedimentation and human impacts. Insect activity that causes tree mortality occurs less frequently in the subalpine than in lower elevation ecosystems. However, spruce budworms are at epidemic proportion on the Routt National Forest to the north and may eventually reach Berthoud Pass. Along portions of Highway 40, sediment deposited below the road from sanding operations is increasing tree mortality. Because of the sand deposition, regeneration

of trees is suppressed. Some areas adjacent to roads, trails, and parking lots have less than desirable amounts of vegetation due to human use and trampling.

Federally listed and sensitive plants that may occur within the assessment area include Altai cotton-grass, bristle-stalked sedge, clawless draba, Front Range cinquefoil, Gray's Peak whitlowgrass, Hall's fescue, hoary willow, Kotzebue's grass of Parnassus, livid sedge, narrow-leaved moonwort, prairie moonwort, roundleaf sundew, sea pink, simple kobresia, slender cotton-grass, ice cold buttercup, Weber's monkey flower, and Weber's scarlet-gilia. CNHP maps show occurrences of Gray's Peak whitlowgrass, Alpine aster, and clawless draba within the assessment area. The current status of these plant occurrences is unknown. These plants may be affected by human uses that trample plants or alter site hydrology through soil compaction or snow compaction.

Wildlife – The primary wildlife issue in the assessment area is the function of the wildlife corridors. Two corridors intersect at Berthoud Pass. A corridor for forest species (such as American marten and Canada Lynx) runs north-south parallel to Highway 40, and a corridor used by open space and/or alpine species (such as mountain goat and bighorn sheep) runs east-west parallel to the Continental Divide. Human activities occur year-round in both corridors. Traffic is often high on Highway 40, especially on weekends year-round. The Colorado Department of Transportation (CDOT) has been conducting a multi-phase reconstruction of Highway 40. Construction has occurred for several summers and will continue into the future. Hikers use the CDNST during the summer. Some off-trail use may occur in the vicinity of the ski area. During winter, skiers and snow boarders use both sides of the pass. Some backcountry winter use occurs as far north as Parsenn Peak and James Peak and as far southwest as Stanley Mountain. Several outfitters provide avalanche training from Hoop Creek to Pumphouse Draw and into Current Creek.

Based on historical aerial photos, it is probable the area at the Pass used to contain a larger number of spruce and fir trees that were cut down to make room for the parking lot and facilities. Presently, the upper end of a former ski lift on the east side of Highway 40 is surrounded by spruce-fir krummholz and a few larger trees between the two densely forested sides of the Pass. This sparsely treed site may be used by wildlife as cover to travel across the Pass

Presently, the two corridors appear to provide the minimum habitat required for species using the corridors. Except for travel along Highway 40, there is little current nighttime human activity and no motorized public uses beyond the parking lot. Bighorn sheep and elk mainly avoid the Pass and the highway corridor during the day, preferring to move along the ridges and through the forest below. Mountain goats prefer to stay on the west side of the assessment area above timberline. Encounters with mountain goats and bighorn sheep are rare near the road and at the Pass. Lynx also tend to move and hunt at night, staying within forested corridors, and are most likely to cross the pass east of Highway 40 close to forested cover. While waiting for darkness, lynx will use blocks of diurnal security habitat located on both sides below the summit, in spruce-fir habitats.

The Berthoud Pass assessment area contain suitable habitat for the Canada lynx. The assessment area contains portions of two Lynx Analysis Units (LAU; an analysis area which approximates the size of a single adult lynx home range): the Fraser LAU (north of the Pass and 'west' of the CD) and the Clear Creek LAU (south of the Pass and 'east' of the CD). The Berthoud Pass area of the Clear Creek LAU contains ample foraging habitat but denning habitat is limited to small isolated patches. The Berthoud Pass area of the Fraser LAU contains ample denning and foraging habitat (see Appendix B, Lynx Habitat map).

Berthoud Pass is a lynx linkage zone as defined in the Canada Lynx Conservation Assessment and Strategy (LCAS). It is one of the few linkage zones in Colorado. There are three other linkage zones (Herman Gulch, Loveland Pass, and Guanella Pass) on the Clear Creek Ranger District and one other linkage zone, Fraser Valley, on the Sulphur Ranger District. Reports from Colorado Division of Wildlife (CDOW) indicate lynx use this linkage zone. This linkage zone is also used by many other forest wildlife species such as black bear, American marten, mule deer, bobcat, and red fox. Restoring forested cover across the Pass would encourage more wildlife species to move across the Pass. This is important for genetic interchange between wildlife populations and for recovering species to suitable, but unoccupied habitat.

A snow compaction map was created to indicate potential compromised lynx habitat since compacted snow invites competition with, and potential direct mortality from, other predators such as bobcat and coyotes. The entire Berthoud Pass assessment area is mapped as compacted as a result of concentrated human use. Therefore, lynx habitat quality within the assessment area is reduced from potential. Reducing the extent of snow compaction may increase the quality of foraging habitat and decrease the risk of mortality.

Boreal toads have been located below the assessment area on the Clear Creek side and it is possible this species may move into the assessment area for hibernation. Sediment from the highway and parking lot may degrade downstream breeding habitat by filling ponds, decreasing water quality, and inundating egg masses with sediment.

Pika (*Ochotona princeps*) and yellow-bellied marmot (*Marmota flaviventris*) have been observed in the assessment area. Soil casts from snow tunnels give evidence of pocket gophers (*Thomomys talpoides*). The Continental Divide is a main corridor for bighorn sheep (*Ovis canadensis*) and mountain goats (*Oreamnos americanus*). According to the CDOW National Diversity Information Source (NDIS) database, the entire assessment area south of the Continental Divide is bighorn sheep summer and overall ranges. An overall range encompasses all known seasonal activity areas within the observed range of a population. Mountain goat overall range is west of Highway 40 on both sides of the Continental Divide. Their summer range is limited to area south of the Continental Divide and west of Highway 40 above timberline within and beyond the assessment area. Elk (*Cervus elaphus*) are seen using the alpine tundra for foraging during summers. The entire assessment area and beyond is summer and overall ranges for elk and mule deer (*Odocoileus hemionus*). Moose overall range is north of the Continental Divide within and beyond the assessment area. The assessment area north and south of the Continental Divide is also overall range for black bear (*Ursus americanus*) and mountain lion (*Felis concolor*). The area may also be used by red fox (*Vulpes vulpes*) and coyote (*Canis latrans*).

Bird species within the assessment area include white-crowned sparrow (*Zonotrichia leucocephalus*), and Townsend's solitaire (*Myadestes townsendi*), which use the krummholz habitat. American pipets (*Antus rubescens*) may utilize ridgetop and slopes for courtship from May to July. White-tailed ptarmigans (*Lagopus leucurus*), a Forest Service sensitive species, may utilize willow areas at or above timberline. The area west of Highway 40 on the south side of the Divide is an overall range for ptarmigans. Ptarmigan scat had been found near Stanley Mountain, which is less than a mile west of Berthoud Pass assessment area. A small section of assessment area near Colorado Mines Peak is also within the overall range for ptarmigan.

The assessment area has adequate habitat to support the following federally listed and Forest Service Sensitive wildlife species that may reside in the area: boreal toad, Northern leopard frog, white-tailed ptarmigan, American marten, pygmy shrew, North American wolverine, Canada lynx, boreal owl,

Northern goshawk, Northern harrier, olive-sided flycatcher, and American three-toed woodpecker. CNHP map shows that *Polixenes arctic (Oeneis polixenes)*, a CNHP species of concern insect, was found just south of the Berthoud Pass parking lot.

Water and Fisheries Resources – Aquatic habitats within the assessment area include fens, streams, ponds, and alpine lakes. Perennial streams within the assessment area include the Fraser River, Hoop Creek and Current Creek. These streams originate in high elevations and are characterized by steep gradients and coarse bed material.

The Hoop Creek Ditch (also known as the Berthoud Pass Ditch), owned by the City of Northglenn, diverts water from the Fraser River watershed. Water transported into the ditch empties into Hoop Creek past Berthoud Pass. Continued use of the ditch, including motorized access along the ditch for maintenance, is anticipated for the foreseeable future.

Highway 40 crosses Berthoud Pass through the assessment area. Historically, the highway has been the primary source of sedimentation in the area. Sediment has been contributed both from eroding cut and fill slopes and from road sanding. Sand loading is evident in stream channels on both sides of the divide. The Colorado Department of Transportation has been working on both sides of the pass to reduce erosion from highway embankments and to trap road sand before it reached streams. Work will continue as funds become available. Even if efforts to reduce sediment sources are successful, large amounts of material have eroded in the past and have moved downslope from the road. This material will continue to travel downslope and some of it will eventually be delivered to Hoop Creek and the Fraser River. Other bare and compacted areas within the assessment area, such as the parking lot at the top of the pass also contribute to erosion and sedimentation, but their effects are minor when compared to the highway.

As previously noted, Hoop Creek is the receiving stream for water transported from the headwaters of the Fraser River through the Berthoud Pass Ditch. Augmented flow in Hoop Creek has caused the stream to enlarge and incise. The incision is most dramatic just below the top of the pass, where the stream has down cut 10-15 feet. Reaches of incision and deposition are evident downstream to the confluence with West Fork Clear Creek. The Forest has been working with the city of Northglenn to plan for stabilization of Hoop Creek. We anticipate that the stabilization work should begin in the summer of 2004.

