

# HATCHER PASS MANAGEMENT PLAN

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## AMENDMENT

**NOVEMBER 1989**



Alaska Department of  
**NATURAL  
RESOURCES**

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# STATE OF ALASKA

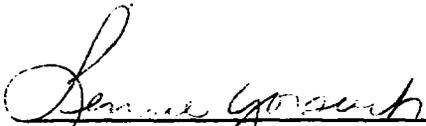
## DEPARTMENT OF NATURAL RESOURCES

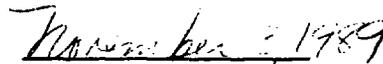
OFFICE OF THE COMMISSIONER

STEVE COWPER, GOVERNOR

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The Commissioner of the Department of Natural Resources finds that the Hatcher Pass Management Plan meets the requirements of AS 38.04.065 and 11 AAC 55.010-.030 for land use plans and does hereby adopt it. The Department of Natural Resources will manage state lands within the planning area consistent with this plan.

  
\_\_\_\_\_  
Lennie Gorsuch, Commissioner  
DEPARTMENT OF NATURAL RESOURCES

  
\_\_\_\_\_  
Date

The Alaska Department of Fish and Game assisted the Department of Natural Resources in preparing the Hatcher Pass Management Plan. We appreciate the opportunity to represent fish and wildlife habitat and harvest values during the development of the plan. The Department of Fish and Game will use this plan as guidance when implementing its authorities and when reviewing and commenting on proposed uses of state lands in the planning area.

  
\_\_\_\_\_  
Don W. Collinsworth, Commissioner  
ALASKA DEPARTMENT OF FISH AND GAME

  
\_\_\_\_\_  
Date

# **HATCHER PASS MANAGEMENT PLAN**

## **AMENDMENT**

**July 1989**

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Todd Miner, Backcountry Users  
Tom Murphy, Hatcher Pass Outdoor Club  
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\*Not reprinted in this document

# INTRODUCTION

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This document contains the amendment to the Hatcher Pass Management Plan. This amendment was developed by an interagency planning team with the assistance of a Citizens Advisory Committee. The final amendment reflects public comments received on the draft amendment. Only those parts of the plan that have been changed are included in this document.

Additions to the original plan are underlined. Deletions from the original plan are capitalized and enclosed in brackets [DELETIONS].

Until the amended plan is reprinted, this document must be used in conjunction with the original plan.

# SUBUNITS

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## SUBUNITS

Government Peak	3
Hillside	45
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# GOVERNMENT PEAK (Chapter Four, Section IX of original plan)

## A. LAND USE DESIGNATIONS

Primary Use: **Recreation, Water Resources, [SECTIONS A AND B]\*, Fish and Wildlife Habitat [IN UNIT A]\*** (If an alpine ski area/four-season resort is established, fish and wildlife habitat then becomes a secondary use.)

Secondary Use: **[FISH AND WILDLIFE HABITAT IN SECTION B\*,] Grazing [(SEE MAP 3, PAGES 116/117)]** in Section C\*, and in portions of Subunit B (T19N R1E Sections 28, 29, and below the 1500-foot level in Section 30).

Prohibited Uses: **Lard Disposal, Remote Cabin Permits, Grazing** outside designated areas (see Map 11 in original plan)

Mining: **Closed**

- site of potential alpine ski area and four-season resort (10-year closure only unless a feasible ski area development proposal has been received by DNR within that time); and
- the Little Susitna River corridor; and
- the upper road corridor area (see Map 11 in original plan).

### Open

- Arkose Ridge, portions of Government Peak and Bald Mountain Ridge.

\* see Map 6, page 196/197 in original plan.

### Classification:

Outside resort lease and Area E on amendment Map 3: Public Recreation, Water Resources, Wildlife Habitat.

Within resort lease: Public Recreation, Water Resources.

## B. BACKGROUND

**Subunit A, east side of Government Peak.** The slopes adjacent to the Hatcher Pass Road attract high use for all winter sports including skiing, snowmachining, bobsledding, and ptarmigan hunting. It is also used for mountaineering classes. There [ARE TWO EXISTING LEASE APPLICATIONS FOR RECREATIONAL DEVELOPMENT AND] is considerable [OTHER] private sector interest in a variety of recreation and tourism related businesses. The northeastern slopes of Government Peak and Bald Mountain Ridge contain [THE ONLY] suitable terrain for

alpine skiing [IN THE MANAGEMENT UNIT. ] There is high potential for all-season trail development and use. [THIS ENTIRE UNIT] Subunit A is visible from the Hatcher Pass Road and has high scenic viewing value.

Moose are abundant year round below 3000 feet on the eastern and southern sides of Government Peak. Several moose and black bear are harvested annually in this area. It is also a ptarmigan habitat and hunting area.

Placer claims occur along Fishhook Creek and the Little Susitna River. There is a conflict between public enjoyment of the road corridor's scenic values and the visual appearance of the placer camps along the road. A description of mineral potential on Government Peak is given in Chapter Two, Subsurface Resources. There are no claims nor past mineral activity in the Government Peak area.

The river corridor has been legislatively designated as the Hatcher Pass Public Use Area and closed to mineral entry and land sales.

This subunit has important watershed values for commercial uses and mining and for the fisheries resources, especially salmon spawning and rearing, and downstream fisheries values.

All of the upper area has high avalanche potential and most areas in the lower portion have some avalanche potential. Government Peak has unstable slopes, areas of potentially unstable glacial till material, fracture zones and rock glaciers.

Subunit B has a rich variety of natural resources, and demands on these resources are expected to increase significantly as private lands adjacent to the southern border are settled. This is important moose habitat for both winter and summer. A significant moose harvest occurs here. It is also a black bear, small game and furbearer area.

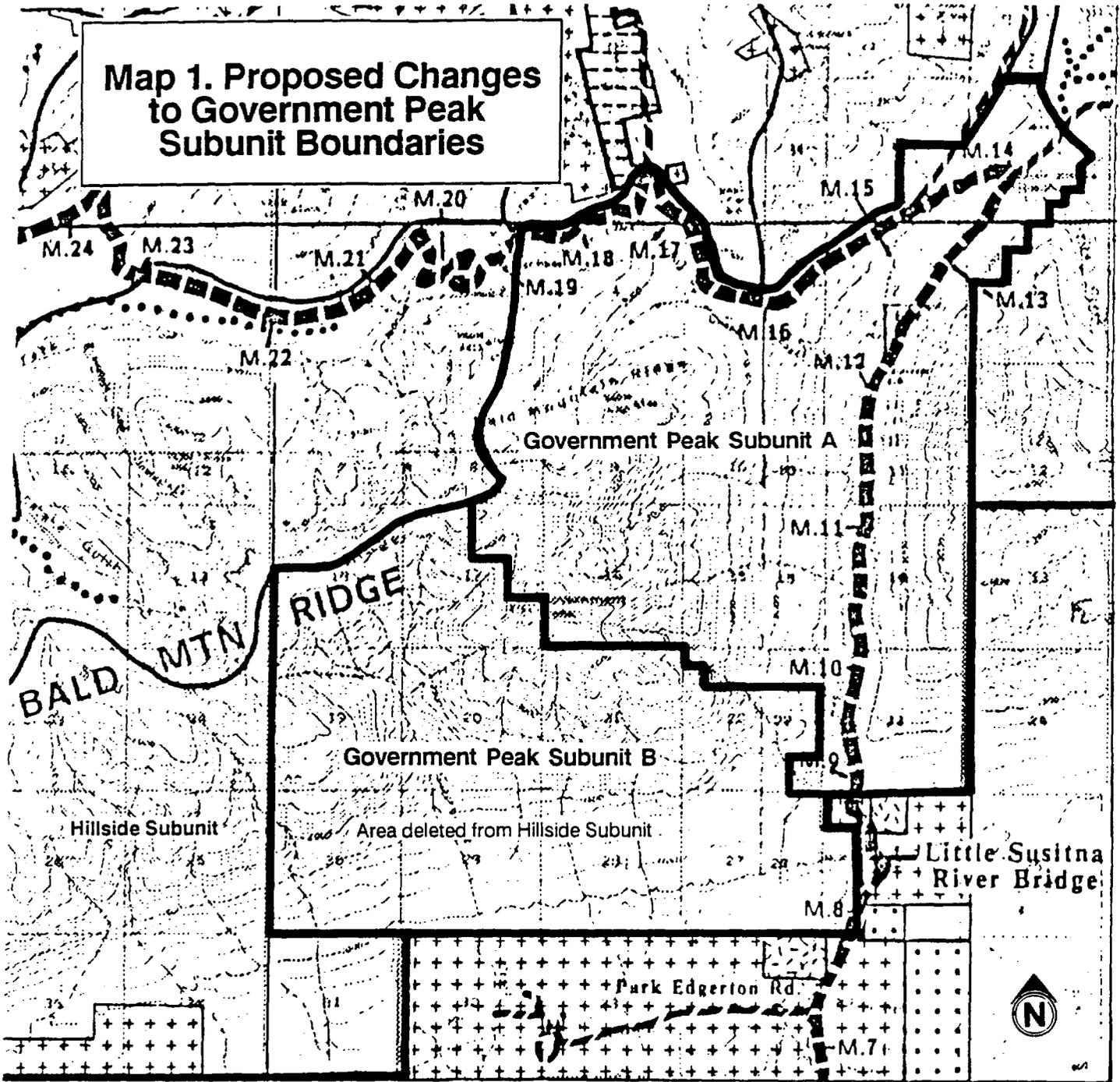
The forested areas in this subunit have high potential for creating productive, replacement moose habitat for summer and winter range lost to development on adjacent private lands.

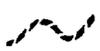
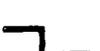
Recreational use is light at present due to limited access. Current use is for hunting, trapping, horseback riding, hiking, skiing and snow machining. Potential for a variety of recreation uses is high, either for cross country ski trails and dispersed recreational trails or for more developed recreation.

Open woodlands with bluejoint understory provide high grazing potential across the unit.

Mineral potential is moderate to low; no claims exist at present and no past mining activity is known.

# Map 1. Proposed Changes to Government Peak Subunit Boundaries



-  HATCHER PASS ROAD
-  LOCAL ACCESS ROADS
-  TRAILS
-  SUBUNIT BOUNDARIES
-  PLANNING UNIT BOUNDARY

## LAND OWNERSHIP

-  STATE
-  PRIVATE
-  MAT-SU BOROUGH
-  STATE SELECTED
-  NATIVE (PRIVATE)
-  INDEPENDENCE MINE STATE HISTORICAL PARK
-  MENTAL HEALTH LAND

Streams in this subunit are lateral tributaries to the Little Susitna River. Water quality in the streams in this subunit is assumed (although not proven) to be important in the protection and maintenance of the downstream fisheries resource in the Little Susitna River. The subunit is important as a watershed for the populated area south of the subunit.

The upper area has unstable slopes, fracture zones and potentially unstable materials. There is high avalanche potential along almost the entire upper slope; lower portions have some potential. An active fault system crosses the lower Hillside, and there are scattered areas of unstable material. Water is near the surface in many of the lower areas of the subunit; careful engineering is necessary in these areas where roads and trails may be constructed to prevent water ponding and drainage problems.

### **C. MANAGEMENT INTENT**

This area is to be managed for intensive recreation and as a tourism destination point in a manner which preserves the option for a downhill ski area and four-season resort development and protects the scenic values of this subunit. This unit will be one of two focal points for four-season developed, commercial and non-commercial recreation options in the Hatcher Pass area including, but not limited to, a downhill ski area, a sledding run, snowmobile, equestrian, and pedestrian trails, parking, picnic and camping areas. A variety of motorized and non-motorized trails will be established in most of the unit. In designing these developments, attention will be paid to minimizing or mitigating moose and ptarmigan habitat loss to the extent feasible, to avalanche safety planning, and to alleviating road congestion. Hunting will be maintained where possible.

While the intent for this subunit is to concentrate intensive recreational use and provide additional future recreational opportunities, the emphasis is to retain the high scenic values of the river corridor and open mountain slopes. The narrow river corridor has a limited ability to accept change brought about by facilities construction and still maintain the open, natural beauty. To protect the existing scenic values, major commercial development will be authorized only [AT THE POTENTIAL ALPINE SKI SITE] on the east and south slopes [SIDE] of Government Peak and Bald Mountain Ridge (see Map 1 in this document). [(SEE APPENDIX VI FOR A COPY OF THE ALPINE SKI SITES STUDY)]. Subunit B (the south slopes of Government Peak and Bald Mountain Ridge) is important moose habitat and valuable public open space and recreation land, adjacent to the private land base in the Matanuska Valley. Siting and design of structures, access, and parking associated with the resort development [SKI AREA] will be carefully done to complement the natural landscape and to leave as much open space and moose habitat as is feasible. Consideration should be given to location of a major sledding hill in conjunction with an alpine ski area. The area north of the junction of the Gold Mint Road with the Hatcher Pass Road at Milepost (MP) 14 will be an intensive use area for small-scale developments such as a bobsled run and a rope tow or poma lift. These facilities will complement the existing public recreational uses and will not include structures other than a warm-up facility or maintenance building. No private commercial recreational uses of state land will be authorized outside these two areas with the possible exception of a site for tourism gold panning.

The alpine ski area site will be closed to mineral entry because mineral development is incompatible with commercial recreational development at this site: mineral claims could hinder

the ability of the private sector to obtain financing; mine roads and structures would hinder design and use of the slopes for ski runs.

**Alpine Ski Area/Four-Season Resort.** In response to interest in locating a downhill ski facility in Hatcher Pass, the Division of Geological and Geophysical Surveys managed a study that analyzed the area and determined that the only location that has the right kind of slope is the east slope of Government Peak (see Appendix VI for a copy of the alpine ski sites study). Public response to a proposed ski development at this site was mixed. It is clear that a majority of users want some type of downhill ski facility, but there is disagreement over how large a facility is desired. There was little support for a winter village. However, there was testimony given that a day-use only development may not be economically feasible.

Subsequently, DNR solicited bids for the development of an alpine ski resort and ultimately issued a lease to Mitsui, Inc., USA. The lease only included development rights for a portion of Subunit A because commercial development was not allowed in the rest of the subunit under the Hatcher Pass Management Plan in effect at the time the lease was issued. Mitsui is interested in developing an international-scale, destination four-season resort with alpine skiing. In a survey commissioned in the fall of 1988 by DNR, the majority of respondents indicated that they supported Mitsui's proposed development. At public meetings held in the spring of 1989 on the proposed amendment, the majority indicated again that they supported amending the plan to allow a four-season resort in Subunit B. Many of the supporters also stressed the need to carry out the development carefully. Those who opposed a four-season resort were concerned with environmental impacts, noise, and effects on existing recreational uses of the adjacent areas.

In response to this public input, the Department of Natural Resources has developed the guidelines outlined in this section. The option to develop an international-scale, destination alpine ski area/four season resort in this unit will be made available. This plan does not make a final decision on the scale of the development but the intent is that, to the extent feasible, it be a compact-type development with buildings located in one or more [A] clusters. [THERE WILL BE NO VILLAGE]. Overnight accommodations including hotel and resort housing (which may include condominiums) are allowed. Location and design must consider public safety and efficient use of land (see resort guidelines). The management intent for resort housing is that it is for the use of visitors to the resort facility. (See alpine ski area guidelines, page 253 for type of developments allowed). Public hearings will be held in the Matanuska Valley and Anchorage before a final decision is made on the scale and specifics of the development and the final decision will reflect public comment.

## **D. PLANNED ACTIONS**

### **1. MINING**

**a. Little Susitna River.** The Little Susitna River has been closed to mineral entry ½ mile to the west and ¼ mile to the east of mean high water through the Hatcher Pass Public Use Area Legislation.

b. **Potential Ski Area.** The potential resort [ALPINE SKI] area will be closed to mineral entry. If within 10 years from the effective date of the mineral closing order a feasible development proposal has not been received, the site may be reopened to mineral entry. Any portions of mineral closing orders 499, 541, and 549 (See Map 2 in this document) that are dropped from the resort lease will be reconsidered with the intent of reopening them to mineral entry under mineral leasehold subject to public review.

An international scale resort would be a significant use of state land and is likely to include uses that are incompatible with mining. Therefore, areas remaining within the ski area/four-season resort lease will remain closed to mineral entry.

c. **Road Corridor.** The road corridor from Archangel turn-off to the Pass will be closed to new mineral entry (see Land Use Plan Map; Map 11 in original plan).

## 2. CAMPGROUND

A campground is planned for the west side of the Hatcher Pass Road, (outside the eastern boundary of the resort leasehold) opposite the Little Susitna River, between MP 11 and 12 at a site where trees are available for screening of the campground from the road. [AS PLANNED, IT WILL CONSIST OF 1 - 3 LOOPS AND CONTAIN 15 - 20 SITES.] The number of camping and picnic sites is intended to be in the low range.

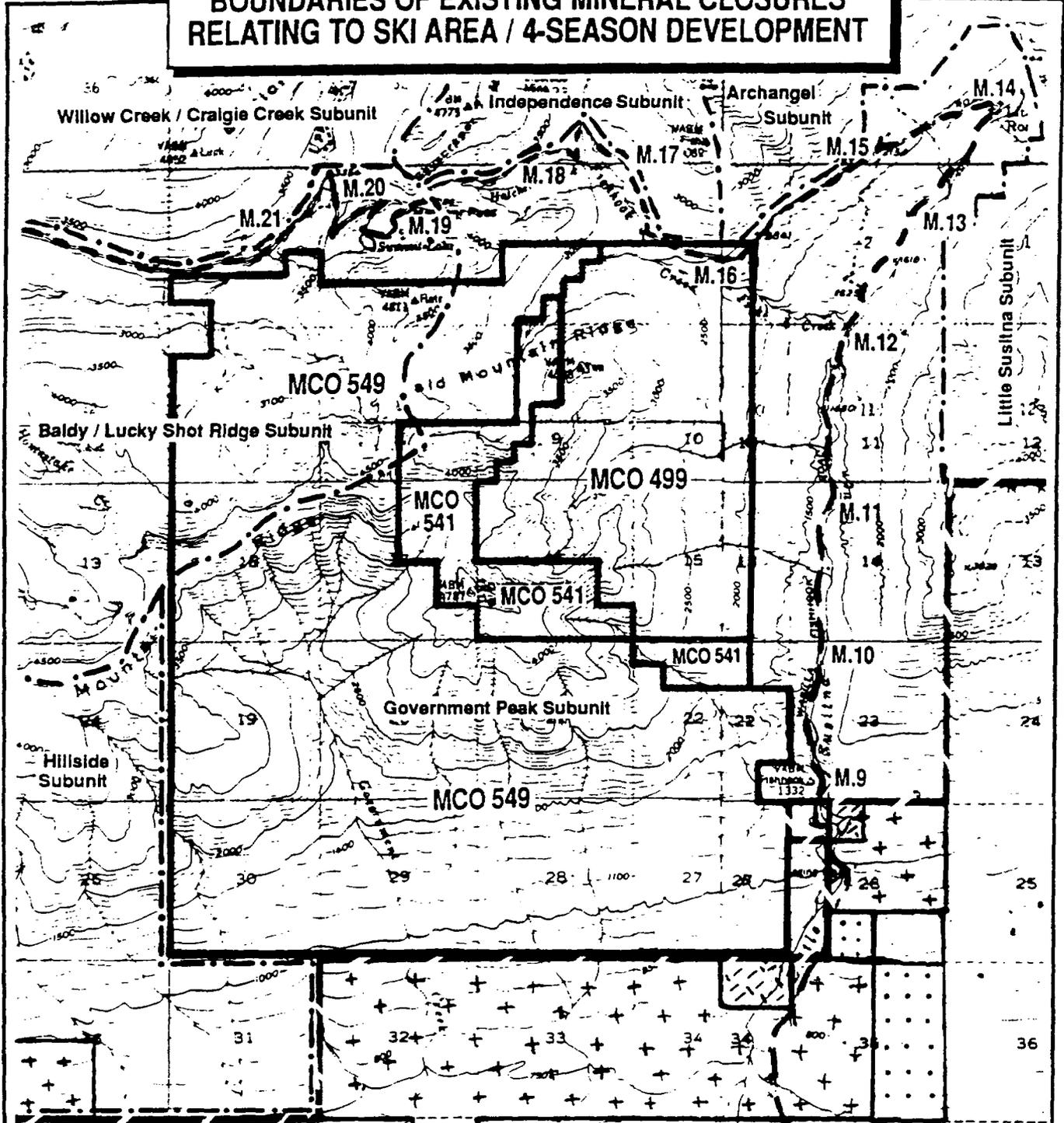
## 3. RECREATIONAL USE AREAS

a. A variety of recreational use areas are planned including a major alpine ski area and four-season resort, a snowmachine play area, a sled run, and a family-type sledding-ski hill (see Map 12 in original plan).

b. If the proposed four-season resort is built, the unauthorized cabin in Section 27 will likely be removed. However, if the resort is not developed, the cabin should be converted to a public facility for trail maintenance or winter warm-up shelter.

c. If the four-season resort is not built in Subunit B, the original intent should be carried out: Section 27, ½ mile access road, trailhead parking (100 spaces), eventual 18-20 mile (30 km) trail system.

# MAP 2. BOUNDARIES OF EXISTING MINERAL CLOSURES RELATING TO SKI AREA / 4-SEASON DEVELOPMENT



### MAP LEGEND

- Mineral Closing Order (MCO) Boundary
- Hatcher Pass Management Plan Boundary
- Management Plan Subunit Boundary
- Hatcher Pass Road
- M. 12 Milepost Number

### LAND OWNERSHIP

- State
- Private
- Mat-Su Borough
- Native (Private)

#### **4. PARKING**

- a. Snowmobile parking south of MP 14 within the snowmachine play area. Final site location will be made after analyzing hazard zones and terrain constraints. This will provide snowmobile access to the trails and intense use areas with minimum road crossings.
- b. MP 14, north of the Hatcher Pass Road off the Gold Mint Road, (40 spaces) for sledding and ski play area, kayak put-in, and hiking. A public restroom should be installed at this site.
- c. Fishhook scenic overlook, MP 16.2 (30 spaces).
- d. MP 16.5, gravel pit site (50 spaces) for a variety of year-round uses.
- e. Archangel Road within the first mile in an avalanche safe zone (30 spaces) for dog sledding, bobsledding, snowmachining, and skiing.

#### **5. PULL-OUTS**

- a. Little Susitna bridge, both sides, MP 8.7 (5 spaces)
- b. Pinnacle Rock, MP 9 (5 spaces)
- c. Scenic view site, MP 9.5
- d. Cottonwood grove and forest transition interpretive site, MP 10.2 (5 spaces)
- e. Scenic view site, MP 10.7
- f. Forest transition interpretive site and scenic view, MP 11.6 (5 spaces)
- g. Lower Fishhook Creek, MP 13 (10 spaces)
- h. Beaver Pond viewing, MP 13 (5 spaces)
- i. Moose pasture interpretive site, MP 13.2 (5 spaces)
- j. Scenic viewpoints of upper Little Susitna valley, MP 13.6 (5 spaces)

#### **6. TRAILS**

- a. Little Susitna Valley trail begins near MP 14 and will continue south on the bench west of the road and eventually have connection points to Hillside Subunit trail system.
- b. Intermittent trails along the west bank of the Little Susitna River for fishing access and sightseeing.

c. Fishhook trail to Hatcher Pass will provide an off-road snowmachine route to the Pass and a summer horse/foot trail. DOT/PF and DNR will work together on the best location.

## 7. PICNIC AREA

At least one picnic area will be developed along the Little Susitna River; the best site has not yet been identified. It will be somewhere between MP 10 and MP 12.

## 8. MANAGEMENT OF RECREATION

a. **Hatcher Pass Public Use Area Addition.** A legislatively-designated addition to the Hatcher Pass Public Use Area is proposed for the upper road corridor (see land use plan Map 12 in original plan).

b. **Cooperative Management.** A cooperative management agreement will be implemented between the Division of Parks and Outdoor Recreation and the Division of Land and Water Management for management of recreational use in this subunit (see Chapter Three, Recreation management strategy).

## 9. PRIVATE SECTOR RECREATION

The following are planned private sector developments within this subunit:

- a. **Sledding.** Sledding hill immediately north of MP 14. (Would use existing roadbed if new route is constructed to reduce seventeen percent grades and curves.) A luge/bobsled run in conjunction with alpine ski area development should be considered.
- b. **Luge/Bobsled.** Luge/bobsled run with warm-up building, lift, and parking off Archangel Road down to parking area north of junction of Hatcher Pass and Gold Mint Roads.
- c. **Ski Area.** Beginner's downhill ski and sledding area with lift, on the gentle slope north of MP 14 below Archangel Road.
- d. **Ski Trails.** Groomed ski trails north of the MP 14 and along the Little Susitna River.
- e. **Horseback Trail Rides.** Horseback trail ride (commercial) and corral facility south of MP 14.
- f. **Commercial Gold Panning.** See guidelines 3, page 136.
- g. **Alpine Ski Area/Four-Season Resort.** See guideline 4, page 253.

## E. GUIDELINES

### 1. MINING

**a. Maintenance of Scenic and Fisheries Values.** Because the major uses in this unit are scenic viewing and intensive recreational activities, mining surface use receives closer than average public scrutiny. Thus, consultation with DNR will be required prior to erecting structures or doing bulldozer work on the claims for roads or site clearing. The mining plan will clearly describe how viewshed guidelines are being met. Riparian habitat along the Little Susitna River shall be preserved wherever possible; development plans shall be reviewed by DNR & ADF&G, for purposes of minimizing impact on the wildlife and fisheries values and water quality.

**b. Structures.** Structures not directly related to mining will not be authorized; this includes housing and tourism-related facilities, signs, and parking. On-site consultation with the Division of Mining [AND GEOLOGY] and the Division of Land and Water Management will be utilized when staff time permits prior to placement of structures on the claims. These structures will be removed when they are no longer being utilized for the authorized purpose.

**c. Minimize Visual Impacts.** Any authorized structure, such as a storage shed, will be screened from view of the Hatcher Pass Road if possible. All structures authorized in the treeless, upper areas must be designed to reflect the historic building style or blend with the environment. Siting and design of buildings will be approved prior to construction by DNR. On-site preplanning will be required.

**d. Access.** Prior to construction of access roads, on-site consultation between the Division of Mining [AND GEOLOGY] and the Division of Land and Water Management will be conducted, staff time permitting, to plan the least impact access route.

**e. Gold Panning.** Tourism gold panning businesses cannot be conducted on a mining claim without surface use authorization from the Division of Land and Water Management.

### 2. GRAZING

**a. Grazing in Recreational Use Areas.** Summer grazing will be [ENCOURAGED] allowed in winter recreation use areas to keep grass height down. This will allow early season participation in winter sports. However, domestic livestock grazing is not expected to be a use within the four-season resort lease boundaries.

**b. Priorities for Grazing Use:** (See Map 11 in original plan for location of sites.)

(1) Establish a horse grazing area near Archangel Road. Use relocatable or "drop-down fencing" or tether horses.

(2) Establish a horse use area south of the Mother Lode Lodge below the Fishhook trail and above the Hatcher Pass Road. Use relocatable or

"drop-down fencing" or tether the horses and move the area in north-south directions as vegetation utilization occurs.

(3) Establish one livestock area (horses or cattle), with common permittee use, north of the Fishhook Creek [AND ONE SOUTH OF THE CREEK. THESE] This should be located on the bench west of the Hatcher Pass Road. [USE OF THE SOUTHERN AREA WOULD BE CONTINGENT ON ALPINE SKI AREA DEVELOPMENT AND CONVERSION OF ALDER TO GRASS TYPE.]

c. **Herd Management.** Grazing can be compatible with intensive recreational use in this subunit with use of herd management techniques such as relocatable fencing or tethering of horses, moving the animals to avoid problems with concentrations of livestock on trails, trampling of stream banks and drainages, or overuse of some sites and underuse of others.

d. **Trail Maintenance.** Livestock owners will participate in trail maintenance.

e. **Grazing in Subunit B.** Until development rights are awarded for the proposed four-season resort, grazing under an annual permit will be an allowed use in Sections 28-29, Township 19N, Range 1E, and below the 1500-foot level in Section 30, subject to the guidelines of the original Hatcher Pass plan. If, at some point in the future, it should be determined that establishment of a resort here is unlikely, grazing may occur as provided for in the original plan. In that case, the issuance of grazing leases will be delayed for 10 years from the original adoption of this plan while the recreational use pattern develops and the proposed trail system becomes developed and hardened. Grazing lessees will participate in trail maintenance once grazing use is authorized.

f. **Erosion.** Grazing in Subunit A should be managed to avoid undesirable run off and erosion problems.

### 3. PRIVATE SECTOR RECREATION DEVELOPMENT

a. **Type of Development Allowed.** The only major commercial development that will be authorized is the alpine ski area/four-season resort. Government Peak Subunit A [THIS SUBUNIT] is already crowded, and the actual physical space in the valley floor is limited. Additional commercial development may occur on the three parcels of private land along the river corridor. Recreational businesses will not be authorized in the Little Susitna Road corridor except as described in Areawide Recreation Guideline 2c and guideline 3c below [WITH THE EXCEPTION OF ONE SMALL-SCALE TOURISM GOLD PANNING OPERATION (SEE ITEM C BELOW)]. Scenic values are high and there are few opportunities to screen structures, roads, and parking from view.

In addition to the alpine ski/four-season resort, the private sector role is to provide high-quality, organized recreational activities; such as, a lift for a sled and ski play area, a bobsled run, winter maintained trails, and horse trail rides. These will occur

in the northeastern section of the subunit. This area is designated as an intensive recreation use node.

**b. Site Plan.** The Division of Parks and Outdoor Recreation will prepare a detailed site plan of this node and of the Fishhook Trail in coordination with private sector groups. With careful planning, a variety of uses can occur in this area and conflicts between user groups can be minimized.

**c. Location of Gold Panning Businesses.** Use of [THE] a mining claim for a tourism business must be authorized by permit or surface lease from the Division of Land and Water Management. [ONE] If a gold panning business is [will be] authorized on the east side of the pass outside the alpine ski resort lease, it should be located adjacent to the Little Susitna River between Fishhook Creek and the junction of the Hatcher Pass Road and Gold Mint Road on state land where the operation can be screened from view of the Hatcher Pass Road corridor. An exception to the screening requirement may be a location adjacent to facilities on private land if it does not create visual clutter and provides the opportunity for clustering commercial recreation facilities. See Chapter Three, commercial recreation guidelines for more details.

#### 4. **ALPINE SKI AREA/FOUR-SEASON RESORT**

**a. Economic and Physical Feasibility Studies.** The Department of Natural Resources will cooperate with the Mat-Su Borough on economic and physical feasibility studies.

**b. Preserving Option for Development.** No actions will be taken which preclude the development of a downhill ski area/four-season resort in this unit and the area will be closed to mineral entry for at least ten years.

**c. Snow Data.** The Department of Natural Resources should continue to collect snow data for at least five years.

[c]**d. Solicitation.** Within one year of the approval of this plan, the Department of Natural Resources will solicit applications for the development of a downhill ski area.

[d]**e. Criteria for Applications.** Prior to soliciting applications, the Department of Natural Resources will develop criteria that the applications must meet. The criteria will include but not necessarily be limited to:

- provides a high quality recreational opportunity
- architectural standards and compliance with viewshed and other plan guidelines
- adequate transportation
- safety

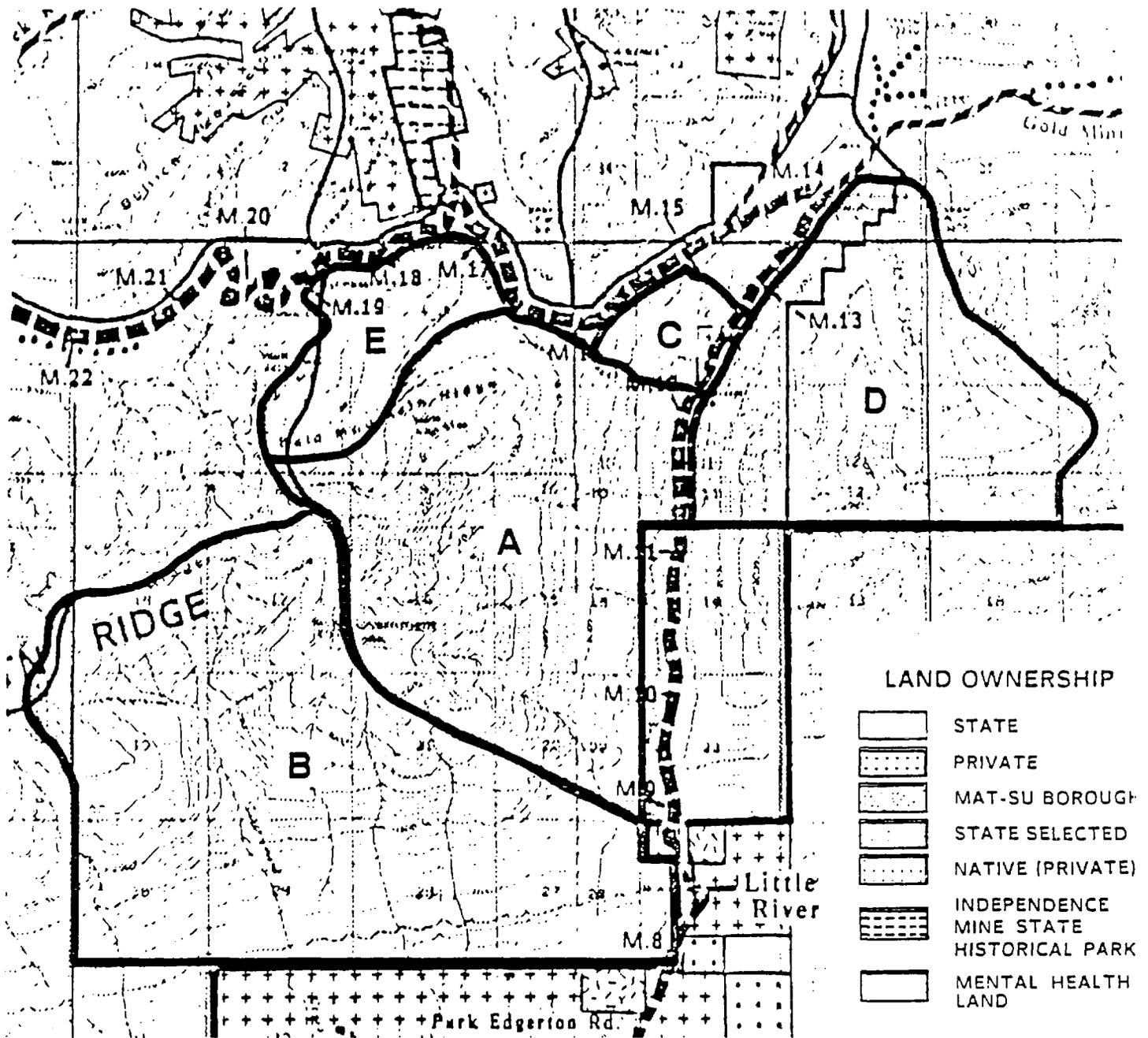
[\* SCALE: OVERALL COMPACT DEVELOPMENT THAT DOES NOT VISUALLY OVERWHELM THE AREA; IT COULD INCLUDE OVERNIGHT ACCOMMODATIONS, RESTAURANT, BAR, AND SKI RENTAL SHOP, BUT WILL NOT INCLUDE PRIVATE

LEASES OR SUBLEASES TO INDIVIDUALS FOR CABINS; IT COULD INCLUDE CONDOMINIUMS IF THEY CAN BE DESIGNED TO MEET THIS CRITERIA.]

