

RESORT DEVELOPMENT

The guidelines in this section apply only to commercial recreation or resort development on state land in Management Unit 3. There is a strong likelihood that any major resort development in the planning area will be partially on land owned by the Municipality of Anchorage. Some of the guidelines in this section may not be relevant (they may be directed at an activity, such as development of resort base facilities, that may occur only on municipal land).



Skiers on the Glacier/Winner Creek massif looking southwest toward Girdwood and Turnagain Arm

GOALS

To allow development of a ski area/four-season destination resort in a uniquely Alaskan setting, while maintaining a high quality natural environment and protecting the character and lifestyle of the Girdwood community.

MANAGEMENT GUIDELINES

1. PROCESS

a. Request for Proposals Process

The process by which DNR will solicit and select proposals for resort development will be consistent with AS 38.05.073.

- (1) **Municipal Coordination.** DNR will coordinate the development of its Request for Proposals (RFP) with the Municipality of Anchorage. DNR and the Municipality of Anchorage should combine their RFPs into one overall RFP for the entire resort area.
- (2) **Public Meetings.** Information on the RFP will be made available to the public, and a minimum of one public meeting will be held in Girdwood prior to issuance of the RFP.
- (3) **Community Involvement.** The Girdwood Board of Supervisors will be provided the opportunity to provide input on the development of the RFP. A representative from the Girdwood Board of Supervisors will be included in the RFP selection team.
- (4) **Criteria for Evaluating Resort Development Proposals.** The RFP will contain criteria for evaluating proposed recreational uses which may be proposed by the developer. The goal is to allow development of a ski area/four-season destination resort in a uniquely Alaskan setting, while maintaining a high quality natural environment and protecting the existing character of the Girdwood community. The intent is not to preclude consideration of an application from a local ski club or small operator.

b. Lease Development

- (1) **Public Meetings.** Information on the proposed development and its impacts will be made available to the public, and a minimum of one public meeting will be held in Girdwood during the development of the lease.
- (2) **Community Involvement.** The Girdwood Board of Supervisors will be provided the opportunity to provide comments on the lease terms and conditions.
- (3) **Social, Environmental, and Economic Impacts.** A preliminary decision regarding a potential lease for four-season resort development must include a statement of the potential social, environmental, and economic impacts of the proposed development, as stated in AS 38.05.073(h)5.

When evaluating the social impacts of the proposed resort development, DNR and/or the prospective developer, in consultation with the Municipality

of Anchorage and the community of Girdwood, will analyze impacts to the community of Girdwood, taking into account the impacts from the new Alyeska Prince Hotel and other expansion at the Alyeska Resort.

- (4) Economic Feasibility Study. For a large project with significant effects or impacts, the developer will conduct an economic feasibility study for the proposed resort development as stated in AS 38.05.073(i).

c. Master Development Plan

- (1) Master Development Plan. The developer will prepare a Master Development Plan (MDP). The MDP will contain a graphical and narrative description of development goals and guidelines, company objectives and priorities, permit and development boundaries, land ownership, existing and proposed facilities, existing and proposed activities and uses, capacities, architectural and signing themes, long-term treatment of vegetation, phases of development, mitigation measures, and rationale for development.
- (2) Community Involvement. The community of Girdwood will be involved in the review of the MDP and amendments to the MDP.
- (3) Public Meetings. The developer will conduct a minimum of one public meeting in Girdwood for the purposes of reviewing and discussing the proposed MDP and significant amendments, as determined by DNR, to the MDP which change the character of the plan.

2. RESORT AND RECREATION DEVELOPMENT

a. Resort Design Guidelines

- (1) Resort Design. 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) The architectural style, colors, textures, and forms of developments will complement the natural features or historic character of the area.
 - (c) 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. Resort facilities should be grouped closely together to facilitate foot access.