There are no known populations of fish within the assessment area because the high gradient streams do not provide suitable habitat. Fish are present downstream from the assessment area, in both the West Fork of Clear Creek and the Fraser River. Recent sampling efforts by the CDOW found the West Fork of Clear Creek contained primarily brook trout, with fewer numbers of brown trout and possibly some rainbow/cutthroat hybrids (CDOW 2000). However, during a sampling effort in 1994, limited numbers (five fish) of the greenback cutthroat were captured in the West Fork of Clear Creek just above the confluence with Woods Creek (CDOW 1994). Greenbacks are a federally sited threatened species under the Endangered Species Act. It is unknown whether the fish captured were genetically pure greenback cutthroat trout or were hybridized fish. The Fraser River contains limited numbers of Colorado River cutthroat trout, a Forest Service sensitive species, as well as the more common species of brook trout, rainbow trout, and brown trout, which are all Management Indicator Species for the Forest (CDOW 2000). In order to facilitate the survival of downstream fish populations, as well as allow for their possible expansion upstream, current sedimentation problems need to be addressed. The amounts of sediment entering the upper headwater areas from winter road maintenance (salt/sand) need to be reduced in order to decrease the amount of sediment being

transported downstream during spring runoff. If the sedimentation levels are reduced, there may be some additional fisheries habitat available for colonization that is currently fishless. However, the headwater streams located within the assessment area are likely to remain fishless because of the high stream gradients.

Cultural History

Prehistoric Human Use – Human occupation of north-central Colorado started nearly 13,000 years ago. The earliest evidence of human activity in this area comes from the Paleoindian period, which lasted from approximately 13,000 to 8,000 years ago. A number of Archaic sites (8,000 to 1500 years ago) have been reported within the assessment area, suggesting that during this period of climatic change of high temperatures and drought, human occupation of the forest shifted from lower to higher elevations where drought conditions were less severe. During the Late Prehistoric period, the Ute occupied the Arapaho National Forest for at least 300 to 400 years. The Arapaho, Shoshone, Cheyenne, and possibly Kiowa utilized the mountains of this area to a lesser extent until the 1700s. After 1810, the Ute and Arapaho competed over hunting territory. In 1880 the White River and Uncomphagre bands of Utes were forcibly removed from their traditional lands and relocated to the Uintah/Ouray Reservation in Utah.

Evidence of prehistoric human use of the Berthoud Pass area is found in lithic scatters (the remains of stone tool production and use), campsites, hunting sites, and food preparation and storage locations. Excavations at the Berthoud-Bridger site indicate that Native American use of the area was common in both the Archaic and Late Prehistoric periods.

Historic Human Use – In the mountains of north-central Colorado, the historic period begins in the early to mid-1800s, when Euro-American explorers first began to venture into the area. Unfortunately, most of the earliest Euro-Americans in the area were explorers and trappers, and left little trace of their visits. The most visible historic activities in the Berthoud Pass assessment area relate to the transportation, early mining and early developed recreation.

American Indian Historic Period – Information from various sources indicates that areas of the Arapaho and Roosevelt National Forests were occupied or visited by several historic tribes including the Ute, Arapaho, Cheyenne, Shoshone, Lakota, and Crow. The latter two groups apparently visited the area less frequently, and then only in the company of the Arapaho and Cheyenne (Jackson and Spence 1970).

The majority of central and western Colorado was considered to be traditional Ute territory. While other tribes came and went during the historic period, the Utes remained until they were forcibly removed to Utah in 1880.

The Indian tribes who occupied this area in the historic contact period were hunter and gatherers. All of the tribes had access to the horse and lived a nomadic lifestyle following the large herds of bison on seasonal migration patterns. The cultural resource sites that remain resulted from this land utilization pattern and consist of campsites located near water, lithic scatters, stone circles and stone alignments. Some campsites have evidence of teepees, while others are classified as camps because they contain only the remains of fire hearths. The vast majority of sites will consist of lithic scatters. These sites contain the discarded flakes or chips from the manufacture of stone tools. Other sites are less obvious and include sites with sacred values like vision quest sites, or sites where natural resources were collected such as quarries and peeled pine trees.

Mining – The discovery of gold at the confluence of the South Platte River and Cherry Creek during the spring and summer of 1858 brought large numbers of immigrants to Colorado. Eventually prospectors located mineral deposits of various types and sizes throughout what is now the Arapaho and Roosevelt National Forests. Sites associated with mining include roads, mines, prospecting pits, adits, mills, and mining camps. Many of these site types have been located within the Berthoud Pass assessment area.

Roads and Transportation - The first trappers and explorers established trails, some of which followed previously established Native American routes. In 1861, Captain E.L. Berthoud in the company of Jim Bridger discovered the pass while looking for a mail route from the gold camps. An improved wagon road over Berthoud Pass was completed in 1874. Scheduled stage runs and improved access encouraged settlers and visitors to enter Middle Park in the 1870s and 1880s. Construction and reconstruction continued on the old wagon road until 1921 when the stone bridge was constructed. This newly improved wagon road allowed for easier fording of Hoop Creek. On July 4, 1938, a celebration marked the paving of U.S. 40 over Berthoud Pass.

Cultural resource sites associated with roads and transportation include segments of the historic wagon road, the improved “1921 Model T” road with the stone bridge at Hoop Creek, and the remains of structures that served as stage stops.

Ski Area History – The Berthoud Pass Ski Area opened February 7, 1937. There is disagreement as to whether Berthoud Pass was the first or second ski resort to open in Colorado. It was the first resort with a lift (tow rope powered by a Ford V-8 engine) at a base elevation of 11,314 feet, the highest in Colorado. Berthoud Pass was operated by The Winter Sports Council associated with the city of Denver. The original Inn at the Pass (circa 1920’s) burned down in 1939. This Lodge was replaced with three smaller buildings the same year. Fire destroyed another building in 1940.

In 1945 Sam Huntington, the Grants, the Shaforths and the Tolls bought the ski area facilities. Berthoud Pass installed the first double chairlift in North America in 1947. A new lodge opened in December of 1949.

Irma Hill purchased the ski area in 1973, and subsequently sold it to Clarence Garst in 1977. Use for the 1980-1981 winter sports season was 19,574 skiers. Peter Crowley bought the area in 1987 and renamed it Timberline Ski Area. Major renovation was done to the lodge and shuttles were run on both sides of the pass on Highway 40 to ferry skiers back to the lifts at the summit. A lift accident closed the double chairlift in 1988. The same year Timberline filed for Chapter 11 bankruptcy protection and the ski area closed.

Gary Schulz, maker of Borvig lifts, bought the resort for \$350,000 in 1988. On March 21, 1989 a special use permit was issued to the Berthoud Pass Ski Corporation, Gary Schulz President. On December 1, 1989 a winter operating Plan is approved for the 1989-1990 season. The resort filed Chapter 11 bankruptcy and closed again in 1991. A bankruptcy-court judge allows creditors owning the lifts at Berthoud Pass to secure permits to dismantle and repossess them. Jim Pearsall and Paul Weibal (Berthoud Pass Recreation Corporation) purchased the ski area from bankruptcy court for an undisclosed price. In March of 1995, a Forest Plan revision document was prepared to remove Berthoud Pass from Ski Area designation but it was never adopted. Berthoud Pass Ski Area did not operate from 1992-1997.

On December 18, 1997 a special use permit was issued to operate the ski area, and it reopened January 29, 1998. On April 23, 1999 Silver Creek Holding CO., owners of Silver Creek Ski Resort, were issued a special use permit to operate the ski area. Silver Creek Holding Co. hoped that the terrain at Berthoud Pass would attract expert skiers seeking powder, a customer base that the Silver Creek Ski Area lacked. On September 17, 2001 the corporate name of Silver Creek Holding Co. was changed to SolVista, Inc. In December 2001, SolVista requested non-use for the season. Berthoud Pass did not operate as a ski area in 2001 or 2002. The Ski Area Term Special Use Permit for the Berthoud Pass Ski Area expired October 22, 2003. SolVista, Inc. removed the lift towers in April/May of 2003. Currently, SolVista is addressing a removal plan for the lodge and other improvements associated with the ski area.

Social Environment

Native American Use And Treaty Rights – Berthoud Pass is a natural pass that has allowed Native Americans to travel from the plains into Middle Park and North Park. The top of the pass likely has spiritual value to various Tribes and is a location where religious events may have taken place.

The United States Government has signed several treaties with the Tribes that inhabited Colorado from the plains to the Continental Divide. Various treaties acknowledged that the Berthoud Pass area was part of the territory of several tribes. Subsequent treaties relinquished Native American claims to the land.

Recreation – Recreation use in the Berthoud Pass assessment area has changed in the previous two years, especially within the ski area boundary. This is due primarily to changes in the Berthoud Pass Ski Area operations and finally to a complete cessation of operations. Developed resort skiing opportunities are no longer available. The portions of the assessment area outside the ski area boundaries that were primarily used for backcountry recreation have not seen substantial change in use patterns or opportunities, although some changes in access have occurred. Recreational use from late spring to fall has remained stable.