- financial capability; proof of financial capability to plan, design, construct, and operate a ski resort is required as appropriate.
- ski area, four-season resort planning, design and management experience is required (four-season resort experience is required only if a four-season resort is proposed).

f. Boundary of resort area. Resort development may occur only south and west of the Hatcher Pass Road.

- West of the road, there should be no resort facility development below the low bench. The intent is that the resort development be above the road and generally out of view of the road at least south of Fishhook Creek rather than in the road corridor in order to retain the natural, scenic quality of the drive and to leave opportunities for siting such public facilities as a campground, scenic pulloffs, salmon viewing area, etc.



**Map 3. Conceptual Map of Skiing and Resort Areas**

A. Primary downhill ski area  
 B. Auxiliary 4-season resort addition  
 C. Potential ski area base facility expansion area  
 D. Potential heliskiing area  
 E. Cross-country/telemark area

- HATCHER PASS ROAD
  - LOCAL ACCESS ROADS
  - TRAILS
  - SUBUNIT BOUNDARIES
  - PLANNING UNIT BOUNDARY
- N

- Resort development should generally be south of the main stem of Fishhook Creek (where Fishhook Creek flows through section 3) except for areas included in the existing resort lease or as necessary to allow a ski run in the Fishhook valley. However, an area north of Fishhook Creek within T19N, R1E Section 2 and the southeast corner of section 3 (area c on amendment map 3), may be considered for base facility development in conjunction with primary ski area development on Government Peak and the east end of Bald Mountain Ridge contingent on site suitability analysis and justification of its functional relationship to the overall downhill ski resort. If such development is allowed, the activities that take place in the area now (skiing, snowmachining, and sledding) must be protected or enhanced.
- The area north of Bald Mountain Ridge (in the vicinity of the "\$1000 Run") should be managed as a telemark area and to maintain the scenic view from the road. Ski lifts and private commercial recreation uses will not be allowed. (Area E, Map 3 in this document.)
- Resort development in Subunit B is allowed only in conjunction with development of an alpine ski resort in Subunit A. In the event that portions of the resort lease that were originally part of the Hillside Subunit are dropped from the lease, the Division of Land and Water Management would consider modifying the boundaries of management units to transfer the relinquished areas to the Hillside Subunit.

**[e]g. Environmental Assessment.** Before a final decision is made, an assessment must be made of the environmental impacts of the proposed development. The scope and detail required will be in proportion to the size of the development proposed. The intent is not to preclude consideration of an application from a local ski club or small operator.

During the environmental assessment for the potential alpine ski area development, DNR and/or the prospective developer, in consultation with ADF&G, will analyze impacts to wildlife and recommend measures to be taken to mitigate any significant loss of important wildlife habitat.

**[f]h. Public Hearings.** Information on the proposed development and its impacts will be made available to the public, and public hearings will be held in the Matanuska Valley and Anchorage before a final decision is made on the scale and specifics of the development.

**[g]i. Agency Involvement.** The Division of Parks and Outdoor Recreation and the Department of Fish and Game will be actively involved in the decision-making process.

**j. Resort Design guidelines.**

(1) Cluster design. Resort facilities should be grouped closely together to facilitate foot access and leave as much of the area in natural open space as possible.

(2) Open space. Open space areas should generally be left in natural condition and should not be modified in order to provide a natural, tranquil setting for the resort and habitat for wildlife. However, a pedestrian trail system is an acceptable use and other related uses may be considered if they meet this intent. (This guideline is not intended to preclude subsequent use of open space for a facility if it meets other guidelines of this plan and is approved by DNR.)

(3) Greenbelts. See fish and wildlife section.

(4) Castle Mountain Fault. Structures designed for human occupancy may not be located within ¼ mile of the location of the Castle Mountain fault zone as shown on Figures 2 and 3 of DGG\$ Public Data File 88-39 unless a geologist/geo-technical engineer experienced in fault studies locates the fault planes by conducting detailed surficial mapping and trenching surveys across the fault zone. In that case residential structures must be located a minimum of 50 feet from the fault planes.

(5) Functional relationships. Group together activities that are functionally similar or that have similar circulation, access, and service requirements. In grouping activities, consider the following:

(a) Noise generating and active activities should not be placed adjacent to uses requiring more quiet, passive conditions.

(b) Activities requiring controlled access or privacy should be functionally and physically separated from other activity use areas and facilities. For example, areas developed for resort housing should be located to afford access to recreational facilities, but with reduced general public access to maintain privacy of the housing area.

(6) Resort design and building relationships. A goal of resort design is to provide a unique or distinct atmosphere, and to allow visitors the possibility of forming an identity with their surroundings.

(a) The overall objective in locating roads and grouping buildings is to define an integrated, cohesive village so that views of the resort from the mountain and off-site locations present a well-organized village that blends with its natural surroundings.

(b) Locate buildings and walkways so that buildings shelter walkways from inclement weather.

(c) Building design.

(i) Orient buildings so that they have as much southern (solar) exposure as possible.

(ii) To the extent feasible, avoid the use of outdoor steps in the base facility unless they can be designed to be ice free and alternate handicap access is provided.

(iii) [h. ARCHITECTURE.] The architectural style of developments will complement the natural features or historic mining character of the area. Parking and access will be designed to blend with the landscape (see commercial recreation guidelines, Chapter Three, pages 133-135).

(d) The developer should provide the rationale for resort design and location decisions when submitting plans for approval. This rationale should be based on functional relationships and a site suitability analysis. The site suitability analysis should address such items as soils, slope, vegetation, wildlife, noise, and visual factors.

#### (7) Mountain Design

(a) Ski-related facilities should be located so that they take full advantage of natural site contours with a minimum amount of cut and fill.

(b) Locate and design ski runs and base facilities to allow for ski access from and to the ski slopes and related base facilities. Provide for efficient, convenient circulation in and around base facilities for both skiers and other resort visitors.

(c) The developer should provide the rationale for his mountain design when he submits plans for approval. This should be based on an analysis of snow and wind conditions, ski terrain suitable for beginning, intermediate, advanced and expert skiers, and justification of the base facilities in terms of need to support the mountain development.

(8) Pedestrian circulation. The resort design should include enough provision for pedestrian circulation so that there is minimal need for the use of a car or other mechanized transportation. Pedestrian access routes and trails should be designated and physically separated from roadways.

(9) Internal access and service roads. Locate, design, and construct access and service roads so as to minimize terrain modification and visibility from within and without the management unit.

(a) To the extent possible, avoid placing roads and service trails on alpine slopes, or slopes with low-growing native plant cover that are visible from the Hatcher Pass Road, Independence Mine, and other popular use areas. Where this is not possible, an analysis of alternative routes should be conducted to locate the proposed roads and trails where they will be least visible.

(b) To the extent possible, locate roads and trails to avoid areas of excessively steep slopes, unstable soils, and steeply-sloping side gullies. For roads and trails that must be located on hazardous or unstable terrain, the developer will conduct an analysis of alternatives and technical feasibility.

(c) Design internal road and trail system to allow for optimum use of suitable ski slopes. To the extent possible, avoid switchbacks on service roads because they disrupt skiing patterns and may not meet design criteria for snow making and slope grooming equipment.

(d) The design of the internal road system should include shoulders, drainage structures, trail head, vehicle pullouts, and terrain stabilization and restoration plans.

(e) The design of service roads should include drainage structures, erosion control, terrain stabilization, and restoration plans; and shoulders, trailheads, and vehicle pullouts as appropriate.

(f) Mass transit should be provided within the resort. All modes of internal mass transit should be considered including an aerial transportation system (e.g. tramway, gondola), to minimize the need for road construction and use of automobiles within the ski site. Further, the developer should evaluate alternatives including the use of mass transit, for reducing private automobile traffic to the resort in order to minimize the impact of increased resort traffic on the regional road system. The developer, in consultation with affected state agencies and the Matanuska-Susitna Borough, should implement appropriate measures to reduce resort-generated traffic on the local road system.

(10) Parking. When designing parking lots to serve resort facilities, the developer should consider efficient traffic patterns, minimize conflicts between vehicles and pedestrians, provide adequate visitor drop-off, handicap access, and provide adequate visitor information.

**k. Type of development allowed.**

(1) Subunit A and B: The type of development that is allowed in Subunits A and B includes those types of facilities and associated development normally found in an alpine ski resort that is also a four-season destination resort. This includes, but is not limited to, ski lifts, day lodge, hotel, resort housing, conference center, a summit restaurant; other recreational facilities such as tennis courts, spa and therapy facility, and a gymnasium; other facilities necessary to support users of the resort such as shops, museum or theatre; and a helipad for use in emergencies, construction, and maintenance. An airport and motocross are not allowed within the four-season resort lease.

(2) Subunit B: Resort development in Subunit B is allowed only in conjunction with development of an alpine ski resort in Subunit A. The type of additional development that is allowed in Subunit B includes those types of facilities normally associated with a four-season resort. This includes, but is not limited to, recreational facilities such as a golf course; horseback riding facilities and associated trail system; trail system in a natural setting for a variety of non-motorized uses such as cross-country skiing, dog mushing, and hiking; field archery; outdoor shooting activities; a camping area; and a heliport that may be used for other operations in addition to those specified above.

(3) Criteria for evaluating proposed recreational and support uses: Criteria for evaluating proposed recreational and support uses which may be proposed by the developer are given below. The goal is to allow development of an economically viable ski area/four-season destination resort while maintaining a high quality natural environment and providing a satisfying recreational experience for the user. These guidelines are criteria for evaluation of the effects of proposed uses on the natural system's ability to absorb development. There is a critical threshold beyond which continuation of development can degrade the natural setting and the quality of the experience. Because determination of the limit of capacity of a system and the appropriateness of proposed uses is ultimately a subjective one, a review process will be established which includes a variety of agency and technical expertise and involvement of a citizens advisory committee.

(a) Physical Capacity. Some primary factors to consider are the amount of space necessary for the proper conduct of the activity, the hardness or vulnerability of the vegetation, and the erodibility and other characteristics of the soil. Proposed uses should not create a problem of overuse to the extent that the site is impacted beyond its ability to restore itself by natural means. A site suitability analysis is a key requirement for physical capacity determination.

(b) Balance of Open Space. Consider the effect of the proposed use on the balance of open space to developed area. The value of developed areas both within the lease site and on adjacent private lands is enhanced by maintenance of a high-quality natural setting on public lands.

(c) Social Capacity. Consider the satisfaction of the participant when evaluating the proposed use. Evaluate such factors as:

- crowding (e.g., will visitors have to "wait too long" to use the activity?)
- compatibility of activity in relation to other activities
- noise generated by the activity and its effect on other uses and on enjoyment of adjoining private land
- environmental affects of the activity such as dust, erosion, or vehicle emissions
- whether Alaska weather conditions allow the proposed activity to be carried out satisfactorily

- attractiveness of the facility
- appropriateness of the activity (is it one resort users would generally enjoy?)
- size and configuration of the site (are they appropriate for the proposed use?)
- location (is it appropriate for the proposed use?)

(d) Effect on Fish and Wildlife. Evaluate the effect of the proposed activity on the ability of fish and wildlife to continue to use the site and adjoining areas.

(e) Effect on Scenic Values. Evaluate the proposed use in relation to important scenic viewsheds from other public use areas. Will the use cause unnecessary harm to the visual qualities of the area? Has the best location been identified for the proposed use?

(f) Public Safety. Evaluate the safety of the proposed use in relation to avalanche and other natural hazards and in relation to other activities.

(g) Appropriate Use of State Lands. Evaluate the proposed use by considering the following questions: Is this a typical resort activity? Is this an appropriate activity to occur on these public lands? Is there demand? If the answers to either of the first two questions may be no, the developer should consider alternative sites, both private and public, for the proposed use. In cases where a viable off-site alternative exists, the developer should justify why the inclusion of the proposed use on site is necessary to the resort development. Before approving the inclusion of such a use on site, DNR should consider the effect on the local economy of locating the proposed use on-site or off-site.

(h) Cumulative Impact of Proposed Use. Evaluate the cumulative effect of the proposed use on open space, wildlife habitat, and environmental quality in relation to other developments within the lease site and adjacent areas.

#### (4.) Review Process for Ski Area/Four-Season Proposed Uses

The review team for ski area/four-season resort development will include Division of Land & Water Management, as the lead agency with lease administration responsibility, in consultation with Division of Parks & Outdoor Recreation as well as other affected resource agencies within DNR; Department of Fish and Game; Department of Commerce and Economic Development's Division of Tourism; Department of Environmental Conservation; and the Matanuska-Susitna Borough. Technical expertise will be included from DNR divisions such as the Division of Geological & Geophysical Surveys, the Plant Materials Center, and Division of Parks & Outdoor Recreation's Design & Construction section. In addition, depending on funding availability, DLWM will contract with private sector consultants with expertise in ski area and four-

season resort development, engineering and other appropriate specialized areas as necessary to serve as technical advisors. When appropriate, federal agencies such as the U.S. Soil Conservation Service and the U.S. Forest Service should also be consulted on an advisory basis. In addition, a citizens advisory committee made up of representatives of the most affected user groups, both in the Matanuska Valley and in Anchorage, will be part of the review process on an advisory basis.

DNR will utilize the review team at the following stages of the development process:

- (a) Review of pre-qualification, solicitation, or other bidding documents.
- (b) Concept Development Plan
- (c) Master Development Plan (MDP) and amendments to the MDP.

Public meetings will be held to provide the general public an opportunity to review and comment on the Concept Development Plan. The public will also be provided an opportunity to comment on major amendments to the Master Development Plan.

#### I. Resort housing development.

(1) Resort housing may be constructed on up to 150 acres, including garages, parking lots, common areas, roadways, and common facilities. Greenbelts and other open spaces that serve the entire resort will not be counted as part of the 150 acres.

(2) The average density of the resort housing will be eight units per acre.

(3) The number of acres or the density limitation may be reconsidered during the master development planning process if the developer can justify the increase based on such factors as market demand, functional relationships, environmental considerations, financial feasibility, and resort carrying capacity. DNR must consult with the planning team and provide the public with an opportunity to review any proposal to increase the acreage or density prior to a final decision to increase the limits. However, a change in acreage or density does not require an amendment to the plan.

(4) Resort housing should be concentrated in clusters.

(5) Resort housing should generally be common wall structures although a percentage may be detached units.

(6) Resort housing in Subunit A should be located to allow for ski-in/ski-out access to ski facilities. Resort housing may be located on slopes of up to 25 percent. (Resort housing is allowed on steeper slopes in Subunit A than Subunit B because Subunit A has only a few acres of less-than-15 percent slopes. For the ski resort to be successful, it is important that visitors be able

to stay close to the ski base. In order to allow and encourage the development of housing adjacent to the ski base facility, it is necessary to allow construction on steeper slopes.)

(7) Resort housing in Subunit B should not be located in the alpine zone (above the alder/willow line). The units should be clustered around a common open space, view, or recreational facility with pedestrian access to those facilities. In order to minimize environmental and visual impacts, the units should be located on slopes that are generally 15 percent or less unless location on a steeper slope is important to recreation design or to complete a cluster or focus (e.g. around the upper edge of the golf course).

(8) Resort housing may not be located within ¼ mile of the mapped location of the Castle Mountain fault zone (as shown on Figures 2 and 3 of DGGs Public Data File 88-39) unless a geologist or geo-technical engineer experienced in fault studies locates the fault planes by conducting detailed surficial mapping and trenching surveys across the fault zone. In that case, residential structures must be located a minimum of 50 feet from the fault planes.

(9) Resort housing may not be located within ¼ mile of Government Creek or the stream in the east ½ of Section 21 and the east ½ of Section 28, Township 19N, Range 1E, Seward Meridian. In addition, resort housing may not be located within the 1000-foot wide east-west greenbelt. See guideline 10 f, Fish and Wildlife, for the location of this greenbelt.

[i.]m. **Management of the Ski Area.** Prior to soliciting development proposals, DNR will evaluate the options available. It could be authorized under a lease from the Division of Land and Water Management or by concessionaire agreement with the Division of Parks and Outdoor Recreation. A third option would be to convey it to the Mat-Su Borough as part of their municipal selections and they in turn could convey development interests to the private sector.

#### n. Recreational Development Guidelines

(1) ORV Use. Vehicular travel is restricted to existing roads and trails. Permits are required for off road or off trail travel.

(2) Motorized Trail Use. Snowmachine trail development is limited to a connection from Subunit A base facilities to the Hatcher Pass snowmachine trail and snowmobile play area north of Fishhook Creek. Other motorized trail development is not allowed due to incompatibility with the tranquil resort setting, non-motorized activities and wildlife use of the area.

(3) Trail Development and Management. It is recommended that the developer include a variety of nonmotorized trails within the lease site to serve both resort guests and local residents. The developer should consult with DNR's Division of Parks & Outdoor Recreation and other knowledgeable local groups (e.g., Nordic Ski Association, Hatcher Pass Outdoor Club, Mat-Su Borough Trails

Committee) in trail planning and design. Access to the trail system should be convenient for local residents and tie in with other public trails where possible and be available to the general public. The developer may charge fees for public use of trails the developer maintains.

(a) Design Standards. Trail design should ensure safe, scenic, and enjoyable recreational experiences for a variety of winter and summer users. The developer should follow trail development standards in the Alaska State Trails Plan or other equivalent sources. The trail system should be located and designed to minimize impacts on wildlife.

(b) Route Selection. Trails should be located and designed to blend harmoniously with the natural topography and vegetation. The trail system should include both loop trails and some longer destination routes.

(c) Alpine Zones. To minimize damage to alpine vegetation, trails and lookouts in heavy use areas in the alpine zone should be planned for and appropriately hardened. Foot traffic should be directed to established trails.

(d) Trail Clearing. Large trees should be cut only where it is impractical to route the trail around them. A large tree is a tree with a minimum of a 12-to 15-inch diameter at breast height. However, this guideline will be implemented through site-specific judgments based on the quantity of large trees, quality and health of the tree, relative size of a tree compared to other trees in the area, whether saving a tree is feasible or practical based on route and gradient (e.g. on a steep slope), and other factors.

(e) Trail Maintenance. The developer should write a trail maintenance operations manual that addresses such items as public safety and other requirements of these guidelines and a quality recreational experience.

(f) Equestrian Trails. Equestrian trails should have appropriate surfacing so that horses can avoid mudholes and insecure footing and to minimize maintenance. Grades should be moderate, especially where winter use is anticipated. Trails will not be located in sensitive alpine terrain. Trails should generally avoid wet areas unless appropriate surfacing or bridging is provided. At least one trail should be designated as a year-round horse trail. Horse trails should be separated from other types of trail use. However, summer-only horse trails could be used for winter sled dog trails. Horse trails should avoid road crossings.

(g) Sled Dog Trails. This use should be separate from ski trails. Sled dog trails are recommended to serve both local users and to provide a uniquely Alaskan experience to visitors to the resort.

(h) Cross-Country Ski Trails. Development of an extensive cross-country ski trail system in Subunit B is highly recommended. Consider grooming for both track skiing and skate skiing. Loop trails are preferable in order to expose trail users to more viewing opportunities and enable a one-way traffic pattern which increases skier safety on hills. Cross country trails should undulate, providing opportunities for a mixture of flat, uphill and downhill. Avoid avalanche hazard areas. Summer hiking and bicycle trails make good ski trails if they provide long run-outs at the bottom of steep hills.

Consider including an open staging area for racing events. Construction of a 30 to 50 kilometer trail system should be considered because the resort could then serve as an international style touring center and site of international competitions. Consider including space for a nordic ski school and overnight, hostel-type facilities for skiers who are training.

(i) Hiking Trails. The developer should consider foot trails for a variety of uses such as hiking trails, wildlife viewing, nature trails, and running trails. Some trails should be designed to accommodate the specialized needs of handicapped people. The developer should consult with Division of Parks & Outdoor Recreation regarding standards for these trails.

(j) Bicycle Trails. The trail system should include trails for mountain bikes. The developer should consider including a bike path separated from the roadway if motor vehicle traffic on the roadways will be fairly extensive and it is feasible.

(k) Snowmachine Trail. The recommended snowmachine connector trail from the ski area in Subunit A to the north side of Fishhook Creek should not be shared by non-motorized users and should be built wide enough to safely accommodate this high speed activity (See Alaska Trail Plan standards).

(4) Camping Area. The goal is to provide an alternative means of overnight accommodation for resort visitors in an attractive setting. Other guidelines include:

(a) Location. The camping area shall be located as near to the resort entrance as possible in order to avoid camper traffic within the resort to the extent possible. Large recreational vehicles and added traffic would detract from the experiences of other visitors.

(b) Siting/Visual. The camping area will be located where there is sufficient vegetation to minimize visibility of camping units from other areas within the resort, from off site, and to provide opportunities for screening of sites within the camping area.

(c) Design. A balance of seclusion and opportunities to congregate with other people should be incorporated in the design. Tent camping sites should be separated by a vegetative buffer from each other and from motor vehicle camping. Tent camping sites should be lower density than motor vehicle sites. A general standard used by Alaska State Parks is 2 to 9 units per acre. Motor vehicle areas have higher densities, up to 17 per acre.

(d) Scale. A camping area may utilize up to 30 acres with a maximum of 100 to 150 sites. If the design justifies use of more acreage to minimize impacts or to provide more open space or grade separation within the site, a larger area could be considered.

(5) Outdoor Shooting. Outdoor shooting may be allowed as a resort activity subject to the following guidelines on public safety and optimum location. It is the intent that this use will be located and designed so that noise impact will be minimal in adjacent residential areas and at resort facilities. The developer shall utilize ADF&G's Hunter Education Program coordinator in the design and development of the shooting facility to insure compatibility with public safety, to optimize public use values of the shooting facility, and to find the best location.

(a) Location. The resort developer shall conduct a site suitability analysis to find the best location. Site requirements include:

(i.) A natural hill as a backstop or an artificial backstop.

(ii.) Maintenance of at least a ½ mile buffer zone between the shooting activity and other resort facilities or private land for a sound buffer to reduce noise impacts. The buffer could be reduced to ¼ mile if there is an adequate means to muffle the sound such as a hill located between the range and other facilities.

(b) Noise. Measures will be taken to minimize noise impacts on others. Covered shooting points with sound baffles shall be used for a shooting range where appropriate. This will help reduce noise at the discharge point. With trap and skeet shooting, where covered points are not possible, maintenance of vegetative screening will help absorb sound.

If, in the future, DNR adopts decibel regulations or the Matanuska-Susitna Borough passes an ordinance on noise regulation, they will supercede this guideline.

(c) Alignment Direction. The activity should be aligned away from any facilities, trails, or ski activities because the range of shotguns is about 300 to 500 yards and rifle bullets can travel for several miles.

(d) Any outdoor shooting activity should be located where it can be incorporated into a biathlon course.

(e) Public Safety and Education.

(i.) A range control facility with full view of the shooting facility should be included in the design. The shooting range will be staffed by a person responsible for monitoring shooting activities.

(ii.) The developer shall provide a user's guide which outlines safety procedures. There shall be a procedure to check in users and inform them of the rules before allowing users to proceed to the range.

(iii.) The developer should consider including a facility for an instructional classroom on hunter education as a public service to the community.

(6) Horse Facilities. Horse facilities may include the necessary structures to support this activity such as a barn and corral. Feed for horses should primarily be obtained off premises. Horse facilities should be located where there will be uninterrupted access from stable to trail, located where streams will not be contaminated, and be compatible with other proposed trail and wildlife use of the area. The animals should be controlled for public safety.

(7) Sledding. Consider adding a sledding hill near the resort housing area.

(8) Downhill Ski Lifts and Trails. Backcountry access should be provided from the lifts both winter and summer.

(9) Golf Course. The golf course should be designed to leave stands of trees between fairways to serve as wind and visual buffers. The alignment of fairways, in addition to serving technical requirements of a high quality golf experience, should be located so as to optimize views of surrounding mountain scenery from resort dwellings and other nearby facilities. Consider designing the golf course with winter sports use in mind; e.g., cross-country ski lessons, sledding, ice skating. A general guideline for size of golf courses is up to 90 acres for a 9-hole course or up to 180 acres for an 18-hole course. The golf course should be designed to enhance its compatibility with moose. The golf course should not be fenced.

(10) Wildlife Viewing. Wildlife viewing should be considered as a resort activity. To maximize viewing opportunities, the resort project should be designed with viewing as a goal. ADF&G should develop a wildlife viewing plan in consultation with DOPOR. The developer should consult with the agencies in planning and implementation of wildlife viewing activities. Some initial recommendations based on limited available fish and wildlife data include:

(a) Moose Viewing. Consider establishing an enhanced moose winter range and wildlife viewing areas in the southwest portion of Subunit B. If this is not feasible or adequate, off-site locations may need to be considered, including the Matanuska Valley Moose Range.

(b) Salmon Viewing. There is potential for development of a salmon spawning viewing area near the mouth of Fishhook Creek.

(c) Landscape for Wildlife. When revegetating and landscaping, consider plant materials that will be beneficial to local wildlife species. Trees and shrubs should be planted in groves around base facilities and ponds to attract birds. Natural areas can be specifically designed to attract small mammals and birds. However, deciduous trees and shrubs known to be attractive to moose should be avoided as they will be browsed by moose and will attract moose which may create a public safety problem; this includes birch, aspen, poplar, and mountain ash.

(d) Visitor Information. Provide visitors with information on wildlife that occur in the area and guidelines for human compatibility with the wild animals.

(f) Fish and Wildlife Guidelines. Refer to other fish and wildlife habitat guidelines in chapter 3 and in this subunit.

(11) Public Information Station. The developer should consider inclusion of a contact station for DNR to provide information about public lands to visitors.

o. Helicopter operations

Helicopter operations are allowed within the four-season resort lease in Subunit B. In Subunit A, helicopter operations are allowed only for emergencies, construction, and maintenance. Before helicopter operations (other than those necessary for emergencies, construction, or maintenance), or a heliport that may be used for other types of operations will be approved in Subunit B, measures to address and minimize noise and other impacts must be developed. Examples of such measures are location, buffers, and limiting operations. The lessee must complete a helicopter operations plan that explains what measures will be taken to minimize these impacts. This helicopter operations plan must be approved by DNR before helicopter operations for commercial recreation purposes are allowed within the lower elevations of the lease.

**5. ENGINEERING GEOLOGY**

**a. Slope Stability**

(1.) Slope Stability Analysis. Perform a slope-stability analysis wherever permanent structures will be located on till slopes to ensure that the slope after construction will have a safety factor appropriate for the type of structure.

(2.) Diversion of Drainage. Install diversion ditches and interceptor drains to divert drainage around structures and away from disturbed surfaces and unstable slopes into existing channels; or use pilings driven to bedrock or into firm till to support permanent structures wherever possible to allow natural drainage to continue underneath structures and to alleviate some of the need for cut-and-fill.

(3.) Till Spoils. Refrain from placing permanent till spoil piles on slopes. Where used for fill or levelling, till spoils should be compacted and revegetated.

(4.) Cut Slope Stability. Excavate and maintain cut slopes in till consistent with sound engineering practice.

**b. Block-Creep**

(1.) Building Restriction. Refrain from building permanent structures on debris slides or block-creep (sackung) failures to the extent possible.

(2.) Test Rates of Movement. Install survey stakes and/or slope-indicator tubes on one or two block-creep failures near proposed facilities to determine whether they are active and, if so, their rates of movement.

(3.) Monitoring. If ski-lift supports are installed in block-creep areas, they may be subject to gradual misalignment. Careful monitoring of their alignment and spacing would provide a good indication of any block movement.

**c. Earthquakes and Faults**

(1.) Earthquake Standards. Design and construction of all facilities in the area should conform to the earthquake provisions of the Uniform Building Code for seismic zone 4 as appropriate for the type of facility.

(2.) Earthquake Response Plan. An earthquake response plan shall be included in resort planning by the developer.

(3.) Dynamic Loading. Dynamic loading using design ground-motion parameters appropriate for the area should be incorporated into slope-stability analyses where permanent structures for human occupancy are proposed.

(4.) Smaller Fault Zones. In the event permanent structures are proposed on or near the smaller fault zones around Government Peak (**DGGS Public Data File Report 88-39**), field studies should be conducted to accurately map their locations and to determine the probable age of most recent activity.

**d. Boulder Fields and Talus Slopes**

(1.) Remove Large Boulders. All areas within and adjacent to ski runs should be examined carefully for large boulders which should be removed.

(2.) Rock Fall Deposits. If ski runs are extended north of Bald Mountain Ridge, the rock-fall deposit (see, Fig. 2, DGGs Public Data File Report 88-39) should be barricaded to prevent skiers from crossing it. Slopes in this area should also be examined for scattered erratic boulders which should be removed.

(3.) Talus Slopes. Facilities and roads should not be placed on talus slopes or near their bases (Fig. 3, DGGs Public Data File Report 88-39).

**e. Pre-Construction Engineering**

(1.) Specifications of Buildings. Building plans should include selective design to conform to expected natural conditions. Plans should also include foundation design which must allow for expected soil and drainage conditions.

(2.) Soils Engineering. Civil engineering, which must include soils engineering, slope-stability analysis, and drainage evaluation shall be conducted as part of the developer's pre-construction approval (in Subunit A, this requirement is subject to the terms of the existing lease). Because of a relatively short snow-free season, at least 18 months should be allowed for this work to accommodate two field seasons.

**6. REVEGETATION AND EROSION CONTROL**

**a. Minimize vegetation removal.** The removal of vegetation shall be kept to a minimum and areas requiring disturbance should be seeded or planted as soon as possible after disturbance. To the extent possible, stumps of trees and shrubs and the associated underlying vegetation along the ski courses should be left intact to enhance slope stability and erosion control. Small debris flows may be a persistent minor maintenance problem on the ski slopes.

**b. Use Minimal Impact Construction Methods.** Minimal impact construction, i.e., use of hand tools and ground crews, use of helicopters for setting lift towers in place, etc., should be practiced to the extent feasible to minimize impacts on vegetation and related erosion problems.

**c. Leave Islands of Native Vegetation.** Where possible, islands of native vegetation should be left undisturbed.

**d. Snow Storage on Surfaced Areas.** Snow piles should be placed away from streams and drainage corridors, on pavement (such as the corner of a parking lot), a gravel surface, or some other non-vegetated surface to minimize negative impacts to vegetation and prevent increased erosion. Damage to plants is caused by the

presence of salt and sand in the snow piles and by the shortened growing season caused by the slower than the normal snow cover melt in the pile areas.

e. **Stockpile Topsoil.** To increase revegetation success, topsoil should be stockpiled and redistributed on the disturbed areas whenever possible. This is particularly critical in alpine areas.

f. **Transfer Sod.** Another revegetation method that should be considered where appropriate is the reintroduction of topsoil and plants to a disturbed site by moving, either by hand or with equipment, a section of sod from an area that is going to be disturbed, to the revegetation site.

g. **Revegetation Methods Evaluation.** A multiple-year approach to evaluating revegetation species and techniques appropriate for the resort development site should be established to help ensure that the best species and most current techniques are used to control erosion and help maintain slope stability. Testing should commence prior to beginning of construction. The DNR Plant Materials Center should be consulted.

h. **Erosion Control Plan.** The master development plan for the four-season resort must include a detailed description of the construction methods and erosion control measures which the lessee will use in developing the lease area. The erosion control plan must be consistent with the lease and the policies in this plan. DNR will also request that the plan contain sufficient detail to be able to judge whether the erosion control requirements established in the lease and the plan have been met and whether the methods will be effective in controlling erosion. The plan may include surficial geology analysis, soils testing, and an engineering plan. The erosion control plan should be developed in such a way as to also be usable for Department of Environmental Conservation and Department of Fish and Game permitting.

i. **Rehabilitation Plan.** A rehabilitation plan shall be prepared by the resort developer prior to approval for construction. The rehabilitation plan shall include measures that will provide a high order of erosion control. The developer shall consult DNR's Plant Material Center for direction on delineation of seed mixes, recommended plant species, fertilizer recommendations, planting windows, and types of scarification (if any). The developer should also obtain direction from the Plant Material Center on:

(1.) Performance standards by which to measure the success of plantings.

(2.) Evaluation of the rehabilitation program.

j. **Monitoring Program.** A monitoring program should be established to evaluate the success of the revegetation sites. DNR shall consult with its Plant Materials Center and the U.S. Soil Conservation Service to determine revegetation standards. The developer shall be responsible for the monitoring program.

[5]Z. PUBLIC RECREATION [DEVELOPMENTS]

a. **Parking.** Large, expansive parking lots are inappropriate in this area. Several small-to-moderate sized lots are preferred to disperse different user groups. Where possible, parking lots will not be immediately adjacent to the road. The lots will be screened from the roadway where possible and made more visually harmonious through use of topographic variation, boulders, and/or vegetative screens where possible.

Parking and pullout areas have been preliminarily identified by the Department of Natural Resources at sites of interest. Prior to development, any site should receive a technical evaluation for avalanche hazard, roadway safety, design feasibility, and cost.

b. **Recreation Area -- Subunit B** (formerly Eastern Hillside p. 224 of original plan): The 1986 plan recognize[s]d strong local interest in establishing the area below 1500 feet in Sections 22, and 27-30, T19N, R1E, Seward Meridian (and the east ½ of Section 31, T19N, R1E, Seward Meridian in the Hillside subunit), as a State Recreation Area. (This is the area formerly identified as Section 3 in the Hillside subunit; see figure 7, page 222) While this area does not currently meet the criteria used in other areas in the management unit of being an intensively used area in need of enforcement and facilities and is not proposed for inclusion in the Hatcher Pass Public Use Area, if the proposed resort is not built, at a future time re-evaluation of regional growth patterns, watershed management and recreational needs may determine that such a designation is appropriate.

c. **Campgrounds and Picnic Sites** The proposed campground and picnic area(s) will be located in the Little Susitna River corridor at sites where trees provide opportunities for screening sites from each other and from the road corridor. [ON THE WEST SIDE OF THE ROAD WITH SITES SCREENED FROM EACH OTHER AND THE ROAD BY TREES AND WITH A ONE-WAY ROAD LOOP TO MINIMIZE INTERSECTION HAZARDS AND CONSTRUCTION COSTS. THE PROPOSED PICNIC AREA(S) WILL BE LOCATED BETWEEN THE RIVER AND THE HATCHER PASS ROAD, AND VEGETATIVE AND TOPOGRAPHIC FEATURES WILL BE USED FOR SCREENING] to the greatest extent possible. The Division of Parks and Outdoor Recreation will perform a site analysis and recommend the appropriate sites in consultation with the Department of Fish and Game. These sites will be developed under an interagency land management agreement by the Division of Parks and Recreation.