- (2) Mountain Design.
 - (a) Ski-related facilities should be located so that they take full advantage of natural site contours with a minimum amount of slope or trail grading.
 - (b) The developer should provide the rationale for the mountain design when submitting plans for approval. Plans should include an analysis of snow and wind conditions and ski terrain suitable for different skier ability levels. Plans should also include a description of the interrelationship of the proposed lift system and the planned trail system, and show how lifts will be placed relative to capacity balance with the trail system, visibility, wind, avalanche hazard areas, and icing potential. Plans should also describe any skier service and resort support structures.
- (3) Open Space. As much of the area as possible should be left in natural open space in order to provide a natural, tranquil setting for the resort and habitat for wildlife.
- (4) Roads and Service Trails. Locate, design, and construct roads and service trails so as to minimize terrain modification and visibility from within and outside the management unit.
 - (a) To the extent possible, avoid placing roads and service trails on highly-visible alpine slopes. Where this is not possible, proposed roads and service trails should be located where they will be least visible.
 - (b) To the extent possible, locate roads and service trails to avoid areas of excessively steep slopes, unstable soils, and steeply-sloping side gullies. For roads and service trails that must be located on hazardous or unstable terrain, the developer will conduct an analysis of alternatives and technical feasibility.
 - (c) The design of the road and service trail system should include drainage structures, erosion control, and terrain stabilization and restoration plans.
 - (d) Reducing Traffic Impacts. The developer should evaluate alternatives including the use of mass transit, for reducing automobile traffic to the resort in order to minimize the impact of increased resort traffic on the local and regional road system. The developer, in consultation with affected state agencies and the Municipality of Anchorage, should implement appropriate measures to reduce resort-generated traffic on the local and regional road system, including the Seward Highway.

- (5) **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. Parking and access will be designed to mitigate visual impacts and reduce land consumption to the extent possible. Underground or covered parking areas should be considered.

b. Recreational Development Guidelines

- (1) **Motorized Trail Use.** The developer may close trails within the lease area to motorized use for safety, security, and operations purposes, with the consent of DNR.
- (2) **Trail Development And Management (for trails other than alpine ski trails).** It is recommended that the developer include and maintain a variety of non-motorized 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, the Municipality of Anchorage, and other knowledgeable local groups (e.g., Girdwood Trails Committee, Nordic Ski Association), 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.
 - (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 fish, wildlife, and vegetation.
 - (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. Trails should avoid avalanche areas.
 - (c) **Alpine Zones.** Trails and lookouts in heavy use areas in the alpine zone should be planned to minimize damage to alpine vegetation. 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.
 - (e) **Equestrian Trails.** Equestrian trails should have appropriate surfacing to prevent deterioration of the trail. 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. Horse trails should be separated from other types of trail use.

Horse facilities, including corrals, should be located where streams will not be contaminated, and be compatible with other proposed trail and wildlife use of the area.

- (f) 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.
 - (g) Cross-Country Ski Trails. Development of a cross-country ski trail system is highly recommended.
 - (h) Hiking Trails. The developer should consider foot trails for a variety of uses such as hiking trails, wildlife viewing, nature trails, and running trails. The developer should consult with Division of Parks & Outdoor Recreation regarding standards for these trails.
 - (i) Bicycle Trails. The trail system should include trails for mountain bikes. The developer should include a bike path separated from the roadway if motor vehicle traffic on the roadways will be fairly extensive and it is feasible.
 - (j) Snowmachine Trails. If snowmachine trails are to be built, they should not be shared by non-motorized users, they should be sited to provide as much buffer as possible from noise, and should be built wide enough to safely accommodate this activity (See Alaska Trail Plan standards).
- (3) Sledding. Consider adding a sledding hill near the resort housing area.
 - (4) Backcountry Access. Backcountry access should be provided from the lifts both in winter and summer, where safe and appropriate.
 - (5) Wildlife Viewing. Wildlife viewing should be considered as a resort activity. Refer to the ***Fish and Wildlife Guidelines*** in this chapter.
 - (6) Public Information Station. DNR may require inclusion of a contact station for DNR to provide information about public lands to visitors.

c. Public Safety

- (1) Operations and Safety Plan. The developer must have an Operations and Safety plan as outlined in the ***Recreation Guidelines*** in this chapter.
- (2) Earthquake Response Plan. The developer must have an earthquake response plan.