Winter Use – Ski Area – The termination in 2003 of the permit issued to SolVista for the operation of the Berthoud Pass Ski Area has led to major changes in recreational opportunities and use patterns within the ski area boundaries. Although some of the facilities have been removed, e.g. the chair lifts, some facilities remain. Still on site is the Berthoud Pass Lodge and associated structures. The lodge is closed to the public and not occupied. Under the terms of the Permit, SolVista is obligated and has committed to removing all permitted improvements and to restoring the site to natural conditions. The Forest Service has put SolVista on notice that, barring any unforeseen circumstances, the lodge removal and all other permit obligations will be satisfied in 2004.

When the ski area was operational and the area was under management by SolVista, access and use by the public was monitored and regulated by on-site ski area personnel. There was a high level of control of activities of visitors as is typical at a downhill ski area. The permit holder addressed safety, security, and sanitation needs. The type of use and access to the facilities were strictly controlled.

Currently, there is a lack of management in this area, which was once provided by the ski area operator. There are virtually no restrictions on access to and use of the area. Although locked, the lodge has no on-site security. Visitors have been seen on the roof of the lodge, presumably using it as a platform for recreational jumping or sliding. The area is used as an access point for backcountry snowshoeing and cross-country skiing. These users park their vehicles in the parking lot that is

regularly plowed by CDOT road crews. This plowing is being done not for the convenience of recreationists, but to safeguard motorists by getting parked cars off the side of the highway. Without plowing the parking lot, recreationists would park along the highway, creating a hazard.

The slopes adjacent to the lodge are being used almost daily for sledding and tubing. On weekends, it is probable the majority of users are engaged in some kind of sledding activity. As many as fifty or more cars have been observed (letter from Friends of Berthoud Pass dated 1/30/04) in the parking lot on weekends. The slopes where most of the sledding is occurring are not designed, managed, or maintained for that type of activity. There are no signs or advertisements promoting the area for sledding, yet it occurs regularly and in high numbers.

The Clear Creek Ranger District provides portable toilets and refuse collection at the parking lot. This is a new program for the District because the ski area operator, as required under the permit, previously provided those services. With the termination of the permit, those services were no longer provided by the permittee, and the District Ranger decided to provide minimal service to protect the environment. This service is a financial burden for the Ranger District and only meets minimum standards for basic sanitation and resource protection. No other on-site services have been provided directly by the Forest Service.

Winter Use – Outside the Ski Area – The public land around Berthoud Pass and between the pass and the resort of Winter Park has been used for many years by recreationists for a variety of non-motorized backcountry activities including skiing and snowshoeing. Snowmobile use is prohibited in these areas. The attraction is due to outstanding terrain, good snow conditions conducive to these types of activities, and relative ease of access along U.S. Highway 40. The area is within an hour's drive of a major metropolitan area and so receives a high level of visitation. Many residents of Grand and Clear Creek Counties have taken up back-country recreation as a way to supplement or replace more traditional developed recreation that has become expensive, crowded, or otherwise undesirable. Improved recreational equipment and clothing has enabled more people to successfully handle the challenges of backcountry travel and to better tolerate adverse conditions. Avalanche beacons, cell phones, and other electronic devices aid in reducing the perceived risk of back-country travel. County search and rescue organizations respond to emergencies whenever they occur.

The condition of backcountry recreation in the Berthoud Pass area has remained more or less the same in recent years even in light of the technological advancements described above. Access to the backcountry has changed somewhat since the cessation of downhill skiing at the Pass. The backcountry must now be accessed directly from the pass without benefit of a chair lift, but also without having to contend with downhill skiers. Back-country recreationists will continue to need a place to park and will occasionally seek a restroom or trash can, but these services are less important as these outdoor enthusiasts spend little time near the parking lot.

Summer Use – As with winter, the summer recreational conditions have changed with the termination of the Permit, although probably not to the extent of the winter changes. Previous permit holders have offered various services to the public ranging from food, retail, lodging, and chair lift rides. Some of these services were not always available or consistent, but the permit holder provided some basic management and presence to the public for most of the year. At a minimum, motorists were usually able to stop and avail themselves of restroom facilities, trash receptacles, and conveniences such as snacks, beverages, and a few retail items sold in the lodge. Currently none of these services are available.

In addition to a convenience stop for motorists heading for another destination, Berthoud Pass is itself a destination for many visitors. There are few opportunities close to the Denver metropolitan area for people to easily access alpine meadows. Rocky Mountain National Park and Mount Evans are notable exceptions, but a fee must be paid to access these areas. Berthoud Pass is easy to get to and has ample free parking. The Continental Divide National Scenic Trail is also an attraction for visitors.

Scenery – The FS Scenery Management System (SMS) ranks this landscape as “distinctive”. “Distinctive” is an SMS term that refers to “Areas where landform, vegetation patterns, water characteristics, and cultural features combine to provide unusual, unique, or outstanding scenic quality. These landscapes have strong positive attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance” (USDA Forest Service, 1995).

Under the SMS inventory system Scenic Classes are used as a measure of the value of scenery in the national forest. The Berthoud Pass area rates as a Scenic Class 1 due to its Distinctive landscape, high viewer concern and high visibility. Scenic Class 1 landscapes are landscapes of high public value.

Landscape elements viewed in the Berthoud Pass area are typical for this landscape character type of the Rocky Mountains, which includes dramatic mountain vistas with areas of dense forest, rock scree slopes with grassy moraines in higher elevations, and rocky spires and sheer faces in many locations. Close range, detailed natural landscape elements include waterfalls, snowfields, rock moraines, groups of conifers, krummholtz, wildflower displays, etc.

Over the last century, motorized and non-motorized travel corridors over Berthoud Pass have gained regional and national importance. The proximity of Highway 40 and the CDNST, and the captive audience of thousands of travelers, makes this area highly "viewed" with extraordinary opportunities for scenic and interpretive viewpoints. Visitors have a high expectation for viewing outstanding, natural appearing scenery.

Despite its high public value, the current scenic condition of the Berthoud Pass area is substantially degraded as a result of past developments including road, ski area, and electronic site development, visible from Berthoud Pass, Highway 40 and locations along the CDNST. Existing scenic integrity of the immediate vicinity of the Pass is rated as very low, with an overall rating of the entire assessment area of low to moderate. The SMS defines very low scenic integrity as, “landscapes where the valued landscape character ‘appears heavily altered.’ Deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However deviations must be shaped and blended with the natural terrain (landforms) so elements such as unnatural edges, roads, landings, and structures do not dominate the composition” (USDA Forest Service, 1995).

Opportunities exist to restore degraded scenery in the Berthoud Pass area. Restoration should focus on removal of obsolete ski area structures and unneeded utilities, soil and vegetation restoration, and improved site planning and facility design for recreation parking, visitor services and access.

Land Uses – There is limited history of minerals exploration in the assessment area. There are no patented or unpatented mining claims in the assessment area. There are a number of non-recreation special uses in the assessment area. These uses are under current authorizations and are critical to the infrastructure needs of the transcontinental divide. The authorized uses include State Highway 40, Hoop Creek Ditch, Mines Peak Electronic Site, and Continental Divide Historic Marker.

State Highway 40 – The route over Berthoud Pass was first paved in 1938 to bring commerce and tourists to the west side of the pass. It is managed by the Colorado Department of Transportation, which holds an easement for Highway 40. The easement extends 200 feet from the centerline of the highway. This highway serves as the major motorized transportation corridor between the east slope and the communities of Winter Park, Granby, Grand Lake and others. A 1995 survey determined the average daily traffic (ADT) was 5,060 vehicles per day. It was estimated to rise to 6,005 by 2002, and up to 8,165 by 2020. CDOT completed an environmental assessment in 1997 for reconstruction of the highway from Berthoud Falls to Berthoud Pass. The purposes of the reconstruction are to improve safety, mobility and environmental conditions. The reconstruction project was broken into 4 phases. Phases I and II are complete. Phase III will begin the summer of 2004, and will take approximately 2 years to complete. Phase IV does not yet have funding or a start date. Phase IV is the portion of the reconstruction project that will take place in the Berthoud Pass assessment area. The expected reconstruction consists of highway widening (to 3 lanes, 2 uphill, 1 downhill), addition of snow storage/bike lane, addition of sediment ponds, and addition of retaining walls. From the plans, it appears the highway will shift to the west as a result of the reconstruction. The construction of a transportation route over Berthoud Pass changed the condition of the area by bisecting the habitat and by bringing people into the area. It opened up the area for recreation, water development, travel and other human uses. Without the existence of the highway, this area would have little human influence.

Hoop Creek Ditch – The City of Northglenn owns and operates (along with the City of Golden) the Hoop Creek Ditch and the associated water conveyance system. The system starts with the Hoop Creek Ditch, which is located on the west side of the divide and is denoted on maps as the ‘Berthoud Pass Ditch or Aqueduct. The ditch was constructed in the early 1900’s and pre-dates the reservation of the National Forest. Because of its status (pre-dating the NFS), the U.S. Forest Service has limited authority to manage and regulate this use. The ditch collects water from the west slope through an open ditch and carries it to the Berthoud Pass parking lot. Typical flow rates vary from 5-30 cubic feet per second (cfs). At the parking lot the water is conveyed underground through a pipe that daylights on the east side of the divide. The east side portion of the system has no improvements. The water is discharged into the natural stream channel of Hoop Creek. The addition of 5-30 cfs into this system over the past 100 years has severely degraded the condition of Hoop Creek. There is severe erosion and undercutting of the stream banks. In several places the stream has cut down to bedrock.