The Department of Transportation and Public Facilities and the Department of Natural Resources should coordinate on future plans for road improvements or realignment to maximize compatibility with campground and picnic site locations.

[7]8. **RECREATION OPPORTUNITY SPECTRUM**

a. **Setting.** The intended recreational setting described in Part "a" is for the purpose of guidance to land managers who must adjudicate land use requests. It is not intended to be a hard and fast set of rules.

(1) **Physical Setting:** Concentrated recreational facilities in a predominantly natural setting. [WITH DEVELOPED FACILITIES AT A FEW SITES]

(2) **Social Setting:** Interaction between users in most areas is high.

(3) **Managerial Setting:** Some obvious on-site control of users such as avalanche closure gates, specified winter use trails, possibly a public contact ranger facility .

(4) **Access and Mode of Travel:** Road, trail and cross-country access; limited-use areas for off-road motor vehicles.

(5) **Vegetative Alterations and Duration of Impacts:** Shape and blend vegetative alterations at facility sites. Moderate loss of vegetation in popular use areas along the road and river, impacts in some areas persist from year to year.

(6) **Type of Experience:** Opportunity to affiliate with other users at developed sites but with some chance for privacy.

b. **Facilities.** The purpose of this section is to describe the intended level of recreation facility development. Where no facilities are proposed, this does not mean it is a prohibited use.

(1) **Public Facilities:** Parking

(2) **Camp Sites:** One on the Little Susitna

(3) **Picnic Sites:** One or more along the Little Susitna

(4) **Water Supply:** At campground

(5) **Sanitation:** Outhouses

(6) **Signs:** Safety, trail, information and use control signs

(7) **Water Crossings:** Simple bridging on trails

(8) **Interpretative:** Interpretation by visitor contact, roadside signs of natural materials, use of the proposed Hatcher Pass Guidebook.

[8]9. **FISH AND WILDLIFE**

a. **Minimize Habitat Loss.** The major wildlife values in this subunit are the three species of ptarmigan, black bear, brown bear, and moose which utilize the river corridor and the eastern and southern slopes of Government Peak. Habitat loss beyond that amount impacted by the construction of the proposed roads, facilities, and ski runs will be minimized by existing lease requirements and other adopted guidelines. The planned Government Peak Trail will be non-motorized.

b. **Wildlife Viewing Opportunities.** Beaver ponds occur beside the Little Susitna River near MP 13 of the Hatcher Pass Road. Opportunities for viewing beaver from the road should be developed and/or protected. Because this subunit is intended to be the major tourism and developed recreation area within the management unit, this and other opportunities for wildlife viewing should be developed.

c. **Wildlife habitat enhancement.**

(1) Enhancement areas.

The criteria for areas with potential for habitat enhancement are:

. elevation below 800 feet;

. slope less than 30 percent; and

. a majority of vegetative ground cover suitable for high to moderate forage production through rehabilitation and enhancement.

The following areas within Subunit B meet these criteria and have high to moderate potential for habitat enhancement to mitigate unavoidable effects of the resort development on large animals, especially moose. Habitat enhancement will be encouraged in these areas. To the extent possible, development in Subunit B should be designed and located to allow wildlife enhancement to occur in portions of these areas. (See enhancement guidelines in Chapter 3)

T19N, R1E, SM

Section 29: N1/2 SE1/4; SE1/4 SE1/4

Section 28: S1/2

Section 27: S1/2

(2) Enhancement techniques may include, where appropriate, small clearcuts, thinning, stimulating, or manipulating undergrowth, hydroaxing or cutting with hand tools, scarification, planting, and fertilizing.

(3) Design of habitat enhancement projects in these sections shall be conducted as part of the master development plan for the leasehold. Enhancement within this subunit will be designed so that it does not detract from the scenic setting of the resort and to minimize visual impacts from outside the lease.

(4) Enhancement projects must be approved by the Department of Natural Resource before they may be undertaken; DNR will consult with the developer prior to approving enhancement projects.

(5) During the formation of the amendment to the Hatcher Pass Plan, agreement was reached that lands should be managed for moose habitat enhancement near Bench Lake in the Deception Creek area. The Deception Creek Land Use Plan is the proper forum to now address and implement this agreement balancing other competing uses (including Matanuska-Susitna Borough land selections). If the Deception Creek Land Use Plan determines that these lands will not be used for habitat enhancement, DNR will provide alternative habitat enhancement sites in the same general area.

(6) To ensure the implementation of the applicable habitat mitigation and enhancement elements of this plan, the Department of Natural Resources will pursue a variety of options including timber sales, private sector contributions, and public expenditures.

d. If DNR determines that it is necessary to petition the Board of Fish and Game to change hunting regulations within the lease area, DNR will consult with the Department of Fish and Game prior to petitioning the Board.

e. Consider identifying wildlife viewing areas with signs in appropriate locations in greenbelt and other undisturbed habitats along the new resort trail and road network.

f. Establish a 1000-foot wide greenbelt below the base of Government Peak extending east and west through Subunit B. The greenbelt could coincide with a "restricted development area" within the vicinity of the Castle Mountain Fault; it may be higher on the slopes (e.g., upslope from the 1400-foot contour at the western edge of Subunit B and the 1700-foot contour at the northeastern edge of Subunit B.); or it may be located in the southern part of Subunit B, connecting the east-west boundaries with the habitat enhancement areas identified in sections 27 through 29. Clearing of vegetation within the greenbelt should be restricted to the minimum necessary for access through the area. Access routes should be substantially perpendicular to the greenbelt.

g. Provide a greenbelt of relatively undisturbed vegetation parallel to the slope, approximately one-quarter mile wide, and below 2000 feet elevation from the base facilities in Subunit A south to Subunit B in order to maintain an area for wildlife movement in a north-south direction.

h. Establish ¼ mile (1/8 mile on either side) wide green belts along both Government Creek and the unnamed anadromous fish stream located in the east ½ of section 21 and 28 T19N, R1E, S.M. These greenbelts will provide needed wildlife migration corridors from alpine to forest habitat types and to the south of the lease area. Additionally, these greenbelts will provide protection for important riparian habitat.

Clearing of vegetation within this greenbelt should be restricted to the minimum necessary to provide access (substantially perpendicular) through the area.

i. In Subunit B, cross-country ski trails should be located away from greenbelt areas to the extent possible. Trails within greenbelt areas should have adequate separation to minimize disturbance to moose caused by skiers on winter range.

j. The construction of fences in wildlife habitat areas should be minimized. Fences (other than bear-proof fences for garbage collection areas or as described in guideline k below) should be designed to allow for free passage of wildlife where feasible. The Chapter 3 fencing guidelines listed in the Grazing section apply to fencing within the resort to the extent applicable. Provisions for free wildlife movements are particularly important in Subunit B.

k. Prevent moose-motor vehicle collisions by implementation of some or all of the following measures:

(1). Minimize the length and number of roads within the resort lease area.

(2). Design resort roads for slow driving speeds without compromising other safety concerns such as maintenance of safe line-of-sight distance.

(3). Motor vehicle speeds should be regulated in areas known to be important moose movement/migration routes in order to minimize moose-motor vehicle collisions.

(4). Provide fencing adjacent to roads as necessary to direct moose to safe crossing areas.

(5). Provide street lighting at known moose crossings.

(6). Educate resort visitors about ways of avoiding moose-motor-vehicle collisions through brochures, pamphlets, audio-visual methods, interpretative displays, or other appropriate methods.

(7). Other measures as appropriate.

During the master development planning phase and subsequent operations, DNR, based on recommendations from ADF&G and in consultation with the developer, will decide which of these measures to implement.

l. To minimize damage to native soils and root systems, the clearing of vegetation for ski runs and/or trails in alpine and subalpine areas should incorporate low ground pressure equipment to the maximum extent possible. Except for road surfaces, foundations, and hardened trails, 100 percent of the ground cover and a minimum of 50 percent of natural shrubs and trees should be maintained in alpine and subalpine areas. (See also revegetation guidelines above.)

m. Skiing off established trails in known moose overwintering areas should be avoided.

n. To minimize impacts to the alpine and subalpine zones and proposed greenbelt areas, equestrian trails should be routed adjacent to established access roads and trails.

o. Where feasible and desirable, revegetation of disturbed areas should utilize willow plantings.

p. DNR will take all reasonable and appropriate action to minimize human and large mammal conflicts. A program for minimizing human and large mammal (e.g., moose, bear) conflicts will be implemented by means of some or all of the following measures:

(1) The developer, based on recommendations from ADF&G and DNR, will prepare and implement a management plan to provide for closures of affected areas (but not entire resort) to public use when and where there is a high likelihood of human-bear conflict.

(2) The developer, based on recommendations from ADF&G and DNR, will create a trail management plan that will channel resort visitors onto designated trails and away from areas that have a high likelihood of human-wildlife conflict and away from sensitive areas. For example, the plan should pay special attention to moose and bear.

(3) DNR, in consultation with the developer, may establish measures such as closures or a permit program to manage back country use to minimize impacts on bear denning and breeding areas.

(4) The developer will educate resort visitors about ways of avoiding human and large mammal (e.g. moose, bear) conflicts through brochures, pamphlets, audio-visual methods, interpretative displays, or other appropriate methods.

(5) Place signs at strategic locations informing users of areas where bears may occur, e.g., berry production areas; these signs should include safety precautions and procedures for avoiding bear encounters.

(6) The developer may propose other methods to prevent human and large mammal (e.g., moose, bear) conflicts. The proposed methods should be reviewed by ADF&G to determine their feasibility before implementation.

During the master development planning phase and subsequent operations, DNR, based on recommendations from ADF&G and in consultation with the developer, will decide which of these measures to implement.

g. Prohibit the outdoor storage of garbage in the alpine and subalpine zone during April 1 through October 31. All garbage should be transferred to base facilities for disposal on a daily basis.

r. Garbage from the resort and ancillary facilities should be removed to an appropriate site or, if disposed of on site, should be disposed of by fuel-fired incineration on a regular basis (daily if possible).

s. All trail heads, lift houses, and other developed access points, should have public information posted on how to avoid conflicts with bears and rules on back country use including packing out garbage.

t. Open-pit garbage dumps (including those with surface burning) within the lease should not be permitted.

u. Bear-proof fencing or bear-proof containers should be used at all garbage storage and transfer sites.

v. Habitat Mitigation Plan. The developer must provide a habitat mitigation plan that describes specific design methodology that the developer will use to minimize direct and irrevocable habitat loss. The plan shall estimate the number of acres of wildlife habitat lost by the placement of improvements. The plan must describe construction techniques that the developer will employ to reduce or eliminate long-term effects on the habitat disturbed during construction. Furthermore, the plan must describe long term maintenance strategies that the developer will use for habitat that will be modified to enhance recreational values such as ski trails.

## **10. OTHER ENVIRONMENTAL QUALITY GUIDELINES**

a. Environmental Studies. Environmental studies should be undertaken during the planning and development of the ski resort in order to:

- (1) provide sufficient data to minimize impacts to fish and wildlife habitat during construction and operation of the resort and to determine how best to mitigate for loss of fish and wildlife habitat;
- (2) to establish baseline water quantity and quality and to monitor water quantity and quality and other environmental quality factors during operation of the resort;
- (3) and to provide sufficient engineering geology, soils and vegetation data to prevent or minimize erosion and safety hazards to the public.

b. Water and Wastewater Systems. The developer should consider serving development "nodes" with their own water supply and/or wastewater disposal systems. This would be preferable to constructing large systems, with extensive sewage collection and water distribution systems, to serve the entire development, because it would be less expensive and because the amount of discharge to a

particular receiving body would be reduced. Treatment beyond secondary level may be required if necessary to prevent contamination of the Little Susitna River. The option of discharge to a holding pond for use in snowmaking and golf course irrigation should be evaluated.

c. Air Pollution. To minimize air pollution within the resort area, reduce traffic by making public transportation available and attractive to use to the extent feasible and prudent. The use and number of wood stoves/fireplaces could be minimized in the project. Use of fireplaces fueled by natural gas are encouraged. Any wood stoves that are utilized in the project should have catalytic converters to reduce emissions.

d. Noise. Special architectural treatment to absorb sound, site planning, and the establishment of buffer zones to isolate noisy equipment should be incorporated in project planning.

The techniques listed below, singly or in combination, should be used to reduce machinery noise where feasible:

- (1) Segregating noisiest elements in groups.
- (2) Vibration damping (using materials like lead sheet in foundation).
- (3) Isolating vibration (mounting on springs).
- (4) Sound absorbing enclosures (with hard outer shell and sound absorbent liner).
- (5) Sound attenuating at exhaust or intakes of fans or compressors.
- (6) Plenum treatments (devices admitting low-velocity air, to prevent escape of excessive noise).
- (7) Pipe lagging (lining or covering that absorbs radiated noise).
- (8) Providing partial barriers.
- (9) Lining ducts.
- (10) Using silencers, mufflers, or mutes (attenuating noise from high velocity flow of gases by multiple reflection of sound waves from acoustically absorbent surfaces; eliminating turbulent flow; and reducing flow velocity).
- (11) Reducing motor speed (to lowest practical requirements in combination with size and pressure to produce required power).
- (12) Selecting valves not normally noisy (pilot-operated or compound valves rather than direct-acting or single stage).

(13) Preventing development of cavitation in pumps (by keeping suction line velocities to less than 5 ft/s (1.5 m/s, keeping inlet lines short with a minimum of bends and joints, etc.).

(14) Reducing turbulent flow next to flat metal plates.

(15) Using rubberlike flexible connection in drive shafts.

(16) Reducing gear noise by maintaining equipment, controlling alignment, and using enclosures.

(17) The techniques listed below may be used to reduce construction and operation noise. Again, the Planning Team should consider whether any of these techniques should be required for construction within the lease.

(18) Replacing individual operation and construction techniques by less noisy ones; for example, using welding instead of riveting, mixing concrete off site instead of on site, and employing prefabricated structures instead of building them on site.

(19) Selecting the quietest alternative items of equipment; for example, electric instead of diesel-powered equipment, hydraulic tools instead of pneumatic-impact tools.

(20) Scheduling equipment operations to keep average noise levels low; for example, scheduling the noisiest operation to coincide with times of highest ambient levels, keeping noise levels relatively uniform in time, turning off idling equipment, and restricting working hours.

(21) Increase the number of machines at work at any one time (this will reduce the duration of noise exposure, although it will increase the noise level during that particular time of operation).

(22) Making use of speed limits to control noise from vehicles.

(23) Keeping noisy equipment operation as far as possible from site boundaries.

(24) Providing enclosures for stationary items of equipment and barriers around particularly noisy areas on the site or around the site itself.

(25) Locating haul roads behind natural earth berms or embankments.

(26) Maintaining noise control devices.

(27) Replacing mufflers before breakdown.

(28) Replacing warped, bent, or damaged engine enclosures and ineffective insulation.

(29) Noise control measures will be effective only as long as control devices are properly maintained.

[9]11. **WATER**

**[INSTREAM FLOW RESERVATION: THE LITTLE SUSITNA HAS THE HIGHEST PRIORITY FOR INSTREAM FLOW RESERVATION DUE TO ANADROMOUS FISHERIES AND EXPECTED COMMERCIAL AND RECREATIONAL DEMANDS.]**

**a. Public Water Supply.** The following measures should be evaluated and utilized in resort planning and development to offset possible negative impacts to water:

(1) On- or off-site public water storage for use during abnormally low flows at times of high demand.

(2) Water conservation programs.

(3) Ground-water wells.

(4) Bring in water from off-site sources such as public wells, public water utilities, etc.

**b. Water Supply for Snowmaking.** Snowmaking water withdrawals may have adverse impacts on the Little Susitna River and the Fishhook Creek streamflow during the winter low flow months. Alternate means of providing water for snowmaking during low-flow periods should be explored:

(1) Use Government Creek, Fishhook Creek, or the Government Creek bowl (unnamed creek) for snowmaking in addition to the Little Susitna River.

(2) Install storage ponds at strategic locations that can be accessed by the snowmaking system. These ponds would contain water diverted to them during periods of pre season high flows. The developer should evaluate the potential of using a natural pond and depression in Section 15 for snowmaking to reduce or eliminate the need to pump water up the mountain for snowmaking.

(3) Use ground water to augment snowmaking.

(4) Use water from off site public water sources.

**c. Hydrogeologically Sensitive Areas.** Resort development should avoid hydrogeologically sensitive areas, i.e. those which, due to high water tables and/or near-surface bedrock, are especially susceptible to ground water contamination. (Potential sources of contamination are summarized in Table 15 in the Hatcher Pass Alpine Ski Area and Four-Season Resort Project Evaluation, p. 104.)

**d. Protection of Recharge Areas.** Engineering practices consistent with protection of recharge areas should be employed, including but not limited to:

(1) Line disposal, evaporation, sewage ponds, or lagoons with impermeable liners.

(2) Monitor ground water in the vicinity of the golf course, horse barns, salt or salted sand storage sites, and areas of fuel use or storage.

(3) Surface water and storm water runoff shall be protected from contamination where possible to avoid negative impacts on ground water quality. Where surface water contamination is unavoidable, treatment is required before allowing surface water discharge to the subsurface. Surface drainage that may contain sediments or other contaminants should be routed to a settling pond or oil and grease separator or other treatment system to remove contaminants before discharge to streams. Drainage systems from facilities should be designed so that chlorinated water is not discharged into the stream.

(4) Snow piles should be placed away from creeks or surface drainage to creeks or water bodies.

**e. Prevention of Groundwater Contamination.** A sewage lagoon or community-scale subsurface disposal field is potentially the most problematic source of groundwater contamination. This could be mitigated by construction of a sewage treatment plant with discharge to surface water. (Such discharge, however, must be adequately treated so that it does not contaminate the Little Susitna River.) Mitigation of other problems would entail common engineering, construction, and waste or product management precautions, monitoring to determine effectiveness of mitigation measures, avoidance of hydrogeologically sensitive areas and nearby well fields during placement of potential sources of contamination.

**f. Management of Surface Run Off.** It is highly probable that the addition of artificial snow to ski slopes and vegetation removal for skiing and resort facilities will result in increased surface water runoff. Flooding, erosion, and increased sedimentation are the most significant impacts of increased runoff; an approved erosion control plan that is in effect before construction begins could help mitigate these impacts. See Revegetation and Erosion Control Guideline 6(h) in this section.

**g. Monitoring of Streamflow.** A streamflow monitoring program should be undertaken by the developer in coordination with DNR to develop mitigation measures and for use in the water rights permit process. At a minimum, the developer should supplement DNR's streamflow data with data of their own for Fishhook Creek, Government Creek, and the creek which drains Government Peak (east side) bowl.

**h. Baseline Water Quality Data.** There is no baseline water quality database to assess the effects the proposed ski area project may have on ground water quality.

The developer should supplement DNR's water quality data with data collection in all streams within Subunits A and B as well as upstream and downstream of development on the Little Susitna River. Data should be collected on: turbidity, heavy metals, nitrogen and phosphorus compounds, fecal coliform bacteria counts, biocides, chlorinated compounds, detergents, or synthetic organic hydrocarbons in surface waters in and near the proposed ski area. Pre- and post-project monitoring of water quality constituents at three sites on the Little Susitna River is needed: (a) upstream of project related activities; (b) at the USGS gaging station, MP 8.5 Willow-Fishhook Road; and (c) downstream of the Government Creek mixing zone which would allow potential surface water quality impacts to be evaluated.

i. **Ponds.** Man-made ponds within the development should be designed as an aesthetic attraction and lined with impermeable liners when necessary to prevent slope destabilization.

#### [10]12. **MATERIAL AND BUILDING ROCK SITES**

a. **Building Rock** No material or building rock sites will be authorized adjacent to the Hatcher Pass Road in this subunit.

b. **Material Sites** (See Map 2, page 49 in original plan)

Site #9. This potential site is not recommended for development due to visual conflicts in an intensive use recreation area.

Site #10. This site could be adequately screened from the adjacent road by both a natural vegetative screen and an embankment and should be considered first as the primary materials site along the Little Susitna River. This site is probably the best one on the Little Susitna River drainage considering the visual screening potential, the size of the material deposit, and its accessibility from the road. It could be rehabilitated for a parking area after project completion.

Site #11. The actual location of site No. 11 will depend upon where the parking and other facilities of the proposed Government Peak Ski Area are located. This material site would become a parking area or site for other facilities after material extraction is completed. Providing visual screening from the road has a high priority in this area. The method for visual screening of this site will depend on its actual location and the proximity of other facilities. Opportunities exist to utilize contours and vegetation and access the pit by a short, curved spur road out of direct visual line of sight with the Hatcher Pass Road.

**Existing Site, MP 16.** This present material site on the Fishhook Road in Township 19N, Range 1E, Section 3 is located in glacial till deposits which usually have low potential as construction material sources. This site will not be used as a material site but will be recontoured and converted to a parking area. See location on Map 11 (in original plan).

## IV. Hillside

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### A. LAND USE DESIGNATIONS

Primary Uses: [RECREATION AND] Fish and Wildlife Habitat and Water Resources throughout; Recreation, Grazing, [WATER RESOURCES] and Forestry in designated areas as shown on Amendment Map [6] 4

Secondary Uses: Forestry and Recreation in designated high value areas

Prohibited Uses: Settlement; Remote Cabin Permits; Grazing in areas I and V on Amendment Map 4 [OUTSIDE DESIGNATED AREAS (SEE MAP 3, PAGES 116/117)]

Mining: Open

Classification: (See Amendment Map 4)

Area I Water Resources, Wildlife Habitat

Area II Grazing, Public Recreation, Wildlife Habitat

Area III Grazing, Public Recreation, Wildlife Habitat

Area IV Forestry, Grazing, Wildlife Habitat

Area V Public Recreation, Water Resources, Wildlife Habitat

### B. BACKGROUND

This subunit has a rich variety of natural resources, and demands on these resources are expected to increase significantly as private lands adjacent to the southern border are settled and the proposed four-season resort on state land to the east is developed. This is important moose habitat for both winter and summer, and is expected to become increasingly important as private lands along the Little Susitna River to the south are developed. A significant moose harvest occurs here and is expected to increase as new access is developed. It is also a black bear, small game, and furbearer area.

The mature, mixed white spruce-birch forest is an important value below the 1000-foot elevation. Spur roads for firewood cutting are being utilized and developed south of this subunit on university lands. The forested areas in this subunit have high potential for creating productive, replacement moose habitat for summer and winter range lost to development on adjacent private lands and the proposed resort in the Government Peak Subunit.

Recreational use is light at present due to limited access. Current use is for hunting, trapping, horseback riding, hiking, skiing and snow machining. Excellent opportunities exist for development of track skiing and dispersed recreational trails to serve growing valley communities south of the subunit.

Extensive [SAVANNAH-TYPE] meadows and open woodlands with bluejoint understory provide a band of high grazing potential across the unit. There is an existing grazing lease on the western end and one application in the central portion.

Mineral potential is moderate to low; no claims exist at present and no past mining activity is known.

Streams in this subunit are lateral tributaries to the Little Susitna River. Water quality in the streams in this subunit is assumed (although not proven) to be important in the protection and maintenance of the downstream fisheries resource in the Little Susitna River. The subunit is important as a watershed for the populated area south of the subunit.

The upper area has unstable slopes, fracture zones, and potentially unstable materials. There is high avalanche potential along almost the entire upper slope; lower portions have some potential. An active fault system crosses the lower Hillside, and there are scattered areas of unstable material. Water is near the surface in many of the lower areas of the subunit; careful engineering is necessary in these areas where roads and trails may be constructed to prevent water ponding and drainage problems.

Three sections in the southwest portion of the subunit are mental health lands (see Map 11 in original plan).

## **C. MANAGEMENT INTENT**

The management intent is to utilize forest and grass resources while maintaining the important moose habitat through habitat protection and enhancement and by providing open space adjacent to the developing private lands and the proposed four-season resort; to improve access for big and small game hunting and a variety of other trail-related recreational activities; and to maintain the scenic and watershed qualities of this front range which forms the backdrop for the Wasilla and Palmer area below; and to make most of the high-quality rangelands which occur below the 1500-foot elevation available for grazing through leases or permits.

To provide a diversity of recreational experiences and wildlife habitats across the [SUBUNIT] front range, [SECTION I (SEE FIGURE 7, PAGE 222) WILL HAVE MORE INTENSIVE RESOURCE DEVELOPMENT ACTIVITIES, INCLUDING SUSTAINED YIELD FORESTRY HARVEST, ENHANCEMENT FOR MOOSE BROWSE, GRAZING, RECREATION TRAILS, AND POSSIBLE LODGE SITES. SECTION II WILL HAVE A MORE MODERATE LEVEL OF DEVELOPMENT INCLUDING FORESTRY FOR HABITAT ENHANCEMENT PURPOSES AND GRAZING. THE EASTERN SECTION III (SEE FIGURE 7, PAGE 222) WILL EMPHASIZE MAINTAINING A NATURAL APPEARING SETTING (AS COMPARED TO

SECTION I) AND AT THE SAME TIME ALLOW FOR MOOSE HABITAT ENHANCEMENT. GRAZING WILL BE ALLOWED IN SECTION III AFTER 1996. THE PURPOSE OF THE DELAY IS TO ALLOW ESTABLISHMENT OF A RECREATIONAL TRAIL SYSTEM TO OCCUR FIRST.] a large portion of this unit will be managed to maintain a natural setting (below 1500 feet in T19N, R1W, S.M., sections 25, 31 to 35 and the north 1/2 of Section 36; and T18N, R1W, S.M., the north 1/2 of Section 5). The intent is to provide the option for a recreational trail system in a natural setting to the extent consistent with other resource values. Forestry is a primary use in Section 7 (T18N, R1W, S.M.) and a secondary use in the south half of sections 5 and 6. Intensive wildlife habitat enhancement is the primary use of Section 31 (T19N, R1E, S.M.), and the SE 1/4 of Section 36 (T19N, R1W, S.M.), to offset loss of moose habitat in Government Peak subunit B. Enhancement is also an important use in portions of sections 5, 6, and 7 in T18N, R1W, S.M. Grazing will be allowed throughout except in Section 31 (T19N, R1E, S.M.) and the SW 1/4 of Section 36 (T19N, R1W, S.M.). (See Map 4 in this document for proposed changes to Hillside Subunit.)

The entire area is open to mining.

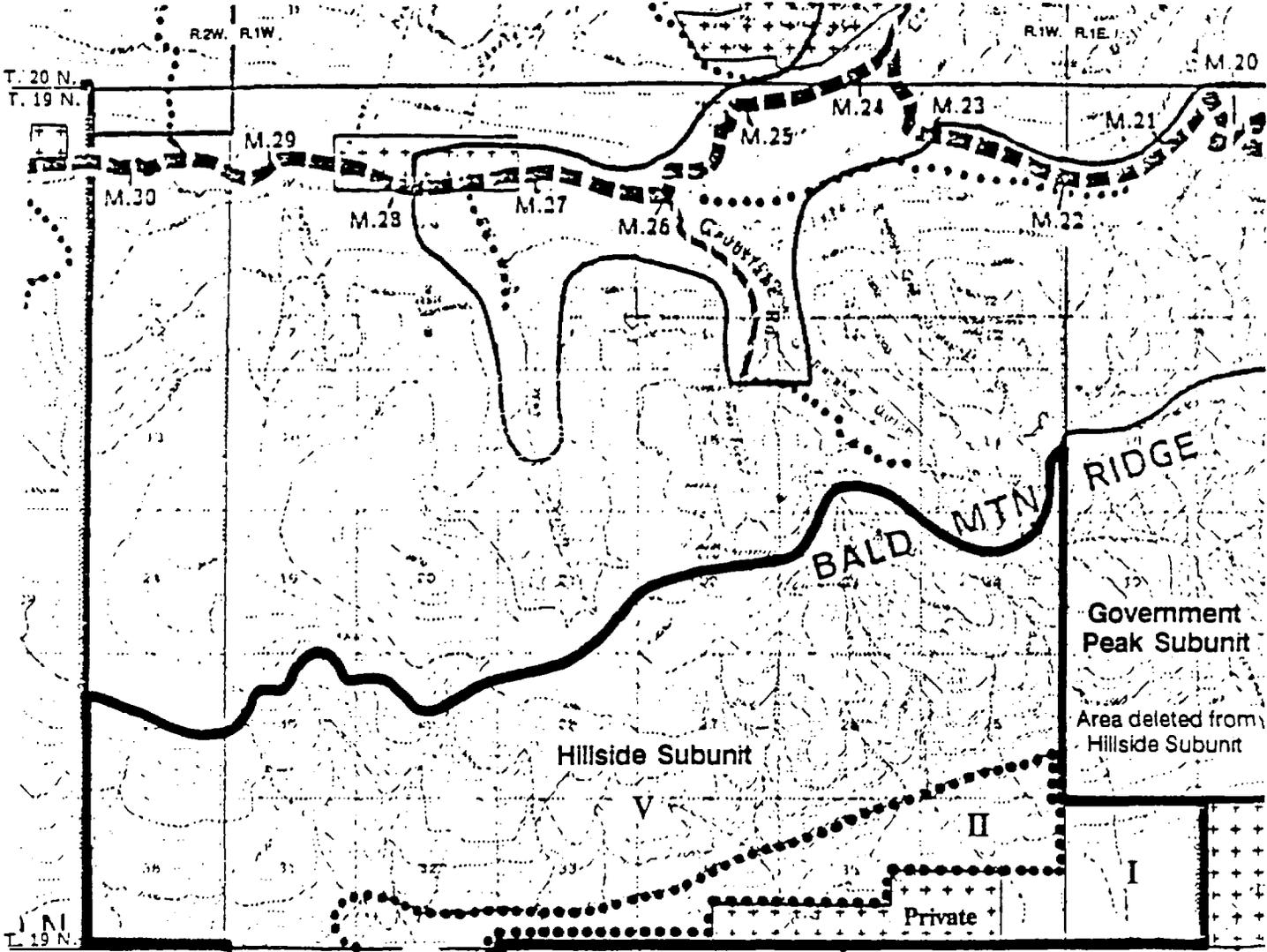
Because of the importance of this area as open space adjacent to the developing valley area as well as for moose habitat, the long-term intent is for the area to be managed at least in part for non-motorized recreational use. Closures to motorized use may be established as needed to accommodate non-motorized trail systems. The intent is to continue opportunities for moose and black bear hunting and the use of motorized vehicles for that purpose on existing public roads and trails until alternate access routes and trailheads are developed.

See guideline 8 below regarding the effect of this plan on the three sections of mental health land in this subunit. They are Sections 5, 6 and 7 of T18N, R 1 W, SM.

## **D. PLANNED ACTIONS**

1. **RECREATION** (See Map 11 for locations)
  - a. Allow establishment of a cross-country trail system [ON THE WEST AND EAST ENDS] to meet the needs of valley ski and running teams, hikers, and horseback riders.
  - b. Trailhead (100 spaces), west end, Section 7, southeast corner, tied to the proposed forestry access road, an eventual 18-20 mile (30 km) trail system, possible recreation lease site.