3. 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 with appropriate species as soon as possible after disturbance. To the extent possible, the underlying vegetation along the ski courses should be left intact in order to retain slope stability and control erosion.

b. Use Minimal Impact Construction Methods

Minimal impact construction, i.e., use of hand tools and ground crews instead of heavy machinery, use of helicopters for setting lift towers in place, etc., should be practiced to the extent feasible to minimize impacts on vegetation and soil, and to prevent erosion problems.

c. Leave Islands of Native Vegetation

Where possible, islands of native vegetation should be left undisturbed within areas where vegetation is removed. Islands should be large enough to be stable and effective in maintaining a natural landscape.

d. Snow Storage on Surfaced Areas

Snow piles should be placed away from streams and drainage corridors to prevent direct deposition of materials into streams. Snow storage areas should be designated and designed to retain desirable vegetation and to prevent increased erosion.

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 where the topsoil layer is thin.

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. Minimize Damage

To minimize damage to soils and tree root systems, the clearing of vegetation for ski runs and/or trails in alpine and subalpine areas should be accomplished by low ground pressure equipment to the maximum extent possible.

h. Revegetation and Erosion Control Plan

The Master Development Plan for the four-season resort must include a Revegetation and Erosion Control Plan. The developer shall consult DNR's Plant Material Center for direction on delineation of seed mixes, recommended plant species, fertilizer recommendations, planting dates, types of scarification (if any), standards by which to measure the success of plantings, and evaluation of the revegetation efforts. The plan will include a detailed description of the construction methods and erosion control measures which the lessee will use in developing and operating in the lease area. The plan should include surficial geology analysis, soils testing, and an engineering plan. The erosion control plan should be prepared in such a way as to also be usable for Department of Environmental Conservation and Department of Fish and Game permitting.

4. FISH AND WILDLIFE

a. Habitat Mitigation

Habitat loss beyond that amount impacted by the construction of the proposed roads, facilities, and ski runs will be minimized. The Master Development Plan must include 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). The habitat mitigation plan must be reviewed by ADF&G.

b. Wildlife Viewing Opportunities

Because this management unit is intended to be a major tourism and developed recreation area, the developer should consider providing opportunities for wildlife viewing. To maximize viewing opportunities, the resort project should be designed with viewing as a goal. The developer will consult with ADF&G to determine the feasibility of providing wildlife viewing opportunities, and in their planning and implementation.

c. Wildlife Habitat Enhancement

- (1) Design of habitat enhancement projects, if required by DNR, shall be conducted as part of the habitat mitigation plan. Enhancement 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 area.

- (2) Enhancement projects must be approved by the Department of Natural Resource before they may be undertaken.
- (3) Enhancement measures may include, where appropriate, small forest clear-cuts, thinning of tree stands, stimulating or reducing undergrowth by hydroaxing or cutting with hand tools, soil scarification, planting, and fertilizing.

d. Maintain Corridors or Greenbelts

Corridors or greenbelts of relatively undisturbed vegetation shall be maintained in order to provide areas for wildlife movement.

e. Trail Systems

Trail systems should have adequate natural areas to minimize disturbance caused by trail users to moose on winter range.

f. Fences

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 g(4)* below) should be designed and constructed to allow for free passage of wildlife at appropriate locations.

g. Prevent Moose-Motor Vehicle Collisions

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 and feasible to direct moose to safe crossing areas.
- (5) Provide street lighting at known moose crossings.
- (6) 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.

j. Minimize Human and Large Mammal Conflicts

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) 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.
- (3) The developer should 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.
- (4) The developer should 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.