Occasionally the ditch portion of the system has failed, which has led to erosion and slumping on the west side. It is imperative the ditch be maintained to prevent these occurrences. The pipeline portion of the ditch was partially replaced in 2000 because of a collapse in the system. The City of Northglenn has requested that the remainder of the pipeline be replaced in 2004-2005 as the pipeline is old and they would like to have it replaced before it fails. The City has also agreed to install stabilization structures in Hoop Creek to decrease the erosion of the stream bank and to attempt to revegetate areas of disturbance. This should improve the condition of the adjoining lands. The proposed start of the stabilization project is the summer of 2004, continuing into the summer of 2005. Due to the limited authority the USFS has over the use and operation of the Hoop Creek Ditch, it can be assumed this use will continue into perpetuity.

Mines Peak Electronic Site – The Mines Peak Electronic site is a designated electronic site in the Forest Plan. The site has been used for transcontinental communication since 1959. The site currently has 6 buildings that accommodate 1-3 users per building. The most prominent building at the site is the AT&T building that was built in the 1970’s. This building is the most visually obtrusive building at the site, and is used exclusively by AT&T (Qwest). The other buildings at the site are smaller

profile, pre-fabricated or cinder block buildings. Each building has a tower, or multiple towers depending on the number of tenants in the facility. The site plan for the area directs the Forest Service to require multiple use facilities, and to maximize use of the site (before designating other alternative sites). Access to the site is via the Mines Peak road, which starts at the far east side of the Berthoud Pass parking lot. The access road is gated, locked closed in the summer, and left open in the winter (to accommodate access by lessees via snowmobile or snowcat). The Forest Service maintains the road. The Forest Service has communication equipment on Mines Peak, and is a co-locator in the Tri-State building and tower. This is a major communication site for the Forest Service. Power to the site is via overhead power lines that are supplied by Xcel Energy.

The existing users of the site have leases that extend through the year 2032. It is anticipated the need for and use of the site will continue into the foreseeable future. The biggest impact of this use on the Berthoud Pass assessment area is the visual impact of the road, the buildings and the towers. Prior to the construction of communication facilities on Mines Peak, the area had a natural appearance with no man-made improvements.

Continental Divide Historic Marker – The Colorado State Historical Society has a granite monument and bronze plaque located at Berthoud Pass. This marker has been in place since 1929 and is currently under a special use permit with a term expiring 2007. This marker is a popular photo opportunity for travelers over the pass. Due to its historic presence, it is anticipated this marker will continue to occupy this site. It may be possible to move the marker to accommodate changes in the parking lot at the summit, however this would have to be negotiated with the permittee and the State Historic Preservation Office.

Facilities – The historic tow rope and double chair lift no longer remain, but the 1947 lodge complex still exists. The Berthoud Pass Lodge (5GA2135) was first recorded as a historic site in 1996 by the Colorado Department of Transportation. It was officially determined by the Colorado State Historic Preservation Office to not be eligible for inclusion on the National Register of Historic Places, the same year it was recorded.

The Forest Service performed condition surveys of the lodge and has identified the following major deficiencies:

- Defective roof needing repair and reconstruction
- Defective electrical system
- Defective septic system
- Fails to meet current fire codes
- Fails to meet accessibility requirements
- Improvement of the water system capacity
- Architectural/interior condition

The estimated cost of repairing the roof, interior condition, electrical, and water/wastewater systems is about \$200,000. This estimate does not include the cost of upgrades necessary to meet fire and accessibility requirements, water system capacity, or improvements to parking areas, landscaping, or signage. Annual operation and maintenance of the building is estimated to be \$90,000 – \$100,000 based on SolVista's recent experience. The annual operation and maintenance costs are equal to the estimate that SolVista received for the one-time cost of structure removal.

There are also other factors that may affect the viability of retaining the existing structure:

- There is currently a lien on the lodge by the Clear Creek County Economic Development Corporation.
- The existing structure and landscape design does not meet Forest Service standards for image, aesthetics, sustainability and overall quality of Forest Service facilities.

Chapter IV – Recommendations & Integrated Desired Conditions

This chapter documents the interdisciplinary team's (IDT) recommendations derived from the IDT's interpretation of the issues. The recommendations are not necessarily the only solution or address all the management issues and opportunities in the assessment area. The recommendations only define the starting point for future project level analyses and may not reflect the final outcome of those projects selected by management to be implemented.

The first section of this chapter defines the overall recommendations for the assessment area. Subsequent sections are resource specific recommendations, which are consistent with the general desired condition.

Integrated Desired Conditions

The Berthoud Pass parking area would be a primary Colorado trailhead for the CDNST with interpretation and orientation available. Non-motorized, wheeled travel would be restricted to designated trails to protect sensitive plants in the area. The area would also serve as a year-round stopping point for travelers of Highway 40 and the CDNST with services such as restrooms, refuse collection, and interpretive and orientation signage. During the winter, the area would be a snow play area managed under a special use permit. Motorized access over snow would only occur through a special use permit and would be consistent with public needs and resource protection, especially related to lynx habitat. The site would be managed to accommodate various types of recreation and public services within constraints that ensure scenic quality and habitat effectiveness. To enhance wildlife use of the corridor, the FS would discourage permitted nighttime activities outside of the highway corridor and parking area.

The Berthoud Pass assessment area would provide for the following recreational activities:

- Hiking the CDNST
- Auto-touring to view scenery
- Backcountry skiing/snow shoeing/snow boarding
- Snow play under a managed permit
- High quality interpretation and education with an orientation focus
- Access for hunting
- Road cycling on the highway

Wildlife Desired Conditions

Recommended Desired Conditions – The Berthoud Pass assessment area would not be a barrier to wildlife movement. Lynx could easily get across Berthoud Pass because there would be large areas of uncompacted snow to reduce access to lynx predators and competitors, there would be no managed nighttime human activity in the area, diurnal habitats would be secure, and there would be continuous forested cover across the pass. Hoop Creek underpass would provide safe passage of wildlife from the Pass area to the Empire area. Noxious weeds in the area would be eliminated creating sustainable habitat for known rare plants.

Discussion – The entire Berthoud Pass assessment area is of high value for wildlife and is an identified lynx linkage area. The Berthoud Pass linkage zone is one of a few linkage zones in Colorado for

Canada lynx, and there is an opportunity to improve the function of the linkage area. Compacted snow increases competition between lynx and other predators, and introduces the potential for direct predation on lynx. Reducing snow compaction in the assessment area could increase the quality of lynx habitat. Decreasing human activities within diurnal security habitats and/or eliminating nighttime uses would increase the quality of lynx habitat. The east side of the pass has potential for restoring forested cover which would improve the function of the corridor for lynx and other forest species.

There are many other animals that use Berthoud Pass as a travel corridor. Alpine and open species move east to west along the Divide; forest species move north to south through the Pass. Therefore, the integrity of the Floral Park wildlife underpass should be maintained to facilitate wildlife movement from the Empire area to Berthoud Pass.

Recreation Desired Conditions

Recommended Desired Conditions – The Berthoud Pass assessment area would be a major focus and access point to the CDNST. Ample off-highway parking would be provided, as well as a safe highway crossing (i.e. tunnel or bridge). All evidence of the ski area would be gone and the area would become a managed snow play area. Human created hazards, such as gates, structures, and snow berms would be eliminated at the snow play area. Interpretation and education of the history and use of the area, and information on backcountry hazards such as avalanches would be provided. No sewage or litter would be found in the area. Bear proof sanitation would also be provided.

Motorized use would be limited to Highway 40 or authorized as permitted use in certain areas. The Mines Peak road would have permitted motorized use for access to the Mines Peak electronic site. The remainder of the area would be non-motorized except by permit in winter only. Permitted motorized winter use would only be to facilitate the non-motorized use of the area. On site controls would be intensive near the highway and parking area, and would be subtle elsewhere.

Discussion – The traditional use of the Berthoud Pass Ski Area (i.e., alpine skiing) has been replaced by a variety of other snow-based activities described in Chapter III. This use has already been established and it will likely continue to increase. Berthoud Pass is one of very few locations along U.S. Highway 40 where visitors can stop and readily access terrain that appears conducive to various activities. There has been a history of avalanche control in the area that no longer occurs except in association with the highway. The Forest Service is concerned this may give users a false sense of security. Other sites between Berthoud Pass and Winter Park provide access to backcountry skiing, but not sledding. Snowplay is a growing use and the greatest concern as far as risk management for the Forest Service. Areas of concentrated public use such as Berthoud Pass present a management dilemma to the Forest Service.

The negative consequences of the termination of the permit are less severe for summer use than for winter. This is probably because fewer services were traditionally provided in the summer and visitors are less dependent on services in the summer to satisfy their needs for safe and enjoyable recreation. However, there are some consequences that need to be addressed. Basic sanitation and refuse service will continue to be in demand. The recent improvements on Highway 40 by CDOT have reduced the drive time from Empire to Winter Park. Most of the incidental needs of through-motorists would be met in either of these two locations. It is the visitor who stops at Berthoud for recreational purposes who is most likely to need some services.