# Map 4. Changes to Hillside Subunit



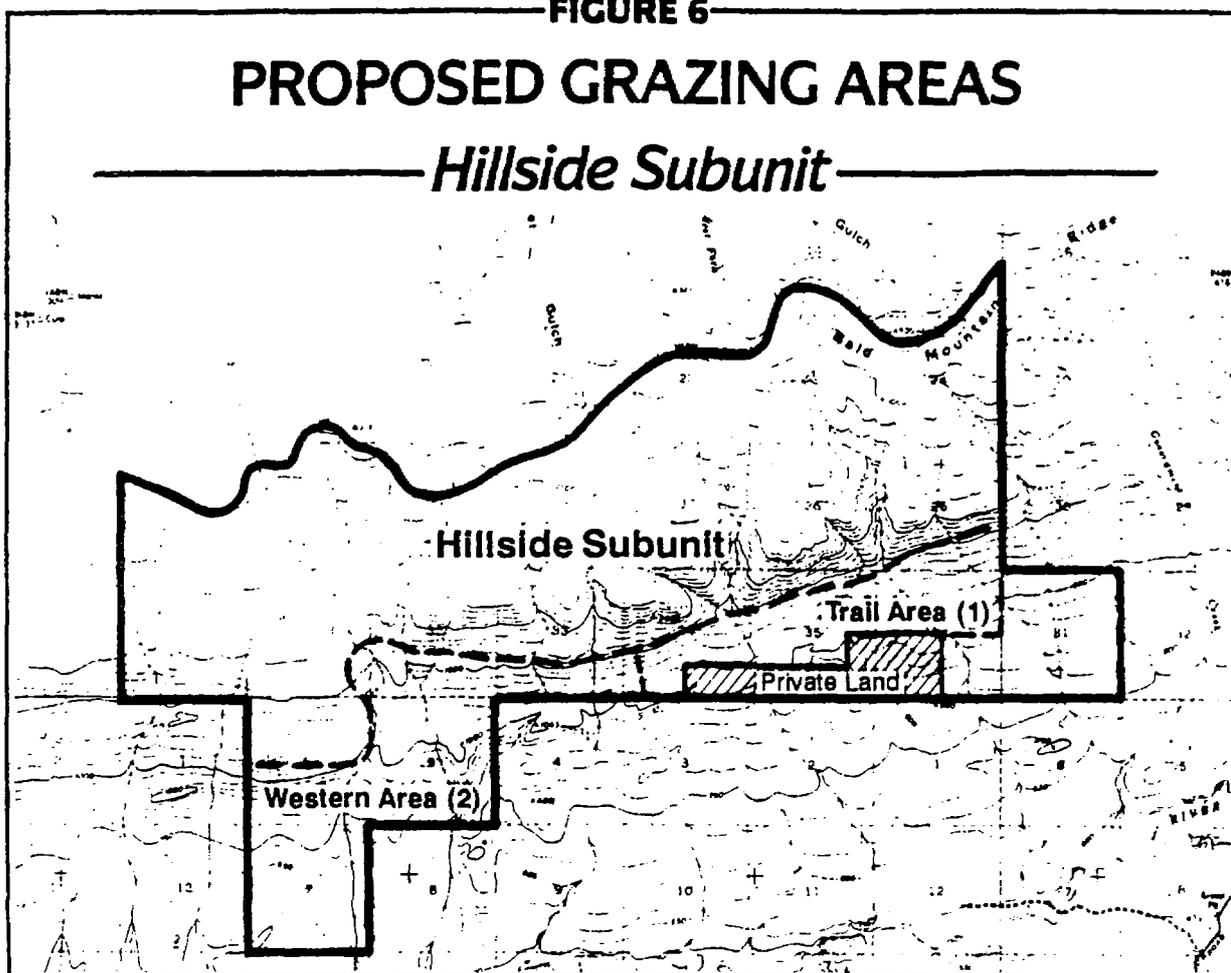
- I. H1 W1 R2 F2\*
  - II. G1 H1 R1 W1; \* manage to maintain natural setting
  - III. G1 H1 R1 W1 F2\*
  - IV. F1 G1 H1 R1 W1 \*
  - V. H1 R1 W1\*
- \*G = Grazing; H = Habitat; R = Recreation; W = Water Resource;  
F = Forestry; 1 = Primary; 2 = Secondary

### LAND OWNERSHIP

	STATE		NATIVE (PRIVATE)		HATCHER PASS ROAD		SUBUNIT BOUNDARIES
	PRIVATE		INDEPENDENCE MINE STATE HISTORICAL PARK		LOCAL ACCESS ROADS		PLANNING UNIT BOUNDARY
	MAT-SU BOROUGH		MENTAL HEALTH LAND		TRAILS		
	STATE SELECTED						

- c. Establish a new snowmachine trailhead (100 spaces) and one-mile access road to the south corner of Section 7 for possible snowmobile access to [BALD MOUNTAIN] the Houston-Meadow Lakes trail and the trail system in the Deception Creek Management Unit if access and use does not conflict with wintering moose concentration areas along the Hillside. Possible recreation lease site.
  - [d. EAST END, SECTION 27, 1/2 MILE ACCESS ROAD, TRAILHEAD PARKING (100 SPACES), EVENTUAL 18 -20 MILE (30 KM) TRAIL SYSTEM.]
  - d. Central portion, (Area II on Amendment Map 4) establish a dog mushing trail system within the subunit consisting of access via existing road, parking (50 spaces) and a 15-mile (25km) trail system.
  - e. Trail design and construction will be cooperative project of DNR, ADF&G, the Mat-Su Borough, and private sector users. It will tie in with the overall borough trail system.
  - f. ADF&G will identify brown and black bear concentration areas, critical moose habitats and concentrations, and possible tundra bird nesting areas. Trails and developments will avoid these areas to the extent feasible.
  - [h. CONVERT THE UNAUTHORIZED CABIN IN SECTION 27 TO A PUBLIC FACILITY FOR TRAIL MAINTENANCE OR WINTER WARM-UP SHELTER.]
2. **GRAZING** [See Map 12 in original plan (BACK COVER)] and Figure 6 below for locations of grazing areas described below).
- a. **Priorities for Use.** The areas to be made available for grazing by lease or permit are listed in priority order below:
    - (1) **Trail area:** Establish as a common use area for general livestock use by permits.
    - (2) **Western area:** Continue use [BY] under permit[TEE] or [LESSEE] lease; investigate feasibility of enhancing for grass production through forest harvesting methods.
    - [(3) **MIDDLE AREA:** MAKE AVAILABLE FOR GRAZING THROUGH LEASES OR PERMITS FOR GENERAL LIVESTOCK USE; INVESTIGATE VEGETATIVE CONVERSION TO GRASS AND MOOSE HABITAT THROUGH ALDER REMOVAL.]
    - [(4) **EASTERN AREA:** ESTABLISH AS A COMMON USE AREA FOR GENERAL LIVESTOCK USE BY PERMIT; INVESTIGATE VEGETATIVE CONVERSION THROUGH ALDER REMOVAL TO MEET GRAZING, WILDLIFE, AND RECREATION USES.]
  - b. **Research.** Establish moose-cattle interaction and food preferences research once active grazing is occurring.

FIGURE 6



## E. GUIDELINES

### 1. MINING

- a. **Access Roads.** Access roads for mineral development will avoid, where possible, the cross-country trail system and minimize the number of intersections.
- b. **Visual Changes.** Access roads will minimize visual changes on the mountainside to the extent feasible.
- c. **Watershed Protection.** Water is near the surface in most of the Hillside subunit and there are several lateral streams. Range management techniques, such as fencing will be necessary to prevent negative watershed impacts (see Table 17, page 95).

## 2. FORESTRY

- a. The location and design of road and forest harvest areas should be coordinated with ADF&G and DOPOR to ensure the provision of opportunities for public access, browse enhancement, hunting and trapping opportunities, recreational trails, and the opening up of views.
- b. Limit the development or improvement of access to a minimum; have provisions where access may be closed at ADF&G's request when a specific problem such as habitat destruction or excessive wildlife harassment occurs.
- c. Forest harvest for disease control and prevention will occur in the entire unit. T 18N, R1W, Section 7 and the S 1/2 of sections 5 and 6 [SECTION I BELOW 1,000 FEET ELEVATION] will be managed for sustained yield timber harvest and wildlife enhancement.

[IN SECTION II, FORESTRY WILL BE FOR ENHANCEMENT OF WILDLIFE HABITAT. IN SECTION III, ADDITIONAL TIMBER HARVEST WILL BE ALLOWED FOR TRAILHEAD CLEARING WHICH DOES NOT CREATE MAJOR NEGATIVE VISUAL IMPACTS (SEE FIGURE 7 BELOW)].

In T 19N, R1E, Section 31 and T19N, R1W, SE 1/4 of Section 36, forestry is a secondary use that will only be allowed if consistent with wildlife habitat enhancement guidelines. Consultation with ADF&G and DOPOR must occur prior to implementing forestry activities. (Refer to Area-Wide Guidelines).

## 3. ENHANCEMENT FOR MOOSE BROWSE

- a. Habitat enhancement will be allowed as long as it is consistent with the management intent to maintain a natural setting [IN SECTION III] below 1500 feet in T19N, R1W sections 25, 31 to 35 and the north 1/2 of Section 36; and T 18 N, R1W, the north 1\2 of Section 5 [A PORTION OF THE UNIT] and it does not have a major visual impact. DNR, in consultation with ADF&G, must approve the locations and type of enhancement activities. In addition, the Division of Parks and Outdoor Recreation must be consulted on enhancement projects in all areas except in T 19N R1E, Section 31 and T19N R1W, SE1/4 of Section 36. [ADF&G AND DNR, INCLUDING THE DIVISION OF PARKS AND OUTDOOR RECREATION, MUST BOTH APPROVE THE LOCATION AND TYPE OF ENHANCEMENT ACTIVITIES.]
- b. T19N, R1E, Section 31 except W1/2NE1/4 and T19N, R1W, SE1/4 Section 36 will be managed primarily for moose habitat enhancement. Until a resort is built, this unit should be managed as part of the natural area.
- c. In T19N, R1E, Section 31 except W1/2NE1/4 and T19N, R1W, SE1/4 Section 36, at least 20 percent of the forested lands must be left in a natural state. Within this 20 percent, no cutting will be allowed except as necessary for trail construction or disease control. Timber stands will be needed for moose escape, thermal cover, and to act as buffers for trails, roads, and private property. While moose habitat enhancement is

an overriding goal in the area, it is important that these activities occur in a way that limits their adverse impacts on other wildlife species and other beneficial use of public lands. (Note: this guideline supercedes Fish and Wildlife guideline 1.e.(3). in Chapter Three.)

The requirement that enhancement not have a major visual impact does not apply in these sections, but enhancement should be designed so as to minimize its visual impact from outside these Sections and from trails through these Sections. If feasible, there should be only one access point into this enhancement area and DOPOR should be consulted in determining its location.

- d. The following mental health lands will be managed for habitat enhancement in conjunction with grazing, forestry, recreation, and other uses appropriate for these trust lands:

T18N, R1W, S.M.

Section. 5: W1/2/SE1/4; SE1/4/SE1/4; and SE1/4SW1/4

Section. 6: N1/2 except NW1/4NW1/4 and S1/2NE1/4

Section. 7: all except E1/2E1/2, N1/2NW1/4, SE1/4SW1/4, and SW1/4SE1/4

Forest management practices in these sections should follow the proposed Fish and Wildlife Guideline 1(e), "Location, size, and shape of harvest units". Once habitat enhancement has been completed on these sections, the state will take reasonable measures to protect it.

#### 4. GRAZING

- a. **Type of fencing.** Fencing should be the drop type to facilitate winter trail use and moose utilization of the area or utilize gates or other design features. Other fencing, control structures, and stock management may be required.
- b. **Level of Use.** The decision to authorize grazing either by issuance of a permit or a lease will be based on planned level of use. The intent is to utilize the resource and not to place large tracts under lease which are not utilized. Common use areas will be utilized where appropriate.
- c. **No New Roads.** Vehicle access to grazing areas will be to designated trailheads. New roads will not be constructed for grazing purposes.
- [d. **GRAZING IN SECTION III.** LEASING WILL BE DELAYED FOR 10 YEARS IN SECTION III WHILE THE RECREATIONAL USE PATTERN DEVELOPS AND THE TRAIL SYSTEM BECOMES DEVELOPED AND HARDENED. GRAZING LESSEES WILL PARTICIPATE IN TRAIL MAINTENANCE ONCE GRAZING USE IS AUTHORIZED.]
- d. Recreation and Wildlife. Prior to issuing new grazing leases or permits, DLWM will consult with the Division of Agriculture, DOPOR, and ADF&G to determine how best to accommodate both grazing, recreational, and wildlife uses.

## 5. WATERSHED PROTECTION

Bald Mountain Ridge provides watershed protection for private lands to the south of the management unit for residential and agricultural purposes. Thus, habitat enhancement, forestry, and grazing practices shall be such that they do not result in erosion or an increase in the rapidity of surface run-off.

## 6. PUBLIC RECREATION

- a. **Density of trails** will be low to prevent moose harassment and to minimize the degree of change to this open space and habitat area. ADF&G will be consulted prior to authorization of the trail system.
- b. **Seasonal restrictions** on certain types of recreational use in areas may be utilized where moose or bear concentrations occur to prevent bear/human or moose/human confrontations as recommended by ADF&G and DNR.
- c. **Hunting access.** Traditional motorized access for hunting will continue unless an area is closed for a non-motorized trail system. In that event, equal or better access will be provided.

[d. **RECREATION AREA – EASTERN HILLSIDE:** THE PLAN RECOGNIZES STRONG LOCAL INTEREST IN ESTABLISHING SECTION III (SEE FIGURE 7, PAGE 222) AS A STATE RECREATION AREA. WHILE THIS AREA DOES NOT CURRENTLY MEET THE CRITERIA USED IN OTHER AREAS IN THE MANAGEMENT UNIT OF BEING AN INTENSIVELY USED AREA IN NEED OF ENFORCEMENT AND FACILITIES AND IS NOT PROPOSED FOR INCLUSION IN THE HATCHER PASS PUBLIC USE AREA, AT A FUTURE TIME RE-EVALUATION OF REGIONAL GROWTH PATTERNS, WATERSHED MANAGEMENT, AND RECREATIONAL NEEDS MAY DETERMINE THAT SUCH A DESIGNATION IS APPROPRIATE.]

## 7. RECREATION OPPORTUNITY SPECTRUM:

- a. **Setting.** The intended recreational setting described in Part a is for the purpose of guidance to land managers who must adjudicate land use requests. It is not intended to be a hard and fast set of rules.
  - (1) **Physical Setting:** [SECTION I AND II] T18N R1W, Section 7 and the S 1/2 of sections 5 and 6; T19N R1W SE 1/4 of Section 36; and T19N R1E, Section 31: mostly natural appearing environment as viewed from trails; [SECTION III], Below 1500 feet in T19N R1W sections 25, 31 to 35 and the north 1/2 of Section 36; and T 18 N, R1W, the north 1\2 of Section 5 mostly unmodified natural environment.
  - (2) **Social Setting:** Low concentration of users, but evidence of others on the trail
  - (3) **Managerial Setting:** Restrictions on trail use in non-motorized trail systems
  - (4) **Access:** Cross-country, forestry roads, new trail systems
  - (5) **Mode of Travel:** Mostly non-mechanized except for existing motorized recreational trails
  - (6) **Vegetative Alterations and Duration of Impacts:** Vegetative alterations for resource use will vary from high in T 19N, R1E Section 31 and the SE 1/4 of Section 36 in T19N R1W [SECTION I] to very small in size and number below 1500 feet in T19N R1W sections 25, 31 to 35 and the north 1/2 of Section 36; and T 18 N, R1W, the north 1\2 of Section 5 [in Section III]. Moderate loss of soil and vegetation on trails which persists from year to year.
  - (7) **Type of Experience:** Moderate opportunity for solitude and closeness to nature in most areas with some developed trail areas providing facilities, easier access, and less challenge and risk.
- b. **Public Facilities.** The purpose of this section is to describe the intended level of recreation facility development. Where no facilities are proposed, this does not mean it is a prohibited use.
  - (1) **Public Facilities:** Trail systems, warm-up facility
  - (2) **Camp Sites:** None planned
  - (3) **Picnic Sites:** None planned
  - (4) **Water Supply:** None planned
  - (5) **Sanitation:** Outhouse
  - (6) **Signs:** Limited signing on trail systems

(7) **Water Crossings:** Bridging over streams on trail systems

(8) **Interpretative:** Interpretation by self-discovery

c. **Guidelines for Appropriate Commercial or Other Private Uses to be Authorized by Lease or Permit:**

(1) **Commercial Uses and Other Private Uses:** Commercial and other private sector recreation uses are permitted only when compatible with the primary management intent.

Small scale lodges would be an allowed use within the mental health lands in sections 5, 6, and 7 (southwest corner). Types of lodges that would be compatible include, but are not limited to, a hunting lodge, a youth group camp, a retreat, or a snowmachine or ski facility. Impacts to fish and wildlife must be evaluated and plans made to mitigate impacts prior to lease authorization.

(2) **Stipulations on Private Uses:** Private uses in mental health lands must generate revenue (a trail system associated with lodges, for example, would attract users and create more revenue). In other portions of Hillside, private uses must provide a clear public benefit and be compatible with the management intent. The cumulative impact of private sector developments within and adjacent to the Hillside Subunit will be evaluated in relation to public uses and wildlife values of the subunit prior to authorization of private uses.

## 8. MENTAL HEALTH LANDS

a. **Use of mental health lands Subject to Mental Health Commission Approval.** This plan contains DNR's recommendations for managing the three sections of mental health lands located within the management unit, all of which are in this subunit (T18N, R1W, sections 5, 6, and 7).

Until such time as the management of mental health trust land is further defined, this plan, in conjunction with Departmental Order 121, reflects the department's interim management guidelines for all mental health trust land within the boundaries of the planning area. However, to the extent that this plan conflicts with the intent of the Alaska Mental Health Enabling Act of 1956, the court decision in **State v. Weiss**, 706 P2d 681 (Alaska 1985) and/or is not approved by the Interim Mental Health Trust Commission, it does not apply to mental health trust lands.

b. **Management for Revenue Production.** The three sections of mental health lands in the southwest corner of this subunit will be managed to produce revenue for the mental health trust according to the Supreme Court decision.

The production of revenue will be based upon the best use of the land, and revenue will be produced through recreational leases, timber production, and grazing leases.

It is intended that all policies contained in this plan apply to these three sections within the constraints outlined above. Planned actions that specifically affect these sections are listed under Recreation, 1a, b, and c; and Grazing 2a(1) and (2). Guidelines specifically affecting these sections are 2c, page 222 and 7c(1) and (2), page 225.

- (1) **Recreational Leases** for lodges associated with public uses of the area such as a hunting, ski, or snowmachine lodge have the potential of both enhancing public uses of the adjacent lands and for generating revenue to the Mental Health Trust. The proposed ski trail system would enhance the value of this land.
- (2) **Grazing Leases** issued at fair market value could allow utilization of the high value grass resources of these three sections and generate revenue for the Trust.
- (3) **Sustained Yield Forestry Harvest** could produce revenue and increase land value by the construction of roads.

## 9. REPEATER AND COMMUNICATION SITES

Leases for repeater and communication sites are an allowed use along the top of Bald Mountain Ridge subject to:

- . Location of facilities so they are not visible from the Hatcher Pass Road and so they blend with the ridge rather than stand out as a skyline feature. Location should avoid the tundra nesting bird habitat.
- . Painting them a dark color to blend with the landscape.
- . Access roads will not be constructed to the facility.
- . Sites will be grouped together to the extent possible.

## **VI Archangel**

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### **A. LAND USE DESIGNATIONS**

Primary Uses: Unit A, Mining, Recreation; Unit B, Recreation

Secondary Use: Fish and Wildlife Habitat

Prohibited Uses: Settlement, Remote Cabin Permits, Large-scale Commercial Development, Grazing Outside Designated Areas (See Map 3, pages 116/117), Mining in Unit B

Mining: Open except the southern tip

### **B. BACKGROUND**

This valley is part of the historic lode district and has many patented and unpatented federal claims and state mining claims. Two small lode mines are currently active. The rugged, glacially carved valley has high scenic appeal and many interesting geologic features such as rock glaciers and boulder areas. It provides unique rock climbing opportunities, and is popular for hiking, mountaineering, outdoor education, skiing, dog mushing and snowmachining. The numerous old mining trails, tunnels, and ruins add historical interest. Trapping furbearers and ptarmigan hunting are historical uses in the valley. Archangel Creek is a coho salmon spawning and rearing area. Snowbird Glacier is a popular year-round skiing destination which is most often accessed on foot via Glacier Creek valley or by skiplane or helicopter.

### **C. MANAGEMENT INTENT**

The management intent is to encourage mining; provide for dispersed recreation including, but not limited to, small game hunting, trapping, snowmachining, skiing, dog mushing, rock climbing, hiking, encourage outdoor education, and to conserve scenic values.

## D. PLANNED ACTIONS

### 1. RECREATION

- a. **Parking Areas.** Establish a parking area at the Snowbird Road turn off (30 spaces) and a small parking area near the end of Archangel Road (8 spaces).
- b. **Public Access.** Resolve access problems through mining claims and private land in the upper valley and post signs clearly designating the public access route.
- c. **Dog Mushing Route.** Designate a dog mushing route.
- d. **Mineral Closing Order.** The southern corner of this subunit will be closed to new mineral entry to provide protection to the scenic and recreation values of the road corridor.

## E. GUIDELINES

### 1. RECREATION

#### a. Recreational Opportunity Spectrum

- (1) **Setting.** The intended recreational setting described in Part "a" is for the purpose of guidance to land managers who must adjudicate land use requests. It is not intended to be a hard and fast set of rules.
  - (a) **Physical Setting:** Predominantly natural appearing environment in valley with some modifications at mine sites, back country, unmodified natural environment
  - (b) **Social Setting:** Interaction between users in road area, low interaction between users in backcountry portions of subunit
  - (c) **Managerial Setting:** Minimum of subtle on-site controls of users such as information signs at key locations
  - (d) **Access and Mode of Travel:** Road access in valley, Snowbird Glacier access by foot or aircraft, both cross-country and trail access by both motorized and non-motorized means
  - (e) **Vegetative Alterations and Duration of Impacts:** Shape and blend vegetative alterations in parking on trail areas; minor loss of vegetation where camping occurs and along travel routes, most areas recover on an annual basis

(f) **Type of Experience:** Opportunity to get away from others, but with easy access in valley floor; accessing Snowbird Glacier on foot provides opportunity for challenge, risk, use of wilderness skills

(2) **Facilities.** The purpose of this section is to describe the intended level of recreational facility development. Where no facilities are proposed, this does not mean it is a prohibited use.

(a) **Public Facilities:** Parking, trails

(b) **Camp Sites:** None planned

(c) **Picnic Sites:** None planned

(d) **Water Supply:** None planned

(e) **Sanitation:** None planned

(f) **Signs:** Minimum necessary for safety and information

(g) **Water Crossings:** Some bridging may be necessary for trails

(h) **Interpretative:** By use of Hatcher Pass Guide and self-discovery

b. **Aircraft landings.** See Recreation guideline 14a in Chapter 3 of this plan.

2. **GUIDELINES FOR APPROPRIATE COMMERCIAL OR OTHER PRIVATE USES TO BE AUTHORIZED BY LEASE OR PERMIT:**

a. **Commercial and Other Private Uses:** No large-scale commercial uses are allowed. The main uses are intended to be mining, dispersed recreation, and outdoor education. Private Sector uses (such as winter trail maintenance, operation of a business, teaching outdoor skills) are examples of low-impact, appropriate private uses. The number of such authorizations is intended to be low.

b. **Stipulations on Private Uses:** Cumulative impacts of mineral developments in the Archangel area and of private sector developments in the Government Peak Subunit and on private land will be used as criteria in assessing need for and desirability of further private sector developments in Archangel Subunit.

Any private sector land use authorizations on state land must be compatible with the overall management intent and have a low impact on the existing character of the area. Any private sector facilities constructed on surface leases of state land must be designed to reflect or complement the historic mining character of the valley and to be visually unobtrusive.

### 3. MINING

- a. **Structures.** Mining structures should follow the same design and siting guidelines as other private sector developments to the extent feasible. Plans of operation will delineate type(s) of proposed structures.
- b. **Historic Sites.** Historic mining sites should be identified, signed, and protected to the extent feasible. Where no alternative exists and historic structures must be removed to allow for active mining operations, the DNR history and archaeology section shall be notified and given an opportunity to catalogue the site.
- c. **Mineral Leasing Area.** Guidelines for development on existing claims in the closed area are given on page 251, E., 1, in the Government Peak Subunit.

### 4. MATERIAL SITE

**Site #4.** If the material is adequate and the site becomes necessary for road construction, then this site should be used only during road construction and not used as a long-term road maintenance material site (see Gravel/Material Sites Map on Page 49 of the original plan).

## VII. Reed Lakes

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### A. LAND USE DESIGNATIONS

Primary Use: Recreation

Secondary Use: Fish and Wildlife Habitat

Prohibited Uses: Settlement, Remote Cabin Permits, Commercial Recreation Leases, Grazing Outside Designated Areas (see Map 3, pp 116-117 in original plan)

Mining: Open, except Reed Lakes and Reed Creek

### B. BACKGROUND

This subunit is becoming increasingly popular for summer hiking and backpacking use, winter skiing, and mountaineering. The old Snowbird Village Mine Road, which is rough and unmaintained, is a 1 1/2 mile spur off Archangel Road. The Snowbird Road is used for hiking, snowmachining, skiing, and dog mushing. A well-publicized route goes from Glacier Creek and Snowbird Road junction to Upper Reed Lake; most portions of the trail are well-defined due to increasing use by the public. Trapping furbearing animals and hunting ptarmigan are historical uses in the Reed Lakes area.

Mineral potential is high. Although there are no active mining sites in the subunit, there are historic mining sites.

This subunit is within the sheep distribution range. Pikas, marmots, and parka squirrels are numerous and ptarmigan are commonly seen. Moderate grazing potential occurs in a small area in the southern portion of the unit; there is an existing grazing lease which includes a larger area.

Avalanche potential exists in varying degrees through this subunit. Floodplain and bog areas occur in the lower portion. Unstable slopes and material and two small rock glaciers occur at higher elevations.

### C. MANAGEMENT INTENT

The management intent of this subunit is to maintain the area for low density, dispersed public recreation and in such a manner so as to protect its scenic values and to provide a non-motorized recreational opportunity in the Reed Creek and Reed Lakes corridor. The

subunit will remain open to mineral entry except for Reed Creek Valley including the upper and lower Reed Lakes. These areas are being closed to mineral entry due to an incompatibility finding with the high public use, scenic values, and because it is not within the traditional mineral development zones of the area.

## D. PLANNED ACTIONS

### 1. RECREATION

- a. **Special Use Area.** Establish a non-motorized (including aircraft landings) special use area in the Reed Lakes and Reed Creek valley. See Map 12 in original plan for boundaries. [PERMITS FOR MOTORIZED ACCESS WILL BE ISSUED TO THOSE WHO CAN DEMONSTRATE AN ECONOMIC INTEREST (OTHER THAN RECREATION) IN THIS VALLEY ON WHICH THEY ARE ECONOMICALLY DEPENDENT (E.G., A MINING CLAIM, GRAZING LEASE, OR ESTABLISHED TRAPLINE). NO PERMIT IS REQUIRED FOR EMERGENCY RESCUE. A PERMIT MAY BE ISSUED IF THERE IS A FINDING THAT THE PROPOSED MOTORIZED USE PROVIDES A CLEAR PUBLIC BENEFIT.]
- b. **Addition to Hatcher Pass Public Use Area.** Reed Creek and Reed Lakes are proposed for legislative designation as part of the Hatcher Pass Public Use Area. See Appendix XIV for Draft Plan Recreation Area proposal and Chapter Three recreation management strategy for a discussion of the Hatcher Pass Public Use Area proposed additions. See Map 12 in original plan for boundaries.
- c. **Monitor Effects of Use.** Establish monitoring for impacts from high use and implement appropriate management techniques as needed to prevent erosion and degradation of the alpine vegetation. This may include switchbacking of the trail in the steep portion to prevent further trail widening.

### 2. MINING

Reed Creek valley including upper and lower Reed Lakes will be closed to mineral entry (see Map 11 in original plan).

### 3. GRAZING

The existing grazing lease will be reduced to actual usable forage area and will require the addition of new grazing guidelines when the lease is up for renewal or upon concurrence with the lessee prior to that time. The lease area will be located entirely in the Little Susitna Subunit, and a fence will be required at the northern extent of the lease area from Archangel Creek west to the mountainside.

## E. GUIDELINES

### 1. TRAIL IMPROVEMENTS

The intent is to maintain the Reed Lakes area as a setting for a primitive, backcountry experience. Trail improvements will only be done where necessary to channel traffic to minimize impacts to the alpine and subalpine vegetation. These impacts should be identified through an annual monitoring program.

### 2. RECREATION [RECREATIONAL OPPORTUNITY SPECTRUM]

a. **Nonmotorized Special Use Area.** Reed Lakes and Reed Creek valley will be closed to the use of motorized vehicles year round, including aircraft landings, except by permit. The intent is to allow access by motorized vehicle for commercial mining. Permits will be issued for the use of motorized vehicles to provide access to active mining claims in order to carry out the mining operations authorized by a Miscellaneous land Use Permit or an approved plan of operations; and for aircraft access for mineral prospecting. No permit is required for emergency rescue. See Map 12 in original plan for boundaries.

#### b. **Recreational opportunity spectrum**

(1) **Setting.** The intended recreational setting described in Part "a" is for the purpose of guidance to land managers who must adjudicate land use requests. It is not intended to be a hard and fast set of rules.

(a) **Physical Setting:** Predominantly unmodified natural environment

(b) **Social Setting:** Low interaction between users

(c) **Managerial Setting:** Minimum of subtle on-site controls such as safety or non-motorized signs

(d) **Access and Mode of Travel:** Non-motorized trail and cross-country travel

(e) **Vegetative Alterations, Prevalence, and Duration of Impact:** Minor loss of vegetation in camping areas, most sites should recover on annual basis; moderate loss of soil and vegetation on trail which persists from year to year.

(f) **Type of Experience:** High probability of experiencing low interaction between users, tranquility and closeness to nature; in winter, challenge and risk

(2) **Facilities.** The purpose of this section is to describe the intended level of recreational facility development. Where no facilities are proposed, this does not mean it is a prohibited use.

(a) **Public Facilities:** Minimum trail improvement to prevent erosion

(b) **Camp Sites:** None planned

(c) **Picnic Sites:** None planned

(d) **Water Supply:** None planned

(e) **Sanitation:** None planned

(f) **Signs:** Minimum necessary for public safety or signing of non-motorized area

(g) **Water Crossings:** None planned

(h) **Interpretative:** Interpretation by self-discovery

3. **GUIDELINES FOR APPROPRIATE COMMERCIAL OR OTHER PRIVATE USES TO BE AUTHORIZED BY LEASE OR PERMIT:**

a. **Commercial and Other Private Uses:** None by lease. Generally permitted activities listed in the DLWM Policy and Procedure Manual (Chapter 5122, Section 01) are not affected. Application for permits will be considered on a case-by-case basis if compatible with management intent and guidelines.

b. **Stipulations on Private Uses:** Must provide a clear public benefit and not negatively impact the low-density, backcountry-type recreational setting described above in Part 2b above.

4. **MATERIAL SITES**

**Site #5.** This site should only be developed if Site #4 is inadequate as a source of material supply in Archangel Valley and should be rehabilitated for fisheries values based on consultation with ADF&G (see Gravel/Material Sites Map on page 49 of the original plan).

## VIII. Little Susitna

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### A. LAND USE DESIGNATIONS

Primary Use:	Recreation, Grazing in Section B, Water Resources (See Map 6, page 196 of original plan)
Secondary Use:	Fish and Wildlife Habitat
Prohibited Uses:	Commercial Recreation Leases, Settlement, Remote Cabin Permits, Grazing in Section A (See Map 3, pages 116/117 in original plan)
Mining:	Open except for a corridor along the Little Susitna River

### B. BACKGROUND

This scenic, glacially carved valley is used primarily for wilderness-type activities, such as foot travel, skiing, snowmachining, horseback riding, and ptarmigan hunting. Rock and ice climbing, mountaineering classes, and year-round glacial travel are also popular. A loop route is used by skilled skiers and glacier travelers between the upper Little Susitna Valley and Reed Lakes. This rugged backcountry, which can be reached by hikers or skiers in one day, provides the opportunity for a weekend wilderness-type experience. A hut built by the Mountaineering Club of Alaska is located near Mint Glacier, at the head of the valley.

The valley is within the general sheep distribution range and there are moose in the lower valley. Trapping and ptarmigan hunting are traditional uses in the valley in fall and winter. Spawning king and coho salmon are found in the Little Susitna River within this subunit and there is sport fishing for Dolly Varden. This valley contains the headwaters of the Little Susitna River and has high value for downstream fisheries, wildlife habitat, riparian habitat, and watershed.

Lode gold mining potential is high. Small-scale placer mining occurs in the lower Little Susitna valley; there is a chance that a deep pre-glacial placer deposit underlies the river. (Refer to Chapter 2, page 70 in original plan, Subsurface Resources for more information on placer potential.)

The primitive trail known as the Gold Mint Road was originally constructed to provide access to the Lonesome Mine on the east side of the river. It is an unmaintained state road approximately four miles long. A derelict foot bridge is still in place at the river crossing. No other trails are known to occur in this rugged valley.

The legislature has designated the river corridor as the Hatcher Pass Public Use Area (see Map 12 in original plan). To protect scenic, recreational, and fisheries values, it has been closed to mineral entry.

The valley is steep and mountainous with many unstable surficial geologic features, an active fault system and glaciers. The valley floor has some avalanche potential, and the rest of the area has high avalanche potential.

The lower valley has moderate value grass resources and has been leased for grazing for 25 years; however, it has not been grazed the past two years. Herd management is easy due to the natural boundaries provided by the mountains and the swift, rocky rivers.

## C. MANAGEMENT INTENT

The overall Hatcher Pass management scheme is to provide a variety of dispersed, wilderness-type, recreational opportunities to a wide variety of users. This subunit is the only one where a quiet, backcountry experience is available from a road access point.

This unit will be managed primarily for low density, non-motorized use, and dispersed recreation, including hunting and trapping. Keeping options open for future lode mineral development of the valley walls has a high priority. Within Section "A", grazing is a high priority and will be managed so it is compatible with recreation.

## D. PLANNED ACTIONS

### 1. MINING

A mineral closing order will be placed on the Little Susitna River headwaters lake to protect the public recreation and fisheries values. Most of the rest of the river has been closed to mineral entry by the legislature in SB 334 which created the Hatcher Pass Public Use Area (see Map 12 in original plan).

### 2. RECREATION

- a. **Non-Motorized Special Use Area.** Establish a nonmotorized (including aircraft landings) special use area in the portion of this subunit within the Hatcher Pass Public Use Area and its proposed additions. [WILL BE CLOSED TO MOTORIZED USE (INCLUDING AIRCRAFT LANDING) FOR RECREATIONAL PURPOSES IN BOTH WINTER AND SUMMER. PERMITS FOR MOTORIZED ACCESS WILL BE ISSUED TO THOSE WHO CAN DEMONSTRATE AN ECONOMIC INTEREST (OTHER THAN RECREATION) IN THIS VALLEY ON WHICH THEY ARE ECONOMICALLY DEPENDENT (E.G., A MINING CLAIM, GRAZING LEASE, OR TRAPLINE), OR FOR GROOMING OF A WINTER SKI TRAIL. NO PERMIT IS REQUIRED FOR EMERGENCY RESCUE. A PERMIT MAY

BE ISSUED IF THERE IS A FINDING THAT THE PROPOSED MOTORIZED USE WILL PROVIDE A CLEAR PUBLIC BENEFIT.] See Map 12 in original plan for boundaries.

- b. **Footbridge.** Replace the old footbridge over the Little Susitna with a safe one. The bridge may be built to also accommodate cattle access to rangeland west of the river.
- c. **Archangel Bridge.** DOT/PF has found the bridge over Archangel Creek on the Gold Mint Road to be unsafe for motorized use. Necessary repairs should be done to allow continued foot, horse, and cattle access, but it will be closed to vehicle use.
- d. **Public Use Cabin.** The existing cabin on Mint Glacier should be converted to a public use cabin. Agreements with recreational groups may be negotiated for its maintenance and provisions made for reserved use by the recreational group at certain times of the year.
- e. **Trails/Routes.** The following are routes which may be identified on a map and/or brushed out:
  - . Upper Little Susitna Trail, 8 miles (13 km)
  - . Mother Lode Lodge to Arkose Ridge, (3 km)
  - . Lonesome Mine/Arkose Ridge, 3 miles (5 km)
  - . Moose Creek overlook, 3 miles (5 km)
- e. **Additions to the Hatcher Pass Public Use Area.** The valley floor in Section 3 and Mint Glacier are proposed for inclusion in the legislatively-designated Hatcher Pass Public Use Area, due to high public recreation and fisheries values. This will provide the same protection and management status for the headwaters of the Little Susitna River as for the rest of the river within the management unit (except that Mint Glacier will remain open to mineral entry).

## E. GUIDELINES

### 1. GRAZING

- a. **Vegetation Studies.** The existing grazing lease shall be used to establish baseline vegetation studies for range trend analysis, utilization trends, livestock forage preference, and other grazing related issues.
- b. **Lease Area Reduction.** Leasing should be continued; however, the lease area shall be reduced to the best grass producing area as identified by Soil Conservation Service (see Unit B on Map 6 on page 197 of original plan) upon expiration of the existing lease or prior to that time by concurrence of the lessee.
- c. **Recovery of Resource.** The area at the confluence of Archangel Creek and Little Susitna River will be fenced off to allow recovery and protection of this sensitive area.

Grazing will be excluded from this site due to fisheries and recreational values which are negatively impacted by livestock-induced bank erosion.

- d. **Archangel Creek Limits.** Establish upper limit of grazing on Archangel Creek. Fence to contain the herd.
- e. **Lone Tree Creek Limits.** Establish upper limit of grazing on Little Susitna River by fence near mouth of Lone Tree Creek.
- f. **Bridge.** Bridge the Little Susitna for livestock and recreation crossing near Lonesome Mine Road.
- g. **Guidelines.** Guidelines from the management plan will be incorporated into the existing grazing lease upon renewal or by concurrence of the lessee prior to lease expiration.
- i. **Compatibility with Recreation:** Herd management and fencing techniques should be made compatible with recreational uses of the area (to the extent feasible and possible). Minimize grazing/recreation conflicts through stipulations in any new grazing authorizations in the Little Susitna Valley when the existing grazing lease expires. Provisions to mitigate conflicts with recreational users must be part of any grazing plan and must be approved by the Division of Land and Water Management in consultation with the Division of Parks and the Division of Agriculture.

## 2. ACCESS

- a. **Trail.** Access development will be limited to trails.
- b. **Mining Access Roads.** If a new access road is required for mining, the road will not be open to general motorized public use.

## 3. RECREATION

- a. **Non-Motorized Special Use Area.** The portion of this subunit within the Hatcher Pass Public Use Area and its proposed additions will be closed to the use of motorized vehicles year round, including aircraft landings, except by permit. The intent is to allow access by motorized vehicle for commercial mining. Permits will be issued for the use of motorized vehicles to provide access to active mining claims in order to carry out the mining operations authorized by a Miscellaneous Land Use Permit or an approved plan of operations; and for aircraft access for mineral prospecting. No permit is required for emergency rescue.

b. **Recreation Opportunity Spectrum**

(1) **Setting.** The intended recreational setting described in Part "a" is for the purpose of guidance to land managers who must adjudicate land use requests. It is not intended to be a hard and fast set of rules.

- (a) **Physical Setting:** Unmodified natural environment
- (b) **Social Setting:** Low interaction between users
- (c) **Managerial Setting:** Minimum of site controls near entry point, none evident after entry except possible brushed trails or information signs
- (d) **Access and Mode of Travel:** non-motorized and cross-country foot or ski travel
- (e) **Vegetative Alterations and Duration of Impacts:** Minor loss of vegetation in travel routes, most impacts recover on an annual basis
- (f) **Type of Experience:** Very high probability of experiencing solitude, freedom, closeness to nature, self reliance, challenge, and risk

(2) **Facilities.** The purpose of this section is to describe the intended level of recreational facility development. Where no facilities are proposed, this does not mean it is a prohibited use.

- (a) **Public Facilities:** None planned
- (b) **Camp Sites:** None planned
- (c) **Picnic Sites:** None planned
- (d) **Water Supply:** None planned
- (e) **Sanitation:** None planned
- (f) **Signs:** Non-motorized and safety information signs only
- (g) **Water Crossings:** Foot bridges over Archangel Creek and Little Susitna River
- (h) **Interpretative:** Interpretation by self-discovery

4. **GUIDELINES FOR APPROPRIATE COMMERCIAL OR OTHER PRIVATE USES TO BE AUTHORIZED BY LEASE OR PERMIT:**

- a. **Commercial Uses and Other Private Uses:** None by lease. Generally permitted activities will not be affected. Other permit applications will be considered on a case-by-case basis if they are compatible with management intent and guidelines.
- b. **Stipulations on Private Uses:** They must provide a clear public benefit and not negatively impact the wilderness-type setting described in Part "a" and "b".

5. **MATERIAL SITES** (See Map Gravel/Material Sites Map on page 49 of original plan)

**Site #6.** This site should only be developed if Sites 10 or 11 prove inadequate as a source of material supply. After material extraction, the low lying area adjacent to the Little Susitna River should be trenched and contoured into side channels and ponds for fish spawning and rearing areas. If this pit is developed, a bridge crossing over the Little Susitna River would be required. This bridge could also serve as access for grazing and recreation. Rehabilitation to a natural appearance and for revegetation to grass and/or moose browse has a high priority in this location.

**Sites #7 & #8.** These sites should only be developed if and when road access is needed for mineral development in the upper Little Susitna Valley. Rehabilitation should include fisheries enhancement based on consultation with ADF&G.

**6. HELISKIING**

See Recreation Guideline 14d in Chapter Three (page 92 of this document) regarding the possibility of heliskiing on the west end of Arkose Ridge.

**AREA-WIDE  
LAND MANAGEMENT POLICIES**

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# **AREAWIDE LAND MANAGEMENT POLICIES** (Chapter Three of original plan)

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## **MANAGEMENT INTENT STATEMENT FOR THE HATCHER PASS MANAGEMENT UNIT**

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The goals of the Hatcher Pass Management Plan are to manage the area for use and enjoyment of the area's resources, conservation of its scenic and environmental quality, to improve public safety, to retain the management unit in public ownership, and to provide opportunities for economic development which are consistent with the major uses.

The major designated uses are public recreation, including tourism and opportunities for the recreation industry, mining, fish and wildlife habitat, and grazing. The plan outlines where and under what conditions these will occur. The area has been divided into nine subunits (see Map 11) which reflect differing resource values and management concerns. The intent is for all of these uses to occur within the Hatcher Pass Management Unit. However, not all uses will occur in each of the nine subunits. For example, mining is more important in some locations and recreation is more important in others. Grazing and forestry are site specific, based on occurrence of the resource. Wildlife values are higher in the western and southern portions of the unit.

A variety of management approaches will be used emphasizing different resources in different subunits. Exploration for and development of mineral resources will be encouraged throughout most of the area but will be emphasized in those portions of the unit with highest mineral potential. Dispersed recreation will be encouraged throughout the unit, but intensive recreational development will be limited largely to two nodes in Independence Valley and the [NORTH]eastern and southern portions of Government Peak. In order to provide a balance of recreational uses, some areas will be designated as non-motorized. Individual trails will be constructed and designated for different types of recreational use, funds permitting. The road corridor, which receives heavy recreational use, should be managed to increase public safety and to improve the opportunities for scenic viewing. In the Willow Mountain subunit, which has exceptionally high wildlife productivity, all other uses must consider impacts on the wildlife resource. Hunting will continue to occur within the entire unit (with the possible exception of portions of the Government Peak Subunit), but in the upper Little Susitna valley ptarmigan hunting will be by foot, snowshoe, or ski access. Information on wildlife viewing opportunities will be provided and a diversity of habitat maintained. Utilization of the grassland resources by domestic livestock may occur when it is consistent with range conservation practices and the maintenance of wildlife productivity. Sustained yield forestry harvest will occur in the eastern portion of the Hillside subunit on mental health lands, while in other areas forest harvest will occur only for habitat enhancement or disease control. Thus, as use increases over the coming years, provisions will be made for the continuance of a wide variety of uses.

Due to the intensity of demands on the area's resources, both current and projected, this plan outlines the basic management strategy which will be required in the future to prevent degradation of the resources and the quality of the recreational experience. The plan includes guidelines for how various uses will occur that will create conditions for continued compatibility among those uses.

The Hatcher Pass area provides for many unique opportunities: the potential for the creation of a major tourism destination point within an active mining district and for the discovery of new minerals is high; it can supply rangeland supplements for the Matanuska-Susitna dairy and livestock industry; and it offers a variety of near-to-urban-centers recreational opportunities, both developed and non-developed. With careful management, these resource uses can occur while maintaining the important wildlife habitat and scenic values of the area.

# I. FISH AND WILDLIFE

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## C. GUIDELINES

### 1. HABITAT ENHANCEMENT

These guidelines apply to all areas where habitat enhancement is carried out unless specifically superceded by a subunit guideline.

a. **Timing of Enhancement Activities.** Habitat enhancement activities for fish and/or wildlife species may occur, subject to guidelines below, when biological and/or population data [STATISTICS] indicate that improvements in survival, reproduction, and/or population numbers can or need to be increased through habitat enhancement/rehabilitation activities.

(1) [HOWEVER,] Enhancement activities will not occur in Hatcher Pass until evaluation of enhancement projects in the Matanuska Valley Moose Range or other areas indicates that the techniques are effective in increasing habitat carrying capacity for moose [PRODUCTION].

(2) Timber harvesting activities shall be planned and coordinated to minimize disturbances to seasonal use patterns of moose and other land use activities.

b. **Areas Where Habitat Enhancement Activities will be Restricted**

(1) **Buffers in Riparian Habitats.** See Lakeshores and Stream Corridors and Wetlands Sections in this chapter.

(2) **Diverse Habitats.** Diversity of habitats will be retained during enhancement activities to protect other species. For example, small stands of old decadent timber will be retained as nesting and feeding habitat for hole nesting birds.

(3) **Scenic Areas.** The quality of foreground scenery near existing or potential residential areas, along roads, trails, floatable waterways, and background scenery seen from populated areas shall be maintained during habitat enhancement or timber harvesting efforts.

c. **Process for Scheduling Enhancement Activities.** Enhancement projects will be described in a habitat enhancement schedule prepared by ADF&G in consultation with Division of Parks and Outdoor Recreation and shall require the Division of Land and Water Management approval. Public review [MAY] will be required [IF APPROPRIATE]. If the enhancement is done as part of a timber sale, public notice will be given as required by the Susitna Forest Plan. Elements within the plan shall include:

Project description and explanation of need.

- . Location and access.
- . Existing and proposed access.
- . Size.
- . Physical data inventory of existing vegetation, slope, aspect, elevation, soil type, depth, moisture content and analysis, and wind condition.
- . Target vegetation for enhancement.
- . Enhancement methods including use of chemicals and controlled burning. These activities require public and agency review prior to approval. The public review must include a public hearing.
- . Restrictions on the type or timing of activities that may be needed to limit impacts on riparian habitats, visual quality, water quality, or other resources.
- . Monitoring programs to ascertain success of project.
- . Compatibility with recreational uses and visual qualities of the area.

d. **Roads**

Road management is probably the most important factor that will influence moose populations and their habitat in areas designated for timber harvests.

- (1) Minimize road mileage necessary to achieve habitat management objectives. All new roads should be evaluated by a biological review process to estimate their potential for affecting moose populations and their habitat. Subsequent use or nonuse of roads should be considered as part of the enhancement schedule.

e. **Location, size, and shape of Harvest Units**

- (1) Timber stands should be designed for shape and edge contrast to provide for wildlife needs. In general, cuts should be designed with irregular borders to increase the amount of forage-producing edge. Cutting units should be oriented to avoid blowdown and loss of moose habitat.

- (2) Maintain mature coniferous cover in close proximity to winter foraging areas (cut units) to benefit wintering moose.

- (3) To ensure that adequate year-round cover is available to meet wildlife species needs, harvests will be designed to leave approximately 60 percent of each enhancement area in mature forest at all times. Reentry for harvest of the uncut portion shall not occur until the stand characteristics of the original cut unit can meet cover requirements of moose. It is not intended that the rotation period be designed for sustained yield timber production in designated enhancement areas in the Government Peak and Hillside Subunits, with the exception of T18N, R1W, S.M., Section 7 and the south half of sections 5 and 6.

Enhancement areas include lands specifically identified for wildlife habitat enhancement in this plan in the Government Peak and Hillside Subunits. Enhancement areas may also include other lands that are identified for wildlife habitat enhancement in the future. The boundaries for additional enhancement areas will be determined through the

process for developing the habitat enhancement schedule described in Guideline 1 c above.

A mature forest is one that has the stand characteristics for which it is being managed. In enhancement areas, mature forests are those that meet cover requirements for moose (generally 80 to 100 years for spruce cover in this area depending on the site).

(4) Cutting units of approximately 20 acres (ranging between 5 and 50 acres) are preferred. (In the Government Peak Subunit the maximum cutting unit size will be 40 acres.) Cutting units that are too large preclude moose use of the total area while cuts that are too small may encourage high-density concentrations that may lead to over-browsing.

(5) Cutting units generally should be no wider than 660 feet to allow access to cover for bears, moose and other small wildlife and to encourage full utilization of browse. Where cutting units are greater than 660 feet or in cuts larger than 50 acres, residual islands of dense cover should be left within the clearcut to provide cover, bedding, and shelter for moose. Islands should be 0.5 - 5 acres spaced 660-990 feet apart, stocked by at least 1/3 conifers to provide relief in deep snow, and with tree cover at least 13-20 feet high for hiding cover.

(6) Escape, hiding, and/or resting cover should be maintained around the perimeter of wetlands areas and other open areas.

(7) Maintain snags greater than 23 cm (9 in) DBH as necessary to provide resting and denning sites for marten and nesting sites for cavity-nesting birds.

**f. Timber Harvest Systems**

(1) Clearcutting and seed tree harvesting are the preferred harvesting systems for wildlife habitat and timber production. Single-tree selection, group selection, shelterwood cutting, or other harvesting systems may be prescribed on certain sites where beneficial for wildlife, timber management, recreation, visual quality, or other considerations.

(2) Plan timber sales to produce a continuous mosaic of mature, close-canopied timber stands intermixed with variable-sized cut units that range between 5 and 25 years old.

(3) Scarification must occur on at least 50 percent of the cutting unit to ensure regeneration. Scarification can be spot or broadcast using root rake or similar method designed to break up duff layer.

**g. Debris Management**

(1) Slash disposal benefits reforestation, helps avoid insect and disease outbreaks, reduces the amount of fuel available for wildfires, improves habitat and visual quality, and aids recreational use of cut over areas. Logging and road construction slash

should be disposed to avoid hindering wildlife from using cut over areas. Disposal can be accomplished either mechanically or by burning, or by a combination of both methods. Slash that falls on uncut lands adjacent to harvest areas should be cleaned up or removed to facilitate moose use of cover and feeding areas.

(2) Broadcast burning is preferable to piling and burning because it encourages growth of fruiting shrubs used for forage. When burning is used for slash disposal, burns should be conducted while the ground is damp to protect the root systems of forage plants. Broadcast burning is preferred to burning slash piles to encourage growth of early successional shrubs used by moose.

h. **Prescribed Burning**

(1) Controlled burning is recommended when climate, soil, and fuel conditions are conducive to safely removing slash, maintaining forest openings, and improving the quality and quantity of moose forage. If burning is proposed for slash disposal, the proposed burning will be described in the Forest Management Report for the timber sale. DEC permits are required for burning on forestry projects greater than or equal to 40 acres. DOF burning permits also are required from May 1 through September 30.

i. **Herbicides**

(1) Herbicides should be not used for regeneration until a comprehensive evaluation of herbicide effects on moose browse has been completed. If pesticides are applied aerially, a buffer strip of 500 feet or wider should be left around aquatic areas to protect fish and wildlife habitat and human uses from significant direct toxicological effects. The minimum width of the buffer in these areas will be 250 feet. A buffer strip of 250 feet will be left around private lands to prevent adverse impacts on private property.

## 2. WILDLIFE VIEWING

In order to provide opportunities for wildlife viewing, DNR (including the Division of Parks and Outdoor Recreation) and ADF&G will take the following steps [(CONTINGENT ON AVAILABLE FUNDING)]:

a. **Preservation of Special Features.** Wildlife habitat, particularly special features like snags, beaver ponds, waterways, naturally occurring mineral licks, raptor nest trees, and fish and wildlife concentration areas, shall be preserved wherever possible.

b. **Disturbances and Development.** Disturbances and development in fish and wildlife breeding and rearing areas should be avoided.

c. **Public Information.** The public should be informed where life history, seasonal fish, and wildlife distribution and habitat association information may be obtained; and also how to use this information to improve their opportunities to see wildlife.

d. **Alternative Viewing Areas.** The public should be encouraged to stop, look, and listen in areas other than high public use locations. Provide information about trails to wildlife viewing overlooks special habitat features.

e. **Beaver Ponds.** Opportunities should be developed for viewing of beavers from the road corridor. See guidelines, page 216 (Willow/ Craigie Creek) and page 256 (Government Peak).

f. **Interpretive Aids.** Educate the public through information displays in facilities within the management unit and by posting interpretive signs at key locations along the road systems, at trailheads, picnic areas and campgrounds; and through information included in the proposed Guide to Hatcher Pass, to the extent funding is available.

g. **Habitat Diversity.** Habitat diversity has important value in providing a related correspondence of wildlife, especially in transition zones between vegetation types. Habitat diversity will thus be maintained to incorporate not only complete vegetative communities but transition zones as well.

h. **Low-speed Roads.** Continuance of low-speed, gravel roads may increase sightings of grouse and ptarmigan, which use gravel as a source of grit. Low-speed roads generally increase wildlife sightings and reduce collisions with wildlife.

### **3. ANADROMOUS FISH STREAMS**

ADF&G will manage by maintaining, protecting, and enhancing anadromous fisheries in the Little Susitna River, Willow Creek and Little Willow Creek. [ADF&G, WITH THE SUPPORT OF DNR AND USGS, WILL OBTAIN THE NECESSARY DATA FOR RESERVING INSTREAM FLOW REQUIREMENTS FOR FISH AND WILDLIFE, FUNDING PERMITTING.]

### **4. ACCESS TO HABITAT ENHANCEMENT AREAS**

Guidelines for access for wildlife habitat enhancement are included in the Transportation and Access section of this chapter on page 163.

### **5. TUNDRA NESTING BIRD HABITAT PROTECTION**

ADF&G has identified several site-specific locations with concentrations of tundra nesting birds (see Baldy North/Lucky Shot Ridge Subunit descriptions, Chapter Four). There is a high likelihood that other such nesting sites may exist within the management unit. Upon identification of these sites by ADF&G, special use areas may be established to protect the nest areas from disturbance by motorized use.

### III. GRAZING

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#### A. GOALS

Grazing lands that are of good quality, relatively accessible, and close to farming areas and markets, such as are found in the management unit, are limited in Alaska. The main goals are:

1. Utilize and manage the grazing resources that exist in Hatcher Pass on a sustained yield basis as a permanent source of supplementing forage to augment on-farm hayland and cropland for the dairy and red meat industry in a manner which is compatible with the management intent for each subunit.
2. Preserve the integrity of the rangeland ecosystem.
3. Minimize domestic livestock and wildlife conflicts.

#### B. MANAGEMENT STRATEGY

The management strategy for grazing is to keep the options open for utilization of the medium and high value rangelands as identified in the 1985-86 Soil Conservation Service range study to the extent grazing use is compatible with the management intent for each subunit. The guidelines in this plan detail what will be included in grazing operations plans (GOP) for lease or permit units. The main features are the incorporation of Soil Conservation Service stocking density recommendations, the annual monitoring of forage utilization and range condition, the use of fencing for range management, and the utilization of range research to improve productivity and minimize wildlife conflicts.

## V. RECREATION

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### A. GOALS

The overall goals for recreation within the Hatcher Pass management unit are to:

1. Continue to provide a broad spectrum of dispersed recreational opportunities as the highest priority for recreation management. Provide a variety of recreational experiences including developed facilities at select sites near the road system, and trail-related, and wilderness-type experiences.
2. Designate some routes or areas for specific types of use. Provide public recreational facilities and parking.
3. Provide opportunities at select locations for private sector commercial and non-profit recreation facilities, the growth of tourism, and for recreation industry contribution to employment and local and state economic development.
4. Maintain the high scenic values and historical resources.
5. Improve public safety and reduce conflicts in use.

### B. MANAGEMENT STRATEGY

The entire Hatcher Pass Management Unit will be managed with recreation as a primary use. Throughout most of the unit, dispersed recreational activities such as hunting, trapping, fishing, skiing, snowmachining, or hiking will be the main management emphasis. In order to preserve the opportunity for dispersed recreation in a scenic, natural setting on state land, commercial recreational development will generally be focused in two areas: Independence Valley within Independence Mine State Historic Park and the potential Government Peak alpine ski area/four-season resort, with smaller developments allowed north of the junction of the Hatcher Pass Road and Gold Mint Road (see Map 12 in original plan), at two locations in the Hillside Subunit and at [ONE LOCATION ALONG] Willow Creek. If there is additional demand for private sector development, the use of the 3,170 acres of private land within the management unit is encouraged. A large portion of the management unit (particularly Willow Mountain and Little Susitna subunits) will be managed as undeveloped open space.

Simultaneously with development of this plan, the legislature determined what it considered to be the most appropriate way to protect the Little Susitna River corridor. The result was the passage of SB 334 (see Appendix XIV), sponsored by Senator Kerttula, which established the Little Susitna River corridor as the Hatcher Pass Public Use Area. The legislation provides long-term protection to the Little Susitna corridor, closes it to new mineral entry and land sales, and states that it will be managed to:

- a. provide for public recreation activities;
- b. protect and enhance the fishery, waterfowl, and wildlife resources and habitat; and provide for public use of the fishery and wildlife resources, including fishing, grazing, hunting, and trapping;
- c. protect the water quality and scenic resources within the Hatcher Pass Public Use Area.

Since the Legislature has thus indicated that a Public Use Area is the type of designation it finds appropriate for this area at this time, the plan recommends that part of the management unit (about 4,232 acres) be added to the Hatcher Pass Public Use Area rather than designated as a State Recreation Area as proposed in the draft plan. The proposed additions to the Hatcher Pass Public Use Area are the Reed Lakes corridor; Hatcher Pass Road corridor between Archangel turn-off and Hatcher Pass; and the Mint Glacier area. DNR recognizes public support for the state park system designations and in the long term it may be that a State Recreation Area is what is demanded here, based on heavy public use, the need for facilities, and the need for active management to minimize hazardous recreation activity in the road and avalanche paths, and for general on-the-ground regulation enforcement.

The purposes stated in the legislation that created the Hatcher Pass Public Use Area are essentially the same as those proposed in the draft plan for these high recreational use areas. The legislation provides that the plan will delineate how these uses will be managed. The plan adds wildlife viewing as a purpose. Grazing in areas of good grassland, hunting and trapping, and mining on existing claims will continue within the Public Use Area. (The Mint Glacier area is to remain open to mineral entry.)

In addition, two areas will be transferred to the Division of Parks under an Interagency Land Management Agreement for management of the intensive recreational use expected to occur there. A 360-acre site in the Hatcher Pass and Summit Lake area will be developed as a scenic viewpoint with parking, trails, and a picnic area. Five hundred and thirty acres on the east side of the Independence Valley floor will be added to the Independence Mine State Historic Park to provide management for intensive year-round trail and visitor use and incorporate historic sites not now within the park.

Public facilities proposed for the management unit (funding permitting) include three campgrounds: on the Little Susitna River, in Craigie Creek Valley, and on Willow Creek; a picnic site on each side of the pass, parking, trailhead and trail development (see Map 12 in original plan), and a limited number of public use cabins in the northwestern portion of the management area.

A diversity of recreational experiences will be maintained by designating some trails or areas for certain uses and by creating new access points to disperse use. The separation of incompatible uses will increase enjoyment and safety by the broadest cross section of users. Extensive user-group involvement has been utilized in determining areas to be designated for motorized or non-motorized designations. Management of these areas will

largely be by user-group participation in trail development, voluntary compliance, and through use of signs.

A coalition of outdoor groups submitted a proposal for the addition of the glacial "high peaks" area to the management unit, and the designation of it and part of the original management unit as a non-motorized primitive area. This addition received strong support at the public meetings. Parts of this proposal are incorporated in this plan, such as inclusion of Snowbird Glacier and designating non-motorized areas; however, all of the proposals could not be accommodated at this time. The proposal is described in Appendix IX and DNR's response is explained.

The most important elements in providing a quality recreational experience are the maintenance of the environmental and scenic qualities of the area and its diverse wildlife habitats and fish and wildlife populations. Guidelines for the maintenance of these important public values are incorporated into the resource use, road development, and facilities sections of this plan.

A final element of the recreation management strategy is to support tourism as a use of the area. The same special environmental values and public facilities which add to enjoyment of the area by residents enhance the area's attractiveness to the tourism industry.

## **C. GUIDELINES**

### **1. PUBLIC FACILITY DEVELOPMENT**

a. **Location of Facilities and Visual Qualities.** The Management Strategy section above generally describes the intended location of proposed public facilities. Other factors to be considered prior to location of public facilities are avalanche hazard and traffic circulation. (More detail is given in Chapter 4.) Specific sites should be carefully selected to harmonize with the natural setting and to screen users from traffic or adjacent uses. It is especially important that facilities visible from the road and located within a quarter mile of the road will be encouraged to harmonize with the natural setting. The scale of a facility should be appropriate to its setting so as not to visually overwhelm the natural setting.

b. **Picnic and Campsites.** Picnic areas and campsites will be located off the road in areas out of view of the road where possible. A spur road with suitable signs will direct the traveler to the site and protect the scenic quality.

c. **Parking Areas.** Parking areas will be located out of view of the roadway where possible. Trees or contours (either natural or artificial) should be used for screening. Use of boulders or planted vegetation may be appropriate at some sites.

d. **Signs.** Establish a uniform sign system which is compatible with and complementary to the character of the area. Signs will be used in a judicious manner so as not to clutter the roadside.

e. **Construction Materials.** Construction materials that blend into the environment or reflect the area's historic character will be used.

f. **Development Associated with Facilities.** Development associated with public facilities, e.g., utilities, parking areas, sidewalks, and lighting should be coordinated with those of other users in the area. These developments should be safe, compact, simple in line and shape, not disruptive of ecological cycles, and of a color that blends into the surrounding terrain.

g. **Utilities.** Utilities shall be placed underground. If that is not possible at specific sites, the type of poles or structures will be selected for minimizing visual disturbance and will be screened from view. Variances must be approved by the Division of Land and Water Management and the Division of Parks and Outdoor Recreation. See Transportation Guideline 3 on utility lines on page 159 of original plan.

## 2. COMMERCIAL AND NON-COMMERCIAL DEVELOPMENT

### a. Authorization Criteria.

(1) **Scale of Development and Suitability.** Large-scale commercial recreational developments are not permitted on state land in most portions of Hatcher Pass. (See Management Strategy above and Chapter 4 for exceptions.) The state has no restrictions upon commercial recreational developments on private lands. Permit or lease applications for the use of the public lands for commercial or other private sector recreational purposes will be evaluated on a case-by-case basis and require interagency review and approval. Permits or leases will be issued only if they are consistent with the management intent for the subunit in which they are to be located and will not have an unacceptable adverse impact on other uses, wildlife and scenic values, and if they provide a clear public benefit.

(2) **Relationship to Public Use.** Private sector developments must enhance public enjoyment of the area.

(3) **Cumulative Impact.** Public input throughout the planning process clearly indicated that most people prefer that care be taken not to overdevelop the area. A sense of overcrowding could easily occur since most of the area is wide open alpine tundra, and on the east side, access is limited to narrow valleys. To meet this public concern, land managers will evaluate the cumulative impact of land use authorizations as a major criteria for determining whether or not further authorizations should be issued.

(4) **Private Sector Role.** Private sector development and management of recreation facilities will be encouraged where specialized capabilities of the private sector are especially well suited for provision of high quality, safe recreation opportunities.

(5) **Avalanche Safety Plan Required.** An avalanche safety plan will be required as outlined in the Snow Avalanche Safety Program Section of this chapter as necessary or appropriate.

(6) **Development Plan Required.** Design concept proposals will be submitted for screening and approval by the Division of Land and Water Management and the Division of Parks and Outdoor Recreation within DNR and ADF&G prior to commencement of development. The design plan must be specific on terrain alteration, people flow, siting of facilities, access, utilities, parking and signs, and type of materials to be used. It will detail how the guidelines given in Number 2, above, are to be followed.

b. **Viewshed Guidelines.**

(1) **Guidelines For Public Facilities Apply.** Guidelines for public facilities given in Guideline 1, a through e, above, also apply to private sector developments authorized on state land.

(2) **Management of Visual Changes.** Authorizations of private sector developments on state land within the management area will create changes in land use and visual qualities of the management area. The goal is to maintain the integrity of the overall natural landscape through regulation of structures, materials, colors, utilities, access, etc. The prescription for management of visual change is outlined below.

(a) **Signs.** Continuity in type of sign material and design is required. Signs will be under 10 feet in height and will complement the natural setting. Natural materials such as stone or wood are preferred. Signs adjacent to the roadway will be limited to a single directional sign. Sign types and locations must be approved prior to construction by the Division of Land and Water Management and the Division of Parks and Outdoor Recreation.

(b) **Utilities.** (See Guideline 3 on page 159 in original plan).

(c) **Structures.** Structures will minimize disharmonious elements by using natural elements in their siting and design, or by reflecting the historic mining character of the area.

(d) **Siting.** Sensitive areas within the site will be identified. With the exception of ski lifts, structures will not be located on visually prominent points. Lift towers will have non-complex design elements and use color to maintain site integrity.

(e) **Parking.** Parking lots should not be large and expansive as they create surface water and snow removal problems. Use natural topography as a guide for designing parking lot edges. Boulders, contours, and vegetation are all

elements to consider to achieve a harmonious transition. Keep ground alteration to a minimum.

(f) **People Flow.** Access roads, paths, and steps provide important transitions and require design to harmonize with the entire development. Surfaces should be compact and of either gravel, cinder, or asphalt. Edging is an important consideration such as the use of wood or rocks.

c. **Tourist Gold Panning Businesses**

(1) **Location and Number of Businesses Allowed.** Several individuals have expressed interest in developing tourist gold-panning businesses. This type of business is particularly compatible with the mining character of the management unit and would enhance the tourism potential of the area. To prevent a proliferation of businesses and a sense of the privatization of the scenic road corridor along the Little Susitna River and Willow Creek, the number of gold-panning businesses will be limited to two with facilities, by lease, on public land, exclusive of the alpine ski resort/four-season resort leasehold.

[THE NUMBER OF BUSINESSES TO BE ALLOWED ARE:

**WEST SIDE OF PASS (WILLOW CREEK)**

-ONE WITH FACILITIES, BY LEASE

**EAST OF PASS (LITTLE SUSITNA OR LOWER FISHHOOK)**

-ONE WITH FACILITIES INSIDE OF INTENSIVE RECREATION NODE, OR BETWEEN FISHHOOK CREEK AND MP 14 AT A SITE WHICH CAN BE SCREENED FROM VIEW OF THE ROAD.

IDENTIFY, WITH SIGNS, AT LEAST ONE UNSTAKED AREA ALONG THE LITTLE SUSITNA RIVER WHERE GENERAL PUBLIC GOLD PANNING MAY OCCUR.

THERE WILL BE A RE-EVALUATION IN FOUR YEARS TO SEE IF THIS IS AN ADEQUATE NUMBER TO MEET TOURISM AND LOCAL DEMAND AND TO ASSESS THE AFFECTS OF THESE DEVELOPMENTS ON THE ENVIRONMENT AND OTHER USES OF THE AREA.]

Tourist oriented gold-panning businesses are prohibited on [OTHER] streams other than Willow Creek or the Little Susitna. (See Chapter Four, Little Susitna, Willow/Craigie Creek, and Baldy North/Lucky Shot Ridge Subunits for location details.)

(2) **Surface Use Authorization Required.** The DNR policy regarding recreational mining is that it is not a subsurface use under State Mining Law (see Guideline 3 on page 138). A party proposing to conduct recreational mining beyond the scope of generally permitted activities, must procure a permit or lease from the Division of Land

and Water Management. As a surface use no mining claim is necessary to conduct recreational mining activities. However, if the location proposed by the applicant is on a claim and the applicant is not the claimholder, an agreement with the claimholder must be reached prior to receiving a lease from the Division of Land and Water Management. The surface authorization will require concurrence by the Division of Mining prior to issuance by the Division of Land and Water Management to ensure that the surface use involves a minimal conflict with the subsurface. If the area applied for is not subject to a mining claim or lease, the Division of Mining will review as on other proposed surface applications. Holding a mining claim does not give that locator a preference right for a surface lease or permit. It must be done on a competitive basis.

(3) **Surface Lease Term and Renewal Conditions.** After the plan is adopted, formal proposals for development will be solicited and evaluated. Surface leases will be issued for a five-year term with a possible five-year renewal if development occurs in accordance with lease stipulations and conditions.

(4) **Criteria for Awarding Leases.** Surface leases will be issued to operators deemed best able to serve the public with the most return to the state. Information potential developers must provide in their applications include, but is not limited to:

- . Estimated fees to be charged to users.
- . Design proposal for all surface alterations and improvements. (This includes parking and signs.)
- . Location of sanitary facilities (subject to DEC approval).
- . Method of water supply.
- . Public safety.
- . A development plan outlining how guidelines given under Guideline 2, Commercial Development, will be met.
- . Description of marketing plan.
- . Ability to operate compatibly with other surface uses such as the proposed alpine ski area or commercial mining.

(5) **Type of Facilities Allowed.** Facilities which may be authorized by lease on state land for gold panning include an access road, parking, a rustic business sign near the Hatcher Pass Road (but outside of the right-of-way), a shelter for picnicking, storage or souvenir sales, and sluice boxes. Prohibited developments include a lodge, overnight camping facilities, and a bar or restaurant. If facilities are not proposed, the operation could be authorized by permit rather than by a lease and the criteria would be scaled back as appropriate to the level of the proposed operation.

(6) **Stream Buffer.** Within the 200-foot stream buffer only actual mining apparatus, trails, or a picnic shelter may be established. Vegetation removal will be minimal except for small site clearing as preapproved in the development plan by DNR in consultation with ADF&G.

d. **Coordination Between Public and Private Sectors.** Private commercial development on non-state land will be encouraged to follow the same guidelines as are required above

for public facilities. Opportunities for coordination between developers and resource managers will be encouraged. Considerations prior to facility construction on private lands include facility location, size, design, character, and operation. Considerations for private use of public lands include off-site parking, signs, and trails. Cooperation between private and public facility developers can provide the opportunity for aesthetic unity throughout the area and the development of high quality recreational opportunities.

### **3. RECREATIONAL GOLDPANNING**

Recreational mining is the use of state resources for the purposes of attempted or successful extraction of placer gold primarily for the purpose of enjoyment, pleasure, and experience rather than for the purposes of profitable extraction for resale or use. It does not require that the participant have exclusive rights to the minerals through a mining claim. As such, recreational mining is not mining or a subsurface use under State Mining Law. It is a surface use which falls into the generally permitted category of land use (11 AAC 96 and the Division of Land and Water Management Policy and Procedures Manual, Chapter 5122, Sections 1.2-1.4).