Berthoud Pass has been identified one of five primary access points within Colorado to the CDNST. Primary access points were defined within those areas with access off a major highway. A fully developed trailhead, which would include constructed parking, signage, bathrooms, and garbage control would be desirable. Indoor lodging for users of the CDNST can be found at Winter Park which is about 12 miles north of the pass, and at the developed campgrounds that are located approximately 5 miles south and 4 miles north of the pass.

The traditional historic use in the area has been established as non-motorized use. Introducing motorized use within the area would create conflicts between user groups and potential safety issues. In addition, the assessment area is adjacent to the Vasquez Wilderness and the James Peak Wilderness (both non-motorized). For these reasons, motorized use of the backcountry is not desired. The use of wheeled vehicles (mountain bikes, etc) should only be allowed on designated routes for the protection of sensitive plants.

Berthoud Pass has been the site of alpine skiing for much of the 20th century and is well known among skiers for its unique role in the evolution of the sport. In spite of its history and reputation, Berthoud is not immune to the economic realities of the ski industry today. The successful business model for ski resorts includes challenges that would be difficult or impossible for Berthoud Pass to overcome. For example, it is becoming increasingly difficult to make money selling lift tickets. Price wars have reduced the cost of season passes. The successful ski area relies more and more on the ability to offer the customer a total resort experience including shopping, dining, and “apres-ski” activities. A small ski area like Berthoud simply cannot provide this kind experience especially when confronted by competition from Winter Park and Summit County resorts which are in a much better position to offer these kinds of services. Despite its earlier successes and recent attempts by several entities to make the downhill ski area model successful, Berthoud Pass cannot and probably will not sustain a viable downhill ski business.

The viability of Berthoud Pass as a ski area in today’s market is questionable. The past four owners have had financial difficulties operating the area. There are several limiting factors that make viability unlikely, which are outlined in the *Berthoud Pass Ski Area Needs Assessment* (see Appendix A)

A number of social, demographic, and economic factors have caused conditions to change at Berthoud Pass. Since I-70 was constructed it diverted a large volume of traffic away from Highway 40 and diminished the visibility of the Berthoud Pass Ski Area. We have seen how the full-service ski resort concept has surpassed the small, family-oriented day-use ski area. Better highways and better-equipped personal vehicles have enabled the recreationist to travel farther and faster to participate in mini-vacations. There is increasing demand for more convenience, better service, and more variety in the typical ski vacation. At the same time, there is a relatively small, but devoted population looking for an alternative to the big resort experience, but still want to have fun in the snow. Berthoud Pass provides a point of access for this group to participate in some of these alternative activities.

There is a demonstrated demand for year-round outdoor recreation opportunities in an undeveloped but easily-accessed location where currently no fee is charged. Berthoud Pass attracts a broad-spectrum of visitors from the motorist stopping to admire the view to the backcountry extreme skier. Exposure and risk are high, especially in winter as visitors participate in often dangerous activities. Safety, security, and sanitation are minimal and expensive, and the prospect of recovering the cost of providing these services either by the agency or by a concessionaire is slim.

Scenery Desired Conditions

Recommended Desired Conditions – The Berthoud Pass assessment area would be a natural appearing landscape of High Scenic Integrity as viewed from Highway 40 and the CDNST, with the exception of the designated Mines Peak electronic site. Obsolete facilities and utilities would be removed and disturbed soils revegetated. . Scenic viewpoints, parking, sanitation, and interpretive facilities would be esthetically pleasing and properly designed to meet the needs of current and anticipated future use. Facilities would be consistent with Forest Service Built Environment Image Guidelines.

Discussion – Currently the scenic quality for the area is degraded due to powerlines and associated access roads, Mines Peak road and electronic site, and obsolete ski area structures and facilities. The optimum resource condition for this area is to achieve and maintain a scenic integrity of “high” as viewed from roads and trails. This scenic integrity level would be consistent with the inventoried scenic attractiveness distinctive. A “high” scenic integrity would also be consistent with the high inventoried concern level of visitors who travel on State Route 40 and the CDNST. The Scenery Management System defines high scenic integrity as “landscapes where the valued landscape character ‘appears’ intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident” (USDA Forest Service, 1995). Careful future development and restoration of existing detracting elements is needed to restore scenic integrity. This could include restoration of road cuts, removal of unneeded ski area elements and structures, and design and installation of facilities consistent with National Forest Built Environment Image Guidelines. In addition, parking and access along Highway 40 at the Pass should be improved to be more esthetically pleasing, and to provide safe and effective scenic viewpoints.

Land Uses Desired Conditions

Recommended Desired Conditions – Use of the Mines Peak electronic site would continue, but facilities would be consolidated. The Hoop Creek Ditch would be stabilized and maintained so that it does not fail and cause resource damage. The receiving side channel would be stable. Environmental impacts from Highway 40 would be minimized though installation of sediment traps, control of noxious weeds, etc. A pedestrian walkway (overpass or under crossing) would be installed at the summit.

Discussion – It is anticipated that all current permitted or leased uses will continue to occupy the site for the long term. The highway and the electronic site are critical links between the east and west slopes of the Continental Divide. To relocate these uses would be to move the impacts to another, currently undisturbed, location. This alternative is not desirable, or in the best interest of the public or the environment. Also, we can expect the amount of use of these two improvements to continue to increase over time. With the population always increasing, the need for transportation from the east to the west side of the divide will continue to exist and to grow. As communication continues to evolve and the demand continues to increase, we will see the need for a communication site on Mines Peak to continue into the foreseeable future.

The need for the water conveyance system can also be anticipated to remain. Like the highway and electronic site, it would not make sense to relocate this use to another site. Additionally, due to the fact this use pre-dates the National Forest, there is limited ability to have this use relocated. The last permitted use, the monument, has little impact on the environment and condition of the area. Whether

the monument stays on site is an issue of the public's desire for the monument, rather than any environmental need.

The future objective concerning these uses is to focus on active and proper administration of the permits and leases. The FS should encourage, and require where possible, the uses to be as compatible and least impacting on the environment as possible.

Highway 40 – With the recent completion of the EA for reconstruction of this highway, future use should focus on continuing to cooperate with CDOT on the reconstruction efforts and to be a partner to encourage funding to complete Phase IV (at the summit). With the reconstruction of this portion of the highway, new erosion control measures will be instituted, snow storage will be provided (as opposed to throwing snow and road sand over the guardrails into the forest), sediment basins will be constructed (to collect road sand so that it can be removed from the site), bike lanes will be constructed, retention walls will be built (to eliminate sloughing of material from the cut slopes, and maintain material on the fill slopes), and animal under crossings will possibly be constructed. It is also possible that a pedestrian under crossing or overpass will be constructed at the summit.

Mines Peak Electronic Site – Future use should require users to consolidate facilities, remove obsolete facilities, and continue to use this site to its full potential. In addition, scenic assessments and effective design can minimize visual impacts of future development of the site and improve the overall scenic quality of the area.

Hoop Creek Ditch – Encourage, and if necessary require, the City of Northglenn to maintain and reinforce the integrity of the ditch on the west side to decrease the chance of accidental failures. Access to the ditch needs to be maintained. Continue to work with the City to process their applications to replace the old pipeline under the parking lot, and to stabilize Hoop Creek. Their willingness to stabilize the creek bed is a critical step in the improvement of this watershed.

Continental Divide Historic Marker – Because of the historical context of this monument, the landmark that it interprets, and the fact that the public desires this information, it is in the public's interest to maintain this use within the Berthoud Pass Assessment area. Consider moving the marker to another location at the summit necessary to comply with long-range plans for the area.

Facilities Desired Conditions

Recommended Desired Conditions – While most physical evidence of the ski area facilities would be gone, its history would be told through interpretive signing at the Pass. New facilities would be consistent with Forest Service Built Environment Image Guidelines and provide year-round presence and management of the area. Facilities would not have night lighting. The parking area would be redesigned to support a fully developed CDNST trailhead. Restroom facilities refuse collection, interpretation & education, and management of the CDNST and snowplay area would be provided.

Facilities at Berthoud Pass would be managed through a partnership or commercial venture, and the partner/operator would maintain the facilities as well as provide for the recreation management needs for the area. The partnership/venture would be financially self-sustaining, and agency funds would not be needed to manage the areas other than for permit administration.

The parking area would provide long and short-term parking, and would be able to accommodate large vehicle parking such as RVs. The parking area would be separated from Highway 40 through traffic

and allow safe pedestrian passage to either side of the highway. Barriers would protect adjacent areas from motorized intrusions. The parking area would be redesigned to limit erosion. The parking area would also be used for emergency response vehicles as well as a helispot for Flight for Life helicopters.

Discussion – The existing lodge was designed as a support service for the developed ski area. The ski area no longer exists and it is not anticipated that it will be used as a ski area in the future. Consequently the lodge is no longer serving as a ski area support facility. The scale of the lodge is inconsistent with current prevalent use of the area, which is to access the backcountry, view scenery, and appreciate the significance of the Continental Divide. The current visitor and management needs for the immediate vicinity of the Pass include provision of restroom facilities, refuse collection, interpretation and education, and management of the CDNST and snowplay activities. Small scale, efficient and properly arranged facilities and parking are needed to meet current recreation and visitor needs at this location. Any future facility development should meet the guidelines established in the FS Built Environment Image Guide. (www.fs.fed.us/recreation/programs/beig).