Recreational mining must occur either in unstaked areas or by permission of the claimholder. [AT LEAST ONE AREA ALONG THE LITTLE SUSITNA RIVER, WHICH HAS BEEN CLOSED TO NEW MINERAL ENTRY BY ACTION OF THE LEGISLATURE AND WHERE THERE ARE NO VALID, EXISTING CLAIMS, WILL BE IDENTIFIED WITH SIGNS AS AN OPEN, FREE PUBLIC PANNING AREA. BECAUSE THERE ARE NUMEROUS MINING CLAIMS ALONG MANY OF THE STREAMS, THIS WILL CLEARLY IDENTIFY FOR THE GENERAL PUBLIC AN AREA WHICH IS OPEN TO RECREATIONAL USE.]<sup>3</sup>.

### **4. PUBLIC SAFETY**

a. **Discharge of Firearms.** [DISCHARGE OF FIREARMS WILL BE PROHIBITED FOR PUBLIC SAFETY REASONS IN ADMINISTRATIVELY DESIGNATED CAMPGROUNDS, PICNIC AREAS, DEVELOPED TRAILHEADS AND OTHER PUBLIC FACILITIES.] See Chapter 3, Section IX., Miscellaneous Guidelines, Public Safety for policies on discharge of firearms.

b. **No Facilities in Hazard Areas.** Recreation facilities will not be constructed in high avalanche (summer-use only parking or viewing areas are exceptions to this) or flood hazard areas.

c. **Trails in Avalanche Areas.** Winter trails will not be established or maintained in high avalanche hazard areas unless no feasible alternative exists. Where trails are maintained or use is occurring in avalanche hazard areas, warning signs will be placed in strategic locations.

d. **Use of Road Corridor by Off-Road Vehicles.** See Transportation and Access section, page 158.

## 5. PUBLIC USE CABINS

a. **Location Criteria.** Public use cabins may be used to provide the public with recreational opportunities in the Hatcher Pass area, funding permitting. Cabins will be located several miles away from the road system to minimize vandalism. They should be sited in visually unobtrusive locations and screened by trees or contour features. They will not be located in moose concentration areas, within 200 feet of major streams, in avalanche hazard areas or in intensive use areas. (Suggested locations are shown on Map 12.) On-site analysis by DNR will be required prior to construction. ADF&G will be consulted prior to construction approval by the Division of Land and Water Management. The number of cabins shown on the map approximate the number and density allowed. Public interest in cabins in the management unit was mixed: a limited number was preferred by a majority of users, although many people preferred no cabins. This is a low priority implementation item. If the cabins create management problems, the state maintains the option to remove them.

b. **Existing Unauthorized Cabins.** Existing unauthorized cabins in these areas will be evaluated by the Division of Land and Water Management for possible conversion to public-use cabins.

c. **Management.** DNR will only manage public use cabins if there are adequate funds available to construct new cabins or upgrade trespass cabins, as well as maintain and operate the facilities. Agreements may be made with recreational groups for construction, maintenance, and operation of public cabins. Groups who construct cabins under such an agreement may reserve the cabin at certain times for exclusive use of the group. Exclusive use times will be specified in the agreement with DLWM. However, such groups will not have exclusive year-round use.

## 6. MANAGEMENT OF RECREATION (page 140, original plan)

a. **Management of [EAST-SIDE] Recreation.** Because of the intensive recreational use occurring on the east side of the Pass, the Division of Land and Water Management and the Division of Parks and Outdoor Recreation will share management responsibility. The two divisions will spell out in a cooperative management agreement the dual management roles to be followed in the Hatcher Pass Public Use Area and for the rest of the subunits included in a special use area [EAST SIDE OF THE PASS (INDEPENDENCE, ARCHANGEL, LITTLE SUSITNA, AND GOVERNMENT PEAK SUBUNITS).] The basic management responsibilities for each division are listed below:

Div. of Land & Water Management

Div. of Parks and Outdoor Recreation

Responsible for issuing land uses leases or permits; management of surface use on mining claims, grazing, gravel extraction; for establishing special use areas; preparing cooperative management agreements; and overseeing implementation of the plan

Coordinate with Department of Transportation and Public Facilities in road improvement projects, gravel site management, right-of-way issues, and related items

Manage people-use of the area including off-road vehicles, littering, and disturbance of natural materials, and manage for greater public safety

Design, construct, and manage recreation facilities, including trailheads, campgrounds, interpretive devices

Provide information to public on uses, natural and human history interpretation, and public safety

Promulgate and enforce regulations as appropriate to use of the area

Permitting of fly-in skiing

The Division of Land and Water Management and the Division of Parks and Outdoor Recreation will jointly review all land use proposals on the east side of the Pass.

b. **Recreation Sites.** The proposed campgrounds and picnic areas, Hatcher Pass Recreation Site, and the addition to Independence Mine State Historic Park will be managed by the Division of Parks and Outdoor Recreation as a State Recreation Site under an interagency land management agreement with the Division of Land and Water Management.

c. **Self-Enforcement.** Self-enforcement of special use designations by user groups will be encouraged through public participation in the planning process, through public education, signs and user involvement in trail siting, construction, repair, and maintenance.

d. **Borough Involvement.** The recreational needs of local communities should, in part, be provided for by the Matanuska-Susitna Borough. The Department of Natural Resources will work with the Matanuska-Susitna Borough to ensure that the demand for recreational opportunities is met on either state, borough, or other land where appropriate. The borough is encouraged to consult with DNR and ADF&G prior to the development or dedication of a recreational area within or adjacent to the Hatcher Pass Management Unit.

e. **Recreation Opportunity Spectrum.** Recreation opportunity spectrum, as applied in this plan, is a conceptual framework that is intended to provide land managers guidance as to what level of recreational development is appropriate within each subunit. This system, which has been adopted from the U.S. Forest Service, helps clarify the relationships between recreational settings, activities, and experiences. Recreation opportunity spectrum

recognizes that opportunities sought by recreationists range from easily accessible, highly developed areas to wilderness experiences.

Based on extensive public involvement, the desired recreational setting for each of the subunits and the level of acceptable changes has been described in Chapter 4 guidelines. Judgements of acceptability of changes in the recreational setting (such as increased vegetation alteration) require not only the viewpoints of managers and researchers but of citizens as well. Thus, continued citizen involvement in decisions about recreational developments will provide valuable feedback to the land manager.

f. **Coordinated Funding.** Consider a coordinated budget approach between the Division of Land and Water Management, the Division of Parks and Outdoor Recreation, and the Department of Transportation and Public Facilities to meet public facility, safety, maintenance, and management operations needs.

g. **Regulations.** The Division of Parks and Outdoor Recreation and the Division of Land and Water Management shall write regulations for management of the Hatcher Pass Special Use Area.

## 7. INFORMATION AND EDUCATION

a. **Interpretative Signs and Guidebook.** DNR will install an interpretative sign system along the roadway which identifies natural features, mining history, wildlife viewing opportunities, and provides avalanche safety information. DNR will also produce an accompanying Guidebook to Hatcher Pass. The purpose is to enhance visitor enjoyment, to educate the public about the resources and legal access, and to provide an explanation of what is allowed and not allowed by the public in active mining sites.

b. **Outdoor Education.** Continued use of the Hatcher Pass area for a variety of outdoor education is encouraged. Floral diversity, wildlife, geology, mining, skiing, mountaineering, rock climbing, and road-access for weekend wilderness travel (both winter and summer) are a few of many outdoor education activities which occur at the present time. Future classes could be conducted on range use by cattle and wildlife.

c. **Authorization Generally Not Required.** The type of outdoor activities education listed in Item b above generally does not require a permit or lease if the use is temporary and does not require structures, roads or signs, or blocking of general public use.

## 8. ENVIRONMENTAL QUALITY

The public has identified maintenance of environmental quality as one of the most important goals for the management area. Because most of the area is in the alpine vegetation zone, which is easily damaged by heavy use, management techniques such as providing hardened trails to direct use or erosion control may be required in selected areas. DNR should establish a program to annually monitor the effects of off-road vehicle (ORV) and hiking use on soils and vegetation in key popular use areas such as Reed Lakes, Summit Lake, Peters-Purches trail to

Willow Mountain, and the Willow Mountain lowlands trail. Once problems are identified, rehabilitation or mitigation measures will be undertaken as funding and/or private sector cooperation is available.

## 9. PROTECTION OF FLOWER DIVERSITY

Flowers and plants may not be removed on the east side of the Pass, within Summit Lake State Recreation Site or along the Hatcher Pass Road corridor on the west side of the Pass for a distance of 100 yards on either side of the road. The only exception will be for scientific purposes under permit. This guideline does not apply to berry picking.

[REPORTS FROM A NATURALIST AND OTHER CITIZENS OF HIGHGRADING OF SELECT SPECIES, SUCH AS ORCHIDS AND CHOCOLATE LILIES POINT TO WHAT COULD BECOME A PROBLEMS OF LOSS OF SPECIES DIVERSITY IN THE ACCESSIBLE ALPINE AND SUBALPINE AREA ON THE EAST SIDE OF THE PASS.

AS PART OF THE DIVISION OF PARK'S MANAGEMENT OF RECREATIONAL USE OF THE PASS, FLOWERS MAY BE DUG UP ON A PERMIT BASIS ONLY. THERE WILL BE NO RESTRICTIONS WEST OF THE PASS, EXCEPT THAT COMMERCIAL USE OF PLANTS REQUIRES A PERMIT AS IT DOES ON ALL STATE LANDS.]

## 10. UNIQUE ECOSYSTEM RESOURCES

The management unit provides many opportunities for outdoor education and scientific study, and sites may be appropriate for designation as ecological reserves for the transitional flora, diversity of flowers, interesting and accessible geologic features (rock glaciers, rock avalanches, slab releases), and unique-to-the-region tundra nesting birds. These sites, once identified, are to remain natural and be used for education and research. Interagency review will be required prior to establishment of ecological reserve site(s).

## 11. TRAIL MANAGEMENT (See Transportation and Access, page 159.)

## 12. ESTABLISHMENT OF NON-MOTORIZED USE AREAS

Pursuant to 11 AAC 96.010(2) and 11 AAC 96.010(3)(b) of the Miscellaneous Land Use Regulations, the following areas are to be established as special use areas where non-motorized use is allowed only under specified conditions (see Chapter IV for details):

- Upper Little Susitna Valley
- Reed Valley Lakes
- Independence Mine State Historic Park addition
- Hatcher Pass/Summit Lake Recreation Site
- Bald Mountain habitat area

Other special use areas may be created to implement the off-road vehicle management policies (see page 160-162) and subunit guidelines for recreational use.

### 13. POLICY FOR ESTABLISHMENT OF A HIGH PEAKS SPECIAL USE AREA ADJACENT TO PLAN AREA

Due to strong public support for establishing special management of motorized use in the high peaks area adjacent to the northeast portion of the management unit, the Division of Land and Water Management agrees to consider a request for establishment of a special use area wherein allowed motorized use would be specified and authorized by a permit. This action would be separate from this plan since the area under consideration is outside the plan boundary. This request should be submitted in writing, and it is recommended that those making the request include available user data and work out a compromise where certain area(s) would be authorized for fly-in use. This area does not need to be included within the plan boundary to create a special use area. (See Appendix XI for background information.)

### 14. [FLY-IN SKIING] AIRCRAFT LANDINGS (page 143, original plan)

[DNR RECOGNIZES THAT BOTH WALK-IN AND FLY-IN SKIING ARE POPULAR USES. AT SOME POINT IN THE FUTURE, SOME LIMITATIONS MAY HAVE TO BE PLACED ON THE LEVEL OF FLY-IN USE IF ALL USES KEEP ACCELERATING AS ANTICIPATED. HOWEVER, OUTSIDE THE DESIGNATED NON-MOTORIZED AREAS, NO SUCH RESTRICTIONS ARE PLANNED IN THE NEAR TERM. PERMITS MAY BE REQUIRED, HOWEVER, FOR COMMERCIAL HELICOPTER OR FLY-IN SKIING TO ENSURE PUBLIC SAFETY AND REDUCE POTENTIAL LIABILITY CLAIMS AGAINST THE STATE].

**a. Aircraft Landings in Archangel and Government Peak Subunits.** In Archangel and Government Peak Subunits, limit the landing of aircraft used for commercial recreation to designated natural landing sites. The use of aircraft on the east side of Hatcher Pass is likely to increase as a result of the resort. The purpose of this restriction is to preserve opportunities for diverse recreational experience, consolidate impacts, contain management costs, and allow for efficient monitoring of cumulative impacts.

DNR will designate landing sites following adoption of the plan in consultation with an interagency work group and interested members of the Citizen's Advisory Committee. Agency participants should include but not necessarily be limited to the Division of Land and Water, the Division of Parks, the Matanuska-Susitna Borough, the Department of Fish and Game, and the Department of Transportation. Local helicopter pilots should also be consulted. Public notice of the intent to designate sites will be given. Snowbird Glacier will probably be one of the designated landing sites.

**b. Impact From Aircraft Use.** DNR will monitor the effects of the landing of aircraft on wildlife, alpine vegetation, and other recreational uses and may modify its management of designated landing sites accordingly.

**c. Flight Corridors, East Side of Hatcher Pass.** Aircraft flying over the east side of the Pass below 1,500 feet will be encouraged to use a flight corridor that avoids the Little Susitna, Reed Lakes, and Independence subunits and other areas that may be designated as off limits for most forms of motorized use.

**d. Arkose Ridge heliskiing.** Evaluate heliskiing opportunities on the west end of Arkose Ridge near Delia Creek (in the vicinity of Delia Creek within sections 1 and 12, T19 N, R1E and sections 6 and 7, T19N, R2E). If the potential is good, allow limited helicopter landings within the area shown as D on Amendment Map 6. The pick-up point is to be located to minimize impacts on the existing nonmotorized zone. (Area D is primarily within the Little Susitna Subunit; part of it is also within Government Peak Subunit A.)

## VI. SUBSURFACE RESOURCES

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### e. Areas Closed to Mineral Entry (page 147, original plan)

The original plan was amended in 1987 to close the additional area shown here to new locatable mineral entry (Mineral closing orders 541 and 549). See Map 2 in this document.

Site	Acreage
• Lucky Shot Ridge Campground	300
• Hatcher Pass State Recreation Site	360
• Addition to Independence Mine State Historic Park	530
• Hatcher Pass Road corridor to the Pass	1,085
• Reed Valley/Lakes	1,952
• Little Susitna Headwaters Lake	80
• Potential <u>Resort</u> [ALPINE SKI AREA] [2,150]	<u>11,545</u>
(with a 10-year sunset clause if development is not initiated within that time)	
• Material sites identified by DOT/PF for future development based on field testing and site analysis. These closures will be limited to 40 acres and the actual number of pits needed for maintenance and construction. Most of the Little Susitna River corridor within the management unit has been closed to mineral entry by the Legislature.	

## VII. TRANSPORTATION AND ACCESS

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### B. MANAGEMENT STRATEGY (page 153, original plan)

The major intent is to provide a safe and scenic road. To that end, DNR will work cooperatively with DOT/PF on any reconstruction or significant maintenance projects on the Hatcher Pass Road. (DOT/PF is the manager of the road right-of-way which is 200-foot wide in most locations.) The road is central to recreational, tourism, and resource development uses of the area, and thus, agreement between DNR and DOT/PF for management of the road corridor is essential for overall plan implementation.

Based on public desires and the anticipated traffic volumes, the standards identified in the 1984 manual by the American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets [APPLICABLE TO RECREATIONAL ROADS] should be applied to any future reconstruction of The Hatcher Pass Road. [THESE STANDARDS ARE IDENTIFIED IN THE 1984 MANUAL BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), A *POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*.] Appropriate scenic pulloffs and parking areas should also be included in any reconstruction of this road.

The Hatcher Pass Road serves as the primary access road through the planning area. [THE AASHTO STANDARDS FOR RECREATIONAL ROADS INDICATE THAT PRIMARY ACCESS ROADS SHOULD BE CONSTRUCTED WITH A TRAVELED WAY WIDTH OF 22 TO 24 FEET AND A SHOULDER WIDTH OF 2 TO 4 FEET.] When funding is appropriated to reconstruct the Hatcher Pass Road, a multidisciplinary team will be formed by DOT/PF to provide recommendations for the design of this road. A public participation process should be utilized throughout the design of this road to provide an opportunity for public review and comment on the design. The guidelines listed below provide the framework within which more detailed design decisions will be made.

New construction for access for recreational, mineral, timber development, or management will be carefully planned to serve multiple uses where appropriate and to minimize undesirable impacts on other resources or uses.

The management strategy for off-road vehicle use is to work with users to identify a designated trail system, and repair damaged areas. This will both provide for continued or expanded opportunities for ORV use while protecting sensitive soil, vegetation, and drainage areas.

## C. GUIDELINES

### 2. HATCHER PASS ROAD (page 154, original plan)

a. Degree of Improvement. The Hatcher Pass Road should be upgraded as outlined below according to AASHTO Standards. [FOR RECREATIONAL AND RESOURCE DEVELOPMENT ROADS.] All recommended improvements are dependent on the anticipated type and volume of traffic.

Section of Road	Type of Improvement
(1) MP 7-14 SE Boundary of Management Unit to Mother Lode Lodge (along the Little Susitna River).	[PAVE TO KEEP DUST DOWN] Reconstruct and pave to reduce dust, and [FOR EASIER MAINTENANCE] improve safety, capacity, and maintainability; pullouts as identified on Map 12 in the original plan (if feasible and safe).
(2) MP 14 - 17.5 and Gold Cord Road; Mother Lode Lodge to Independence Mine State Historic Park.	Reconstruct road with [GRAVEL SURFACE AND] pull outs. Pavement may be required depending on traffic volume.
(3) MP 17.5 - 34.5 Independence Mine State Historic Park turn off west to paved road.	Improvement [MAINTENANCE UPGRADE] with scenic pull outs. Road reconstruction and/or pavement may be required depending on traffic volume.

The road [WILL] should not be paved in Section [2 AND] 3 unless [ONLY IF] the traffic volume increases to the point that paving is necessary for dust control or maintenance. [IS SO HIGH THAT THE ONLY FEASIBLE WAY TO MAINTAIN THE ROAD IS BY PAVING IT]. The intent is to keep the road as a low-speed, scenic roadway. DOT/PF will provide the public an opportunity to comment on road reconstruction plans and will provide information on the effect of funding sources on road standards; e.g., if federal funds are used, road construction to the standards of the American Association of State Highway and Transportation Officials (AASHTO) would be required. DOT/PF will consult DNR and ADF&G prior to carrying out any maintenance upgrade projects if they involve additional cut and fill outside the existing roadbed.

#### DNR recommends that:

(1.) The Department of Transportation and Public Facilities give special emphasis in the design of any road improvements to maintaining the scenic and recreational quality of the roadway; reduced design speed should be considered to achieve the objective.

(2.) Consideration will be given to minimizing social, environmental, and economic impacts during the road design process, including displacement of existing structures.

(3.) At the time of design of road reconstruction, demand for a separated bike and pedestrian trail should be evaluated and construction of a separated bike and pedestrian trail should be considered. If a snowmobile trail between the Mother Lode Lodge and Hatcher Pass has not been developed at the time of design of road reconstruction, DOT/PF should evaluate the feasibility of designing the bike and pedestrian trail to be used by snowmobiles in winter. The intent in this case is that the trail be for nonmotorized use in summer and motorized use in winter.

(4.) The impact of the proposed resort development activities on other roads accessing the proposed resort area will also be considered.

## C. GUIDELINES

Change to Guideline 2d. Design Considerations, page 155, original plan

(2) **Contour Grading Plan.** The design of the roadway should follow the contour of the topography to the extent that the appropriate standards [FOR RECREATIONAL ROADS] can be met. The intent is that the road should blend with the landscape.

(9) Coordination With Resort Project. Road design and construction should be coordinated with ski area/four-season resort master development planning.

## 11. AIRCRAFT

See Recreation Guideline 14 regarding landing of aircraft used for commercial recreation in Archangel and Government Peak Subunits and flight corridors.

## **IX. MISCELLANEOUS GUIDELINES**

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### **LAKESHORES AND STREAM CORRIDORS**

#### **A. GOALS**

1. Provide for common use of water by people for the maximum benefit to people through the established statutes and regulations related to water management.
2. Protect riparian habitat, breeding areas for fish and wildlife, lakeshores, and river corridors for fish and wildlife and other recreational uses.
3. Assure water quality is maintained.

#### **B. MANAGEMENT STRATEGY**

The overall management intent for lakeshores and stream corridors is to maintain and protect riparian zones, water quality, lake shorelines and river banks while allowing for multiple use of the resources. Public access to public waters will be maintained.

#### **C. GUIDELINES**

##### **1. RIPARIAN ZONES**

a. Any timber harvest or habitat enhancement activity altering the habitat/vegetation within the riparian zone shall require concurrence by DNR and ADF&G subject to existing laws. The following activities require review and concurrence. Where such activities occur within state road rights-of-way, DOT/PF should consult with DNR and ADF&G prior to removal of vegetation.

- (1) Road and trail construction
- (2) Habitat enhancement projects
- (3) Timber cutting
- (4) Material removal
- (5) Grazing

## 2. STREAM BUFFERS

In order to protect water quality, riparian habitat, and recreation values; a buffer of essentially undisturbed land and vegetation should be protected along streams.

a. Group I - Little Susitna River, Fishhook, Archangel, Reed, Willow, Little Willow, Peters, Purches and Government Creeks, and other perennial streams in the eastern Section II of the Hillside Subunit. The buffer area shall be normally 200 feet on either side of the high water mark and shall include all streamside riparian vegetation zones

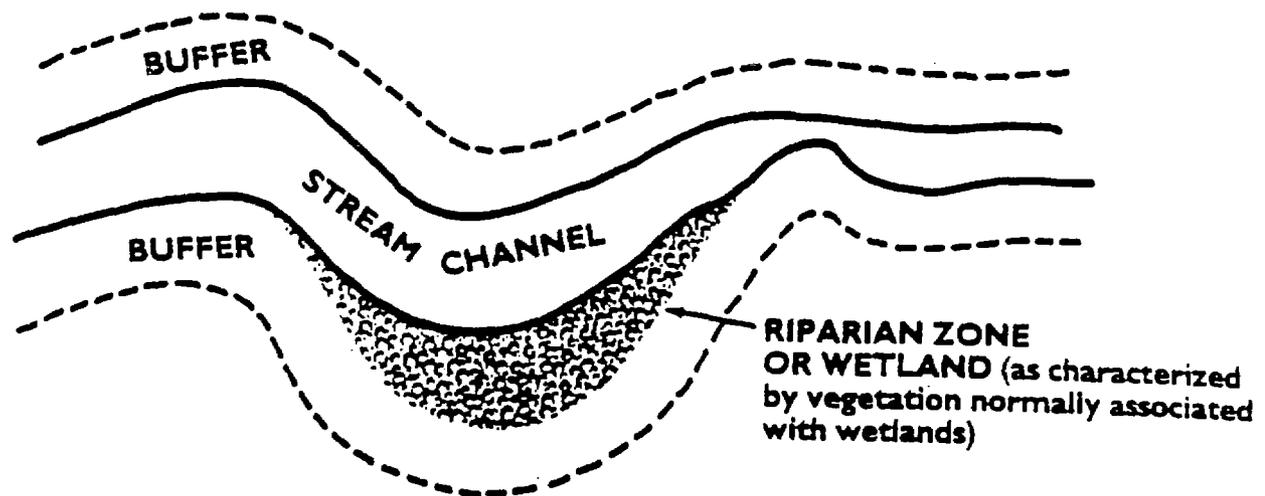
b. Group II - Other Perennial Streams identified on a U.S. Geological Survey 1:63,360 topographic map or field verified by ADF&G and DNR; the buffer shall be 100-foot wide on either side of the high water mark and shall encompass the adjacent riparian vegetation zones. (See illustration in Figure 5).

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**FIGURE 5**

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STREAM BUFFER ILLUSTRATION



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### c. Buffer Adjustments

(1) **Riparian Zone Less Than 100 Feet.** The buffer width on Group II streams may be reduced to the width of the riparian zone or 50 feet, whichever is greater, if field verification by ADF&G and DNR concludes the riparian zone is less than 100 feet wide.

(2) **Slope Effects.** Buffer widths on Group I and II streams should be adjusted to reduce potentially adverse impacts of development within sloping buffer areas. Buffer widths should follow the following table:

<b>Average Side Slope</b>	<b>Buffer Width</b>
0 - 20 %	SB
20 - 40%	SB + 25%
40% or greater	SB + 50%

SB = Standard buffer (Group 1 = 200' and Group II = 100')

(3) **Wind Effect.** In forest harvest areas, riparian buffer widths should be widened as necessary to increase resistance to windthrow of the residual buffer trees in areas subject to strong winds.

d. **Activities Allowed in Group I and II Stream Buffers**

(1) Selective-tree cutting as approved by ADF&G, the Division of Parks and Outdoor Recreation, and Division of Land and Water Management.

(2) Disease and insect control and prevention with pesticides and/or tree removal as approved by ADF&G, Division of Parks and Outdoor Recreation, DLWM, and Division of Environmental Conservation.

(3) Grazing as approved by the Division of Parks and Outdoor Recreation, DLWM, and ADF&G, and consistent with the grazing guidelines in this chapter.

(4) Picnic facilities, foot paths, parking, and other recreational developments which are shown on the land use plan map or for which no feasible alternative exists due to the location of access routes in stream valley floors. Such allowable recreational developments will be designed to prevent bank erosion, increased run off of water, and other negative impacts to anadromous fisheries.

(5) Road and trail access to and/or across streams for recreation, habitat enhancement, or forest operations as approved by ADF&G, the Division of Parks and Outdoor Recreation, and DNR.

(6) Access to and/or across streams for utility lines such as powerlines and waterlines, etc., as approved by ADF&G, the Division of Parks and Outdoor Recreation, and the Division of Land and Water Management. Utility systems should not be located so that they parallel stream systems; rather they should cross streams in a perpendicular fashion to the extent feasible and prudent. Utility systems should be underground where possible. (See Chapter 3, Recreation, Public Facilities and Transportation Guideline 3.)

### 3. LAKE BUFFERS

- a. **Lakes Less Than 5 Acres.** Buffer widths for lakes up to 5 acres in size are set at 200' landward of the lake's high water mark.
- b. **Lakes Between 5 and 100 Acres.** Buffer widths for lakes between 5 and 100 acres in size are set at 300' landward of the lake's high water mark.
- c. **Lakes Over 100 Acres.** Buffer widths for lakes exceeding 100 acres in size are set at 400' [100] landward of the lake's high water mark.
- d. **Side Slope Adjustment.** Buffer widths for lakes should be adjusted to reduce potentially adverse impacts on wetlands from development on adjacent side slopes. Buffers should be the standard buffer width for side slopes of 0-20 percent, 25 percent additional buffer should be added to the normal buffer width for side slopes of 20-40 percent, and 50 percent additional buffer should be added to the normal buffer width for side slopes of 40 percent or greater.
- e. **Allowable Activities.** Activities allowed within lake buffers include all activities (1 - 5) that are allowed in stream buffers. In addition:
  - (1) Access for development and utilization for sport fishing shall be an allowable activity within these buffers.
  - (2) Access to lakes for utility lines such as powerlines and waterlines, etc., as approved by ADF&G, the Division of Parks and Outdoor Recreation, and DNR. Utility systems should not be located so that they parallel lakeshores.

## **PUBLIC SAFETY**

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### **1. RESCUE PLAN**

Encourage development of a comprehensive rescue plan for the management unit by using the State Trooper Statewide Search and Rescue Plan, and initiating coordination among all local rescue teams. A cooperative rescue plan should be initiated between rescue technicians on the east and west sides of the pass. The Mat-Su Borough Emergency Services or other organizations could be encouraged to participate in training procedures as well.

### **2. EMERGENCY PHONE-RESCUE CACHE**

An emergency telephone and emergency rescue caches should be installed near intensive use areas including recreation sites, parking lots, and/or trailheads.

### **3. OTHER PUBLIC SAFETY GUIDELINES**

Other public safety guidelines are incorporated in Chapter Three within the "Transportation and Access" (page 158, 1.g), "Snow Avalanche Safety Program" (page 180), and "Recreation" (page 139, Guideline 3).

### **4. DISCHARGE OF FIREARMS**

To enhance public safety in high public use areas, the discharge of firearms should be prohibited in certain areas within the Hatcher Pass Management Unit. The Matanuska-Susitna Borough is the preferred jurisdiction to implement this guideline.

State law prohibits the discharge of firearms from on or across a highway or trail (AS. 11.61.220 (a)(2) and 11.81.900 (a)(24)).

In addition shooting should be prohibited in the following high public use areas:

**Hatcher Pass Road, East, Pass Area.** Within 1/2 mile of either side of the Hatcher Pass Road from where the road enters the management unit on the east side at approximately Milepost 7.8 to the turn off to upper Willow Creek Valley at approximately Milepost 20.5.

**Gold Cord Road.** Within 1/2 mile of either side of the Gold Cord Road from its junction with the Hatcher Pass Road to Independence Mine State Historic Park.

**Gold Mint Trail.** Within 1/2 mile of either side of the Gold Mint Trail from the Gold Mint Trailhead to Archangel Creek, and the cleared site north of Archangel Creek at the junction with the Little Susitna River.

Developed Recreation Facilities. Within 1/2 mile of developed public and private recreation facilities; this includes:

a. Independence Mine State Historic Park

b. Summit Lake State Recreation Site

c. Campgrounds, picnic sites, developed wildlife viewing sites, public use cabins, and other recreational facilities which may be developed in the future.

d. Private recreation facilities such as within the proposed ski area/four-season resort or groomed winter trails.

## SNOW AVALANCHE HAZARD

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### 2. PRIVATE SECTOR DEVELOPMENT (page 181, original plan)

IT IS REQUIRED THAT POTENTIAL PRIVATE SECTOR DEVELOPMENTS/OPERATIONS ON PUBLIC LAND PROVIDE A DETAILED AVALANCHE HAZARD ANALYSIS.

A. **STUDY.** THE POTENTIAL DEVELOPER WILL HIRE A QUALIFIED AND APPROVED (BY DNR) AVALANCHE SPECIALIST TO PREPARE A DETAILED STUDY OF AVALANCHE IMPACTS AND METHODS OF MITIGATION.

B. **REQUIREMENTS.** IT IS REQUIRED THAT METHODS OF MITIGATION BE IMPLEMENTED AS A CONDITION OF DEVELOPMENT:

- . STRUCTURAL CONTROL.
- . PERIODIC CLOSURE.
- . EXPLOSIVE CONTROL (FOR SKI AREAS) -- THIS MUST BE COORDINATED WITH DOT/PF AVALANCHE CONTROL PERSONNEL.
- . OVERALL SNOW SAFETY/RESCUE PLAN.]

a. **Snow Safety Plan Required.** A snow safety plan will be required for winter commercial operations such as fly-in skiing, snowcat skiing, guided backcountry skiing/mountaineering, and ski area development. Classes and advertised events of educational institutions and non-profit groups are included in the definition of commercial. Specific requirements are delineated in the Hatcher Pass Special Use Area Document of Intent, Addendum A, November 21, 1986, and as amended.

b. **Purpose of Snow Safety Plan.** These commercial activities attract people to the area who may be unprepared for the hazardous conditions which exist. Additionally this plan has identified the hazard potential and the State should take steps to reduce its liability. Further, a snow safety plan may be a condition for private operators to obtain liability insurance.

c. **Liability Insurance and Indemnification.** Liability insurance may be required of operators. The amount will depend on the type and scale of the proposed operation. The permittee/lessee will indemnify the state from liability claims which may arise from the permittee's/lessee's operations.

d. **Commercial Operators Responsibilities.** The commercial operator will make responsible, consistent efforts to comply with provision of the safety and operations plan, to determine the extent of safety hazards and take steps to reduce these hazards. Some risk is always present in a backcountry ski operation, however, and the user must also assume a part of the risk.

e. **Avalanche Hazard Evaluation Required.** Prior to beginning operations, the commercial operator should have an avalanche hazard evaluation performed if such an evaluation is not already available from private or public sources. It is recommended that the operator use

an expert with several seasons of paid, full-time experience in one or more of these areas: hazard evaluation, mitigation and control, forecasting with snow specialist background. The study should identify the runs to be used and the degree of hazard.

Ski resort operators are required to perform an avalanche hazard evaluation and obtain approval of the safety plan prior to obtaining approval for operation. This requirement also applies to other commercial operators who propose to use areas identified as "high potential" avalanche hazard in the avalanche hazard map prepared for the draft plan.

f. **Operation and Safety Plan.** An operation and safety plan should be put into effect which delineates how the operation will proceed in low, moderate, and high avalanche hazard periods. The basic elements that should be included in the operation and safety plan are given below. Requirements may vary depending on location and degree of hazard associated with the operation:

(1) Mobilization plan in case of accident or avalanche.

(2) Radio and dispatch ability.

(3) Contacts with weather service and qualified personnel checks weather and snow conditions during operations.

(4) Guides(s) or ski safety patrollers at a minimum should have emergency trauma training as well as knowledge and training of avalanche safety precautions and rescue techniques.

(5) Identification of mitigation methods such as periodic closure of operations, structural control, explosive control (for ski areas this must be coordinated with the DOT/PF avalanche control personnel), or other appropriate measures.

(6) For noncontrolled areas in the backcountry, the operator should provide safety beacons and information on safety procedures to clients.

# IMPLEMENTATION

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## **CHAPTER FIVE:**

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### **IMPLEMENTATION**

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This chapter outlines the actions necessary to implement the land use policies and planned actions described by this plan. These actions include proposals for legislative designation of certain lands, improvements to the Hatcher Pass Road, a list of agency responsibilities, priorities for capital improvements for recreation, land use classifications, priorities for instream flow studies, and recommendations for cooperation or coordination with the Matanuska-Susitna Borough, the Bureau of Land Management, other agencies, and the private sector.

These implementation actions will be used as a basis for budget preparation, requests for legislative funding of capital improvement projects or designations, data collection, and other actions necessary to implement the plan.

It is anticipated that these actions will take place over the 20-year life of this plan and as the need for them develops. In some cases, the need exists now due to public safety concerns (for example, an avalanche safety program, off-the-road parking, and a snowmachine trail to Hatcher Pass); in other cases the need may be years away (such as parking and trail development on the southwest end of Bald Mountain Ridge, or a campground on Willow Creek). Most of the projects are dependent on funding, although some could be done with volunteer help, such as brushing out recreational trails, identifying historical sites, or improving search and rescue capability.