The terms and conditions of the SolVista ski area permit should be fully implemented, including the removal of lodge. The existing structure and site design does not meet the visitor and management needs. The lodge is too large for the management need, is inefficient to operate, and lacks proper accessibility and architectural compatibility with the site. The parking area is unattractive and pedestrian unfriendly, lacks organized and properly marked traffic circulation, and is not designed for current and anticipated uses. Smaller scale environmentally compatible facilities would better meet the management needs and would be less expensive to operate, and consistent with National Forest accessibility, site and architectural design guidelines.

The area is a portal for backcountry users utilizing the CDNST, and the area has historically been a stopping point for users of Highway 40 to rest and view the natural scenery. People also stop to appreciate the Continental Divide, a significant natural feature. Interpretive signs and the Continental Divide Marker should be part of the permanent facility development of the Pass.

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Appendix A - BERTHOUD PASS SKI AREA NEEDS ASSESSMENT

➤ I. PURPOSE OF NEEDS ASSESSMENT

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

The Ski Area Term Special Use Permit for the Berthoud Pass Ski Area expired October 22, 2003. In December of 2001 SolVista, Inc., holder of the permit requested non-use for the season. In October of 2001 SolVista applied for an Outfitter-Guide permit for snowcat ski tours at Berthoud Pass. A temporary special use permit was issued to Berthoud Pass Powder Guides December 7, 2001 with an expiration date of May 31, 2002. SolVista also requested non-use for Berthoud Pass Ski area for the 2002 - 2003 season and applied for another special use permit for Berthoud Powder Guides, which was issued December 6, 2002 with an expiration date of May 31, 2003. At this point SolVista thought they had found the proper niche to operate a ski operation at Berthoud Pass. Based on this situation, it is timely to prepare a *Needs Assessment* to aid in determining future agency actions with regard to this special use permit.

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

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

➤ II. NATIONAL SKI INDUSTRY HISTORY AND TRENDS

The ski industry in the United States may be characterized as mature. The average age of ski areas in this country is 40 years. Over the past 20 years, annual skier visits have been uneven, but essentially level, exhibiting no sustained growth and averaging about 53.4 million skier visits a year. (1)

The 2002/03-ski season recorded 57.3 million skier visits, an all time high. Most areas of the country, with the exception of the Northwest, had strong performances with the Southeast enjoying its second best recorded season, the Midwest and Northeast each recording their third best seasons, and the Rocky Mountains had its fourth best season on record. An important factor in the 2002/03-ski season was the strong performance of small and mid-sized resorts that are located near large population centers in the Northeast, Southeast and Midwest. (1)

Based on the strong performance by the ski industry over the last three years, some industry analysts suggest that the industry may have elevated its performance range to a higher level. Over this three-year period, starting with the 2000/01 ski season, skier/snowboarder visits have shown an uptick, averaging 56.4 million, a 5.6 percent increase over the long-term average. (1&2)

In the last 20 years, the number of ski areas operating in the country declined 33 percent, from 735 areas in the 1983/84 ski season to 490 areas in the 2002/03 ski season. As a result of this, the average annual skier/snowboarder visits per operating ski area has increased by 84 percent, from an average of 63.7 thousand skier/snowboarder visits per operating ski area in the 1983/84-ski season to an average of 117.5 thousand skier/snowboarder visits per operating ski area in the 2002/03 ski season. This is a result of surviving ski areas expanding their market shares to accommodate skiers and snowboarders who had previously patronized ski areas which ceased operating. (1)

The acreage developed for skiing and snowboarding has been growing by about 2.3 percent over the 1999/2003 period. The acreage within ski areas that is covered by snowmaking has increased by 4.1 percent over this same period. From survey information, total expenditures on ski area capital improvements, including new and upgraded lifts and other on-mountain facilities and support, decreased from \$198 million in 2001/02 to \$154 million in 2002/03. This trend is expected to reverse in 2003/04 with projected expenditures of about \$160 million. (1)

While only 25 percent of the ski areas operating in the U.S. are on National Forest System lands, these ski areas account for approximately 56 percent of the nation's skier/snowboarder visits. Approximately 178,000 acres of National Forest System lands are under permit to ski areas. While this represents only .09 percent of the 191 million acres in the National Forest System, the skier/snowboarder visits they accommodate represents 16 percent of the total annual recreation visits to National Forests. (3)

While total annual skier/snowboarder visits have remained essentially flat, snowboarding has shown sustained growth since the early 1990s and now represents 29.5 percent of the nation's annual skier/snowboarder visits. While snowboarding participation continues to grow, its rate of growth is decreasing, from rates as high as 20 percent annually in the 1995/96 ski season to 5.1 percent in the 2003/03 ski season. (1 & 4)

Nationally, in the 2002/03-ski season, day visitors represent about 49.7 percent of total skier/snowboarder visits, with the remaining 53.3 percent being overnight visitors. International

visitors have decreased over the past three years from 4.4 percent of national skier/snowboarder visits in 2000/01 to 3.8 percent in 2002/03. (1)

Over the past several years, there has been a trend in certain parts of the country of ski areas offering heavily discounted season passes, as compared to prices previously charged. Most often, these discounted passes are offered in larger day-skier markets. Nationally, the average number of season passes sold per ski area has increased by 59 percent since the 1999/00 ski season, with the greatest growth occurring at larger resorts. In the 2002/03 ski season, season passes accounted for 27.5 percent of skier/snowboarder visits. (1) This increasing trend in season pass sales translates into increased skier/snowboarder visits since pass holders tend to ski/snowboard more frequently than non-pass holders. Season-pass holders were expected to ski/snowboard more than twice as many days as the skier/snowboarder population as a whole - 25 days as compared to 10 days. Additionally, season pass holders expected to do 83 percent of their skiing/snowboarding at the ski area for which they held passes. (5)

As stated earlier, notwithstanding the performance of the last three years, the growth in national annual skier/snowboarder visits has been relatively stagnant for two decades while, during this same period, the U.S. population increased by 20 percent. (6) A consideration of national demographic projections and the demographic profile of the skiing public raise questions about the industry's ability to maintain historic levels of skier visits, let alone grow participation in the sport.

The median age of U.S. skiers and snowboarders increased from age 30 in the 1996/97 ski season to age 34 in the 2002/03 ski season. This aging of the skiing population is also manifested by the steady increase in the proportion of annual skier/snowboarder visits attributable to skiers aged 45 and older. Between the 1996/97 and 2002/03 ski seasons, the proportion of visits attributable to this age group increased by 7 percent. During this same period, the proportion of annual skier visits attributable to skiers under 35 years of age decreased by 8 percent. The median age of skiers was 40 in the 2002/03 ski season compared to the median age of 22 for snowboarders. (5)

Over the past several ski seasons, members of ethnic and/or racial minorities groups have been responsible for about 13 percent of annual skier/snowboard visits. Since people who are members of ethnic and/or racial minority groups comprised 32 percent of the nation's 2002 population, it is evident that they are underrepresented in the skier and snowboarder community. (5)

Over the next two decades, the nation's White non-Hispanic population is projected to remain flat and grow older. As this occurs, the traditional core market segment for skiing will decrease, with many current skiers attaining the age when they are unable, or less likely, to participate in the sport, with no corresponding increase from younger age segments. All of the population increases in the age groups currently most likely to ski will be by ethnic and/or racial minorities who have historically represented a disproportionately small proportion of the participants in the sport. (10)

Like demographic trends, the warming trend of the earth's climate does not bode well for the growth of skiing and snowboarding. Climate change is evidenced by the fact that the year 2003 was the third warmest year on record worldwide. The three warmest years on record have all been in the last 6 years and the ten warmest years on record have all occurred since 1990. (7) These warm years are a manifestation of the .07 to 1.4 degree F increase in surface temperatures over the 20th century. In the Northern Hemisphere, this increase is likely the largest of any century in the past 1,000 years, and the 1900s were likewise the warmest decade during this period. (8) This warming trend has been most pronounced in winter over land in mid to high latitudes in the northern hemisphere. Additionally,

snow cover in the northern hemisphere has been decreasing for the past 100 years. (8) The Intergovernmental Panel on Climate Change (IPCC) estimates a temperature increase of 2.5 to 10.4 degree F over the next 100 years. They predict this change will continue the trend of being stronger in the winter on the land surface in the northern hemisphere. Climate research indicates that there will be an increase in the number of winters with little snow in traditional winter tourism regions. (9) Taken together, these phenomena work to shorten ski seasons, select against the continuation of low elevation ski areas and hold down skier visits.

Finally, the percentage of the population that is overweight is growing in all age groups. This trend does not bode well for participation in skiing, a sport that demands a certain level of physical fitness. (10)

In the year 2000, the National Ski Areas Association, in recognition that these trends will act to depress future skier visits, proposed an industry-wide course of action designed to counter their effects. The basis of the industry's initiative is the fact that 85 percent of the people who try skiing drop out of the sport; in other words, only 15 percent of people who try the sport are eventually converted from beginners to core skiers. The industry proposal involves two actions: increasing number of people who try skiing, and increasing the percentage of the people who try skiing and go on to become part of their core market. (10)

Industry analysts have developed a model and a hypothetical benchmark to simulate and quantify the effects of market interventions. The benchmark incorporates the effects of the demographic projections and weather trends, and projects that absent intervention, national skier visits will decline by about 12 percent by year 2010. The model indicates that by increasing the number of people who are introduced to the sport and increasing the percent of these people who convert from beginners to core skiers, this decline is preventable. The model indicates that increasing the beginner conversion rate by 2 percent a year (to 17 percent) would maintain current skier visit levels. The model predicts that a 6 percent annual increase in people trying the sport, combined with a 1 percent increase in the beginner conversion rate, will result in sustained growth producing 59.8 million skier visits by year 2010. (10)

Ski and snowboard lessons are a key tool for ski areas to increase the beginner conversion rate. Overall, the proportion of skier/snowboarder visits that included a lesson has decreased from 10.2 percent in the 1999/2000 ski season to 9.6 percent in the 2002/03 ski season, while the proportion of lessons taken by children has remained relatively stable. (5)

An indicator of success with regard to first time visitors and beginner conversion rate would be an increase in the proportion of annual skier and snowboard visits from participants in the lower ability levels. However, over the past five ski seasons, the proportion of visits from first timers has decreased by 1 percent, the proportion of visits from beginners has decreased by 3 percent and the proportion of visits by intermediates has decreased by 6 percent. (1) Taken with the above data on lessons, the ski industry has not shown clear-cut progress in increasing the number of first time visitors or the beginner conversion rate.

Analysis:

While recent increases in national skier/snowboarder visits provide an indication that the ski industry may have elevated its performance range to a new higher level, underlying demographic and climatic trends are working against this. In order to grow, the industry must attract sufficient new entrants to

replace aging Baby Boomers as they inevitably begin to drop out of the sport. As the discussion above points out, the skier/snowboarder population continues to age. Ethnic minority groups are underrepresented in the sport but will represent virtually all the population increases in age groups most likely to ski/snowboard in the future. Over the past several years, there has been no increase in minority participation in the sport. Additionally, the ski industry's efforts to increase trial and conversion have yet to demonstrate success. Coupled with unfavorable effects of climate change, these underlying demographic trends do not bode well for the ski industry's ability to sustain growth.

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

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

Unlike the national skier market, up until four years ago, Colorado skier visits exhibited sustained growth. In the 1979-80, ski season the state experienced 7,887,181 skier visits and from that time, experienced steady growth until the 1997-98, ski season when a record of 11,979,719 skier visits was recorded. Over the past two decades, the Colorado Ski Industry has enjoyed a 2% annual average growth rate. Following the record 1997-98, ski seasons, Colorado's skier visits declined for two seasons then rebounded to 11,527,310 skier visits in the 2000-01 ski season. Visits in Colorado increased by 5.6 percent in the 2002/03 season. The state's share of the national skier market increased from 15% in the 1981-82, ski season to 22.1% in the 1997-98 ski season and has declined each succeeding year, registering a 20.1% share of the national skier market in the 2000-01 ski season.

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

Colorado has a higher proportion of destination or out-of-state skiers than the national average. However, the percent of Colorado skier visits attributable to out-of-state or destination visitors, has been declining. In the 1993-94 season, 65% of the state's visits were attributed to out-of-state skiers while in the 2000-01 season the percent attributable to out-of-state visitors had decreased to 60% of total skier visits.

Consistent with the trends of decreasing overnight and international visits, Colorado, the largest state in the Rocky Mountain Region in terms of ski area visits, has experienced a steady decline in these types of visits over the past six years. Since the 1996/97 season, destination and international visits to Colorado have declined by 1.23 million. At the same time, visits to Colorado ski areas from the state's Front Range population centers (Denver, Colorado Springs, etc.), increased by about 1 million. Additionally, Front Range skiers also increased their overnight visits to Colorado ski areas by 47.7 percent from the 1997/98-season. (11)

It appears that much of the increase in Front Range skier/snowboarder visits are attributable to inexpensive season passes offered by ski areas located along the I-70 corridor near the Denver metro area. These passes were priced about \$200 when first offered in the 1998/99-season. In that season, visitation from the Front Range increased 45 percent. Last season, 2002/03, Front Range visits increased to 3.1 million, a 172 percent increase in five years. An indicator that inexpensive season passes are responsible for this growth in visits is the fact that sales of discount passes by Vail Resorts, operators of the Beaver Creek, Breckenridge, Keystone and Vail ski areas, increased from \$8 million in 1998 to \$36 million in 2002. (12)

Seven percent of Colorado's skier visits in the 2000-01 season were attributable to foreign skiers. This represents a continuation of a declining trend. International visits made up 8.9% of Colorado skier visits in the 1996-97 season, 8% in the 1997-98 season and 7.8% in the 1998-99 season (13).

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

As a result of the trends discussed above, most Colorado ski areas have seen an erosion of revenue/skier visit and have taken actions to reduce expenses and trim operating cost. Several of these ski areas are experiencing severe problems. Crested Butte experienced a continual decrease in skier visits over the past four years resulting in a 34% decrease in skier volume in this period. Both Winter Park and Steamboat are in the process of restructuring in attempts to remain competitive in response to the changing market place for skiing.

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

➤ **IV. BERTHOUD PASS SKI AREA HISTORY AND TRENDS**

The Berthoud Pass Ski Area opened February 7, 1937. There is disagreement if Berthoud Pass was the first or second ski resort to open in Colorado. It was the first resort with a lift (tow rope powered by a Ford V-8 engine) at a base elevation of 11,314 feet, the highest in Colorado. Berthoud Pass was operated by The Winter Sports Council associated with the city of Denver. The original Inn at the Pass (circa 1920's) burned down in 1939. This Lodge was replaced with three smaller buildings the same year. Fire destroyed another building in 1940.

In 1945 Sam Huntington, Grants, Shaforths and Tolls bought the ski area facilities. Berthoud Pass installed the first double chairlift in North America in 1947. A new lodge opened in December of 1949.

Irma Hill purchased the ski area in 1973. Clarence Garst bought the ski area in 1977. Peter Crowley bought the area in 1987 and renamed it Timberline Ski Area. Major renovation was done to the lodge and shuttles were run on both sides of the pass on Highway 40 to ferry skiers back to the lifts at the summit. A lift accident closed the double chairlift in 1988. The Forest Service and the Colorado State Tramway Board had operational concerns regarding the resorts ability to maintain lift operations. The Forest Service also had concerns about ski patrol and avalanche control operations. Timberline filed for Chapter 11 bankruptcy protection and the ski area closed in 1988.

Gary Schulz, maker of Borvig lifts bought the resort for \$350,000 in 1988. Borvig is an east coast lift manufacturer and Berthoud Pass Ski Area was purchased to install Borvig lifts and showcase Borvig lifts in the west. March 21, 1989 a special use permit was issued for Berthoud Pass Ski Corporation, Gary Schulz President. December 1, 1989 a winter operating Plan is approved for the 1989-1990 season. The resort filed for chapter 11 bankruptcy and closed again in 1991 and a bankruptcy-court judge allows creditors owning the lifts at Berthoud Pass to secure permits to dismantle and repossess lifts. Jim Pearsall and Paul Weibal (Berthoud Pass Recreation Corporation) purchased the ski area from bankruptcy court for an undisclosed price in 1992. In March of 1995 a Forest Plan revision document was prepared to remove Berthoud Pass from Ski Area designation, it was never adopted. Berthoud Pass Ski Area did not operate from 1992-1997.

On December 18, 1997 a special use permit was issued to operate the ski area, and the area reopens on January 29, 1998. Silver Creek Holding CO., owners of Silver Creek Ski Resort were issued a special use permit to operate the ski area on April 23, 1999. Silver Creek Holding CO. hoped the terrain at Berthoud would attract expert skiers seeking powder and extreme terrain, a customer base the Silver Creek Ski Area lacked. On September 17, 2001 the corporate name of Silver Creek Holding CO. is changed to SolVista, Inc. In December SolVista requested non-use for the season. Berthoud Pass did not operate as a ski area in 2001 or 2002. The Ski Area Term Special Use Permit for the Berthoud Pass Ski Area expired October 22, 2003.

SolVista, Inc. removed the lift towers in April of 2003. Currently SolVista is addressing a removal plan for the lodge and other improvements associated with the ski area.

➤ **V. BERTHOUD PASS SKI AREA'S COMPETITIVE POSITION IN THE COLORADO FRONT RANGE SKI MARKET**

Over its 55-year history Berthoud Pass has had it's ups and downs. Berthoud Pass is a 'natural' ski area. The location and terrain of the area lend themselves perfectly to the sport. The elevation of the area (between 10,700 and 12,200 feet) contributes to the large amount of natural snowfall, which has made snowmaking unnecessary in past operations. Also, the abundance of terrain available for backcountry, extreme skiing makes it a popular destination for even the most advanced skiers.

The same natural features that make the area so perfect for skiing also make the area undesirable as a developed ski area. First, due to the location on the pass, there is limited flat ground to expand base facilities. Sno.engineering conducted an independent study on the economic viability of Berthoud Pass as a ski area in 1994 (14). Their study suggests that the area could physically serve 8500 skiers daily and would require parking for 3000 cars or buses (approximately 20 acres). Viability of the area as developed ski area is primarily jeopardized by the fact that area available for parking is limited. Currently the parking area can hold 100 cars. Also, due to steep terrain Berthoud Pass is one of the most active avalanche zones in the state. Although some of the runs are managed by the Colorado

Department of Transportation because of their responsibility for keeping the highway safe from avalanches, others are unmanaged and provide a constant threat to backcountry users.