# **I. PRIORITIES FOR LEGISLATIVE DESIGNATION**

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The plan includes proposals for legislative designation of areas requiring intensive recreation management and for moose habitat protection for inclusion within the Hatcher Pass Public Use Area. These special designations would serve as official recognition of the outstanding public values in these areas and of the state's intent to retain these areas in public ownership in perpetuity. A legislative designation is recommended when an area proposed by the plan for long-term retention possesses such high resource values that:

1. It is clear that the area should remain in public ownership permanently; and/or
2. The nature and value of the resources present require more restrictive management for their protection than is possible under a departmental use classification order.

## **A. AREAS RECOMMENDED FOR INCLUSION IN THE HATCHER PASS PUBLIC USE AREA - 4,317 Total Acres**

### **1. UPPER LITTLE SUSITNA VALLEY--REED VALLEYS - 3,232 Acres**

These two river corridors include areas of exceptionally high scenic and public use value. Both valleys are becoming increasingly popular for day and weekend use by urban dwellers. The Little Susitna River is a coho and king salmon spawning and rearing area and supports intensive downstream fisheries. This addition will add the headwaters of the Little Susitna to the existing public use area. Grazing, hunting, trapping, and mining on existing claims would continue as uses within the area.

### **2. ROAD CORRIDOR ARCHANGEL TO HATCHER PASS - 1,085 Acres**

This section of the Hatcher Pass Road and its adjacent corridor is proposed for inclusion in the legislatively designated area due to its high tourism and local use values and the need for intensive public safety and recreational management. Historically, mining has not occurred here and has been found to be an incompatible use, thus this corridor will be closed to mineral entry.

## **B. SPECIAL WILDLIFE HABITAT AREA**

### **WILLOW MOUNTAIN MOOSE CONCENTRATION AREA - 22,720 Acres**

This area is recommended for legislative designation to ensure long-term retention in public ownership and management for its wildlife values.

The western slopes of Willow Mountain provide winter and summer range for high populations of moose. Year-round concentrations of 1,500 - 2,000 moose are among the highest in the Susitna Basin. It provides important near-to-population centers harvest opportunities. Special management will become increasingly important as use increases as a result of improved access for forestry harvest west of the management unit.

## **II. TRANSPORTATION PROPOSALS**

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### **A. HATCHER PASS ROAD IMPROVEMENTS**

Improvements of the Hatcher Pass Road and implementation of an avalanche safety program are major components for public safety, use, and enjoyment of the area. Weekend use of the current road has reached a saturation point. Lack of pull outs, parking, inadequate road width, substandard roadbed, drainage, and lack of a regular avalanche control program are the key problem areas.

Recommendations for the level of upgrade for specific portions of the Hatcher Pass Road are listed below. The road should be upgraded according to the American Association of State Highway and Transportation Officials (AASHTO) standards [FOR RECREATIONAL ROADS]. DOT/PF has prepared these for discussion purposes only -- actual road cost estimates must be determined based on the avalanche and reconnaissance study.

Table 21

**HATCHER PASS ROAD IMPROVEMENT COST ESTIMATE**

Phase	Location	Action	Cost (1986 \$)
I	East side	Avalanche hazard study	\$ 60,000
	[ENTIRE ROAD] MP 7 - 17.5	Road construction design	[\$ 500,000] <u>\$ 1,600,000</u>
II	MP 7 - 14 Boundary of Management Unit to Mother Lode Lodge	Reconstruction and pave; pullouts as identified on the Land Use Map 12.	[\$ 8,500,000] <u>\$ 9,300,000-</u> <u>\$15,900,000</u>
III	MP 14 - 17.5 and Gold Cord Road: Mother Lode Lodge to Independence Mine State Historical Park	Reconstruct road with [GRAVEL SURFACE AND] pull outs. Pavement may be required, depending on traffic volume.	\$ 5,900,000
IV	MP 17.5 - 34.5 Independence Mine State Historical Park turn off west to paved road	[MAINTENANCE UPGRADE] <u>Improvement</u> with scenic pull outs. Road reconstruction and/or paving may be required, depending on traffic volume.	\$ 2,200,000
		TOTAL ESTIMATED COST	_____ [\$17,160,000] <u>\$19,060,000 -</u> <u>\$25,660,000</u>

These estimates do not include operating and maintenance costs, avalanche control east of the pass nor parking lot construction.

**B. AVALANCHE SAFETY PROGRAM FOR HATCHER PASS ROAD CORRIDOR**

<b>1. One-Time Cost</b>	<b>Estimated Cost</b>
Two sets of gates and signing	\$10,000
<b>2. Annual Cost</b>	
Staff funding for observer for 4 months	\$16,000
Helicopter time and dropping charges at \$3,000/time, 10 times per season (minimal safety level)	\$30,000

**C. CRAIGIE CREEK ROAD**

Craigie Creek Road, which is one lane, should receive at least minimal maintenance and pullouts--first three miles only--should be added for safe passing if the road is not upgraded for mining purposes. This is not a DOT/PF maintained road and will require special funding for recreational access.

Improvements: \$300,000  
Annual Maintenance: \$1,000-\$2,000 (one time grading)

**D. PARKING AREAS**

Lack of parking is a public safety problem. Vehicles commonly are found parked in the roadway, in avalanches chutes, or in makeshift pull outs. Inadequate parking concentrates users in the few accessible areas and leads to safety problems, conflicts between user groups, and a diminished enjoyment of the area.

Parking areas proposed for construction are listed in priority order below. Priorities are based on safety and management needs such as dispensing use, public demand, and numbers of users.

Cost estimates are given for two levels of construction. The first column is a contract labor estimate which includes state inspection, design, attention to visual qualities, and a higher quality parking lot. The second column represents an estimate of construction by state maintenance forces and does not include design or landscaping. It is likely to result in a less attractive road.

<u>Cost Estimates</u>	
<u>Contract labor including design &amp; landscaping</u>	<u>State maintenance construction, no design or landscaping</u>

## 1. FIRST PRIORITY PARKING AREAS

* Snowmachine parking south of MP 14 in an avalanche safe zone near the snowmobile play area (40 space). This will provide safe snowmachine access with minimum road crossings.	50,000	25,000
* MP 14, north of the Gold Mint Road and Hatcher Pass Road junction, (40 spaces) for sledding, ski play area, kayak put-in, and hiking.	50,000	25,000
* Archangel road within the first mile in an avalanche safe zone (30 spaces) for dog mushing, bobsledding, snowmachining, and skiing.	38,000	19,000
* Provide additional parking adjacent to the Independence Mine State Historic Park (75 spaces) and in the lower valley (75 spaces).	94,000	47,000
	94,000	47,000
* Summit Lake and Hatcher Pass area, 1-3 small parking areas should be developed and the numerous tundra pull off areas blocked off to use by placement of boulders and berms.	30,000	15,000

## 2. SECOND PRIORITY PARKING AREAS

* Lucky Shot Ridge, MP 29.6 (30 spaces) for trailhead parking for Peters-Purches Trail.	38,000	19,000
* Trailhead parking area near the Willow Creek bridge is recommended, MP 34.2 (50 spaces).	63,000	32,000

<u>Cost Estimates</u>	
<u>Contract labor including design &amp; landscaping</u>	<u>State maintenance construction, no design or landscaping</u>

- |   |         |        |
|---|---------|--------|
| * MP 16.5, gravel pit site (50 spaces), improvements to recontour the banks and upgrade existing lot primarily for snowmachining and sledding.  | 63,000  | 32,000 |
| * Establish a parking area at the Snowbird Road turn off (30 spaces) and a small parking area near the end of Archangel Road (8 spaces).  | 38,000  | 19,000 |
| * East end, Section 27, Hillside subunit, 1/2 mile access road, trailhead parking (100 spaces), eventual 18-20 mile (30 km) trail system for winter ski trails, summer hiking, and horseback use. | 125,000 | 63,000 |

### 3. THIRD PRIORITY PARKING AREAS

- |   |                            |        |
|---|----------------------------|--------|
| * Fishhook overlook, MP 16 (30 spaces).   | 38,000                     | 19,000 |
| * Grubstake Gulch trailhead, MP 26 (10 spaces).   | 13,000                     | 6,500  |
| * Establish a new snowmachine trailhead (100 spaces)  | 125,000                    | 63,000 |
| * One-mile access road to the south corner of Section 7 of the Hillside Subunit for snowmachine access. Connect to proposed Park-Edgerton off road snowmachine trail. Possible recreation lease site. | no available cost estimate |        |

### 4. FOURTH PRIORITY PARKING AREAS

- |   |        |        |
|---|--------|--------|
| * Central portion, Hillside Subunit, parking (50 spaces) with access via existing road, for a proposed dog mushing trail, 15 miles (25 km). | 63,000 | 32,000 |
|---|--------|--------|

<u>Cost Estimates</u>	
<u>Contract labor including design &amp; landscaping</u>	<u>State maintenance construction, no design or landscaping</u>

\* Trailhead (100 spaces), west end, Section 7 of Hillside Subunit, southeast corner, tied to the proposed forestry access road, an eventual 18-20 mile (30 km) trail system, possible recreation lease site.

125,000      63,000

**5. FIFTH PRIORITY PARKING AREAS**

\* Lucky Shot Ridge, MP 25 (10 spaces) for a hiking trailhead.

13,000      6,500

\* Bald Mountain trailhead, MP 31 (20 spaces).

26,000      13,000

\* Sawmill Creek, MP 29 (10 spaces).

13,000      6,500

\* Trailhead parking at MP 34.5 (30 spaces) for a proposed dog mushing trail.

38,000      19,000

## E. PULL OUTS

The following is a preliminary list of pull outs which have been identified by DNR. It is intended to guide selection of pull outs which should be constructed as part of Hatcher Pass Road improvements. These pull outs are related to the best scenic viewing opportunities, natural features where interpretative signs are proposed and to recreational use.

	<u>Cost Estimates</u>	
	<u>Contract labor including design &amp; landscaping</u>	<u>State maintenance construction, no design or landscaping</u>
* Little Susitna bridge, MP 8.5 (5 spaces).	6,500	3,300
* Pinnacle rock, MP 9 (5 spaces).	6,500	3,300
* Scenic view, MP 9.5, 10.7, 11.6 (5 spaces each).	19,500	9,800
* Lower Fishhook Creek, MP 13 (10 spaces).	13,000	6,500
* Beaver Pond, MP 13.2 (5 spaces).	6,500	3,300
* Scenic view, MP 16.2, 18.1 (5 spaces each).	13,000	6,500
* Bullion Mountain pullout, MP 21 (10 spaces).	13,000	6,500
* Trailhead below Lucky Shot Ridge at MP 25 (10 spaces) for a proposed summer hiking trail.	13,000	6,500
* MP 26.1, views of War Baby and Lucky Shot mines (5 spaces).	6,500	3,300
* MP 25.4, view of Grubstake Gulch (5 spaces).	6,500	3,300
* MP 27.2, Beaver lodge in Willow Creek (5 spaces).	6,500	3,300
* MP 35.2, view of Willow Mountain, Peters and Purches Creek valleys (5 spaces).	6,500	3,300

## F. DNR-DOT/PF COORDINATION

The Department of Transportation and Public Facilities and the Department of Natural Resources will prepare a Memorandum of Understanding to spell out the specifics of the agreement between DOT/PF and DNR on the following items:

### 1. DOT/PF COMPLIANCE WITH PLAN

- a. **Plan Guidelines.** DOT/PF agrees to comply with the plan guidelines for material sites, road improvements and maintenance, or improvement of scenic viewsheds within the Hatcher Pass Road right-of-way to the extent economically practical and subject to legislative intent of appropriations.
- b. **Overhead Powerlines.** Utility lines will be located so that they generally cannot be seen from the Hatcher Pass Road--they will be screened or buried--unless no feasible or prudent alternative exists. Prior to granting approval for an overhead utility line that cannot be screened from the roadway, the authorizing agency (DOT/PF or DNR) will conduct interagency and public review of the proposal including a public hearing.

### 2. DOT/PF IMPLEMENTATION ITEMS

- a. **Material Sites Testing.** DOT/PF should site test the potential material sites given in the plan and develop sites as needed according to the plan guidelines. A high priority will be placed on maintenance of scenic qualities through application of viewshed guidelines.
- b. **Avalanche Study Commitment.** DOT/PF will evaluate the need for funding an avalanche hazard study and control program based on statewide priorities and if possible, seek funding.

### 3. DNR IMPLEMENTATION ITEMS

- a. **Transfer of Management Authority.** DNR will submit a proposal to transfer management authority from DOT/PF to DNR for the Gold Mint, Grubstake, Reed Creek and Craigie Creek Roads because these roads are unmaintained, primitive, and intended to be used for mining and/or a variety of recreation including, in the case of the Gold Mint Road, non-motorized use. It is not anticipated that they will function as a highway.
- b. **Sign Program.** DNR will propose a uniform sign system so that recreational trail and information signs in the road right-of-way complement each other.
- c. **Road Name Change.** Propose that the Legislature officially change the name of Willow-Fishhook Road to Hatcher Pass Road to avoid confusion with the other two Fishhook Roads.

d. **Development in or Near Avalanche Hazard Areas.**

- (1) **Snowmachine Trail from the Little Susitna River to the Pass.** DNR will work with DOT/PF to identify the best location crossings necessary for this trail. If road crossings are necessary, a DOT/PF traffic engineer will be consulted to ensure that the crossings are located where there is sufficient line of sight to enable road vehicles to stop.
- (2) **Pull Outs.** Summer pull outs in avalanche areas may be authorized by DOT/PF if DNR agrees to provide a method of blocking off winter access and enforcing winter non-use.
- (3) **Location of Recreational Improvements.** Avalanche hazards will be evaluated prior to siting recreational improvements and parking.

### III. PUBLIC RECREATION MANAGEMENT AND CAPITAL IMPROVEMENTS

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Proposed improvements for public recreation facilities are itemized in this section. The purpose of these improvements is to help provide a quality recreational experience on state lands to a variety of users, to complement private sector activities, and to enhance tourism-related use of the area. They are priority rated from high to low (1 = high, 4 = low). Actual construction is dependent on funding and on private sector participation.

<u>Location</u>	<u>Function</u>	<u>Priority (1-4)</u>	<u>Approx. Cost</u>
<u>Management</u>			
Park Ranger I for 12 months		1	38,000
4-wheel drive pickup truck with radio		1	16,000
<u>Picnic/Viewing Sites</u>			
Picnic site along the Little Susitna River	Enjoyment of the river view and sounds. Six sites.	2	15,000
Summit Lake viewing area, interpretative sign, trail, picnic site	A public facility to enhance enjoyment of this scenic alpine area. Six picnic sites, parking, and boulders to block off-road access.	1	45,000
<u>Campgrounds</u>			
Campground opposite the Little Susitna River.	15 spaces in the trees west of the road.	1	225,000
Primitive campground area, at about mile 3 of the Craigie Creek Road.	To provide a Dogsled Pass trailhead access point and overnight area. Parking area for eight vehicles.	3	8,000

<u>Location</u>	<u>Function</u>	<u>Priority (1-4)</u>	<u>Approx. Cost</u>
<u>Public Shelters:</u>			
* Conversion of trespass cabin in Hillside SE corner, to warm-up facility.	Enhance enjoyment of track ski area.	2	No figures available-- subunit. case-by-case analysis at time of conversion or construction will be required
* Convert other unauthorized cabins to public use and/or authorize construction of a few cabins.	Add to public safety and enjoyment of some remote backcountry areas for hunting and other recreational uses.	2	No figures available-- case-by-case analysis at time of conversion or construction will be required
<u>Trail Related Items</u>			
* Replace collapsed Gold Mint Road footbridge over Little Susitna River.	Bridge for recreational, and/or cattle use.	2	
* Construct Fishhook Trail from old Archangel trail east of the Mother Lode to Hatcher Pass.	To provide an off-the-road route for snowmachines as well as for summer uses.	1	[\$10,000] \$ 25,000
<u>Trail Clearing Work For:</u>			
* Upper Little Susitna Trail, 8 miles (13 km)	Provide opportunities for public enjoyment of these areas and for dispersing use.	4	\$4,000-\$5,000 annual budget for seed money for
* Lonesome Mine/Arkose Ridge, 3 miles (5 km)	"	4	materials and correctional facility
* Moose creek overlook, 3 miles (5 km).	"	4	labor--private sector participation will be encouraged
* Mother Lode Roadhouse to Arkose Ridge, (3 km).	"	3	
* Independence bowl trails.	"	2	

Location	Function	Priority (1-4)	Approx. Cost
* Little Susitna Valley trail on the bench west of the road from the Mat Valley to MP 14.	Off-the-road equestrian route for connection to Mat Valley horse trails.	2	\$4,000-\$5,000 annual budget for seed money for materials and correctional facility labor--private sector participation will be encouraged
* Intermittent trails along the west bank of the Little Susitna River.	Add to safe, off-road enjoyment of the river corridor.	2	"
* Trail repair and redesign sufficient to halt erosion erosion on Lucky Shot Ridge	Allow continued ORV access while minimizing environmental damage.	1	"
* Corduroy-type trail work in bogs south-west of Willow Mountain.	Allow continued ORV access while minimizing environmental damage.	1	"
* East and west Hillside cross-country trail systems.	Provide accessible ski and trail system for valley residents and school skiing and running programs.	1	"
* Central Hillside dog mushing trail.	Provide dog mushing access area for Mat Valley area.	3	"
* West Hillside snowmobile access trail.	Provide snowmobile access area for Mat Valley area.	4	"
<u>Signs</u>			
Information and interpretive signs.	Public safety, enjoyment and on-the-ground implementation.	2	\$10,000
Designated-use area signs.	"	1	5,000
Trail signs.	"	2	5,000
Warning signs.	"	1	2,000

\* All of these items should be evaluated for the possibility of private sector user group participation in construction, maintenance, or repair.

## IV. CATTLE-WILDLIFE RESEARCH

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The on-going research projects outlined in Chapter Three are listed below in priority order and with estimated costs. These estimates were supplied by the Agricultural and Forestry Experiment Station.

<u>Research</u>	<u>Cost Estimates</u>
A. <b>EXCLOSURES</b> , minimum of 2, is the minimum research level necessary to document changes in vegetation.	\$1,000+ (depends on number of grazing areas)
B. <b>UTILIZATION TOLERANCE</b> . This would involve clipping one or two plant species at six times during the growing season in specified treatments inside an exclosure. Results would include quantity of forage as well as protein, energy, and digestibility. If analysis of nutritional quality is eliminated, \$8,000/year would cover analysis of the production. Cost varies with the number of exclosures, number of species, and number of clipping times.	\$18,000-\$40,000 per annum for 5 years
C. <b>FORAGE QUALITY</b> . Ungrazed plants would be clipped at specified intervals (six times). It would involve more species in more areas than the utilization study but would be dealing with unclipped plants, which are usually poorer nutritionally than are the regrowth on grazed plants. This would be more extensive while the utilization tolerance is very intensive.	\$26,000-\$39,000 per annum for 2 years
D. <b>FOOD HABITS</b> . Based on simplified USDA proposal: includes some nutritional quality analysis.	\$40,000-\$60,000 per annum for 2 years
E. <b>HABITAT MANIPULATIONS</b> . Based on National Science Foundation proposal designed more for Matanuska Valley Moose Range but applicable to Hillside subunit.	\$34,000 per annum for 3 years

Priorities and expenses were based on the following assumptions:

1. SCS soil survey from 1985 provides some forage quantity information, but no forage quality information. More detailed information in the grazing areas may be beneficial, but other areas exist where we have no knowledge.
2. Compton's cattle behavior study from 1969 provides some food habits and a little forage quality information, although this could be greatly improved.
3. Emphasis is placed on Little Susitna grazing area. Similar studies in Hillside area may cost a little more than Little Susitna because of additional species in birch-spruce forest.

Hence, tolerance to utilization and forage quality seem to be the most important missing items where essentially no information is available.

### **FUNDING OPTIONS AND RESEARCH MODIFICATIONS**

The state budget is very limited at this time, and full scale scientific studies would be difficult to obtain on state funds alone. Modifications could be made in the studies outlined above to at least obtain minimal analyses. There is some overlap in the above studies; e.g., utilization tolerance and food habits each contain some analysis of forage quality but for limited species in limited areas. Hence, the cost of two studies done simultaneously could be somewhat less than the sum of the two. Combining the suggested tolerance to utilization study (\$18,000/year, two exclosures, two species, six clipping times) with a minimal forage quality study (\$15,000/year--15 stands, three clipping times, four species) would probably supply the most meaningful information for a limited study (\$33,000/year). Costs could be decreased or increased by adding or eliminating sites, species, or number of clipping times. For instance, reducing the number of stands in the forage quality study to 10 would reduce the cost to about \$10,000.

Some federal agencies and private foundations require matching funds (sometimes 50 percent). Without some state funds, it is almost impossible to obtain funds from other sources. Availability of enough state funds to help obtain funds from other sources would help provide the state with some scientific results rather than just minimal results.

Minimal results are useful if nothing else is available, but results based on a more solid scientific foundation in terms of number of replicates and years provides much better management information and would be worth the extra money in the long run. Sometimes simple studies can be used to generate hypotheses for sounder scientific studies which could be funded by non-state sources.

These values are estimates for a general budget. If funds are appropriated for studies, more detailed budgets and study plans for specific objectives with the different pieces meshed can be provided by the Agricultural and Forestry Experiment Station.

# V. AGENCY RESPONSIBILITIES FOR IMPLEMENTATION

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Agency responsibilities for implementation of the plan are itemized in this section. These actions are listed under the agency that has primary responsibility for each item. Implementation of these actions is subject to obtaining adequate funding and other agency priorities. These items are priority rated from high to low (1 = high, 4 = low).

## A. ALASKA DEPARTMENT OF NATURAL RESOURCES (DNR) DIVISION OF LAND AND WATER MANAGEMENT (DLWM)

### 1. DESIGNATE AND MODIFY SPECIAL USE AREAS

- |  | Priority |
|--|----------|
| a. <b>Wildlife Habitat.</b> Designate the Bald Mountain Ridge critical tundra bird nesting area as a special use area according to guidelines in Chapter Four.   | 1        |
| b. <b>Non-Motorized Areas.</b> Designate special use areas where motorized use is limited, as described in Chapter Four. These non-motorized areas include:  | 1        |
| * Hatcher Pass Recreation Site.  |          |
| * Independence Subunit.  |          |
| * Reed Creek and Reed Lakes.   |          |
| * Upper Little Susitna Valley--as shown on Map 12 <u>in original plan</u> .  |          |
| c. <u>Revise the Hatcher Pass Special Use Area to reflect the July 1989 amendment (Chapter 3, Recreation, C, 9 &amp; 14; and Public Safety, 4) and as needed in the future to make necessary adjustments (Chapter 3: Recreation, C, 12 &amp; 13; Transportation, C, 6. Chapter 4: Willow Mountain, D, 4; Baldy/Lucky Shot Ridge, 4, b; Hillside, E, 6, b &amp; d).</u> |          |

### 2. PREPARE COOPERATIVE MANAGEMENT AGREEMENTS:

- |   |   |
|---|---|
| a. <b>Recreation Use Areas.</b> A cooperative agreement will be established between the Division of Land and Water Management and the Division of Parks and Outdoor Recreation giving DOPOR authority to manage recreational use of the following subunits: | 1 |
|---|---|

- \* Independence, Archangel, Reed Lakes, Government Peak and Little Susitna Subunits.

- b. **Federal Mining Claims.** The Division of Land and Water Management will prepare a cooperative management agreement with the U.S. Bureau of Land Management for implementation of the plan's surface use guidelines on federal mining claims to the extent possible. The agreement will also place a priority on conveying federal lands to the state when claims are abandoned. 1

**3. DNR-DOPOR INTERAGENCY LAND MANAGEMENT ASSIGNMENTS:**

DLWM will issue an interagency land management assignment (ILMA) to the Division of Parks and Outdoor Recreation for management of the following recreation sites:

- (1) **Hatcher Pass Recreation Site - 360 acres** 1

This site is a popular scenic viewing and recreational use area which requires special management to protect and enhance these qualities. It includes Hatcher Pass, Summit Lake, and the April Bowl telemarking area. Parking, picnic facilities, hardened trails, and a viewing area are proposed.

- (2) **Independence Mine State Historic Park Addition - 530 Acres** 1

The plan proposes adding the eastern portion of the Independence Bowl valley floor to the existing Hatcher Pass Public Use Area. It would incorporate historic sites related to Independence Mine State Historic Park which currently are not within the park boundaries and allow for similar management of the valley which is becoming a popular visitor/tourist destination point.

This is an intensively used recreation area for cross-country skiing, telemarking, hiking, and scenic driving. Including the entire valley floor in the legislatively-designated area would give recognition to its outstanding scenic and public use values. Access for mining through the park addition would be allowed.

- (3) **Lucky Shot Ridge Campground - 300 Acres** 4

A campground on the bluff overlooking Willow Creek is proposed to provide a developed recreation site west of Hatcher Pass for fishermen, hunters and summer visitors.

Priority

(4) Other developed recreation sites as necessary. 3

4. MINERAL CLOSING ORDERS\* 1

Prepare mineral closing orders for the following areas as outlined in Chapter IV and illustrated on map 11 in original plan.

<u>Site</u>	<u>Acreage</u>
* Lucky Shot Ridge Campground	300
* Hatcher Pass State Recreation Site	360
* Addition to Independence Mine State Historic Park	530
* Reed Valley/Lakes	1,952
* Hatcher Pass Road corridor from Archangel turn-off to the Pass	1,085
* Potential Alpine Ski Area (with a 10-year sunset clause if development is not initiated within that time).	2,150
* Material sites identified by DOT/PF for future development based on field testing and site analysis. (These will be no more than 40 acres each and for developed sites only for the life of the extraction site.)	40 <sup>±</sup>

5 RECLASSIFICATION\* 1

- a. **Prepare** classification orders to reflect the changes in and classification as a result of the management plan.
- b. **Remove MLLO.** Remove the mineral leasehold location order (MLLO) classification which currently exists for over 1/2 of the management unit.

\*These actions will occur at the same time and are scheduled for Commissioner signing shortly after the plan is approved by the Commissioner.

6. INSTREAM FLOW RESERVATIONS. 3

Work with ADF&G to reserve instream flow reservations for the Little Susitna River and Willow Creek.

**7. ADJUDICATE LAND USE APPLICATIONS**

1

DLWM will adjudicate the pending land use applications for grazing, communication sites, and recreational development based on plan guidelines and land use allocations.

**8. ALPINE SKI AREA**

1

- a. **Feasibility study.** DLWM will coordinate with the Matanuska-Susitna Borough in completion of the feasibility study for the proposed ski area.
- b. **Procedures for Ski Area Development.** DLWM will consult with the Division of Parks and Outdoor Recreation and the Matanuska-Susitna Borough on the most appropriate procedures to be used in enabling private sector development of the ski area.
- c. **Solicit Proposals.** Within one year of plan completion, DLWM and/or the Division of Parks and Outdoor Recreation will solicit proposals for alpine ski development at the Government Peak site.
- d. **Public Meetings.** Public meetings on the findings and proposed development will be conducted in the Matanuska Valley and in Anchorage by DLWM to allow the public an opportunity to comment on future development of the site.
- e. **Interagency Review Process.** Establish and implement an interagency, technical, and citizen committee review process for ski area development as outlined in Government Peak Subunit Guideline 4k(4).
- f. **Budget, Resort Development, and Management.** Following are estimates of funding requirements to support the agency review, analysis, and management of a four-season ski resort development process.

(1) Environmental Studies:

<u>(a) Fish and wildlife studies (Project Evaluation 404-410)</u>	<u>\$132,679, Year 1</u>
	<u>42,439, Year 2</u>
<u>(b) Vegetation study (Project Evaluation 403)</u>	<u>12,300, Year 1</u>
<u>(c) Water quantity and quality data collection</u>	<u>12,600, Year 1</u>

Priority

(Project Evaluation 401-402; Government Peak, E, 11, g-h) \$ 5,000, Year 2

5,000, Year 3

(2) Technical Advice:

Consultants with ski resort planning and development, engineering or other appropriate technical skills to act as advisors to DNR during the various stages of ski resort development;

- (a) Solicitation, lease auction 15,000
- (b) Concept development plan stage 20,000
- (c) Master development plan stage 50,000

(3) Agency Expertise:

Funding for resource service agreements for technical assistance by agencies such as Division of Geological and Geophysical Surveys, Division of Parks and Outdoor Recreation/Design and Construction, Institute of Social and Economic Research, USDA Soil Conservation Service, and other necessary and appropriate state and federal agencies.

Estimated funding, total for three years planning and development \$0,000

Guideline that applies for Technical Advice and Agency Expertise is Government Peak E, 4K(4).

(4) Lease administrator, Range 18, position

50,000

**9. RESOLVE ACCESS PROBLEMS**

2

DLWM will research access problems in key areas and assert rights-of-way on existing roads and trails if there is no feasible alternative and the action is determined to be in the state's best interest.

**10. IDENTIFY PRIVATE/PUBLIC LAND BOUNDARY**

2

Where public sites or trails are planned adjacent to private land, such as the Little Susitna bridge and Fern Mine areas, ensure that such facilities are located on public land by identifying the boundary between the public and private land.

## 11. MANAGEMENT OF ORV USE

- a. **Monitoring Program.** A program to monitor the effects of off-road vehicle use on wetlands and alpine and subalpine tundra should be established in key use areas and the appropriate management techniques applied if needed to prevent erosion, degradation of alpine vegetation, or wetlands. 2
- b. **Designated Motorized Trails.** Work with users, ADF&G and the Division of Parks and Outdoor Recreation to designate map and sign motorized trails. 1
- c. **Coordination.** DLWM will coordinate with ADF&G in possible future establishment of special use areas for seasonal restrictions on motorized uses in critical moose wintering habitat areas or tundra nesting bird concentration areas based on ADF&G research and recommendations. 2
- d. **Trail Repair.** In the two key ORV access areas in the Willow Mountain Subunit, DLWM will consult with users and ADF&G and utilize correctional facility labor to do minimal repairs necessary as described in Chapter Four. 1

## 12. GRAZING MANAGEMENT

- a. **Monitoring.** Coordinate with Division of Agriculture, Soil Conservation Service, ADF&G, and the leaseholder in implementation of annual monitoring of forage and range utilization. Stocking rates and range management practices will be adjusted accordingly. 1
- b. **Research.** Act as a clearinghouse and coordinator in research on wildlife/cattle interaction, forage utilization, and its application to grazing leases. 3
- c. **Existing Grazing Leases.** Work with lessees and the Division of Agriculture to revise leases to reflect usable grazing resources and plan management guidelines. The areas included in the leases should be reduced to the areas identified by Soil Conservation Service as having moderate to high value grass resources at the time of lease renewal or earlier if the lessees agree. 2

**13. MINING SURFACE USE**

- a. **Review Mining Plans and Annual Placer Mining Applications** for consistency with plan guidelines. 1
- b. **Unauthorized Structures.** Continue enforcement action for unauthorized structures on mining claims. 1
- c. **Monitor** mineral leases and surface use on claims. 2
- d. **Information.** Make available to mine developers information on visual siting considerations for structures and access roads. 3
- e. **On-Site Consultation.** When possible, provide a pre-development, on-site consultation with mine developers and the Division of Mining and Geology. 2

**14. RECREATION**

- a. **Trails.** Coordinate with the Division of Parks and Outdoor Recreation, ADF&G, the Matanuska-Susitna Borough Trails Committee, and user groups to locate and design the proposed trails. 2  
  
Organize volunteers and/or correctional center labor to do trail construction and maintenance.
- b. **Signs.** Contract for design and construction of information, interpretative, and designated use areas signs. Research low-cost alternatives for construction. 1
- c. **Parking, Pullouts, Public Facilities.** Coordinate with the Division of Parks and Outdoor Recreation in siting and authorization of facilities. Prepare Capital Improvement Project budget. 1
- d. **Public Use Cabins.** Determine the status of existing unauthorized cabins and which ones are appropriate for conversion to public use. Work with recreational groups in converting existing cabins or constructing new ones according to plan guidelines. Consult with ADF&G on location of cabins. 3

Priority

- e. **Historical Sites.** Coordinate with the Division of Parks and Outdoor Recreation and knowledgeable citizens to identify historical sites, and plan for their protection and interpretative use. 4
- f. **Coordinated Budget Process.** Establish a coordinated budget process with the Division of Parks and Outdoor Recreation and the Department of Transportation and Public Facilities for capital improvements and management of the Hatcher Pass Special Use Area (Chapter 3, Recreation, C 6 f).
- g. Coordinate with Division of Parks and Outdoor Recreation in development of regulations for recreation management in the Hatcher Pass Special Use Area (Chapter 3, Recreation, C 6 g).

**15. UNAUTHORIZED USE**

- Initiate action to remedy unauthorized use cases and follow through with pending cases. 2

**16. FORESTRY**

- Review and approve the Division of Forestry timber harvest schedules and access proposals. Coordinate harvest schedules and methods with ADF&G. 1

**17. COORDINATION WITH ALASKA DEPARTMENT OF FISH AND GAME**

- a. **Enhancement Assessment.** Coordinate with ADF&G in evaluation of moose browse enhancement effectiveness in the Matanuska Valley Moose Range prior to initiating projects in the Hatcher Pass Management Unit. 3
- b. **Recreation-Wildlife Interaction.** Coordinate with ADF&G in assessing recreational development impacts to fish and wildlife and in minimizing or mitigating these impacts. 3
- c. **Grazing-Wildlife Interaction.** Coordinate continuing assessment of grazing-wildlife interaction with ADF&G. 3

- d. Wildlife Habitat Mitigation Planning. Work with ADF&G to seek funding for fish and wildlife habitat studies as part of planning to mitigate negative effects of ski area resort development. Estimated contribution from existing budget: \$43,267 through CDP phase; additional funding needed: \$139,863 through CDP phase.
- e. Identify Wildlife Habitat Enhancement Sites. Make lands available for habitat enhancement and pursue funding options to implement (Government Peak, E 9 C).
- f. Wildlife Management in Ski Resort. Coordinate with ADF&G and the ski resort developer in wildlife management within the resort; e.g., wildlife viewing plan, public education, greenbelts, minimizing encounters with large mammals (Government Peak E 9 e-v).

**18. PUBLIC INFORMATION AND SAFETY**

- a. **Guidebook to Hatcher Pass.** Prepare text and oversee design and layout of the guidebook. The guidebook will include natural history and mining history information and provide the user with a road tour keyed to interpretative signs, information on the plan, information on miners' rights, and public rights of access. It will include a map showing trails and private property areas. 2  
  
 Coordinate with ADF&G and locally knowledgeable citizens on identifying wildlife viewing opportunities and incorporate the information into the guidebook and sign system.  
  
 Explore the possibility of having the guidebook published through the Alaska Natural History Association. Set up distribution and sales of the guidebook.
- b. **Non-Motorized Use Areas.** Identify non-motorized use areas with signs. 1
- c. **Interpretative Sign Program.** Establish an interpretative sign program at key points in the road corridor keyed to the Guidebook. 3
- d. **Avalanche Information Signs.** Establish information signs at winter parking areas on avalanche safety. 1
- e. **Public Presentation.** Make public presentations on the management plan, public safety, development projects, resource use, and volunteer opportunities. 2

Priority

- f. **Information Pamphlet.** Prepare an information pamphlet for miners illustrating visual techniques for siting mine structures, access roads, and habitat restoration techniques. The purpose is to assist miners in developing claims with a minimum of visual impacts. 2
- g. **Initiate Public Safety Coordination** for emergency rescue and avalanche safety with private sector and agencies. 2

**19. ECOLOGICAL RESERVES SUITABILITY.**

Contact the Alaska Ecological Reserves Coordinator for possible identification of sites suitable for inclusion in the system (see Chapter 3, page 142). 4

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**B. DNR -- DIVISION OF AGRICULTURE (DOA)**

**1. MONITOR FORAGE UTILIZATION AND RANGE USE**

Coordinate with the Soil Conservation Service, DLWM, ADF&G, and the lessee in applying monitoring data to adjust stocking rates and range management practices. 1

**2. RESEARCH**

Coordinate with ADF&G, DLWM, University of Alaska Agricultural and Forestry Experiment Station, and the Soil Conservation Service in design and analysis of range research projects which are outlined in Chapter Three. 1

**3. RANGE ENHANCEMENT.**

Evaluate potential for range enhancement through timber harvest or alder removal. Make recommendations to lessee and DLWM for implementation of appropriate techniques. This must be reviewed by the Division of Forestry, the Division of Parks and Outdoor Recreation, and ADF&G. 3

Coordinate range use with browse enhancement projects where appropriate.

**C. DNR -- DIVISION OF FORESTRY (DOF)**

**1. COORDINATION**

Coordinate timber harvest and access plans in Hillside with recreational plans and wildlife habitat management. 1

**2. TIMBER HARVEST AND HABITAT ENHANCEMENT**

Work cooperatively with ADF&G and University of Alaska to research and develop improved methods for wildlife habitat enhancement through timber harvest. Apply these methods in forest management practices. 3

Perform regeneration surveys on all harvest and enhancement areas. Evaluate the regeneration success.

Investigate and take action on timber trespass (poaching).

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**D. DNR -- DIVISION OF MINING [AND GEOLOGY]**

**1. REVIEW**

Review interagency comments on mining plans and leases and provide for implementation of surface use guidelines through stipulations in Miscellaneous Land Use Permit, and leases. 1

**Priority**

**2. INSPECTION**

Perform field inspections on existing mining locations in the management unit to determine if surface uses are consistent with state regulations and Miscellaneous Land Use Permits or lease stipulations. 1

**3. CONSULTATION**

Provide pre-development, on-site consultation where possible in coordination with DLWM. 2

**4. INFORMATION**

Make information available to miners on siting of structures and access roads. 2

**5. DATA COLLECTION**

a. **Water Quality.** Establish annual water quality sampling in mineral production areas. 2

b. **Snow Surveys.** Continue snow surveys; add 2-3 additional sites in the proposed Government Peak ski area, if budget allows. 1

c. **Hydrologic Data.** Collect hydrologic data for the alpine ski area site. 1

d. **Wind Data.** Collect wind data for alpine ski site, if funding is available. 2

**E. DNR -- DIVISION OF PARKS AND OUTDOOR RECREATION (DOPOR)**

**1. REVIEW**

a. **Enhancement.** Review ADF&G and/or the Division of Forestry habitat enhancement and timber harvest schedules to analyze effects on scenic values and recreational use and make appropriate recommendations. 1

	Priority
b. <b>Mining and Material Sites.</b> Review mining plans of operations to assist in location of public access, relocation of trails as necessary, and maintenance of scenic values.	1
c. <b>Grazing.</b> Review grazing management plans for compatibility with recreational use, location of fences, and maintenance of public access.	1
<b>2. COOPERATIVE MANAGEMENT AGREEMENTS/COORDINATION</b>	
Develop cooperative management agreements with Division of Land and Water Management for management of recreational use east of the Hatcher Pass as outlined in Section V, 2a of this chapter. Coordinate with the Division of Land and Water Management in authorization of recreational developments.	1
<b>3. LEGISLATIVE DESIGNATIONS</b>	
Work with DLWM in establishment of these designations for land management as outlined in Section A, Item Number 3 of this chapter.	1
<b>4. ILMA'S/RECREATION SITES</b>	
Work with the DLWM to develop interagency land management agreements for recreation sites.	1
<b>5. SITE PLANS</b>	
a. <b>Government Peak Area.</b> Prepare a detailed site plan of the trails and private/public sector recreational developments proposed for the intense use areas within this subunit.	1
b. <b>Hatcher Pass Recreation Site.</b> Prepare a site plan with phased improvements. The first priority is site protection.	2
c. <b>Parking.</b> Do on-site analysis and design of parking areas.	1

**6. PERSONNEL**

Add a new ranger position for on-the-ground management of recreational use east of the Hatcher Pass when funding is available. This is a high priority item. 1

**7. TRAIL SYSTEMS**

Coordinate with the private sector, DLWM, ADF&G, and the Mat-Su Borough in design and development of track ski systems, public trails, and other special use trail systems. 2

**8. HISTORICAL SITES**

Identify sites and plan for protection, interpretation, and identify possibilities for restoration. Utilize volunteers to assist in the effort to gain local knowledge and to extend the use of limited funds. 3

**9. PUBLIC SAFETY**

Coordinate with the Department of Public Safety, DLWM, the Matanuska-Susitna Borough, and the private sector in improvement of search and rescue capability and other public safety factors. 2

**10. CAMPGROUND AND PICNIC AREA LOCATIONS**

Identify the best sites for the proposed campgrounds and picnic areas and coordinate with DLWM to reserve the site for future development by placing a mineral closing order on the site. Do site development plans and capital projects budgeting. 4

**11. JOINT BUDGET PROCESS FOR SPECIAL USE AREA.**

Coordinate with Division of Land and Water Management and the Department of Transportation and Public Facilities in development of a coordinated budget process for capital improvements and management of the Hatcher Pass Special Use Area (Chapter 3, Recreation, C 6 f).

## **12. PREPARE REGULATIONS FOR SPECIAL USE AREA.**

Prepare regulations for management of the Hatcher Pass Special Use Area in coordination with the Division of Land and Water Management.

## **13. MONITOR PUBLIC USE**

Monitor public use, preferences, and conflicts as a database for future adjustments to Hatcher Pass Special Use Area requirements (Chapter 3: Recreation, C 14).

## **14. COORDINATE WITH SKI RESORT DEVELOPER**

Coordinate with the ski resort developer on trails system design and location, public safety, and other items related to public recreational use of the ski resort area (Government Peak, E 3 n--recreational development guidelines).

# **F. ALASKA DEPARTMENT OF FISH AND GAME (ADF&G)**

## **1. ONGOING RESPONSIBILITIES, EXISTING BUDGET**

- a. **Moose Browse Enhancement.** Assess the forest types and moose productivity to determine areas where enhancement is appropriate. Prepare an enhancement plan in coordination with DNR.

Utilize analysis of effectiveness of enhancement projects conducted in the Moose Range in designing Hatcher Pass enhancement projects.

- b. **Game Board Coordination.** Work with the Game Board to determine types of hunts which will provide opportunities to utilize fish and wildlife or view wildlife in the management unit.
- c. **Livestock Fencing Requirements.** Apply existing research and available literature on types of livestock fencing to grazing lease areas.
- d. **Review:**

**Mining.** Continue to review mining plans. Make recommendations on rehabilitation of placer mines for fish and wildlife habitat. Prepare recommendations for mitigation of wildlife impacts for mineral leases.

**Access.** Review right-of-way applications for mining and forestry access and recreational trails and provide recommendations on design which will facilitate wildlife management or minimize negative impacts.

**Land use applications.** Review recreational development, gravel site, grazing, and forestry applications.

## 2. NEW RESPONSIBILITIES, PROPOSED BUDGET

- a. Identify **brown and black bear** populations, identify specific conflicts with proposed grazing and recreational uses and make recommendations for mitigation of identified conflicts.

Continue studies on **moose** utilization of the western portions of the management unit, determine if a conflict exists with snowmachine use and make recommendations for mitigation of identified conflicts.

Identify extent and importance of **nesting concentrations of tundra birds** on Bald Mountain Ridge and other areas. Make recommendations for boundaries of special use area and/or other necessary management practices.

Identify important **caribou habitat** areas.

Cost estimate for above studies: \$20,000

- b. **Wildlife Viewing.** Identify opportunities for wildlife viewing both on the road system and away from high use areas. Coordinate with DNR to incorporate this information into the proposed Guide to Hatcher Pass. Estimated cost: \$5,000.
- c. **Placer Mine Rehabilitation.** Assist mine operators in applying known rehabilitation methods to mined areas.
- d. **Grazing research.** Participate in design of grazing research projects with DNR, the Soil Conservation Service, and the University of Alaska Agricultural and Forestry Experiment Station. Initiate moose habitat utilization and forage preferences research in key areas. Coordinate with DNR in applying this data to development of state-of-the-art grazing management. See cost estimates on page 274.
- e. **Instream Flow Reservations.** Initiate stream flow research for the Little Susitna River and Willow Creek to allow for establishment of instream flow reservation for fish and wildlife. Estimated cost: \$5,000.

f. **Vegetation Model.**

The ADF&G, in cooperation with DNR, will prepare a vegetation model depicting potential moose forage production for the vegetation types occurring in selected portions of the Hatcher Pass Management Area based on a vegetation analysis and field vegetation verification conducted by the Soil Conservation Service in 1985-86 if funding is available. Estimated Cost: \$16,000.

g. **Ski Resort Development.**

Coordinate and participate with DNR and the ski resort developer in conducting necessary fish and wildlife habitat studies, mitigation planning, and management of wildlife in the resort area.

## VI. PRIORITIES FOR INSTREAM FLOW

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Priorities for instream flow studies are listed below. Recommendations for study priorities are determined by the merits of the stream for human use and fish and wildlife habitat, including;

- . Values of the stream for fish, especially anadromous fish,
- . existing and potential recreation and navigation value,
- . relationship of streamflow to water quality, and
- . the vulnerability of the stream to disturbance and the likelihood that such disturbance will occur in the near future.

Based on these criteria, the following streams have been identified as candidates for instream flow studies:

1. **LITTLE SUSITNA RIVER** is the highest priority for instream flow studies due to its high value for fisheries, riparian habitat, and recreational use, including boating. It is anticipated that there will be heavy demands on the water supply for commercial uses.
2. **WILLOW CREEK** is the second highest priority stream due to its high value for downstream fisheries, riparian habitat, and recreational use. It is anticipated to have future increased use for placer mining.

## VII. LAND USE CLASSIFICATIONS

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The land use classifications that will appear on the state's land status plats are listed in Table 22 below. These classifications reflect the primary surface uses; however, all classifications are intended for multiple use, as defined in AS 38.04.910(4). The primary uses are depicted on Map 6, pages 196/197 in the original plan. The only difference between the primary uses and the classification is that there are four primary uses in the Hillside subunit. The plan specifies some places where some uses will not occur, consistent with AS 38.04.910(4). The status plat will refer the user to the management plan for an itemization of specific uses and restrictions. While mining is a use in all subunits, a subunit is only classified as "mineral" in current (or anticipated near future) active development areas where surface impacts are expected to be significant.

Table 22

**LAND USE CLASSIFICATIONS**

<u>Subunit</u>	<u>Classification</u>
Willow Mountain	Public Recreation, Wildlife Habitat
Lucky Shot Ridge/Baldy North	Public Recreation, Wildlife Habitat
Willow Creek	Mineral, Public Recreation
Hillside (See Amendment Map 4)	
I	Water Resources, Wildlife Habitat
II	Grazing, Public Recreation, Wildlife Habitat
III	Grazing, Public Recreation, Wildlife Habitat
IV	Forestry, Grazing, Wildlife Habitat
V	Public Recreation, Water Resources, Wildlife Habitat
Independence -- Unit A	Mineral, Public Recreation
Unit B	Public Recreation
Archangel -- Unit A	Mineral, Public Recreation
Unit B	Public Recreation
Reed Lakes	Public Recreation
Little Susitna -- Unit A	Public Recreation, Water Resources
Unit B	Grazing, Public Recreation, Water Resources
Government Peak	Public Recreation, Water Resources; Wildlife Habitat in part (See Government Peak Subunit for where Wildlife Habitat is the classification)

## **VIII. COORDINATION WITH THE MATANUSKA-SUSITNA BOROUGH**

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The following items are recommendations for coordination between the State and the Matanuska-Susitna Borough for implementation of the plan.

### **A. TALKEETNA MOUNTAINS SPECIAL USE DISTRICT**

It is recommended that the Matanuska-Susitna Borough review the existing ordinance in light of the management plan and consider the appropriateness of replacing Talkeetna Mountains Special Use District with plan guidelines in the Hatcher Pass area.

### **B. PRIVATE PROPERTY**

DNR recommends that the Matanuska-Susitna Borough assess the effects of the Hatcher Pass plan on adjacent communities and in future development of community plans for private lands along the Hatcher Pass Road to consider how the scenic qualities of the road corridor can be maintained. Many valley residents expressed concern that future Hatcher Pass developments would stimulate a strip-type development on private lands along the road corridor and subsequently diminish the special rural flavor of the area that these residents prefer.

### **C. TRAILS**

Continue to coordinate borough-wide trail planning with DNR on the trail systems in the management unit and assist in volunteer coordination on trails of local significance.

The borough is encouraged to continue with joint efforts in trail construction, particularly where trails facilitate use of the Hatcher Pass area by valley residents.

### **D. ROADS**

The borough is encouraged to participate in development and support of the road improvement legislative appropriation proposal and to jointly fund some of the recreational parking areas.

## **E. ALPINE SKI AREA**

Coordinate with DNR in evaluating results of the borough-funded feasibility study and in determining the most feasible method for making the ski area available for private sector use. Participate in the review process (Government Peak guideline 4 k (4)); work with the developer in trail development (Government Peak, E 4 n (3)), Matanuska-Susitna Borough platting requirements, and local community planning (Refer to Social-Economic-Fiscal Assessment in the Project Evaluation). Consider establishing regulations for management of noise impacts (Government Peak, E n (b)).

## **F. EMERGENCY RESPONSE**

Responses to emergency situations should be coordinated with Borough Emergency Services.

## **G. DISCHARGE OF FIREARMS**

Consider establishing ordinances regarding the discharge of firearms in the Hatcher Pass Management Unit (Chapter 3, IX. Miscellaneous Guidelines Public Safety, C 4 ).

## **IX. COORDINATION WITH OTHER STATE AND FEDERAL AGENCIES**

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### **A. UNIVERSITY OF ALASKA AGRICULTURAL AND FORESTRY EXPERIMENT STATION**

1. Initiate or coordinate research efforts to determine moose-livestock-vegetation interaction, including food habitats and behavior, forage quantity and quality, plant tolerance to utilization, and habitat manipulations. (Refer to Chapter Three, Grazing.)
2. Work with grazing lessees and or permittees to establish study area exclosures on existing and proposed grazing leases.
3. Assist DNR and ADF&G in applying research data to active management techniques.

### **B. USDA SOIL CONSERVATION SERVICE**

1. Continue to work with existing and future grazing lessees or permittees to develop Range Conservation Plans.
2. Assist in monitoring of annual forage utilization on lease or permit sites.
3. Coordinate with the Agricultural and Forestry Experiment Station, DNR, and ADF&G in analyzing grazing research data and applying it to Range Conservation Plans.
4. Act as an advisor in future DNR monitoring efforts of recreational impacts to vegetation and soil erosion.

## **C. U.S. BUREAU OF LAND MANAGEMENT**

Coordinate with BLM in:

1. Development of a cooperative management agreement for use of the surface on federal mining claims.
2. State selection of federal claims which become abandoned.
3. Adjudicating proposed reconveyance of certain Willow Creek and Grubstake Gulch claims.

## **D. ALASKA DEPARTMENT OF PUBLIC SAFETY**

Coordination between the Department of Safety and DNR is recommended to enforce illegal snowmachine use of the roadway and to incorporate the existing the Department of Safety search and rescue plan with future public safety efforts in the Hatcher Pass area.

## **X. CITIZEN/INTEREST GROUP ROLE IN PLAN IMPLEMENTATION**

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### **A. CONTINUE CITIZEN PARTICIPATION.**

There has been extensive public involvement in development of this plan. Individuals, interest groups, and local community councils are encouraged to continue this involvement.

The recreational proposals, in particular, will depend heavily on private sector participation for their implementation. This includes items such as identification and interpretation of historical sites; continuing work on protection of native flora in high use areas; identifying opportunities for wildlife viewing; trail location, construction and maintenance; public use cabin construction and maintenance; and compliance with designated use trails or areas.

Continued citizen participation in development of public safety items such as a coordinated search and rescue plan for the area and establishment of a rescue cache and emergency phone west of the Hatcher Pass is encouraged.

Public support for the capital improvement projects and items requiring funding is an important element in plan implementation.

### **B. CITIZENS' ADVISORY BOARD.**

The Department of Natural Resources welcomes continued citizen involvement as an important part of plan implementation. An advisory mechanism is planned; however, its implementation will be dependent on funding and availability of staff time to coordinate with the citizens.

### **C. PRIVATE LANDOWNER COORDINATION ENCOURAGED.**

Coordination between DNR and private land developers within the management unit is encouraged (see Chapter Three, Section 2d, page 138).

# APPENDIX

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## **APPENDIX XI**

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### **PROPOSALS FOR EXPANSION OF NONMOTORIZED AREA**

#### **A. OUTDOOR COALITION PROPOSAL FOR A PRIMITIVE AREA**

The Outdoor Coalition\*, which is a coalition of representatives of several groups involved in, or supportive of, outdoor recreation, made a proposal to the planning team during the resource inventory phase to:

1. Include the "glacial peaks" area just to the northeast of the management unit boundary within the Hatcher Pass Management unit.
2. Designate the "glacial peaks" area as well as the area indicated on Figure 8 as a primitive area closed to new mineral entry and motorized use.

The purpose of this proposal is to provide the opportunity for a walk-in/ski-in quiet recreational experience in a scenic, relatively accessible, alpine, mountain and glacier setting, and reduce conflict with fly-in skiers and snowmachiners. The position of the group is that such an opportunity is not now provided on state land outside the state park system but should be in order to adequately meet the demand for this experience. Furthermore, the primitive area would provide a counter-balance for the intensive recreation development or uses which likely will occur in the Independence and Government Peak subunits.

In response to this proposal, the option of adding the glacial peaks primitive area to the management unit was included in the workbook used at the public meetings to review alternative management proposals. It received support approximately in the ratio of 2:1, and 23 letters of support were received.

The planning team did not include this proposal in the draft plan preferred alternative for the following reasons:

1. Insufficient time and budget to allow addition of such a potentially controversial issue.
2. Insufficient data from which to evaluate conflicts and propose appropriate land uses.
3. The proposed boundary includes areas which may conflict with existing or future mineral development.
4. The extremely rugged physical topography of the area which effectively bars use of the area by ground vehicles, thus there is no need for a non-motorized designation for much of this area.

Some of the Outdoor Coalition's concerns have been met through the inclusion of Snowbird Glacier within the management unit and the proposals for non-motorized use areas in the Reed Lakes and Upper Little Susitna area.

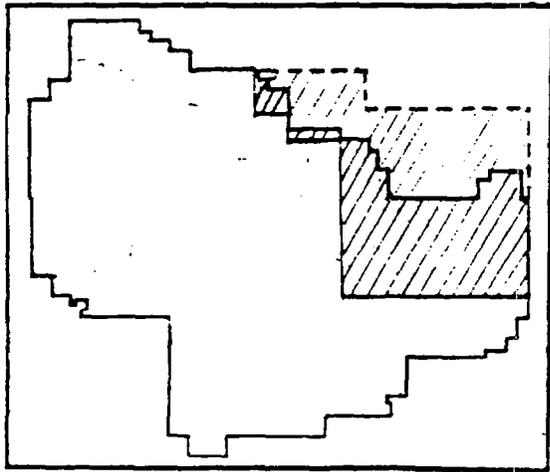
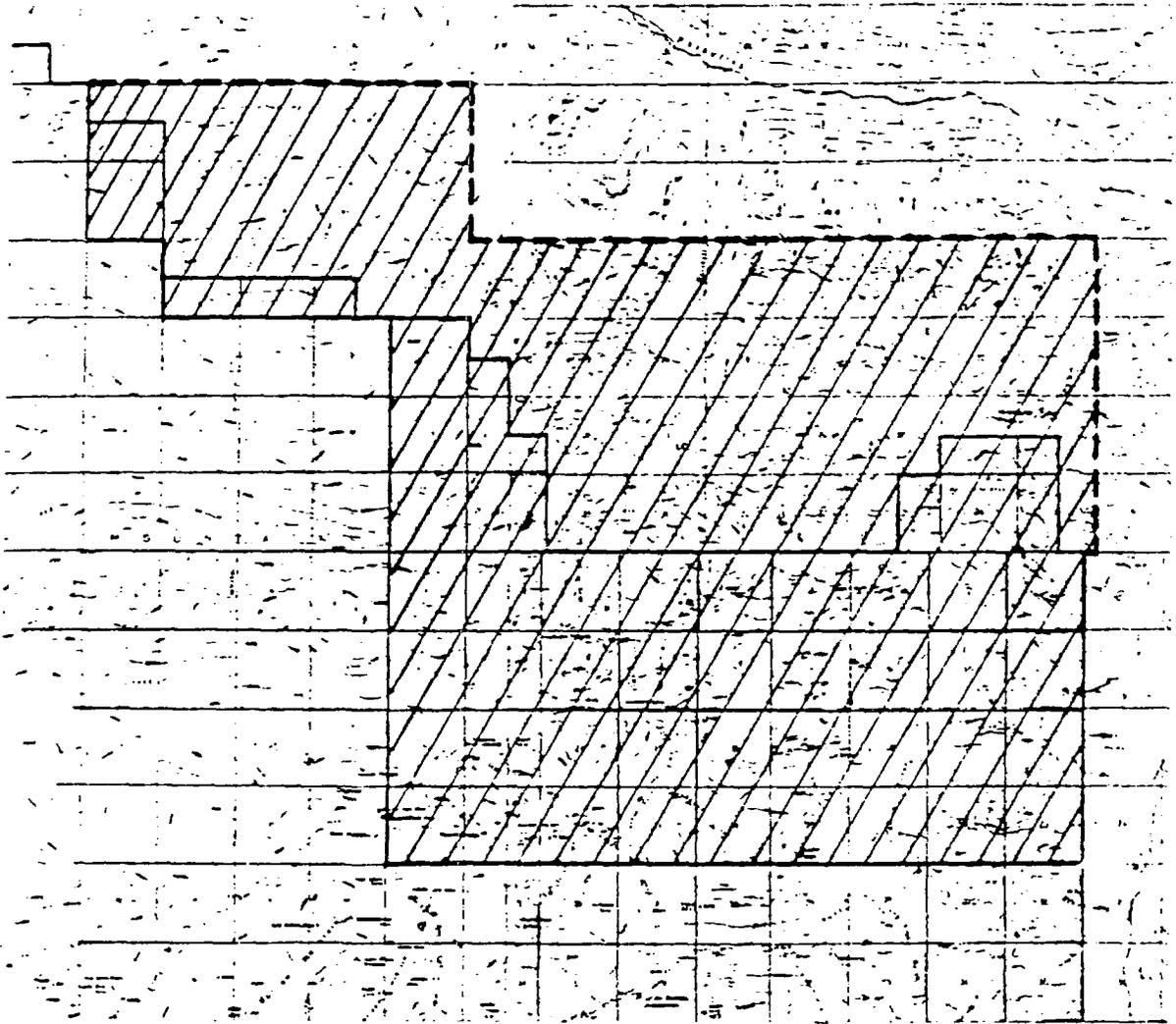
Another possibility is future designation of the "glacial peaks" area as a special use area. Under this designation such management options could be considered as time separation of motorized and non-motorized uses, voluntary restrictions on use, or permits for helicopter ski use. Any such proposal should be considered separately from the Hatcher Pass plan due primarily to time and budget constraints.

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\*Participating groups included the Mountaineering Club of Alaska, Nordic Ski Association, Knik Canoers and Kayakers, Alaska Center for the Environment and the Anchorage Community College Alaska Wilderness Studies Program.

FIGURE 8

# OUTDOOR COALITION PRIMITIVE AREA PROPOSAL BOUNDARIES



PROPOSED  
NON-MECHANIZED,  
NON-DEVELOPMENT,  
NON-COMMERCIAL  
WILDERNESS AREA



Proposed Boundary  
Change

**B. PROPOSED CHANGES TO HATCHER PASS SPECIAL USE AREA DURING SPRING 1989, PLAN AMENDMENT PROCESS** (Page 143, guidelines 12 and 13 of original plan)

The following language was included in the April 1989 draft amendment document as an alternative proposal:

**Boundaries.** As part of the implementation of the original Hatcher Pass Plan, a Special Use Area was established. Within the Special Use Area, motorized use for commercial recreational purposes is currently restricted in Independence Subunit and the valley floors of the Little Susitna and Reed Lake subunits. An expansion of this area is proposed in order to ensure that the opportunity for quiet, nonmotorized recreation will continue to be available in the Hatcher Pass area as the Government Peak Subunit is developed and the visitors to the Hatcher Pass area are not accessible by ground transportation. The major anticipated change in use in these areas as a result of the resort would be an increase in use of these mountains and glaciers for guided helicopter tours. The majority of the Hatcher Pass Management Unit would remain open to motorized use.

**Change in uses.** The management plan currently allows motorized access by permit in the Little Susitna and Reed Lakes subunits for uses for which an economic dependency can be demonstrated such as for mining, grazing, or commercial trapping. The proposal is to only allow motorized access for commercial mining or by aircraft for prospecting. (The valley floors of the Little Susitna, Reed Lake, and Independence subunits are closed to new mineral entry. The valley walls and ridges are the places with the highest mineral potential.) The reason for this proposed change is to better achieve the objective of providing an opportunity for quiet, nonmotorized recreation. Motorized use is not needed to bring cattle to the lease site due to proximity to the Hatcher Pass Road. No clear evidence of economic dependency on trapping has been demonstrated in the past three years since completion of the management plan, and it is difficult for managers to ascertain the difference between recreational trapping and commercial trapping. Other users question the fairness of one person being able to go in by snowmachine. Trappers have the option of snowshoe or ski access.

**Talkeetna Mountains Management Unit, Susitna Area Plan.** Expanding the nonmotorized area into a small portion of this management unit (Subunit 3d) is consistent with the Susitna Area Plan which designated public recreation and wildlife habitat as the primary uses for this subunit. It is intended that remote cabins be a prohibited use in this portion of the subunit. This mountainous area is not suitable for them; in addition, private cabins are an inappropriate use in this area due to proximity to popular public use areas in the Hatcher Pass Management Unit.

**Reevaluation.** The planning team intends to reevaluate proposed boundaries and use limitations as well as the general concept following public comments. There may be some existing motorized use for hunting in the upper Purches and Peters Creek drainages and in the portions of the Talkeetna Mountain Management Unit proposed for inclusion in the Special Use Area. The team is especially interested in information on existing motorized uses within these areas.

## **Final Decision.**

This issue proved quite controversial during the public meetings. Many commented that the issue was unrelated to the resort issue and argued that the two issues be separated. The nonmotorized expansion issue was unresolved by the planning team, and it was elevated to the director's level by the Division of Mining and the Division of Parks and Outdoor Recreation. The directors could not come to agreement, and it was elevated to the commissioner by the Division of Mining.

At the May 25, 1989, director's elevation session, the Division of Parks and Outdoor Recreation's position was to support a nonmotorized designation for all of areas 1 and 3 and the east portion of Area 2, from Dogsled Pass north. That division offered a compromise solution: establish Area 1 as nonmotorized; designate areas 2 and 3 as needing further study because of their special values.

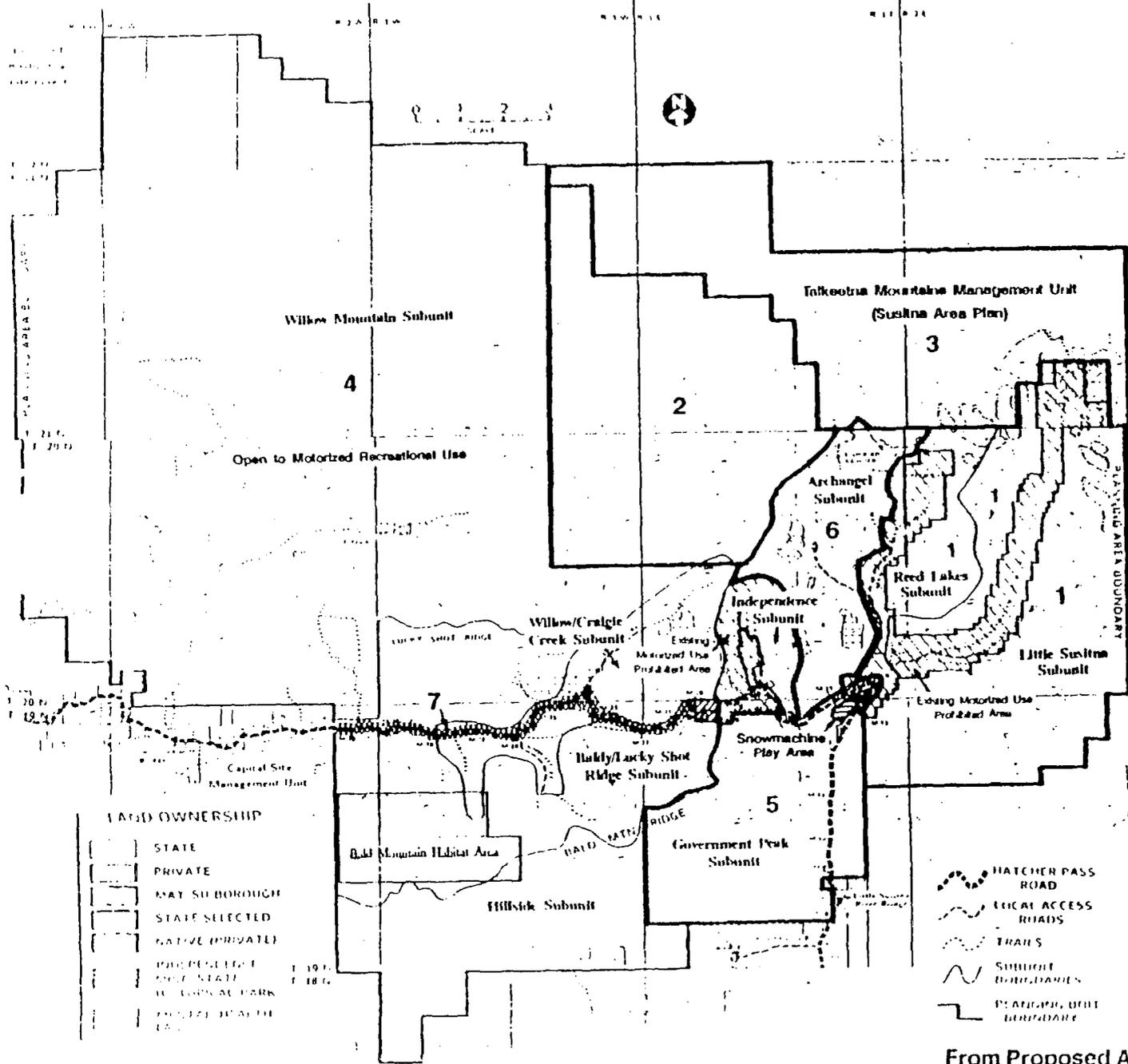
Division of Mining's position was that it does not want one more acre placed in the nonmotorized category because it believes such designation is a *de facto* mineral closing order. It also seeks to prevent the necessity of another permit requirement for miners on state land.

The Division of Land and Water Management recommended that Area 1 and the Bomber Traverse (which is in Area 3 and connects the upper Little Susitna Valley with the Reed Lakes area) be established as a nonmotorized area.

The Mat-Su Borough requested that allowance be made for the possibility of heliskiing at Delia Creek on Arkose Ridge. Permitting for this activity should require multi-agency review but not a plan amendment. The directors agreed to this amendment of the Division of Land and Water Management's recommendation.

The Department of Fish and Game stated that it has significant harvest activities in areas 2 and 3, and is, therefore, concerned about limiting motorized uses to only commercial users.

The Commissioner's final decision was not to expand the nonmotorized area due to substantial public opposition to the proposed expansion.



## Map 5. Proposed Changes to Hatcher Pass Special Use Area

In addition to the existing special use area policies summarized on Map 4, the following changes are proposed

- 1** Addition to nonmotorized special use area in Little Susitna and Reed Lakes subunits. Recreational motorized use, including aircraft landings, restricted year round.
  - 2** Addition to nonmotorized special use area in the eastern portion of the Willow Mountain subunit. Recreational motorized use, including aircraft landings, restricted year round.
  - 3** Addition to nonmotorized area in southwest corner of the Talkeetna Mountains management unit (Susitna Area Plan). Recreational motorized use, including aircraft landings, restricted year round. Remote cabin permits not allowed.
- Note: Pilots flying below 1,500 feet elevation are requested to avoid flying over the designated non-motorized areas in Little Susitna, Reed Lakes, eastern portion of Willow Mountain, and the designated portion of the Talkeetna Mountains Management Unit.*
- 4** Reel of management unit to remain open to motorized use year round. (Some limitations on spring-summer-fall off-trail use may eventually be established.)
  - 5** Government Peak unit including proposed addition: off road or off-trail motorized use by permit only with exception of Snowmachine Play Area south of the Mother Lode Lodge in the triangular area bounded on two sides by the Hatcher Pass Road and on the south by Fishhook Creek.
  - 5&6** Aircraft used for commercial recreation may land at designated sites only in Government Peak and Archangel subunits.
  - 7** Hatcher Pass Road Corridor, 100 yard buffer in either direction from the edges of the road. Plant removal is not allowed.