The most prominent man-made feature at the area, Highway 40, both makes and breaks Berthoud Pass as a ski area. The highway provides excellent year round-access directly to the site and is used by thousands of people daily (over 6500/ day in the summer) to get over the Pass to the western slope. However, the highway also separates the two main slopes of the ski area and makes access from one lift to another dangerous as skiers are forced to trek back and forth across the highway. A pedestrian walkway across the highway would allow safe access for skiers. Highway 40 also restricts any possible parking expansion opportunities because of its location. CDOT has informed past operators of the need to construct acceleration and deceleration lanes at a cost of over \$200,000.00, adjacent to the highway as a safety precaution. This requirement will even further restrict any future operator's ability to provide adequate parking at the summit.

Other man-made features at the Pass are the lodge and support buildings. The tower footers from three lifts are still in place. The lodge is a three story, 12,500 square foot building remodeled in the late 1980's with a bar, restaurant, retail area and office space. Sno.engineering's study suggested that approximately 105,000 square feet is necessary to provide adequate services to the 8500 skiers per day the area can physically accommodate. The current well is unable to meet this demand. A new operator would need to secure special use rights and water rights, along with a method of getting water to the site. Now that the special use ski area permit has expired the Forest Service would need to consult with US Fish and Wildlife to determine the affects of water depletion on downstream threatened and endangered species. Lynx consultation would also need to be addressed.

During the mid-1940's through the mid-1950's skier visits averaged in the 30,000 plus range. In the early 1960's the summer tourist operation kept the ski area in business. Summer visitation figures in 1962 totaled 261,000, 1963 showed 197,000 visits and there were 231,000 visits in 1964. Winter skier visits totaled 9,500 for the 1963-1964 ski season. The 1969-1970 season recorded 12,200 skier visits. In 1972 an analysis of Berthoud Pass as a viable ski area was done by the Forest Service, the conclusion was the viability of the ski area was considered questionable. Recorded skier visits for the 1980-1981 season was 19,574.

In 1987 when Berthoud Pass opened as Timberline ski area the focus was on off "piste" skiing and a shuttle system was introduced to ferry skiers up the north and south side of the pass after they took their powder runs. The public had always done this on their own, hiking up to the top of the ski lifts and skiing down either side of the pass coming out on Highway 40 and shuttling each other up in personal vehicles. Timberline offering the shuttle service through the ski area did not stop the bulk of the public from continuing to use the area as a backcountry ski area, providing their own shuttles for free. The parking lot often held more cars from backcountry skiers than paying customers.

In 1988 the ski area faced many challenges in meeting the requirements in their operating plan. Financial viability was very marginal and management was stretched thin to provide adequate lift and maintenance operations. The Colorado State Tramway Board raised concerns about lift operations at the area. The Forest Service had operational concerns about their ability to maintain adequate ski patrol coverage in addition to avalanche control without the presence of a day-to-day avalanche technician. A serious chairlift accident closed the double chairlift and Timberline filed Chapter 11 bankruptcy and closed the resort in 1988.

The area was sold and re-opened in 1989 under Berthoud Pass Ski Corporation. Berthoud Pass closed again in 1991; the owner filed for chapter 11 bankruptcy.

Jim Pearsall and Paul Weibal purchased the area from bankruptcy court in 1992 and worked for years trying to get it open. They were close in 1996, when Jim Pearsall was killed in an automobile accident on Highway 40. June Pearsall, Jim's wife and his partner Paul Weibal re-opened Berthoud Pass Ski Area January 29, 1998.

Fifteen months later, in April of 1999, the area was sold to Silver Creek Holding, CO., which operated the area for three seasons. With less than 70,000 annual skier visits SolVista (previously Silver Creek Holding CO.) experienced significant operating losses. In 2001 SolVista introduced Berthoud Powder Guides to offer snowcat ski tours as an ancillary operation under the ski area permit, keeping the ski area closed. The lodge was used for office space and client reception for Berthoud Pass Powder Guides. Maintaining the lodge year round at a cost of nearly \$100,000.00 for a seasonal operation caused SolVista to cease Berthoud Pass Powder Guides operation in 2003 after two seasons.

Berthoud Pass has not been in operation as a developed ski area for the past three years. The lodge has been closed since the fall of 2003. The lifts towers have been removed. CDOT has continued to plow the parking lot, at a minimum level, mostly so that winter sports enthusiasts don't park along the highway. Partially plowing the parking lot also allows public access to the port-a-pot toilets put at the pass by the Forest Service. Even though the ski area is not operating the area sees an abundance of use. On weekends the use is such that people do park along the highway, unable to find parking in the partially maintained lot, which is packed. The same is true at the lower 'pick-up' points (Hoop Creek, Floral Park, Current Creek, etc). This type of use, in somewhat smaller proportions, is also seen on weekdays. There is no typical user at the site. Everything from families with sleds enjoying snow play to snowboarders, to the most experienced backcountry skiers are seen. Some users come to Berthoud to enjoy the unrestricted use and access of the site; some come for the freedom; some for the known challenges; and some out of traditional use.

The Forest Service has received little public input about the ski area closing. Public concern about Berthoud Pass as a historic ski area and the lodge is extremely high. The Forest Service embarked on a Berthoud Pass desired future condition analysis in the fall of 2003 and has held two public meetings, with a third soon to be scheduled. A big concern for the public was the lack of toilet facilities at the Pass, which prompted the Forest Service to fund temporary toilets at the summit. The biggest concerns of the unmanaged use area: 1) avalanche hazards, 2) public safety and Forest Service liability (including unmanaged snow play), 3) trash and human waste 4) parking and vehicle intrusion into Highway 40, 4) the attractive nuisance of an unoccupied, unmanaged building.

➤ VI. PROS AND CONS OF DEVELOPED SKI AREA DESIGNATION

Pros:

- Continuance of historic ski area for historic appreciation and nostalgia
- Natural ski area qualities (natural snow and expert terrain)
- Will be used for skiing whether Forest Service designates or not
- Can meet demand for specific type of skiing; snowboarding, backcountry skiing
- Would add tax revenue plus employment opportunities for Grand and Clear Creek Counties

- May lessen risk/liability to Forest Service – operator assumes management and risk for avalanche zone within permit boundary
- Operator will give area a sense of management which will alleviate some of the current use problems; trash, human waste, lack of education risks for users, controlled access across highway, etc
- Provides a customer service

Cons:

- Viability of area in today's market is questionable, how can Berthoud compete
With large destination resorts offering discounted season passes
- Limiting factors at area; parking, base area for facilities, dangerous terrain
Highway 40
- Time requirements for reviewing applications if area continues to hold it's 8.22 designation, District will be inundated with inquires
- Cost of bringing area up to operating standards, the last four owners could not make it work
- Even in best circumstances, the area will only be a marginal ski area financially and chances of finding an operator with the top-notch staff to meet the technical requirements and having the financial capabilities are slim.

➤ **VII. CONCLUSIONS**

Viability of a developed Ski Area at Berthoud Pass in today's market is improbable. The past four owners have had financial difficulties operating the area and the assessment of Colorado's ski industry future trends is not a conducive picture. There are several limiting factors which make viability unlikely:

- The two ski lifts along with the towers were removed and sold in May of 2003. Some work has taken place to break down footers of lift towers near the base.
- Parking space is limited, only 100 spaces exist. In the 1995 it was determined that 3000 spaces would need to be filled to make a financial profit operating the ski area. Shuttling to off-site parking will not likely work due to distance, cost and lack of available facilities.
- Base facilities are limited. Currently the lodge is 12,500 square feet with little room for expansion. Approximately 1,000,000 square feet would be needed to meet the needs of skiers.
- Highway 40 bisects area, making access to both sides of the area difficult and hazardous.
- The lodge would cost an estimated \$200,000.00 to meet standards, not including bringing the facilities up to Americans with Disability Act (ADA) and Built Environment standards.
- Water is an issue. The current well was re-fractured at a cost of \$25,000.00 in 2003 and water needs could not be met for the small Berthoud Pass Powder Guides operation.
- Difficult for operator to keep prices competitive with the front range discount passes, such as the buddy pass, offered by larger areas on the west slope and be able to maintain qualified, competent personnel with expertise in avalanche control. Neighboring resorts with such expertise are Winter Park and Loveland; neither has displayed any interest in operating Berthoud Pass.
- There does not appear to be large public support or need for a developed ski area, evidenced by lack of public comment when the last two operators closed the area on Berthoud Pass. There is no demonstrated public need for additional skiing opportunities on the front range of Colorado.

- A study by Sno. engineering in the mid-1990's suggested that Berthoud Pass could not compete with the other larger ski areas in the state and would probably not be able to lure customers away from the closest small areas (Loveland and Arapaho Basin) unless it specialized in a specific niche of the ski industry (14). SolVista discovered this was indeed the case and attempted to find the niche by offering snowcat ski tours. Due to the expense of maintaining the lodge this was not a profitable venture.
- National and Colorado Ski Industry trends are unfavorable, with industry projections indicating a decrease in skier visits over the next 20 years.
- Based on its demonstrated and repeated failures, the unfavorable business climate, and the established market advantages of its competitors, Berthoud Pass will be unable to attract sufficient market share needed to become a viable ski area.

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Appendix B - Maps