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. The developer may propose other methods, which should be reviewed by ADF&G to determine their feasibility before implementation.

k. Garbage

Garbage from the resort and ancillary facilities should be removed to an appropriate site on a regular basis (daily if possible).

l. Posting Public Information

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.

m. Open-pit Garbage Dumps Not Permitted

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

n. Bear-proof Garbage Facilities

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

5. WATER

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 (surface water source).
- (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 and Other Resort Purposes

If not controlled and monitored, water withdrawals, including those for snowmaking, may have adverse impacts on Glacier, Crow, and Winner Creek streamflow during the winter low flow months. Lowered flows could affect fish survival with respect to egg incubation, rearing, and overwintering. Alternate means of providing water for snowmaking during low-flow periods will need to be addressed by the developer and approved by DNR:

- (1) Establish storage ponds at strategic locations that can be accessed by the snowmaking system.
- (2) Use ground water to augment snowmaking, if withdrawals do not adversely impact local stream levels or holders of prior water rights.
- (3) Use water from off site public water sources, if available, cost effective, and contingent upon adequate water remaining after satisfying domestic, fire flow demand, and emergency reserves.

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.

d. Protection of Aquifer Recharge Areas

Engineering practices consistent with protection of recharge areas will be employed, including but not limited to:

- (1) Impermeable liners will be used for disposal, evaporation, sewage ponds, or lagoons.
- (2) The developer will monitor ground water in the vicinity of golf courses, horse barns, salt or salted sand storage sites, areas of fuel use or storage, water disposal, and high yield water development..
- (3) Surface and subsurface water and storm water runoff shall be protected from contamination to avoid negative impacts on water quality. Where surface water contamination is unavoidable, treatment is required before allowing surface water discharge to the surface or subsurface.
- (4) Snow piles should be placed away from creeks or surface drainage to creeks or water bodies.

e. Management of Surface Run Off

Appropriate measures will be taken to mitigate any negative impacts from increased surface runoff resulting from road and parking lot development, artificial snow-making and vegetation removal. See *Revegetation and Erosion Control Guidelines* above.

f. Stream Monitoring

The developer will be required to consult the Division of Mining and Water Management and the Department of Environmental Conservation for advice and requirements on monitoring streamflow discharges and water quality parameters, based upon the scale and phasing of the prospective development. The Division of Land will consider the adequacy of the developer's monitoring program prior to approving the Master Development Plan.

g. Ponds

Man-made ponds within the development should be designed as an aesthetic attraction and to prevent slope destabilization, contamination, and water loss.

h. Water Intake Structures

Where necessary to protect fish, water intake structures will be screened and intake velocities will be limited to prevent entrapment, entrainment, or injury to fish. Screen size, water velocity, and intake design shall be approved by DNR Division of Mining and Water Management, with consultation with ADF&G.

6. OTHER ENVIRONMENTAL QUALITY GUIDELINES

a. Air Pollution

To minimize air pollution within the resort area, consider reducing traffic by making public transportation available and attractive to use. The use and number of wood stoves/fireplaces should be minimized in the project. Use of fireplaces fueled by natural gas are encouraged, if natural gas is available. Any wood stoves that are utilized in the project area should have emission control devices to reduce emissions.

b. 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.

Appropriate techniques, mufflers, and materials should be used to reduce machinery noise. The techniques listed below may be used to reduce construction and operation noise.

- (1) Schedule 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.
- (2) 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).
- (3) Make use of speed limits to control noise from vehicles.
- (4) Keep noisy equipment operation as far as possible from site boundaries.
- (5) Provide enclosures for stationary items of equipment and barriers around particularly noisy areas on the site or around the site itself.
- (6) Maintain and replace noise control devices and mufflers.

c. Engineering Geology

The developer should evaluate the engineering geology of the lease area, including soils, slope stability, drainage, and earthquake hazard. The developer must demonstrate that the appropriate design, engineering, and construction practices are used for the existing conditions.

d. Avalanche and Mass-wasting Hazard

- (1) Areas of high avalanche or mass-wasting hazard. Residential structures, public buildings, ski lift terminals, or other facilities that concentrate human activity will not be placed in areas of high avalanche or mass wasting hazard unless the site of the facility (including the facility itself and areas outside the facility where people may be present) can be protected. Roads should avoid areas of high hazard if possible—if not possible, the developer will place warning signs along the road at hazard zones. Utilities should be placed underground when crossing areas of high hazard.
- (2) Areas of moderate avalanche or mass-wasting hazard. Residential structures, public buildings, ski lift terminals, or other facilities that concentrate human activity will not be placed in areas of moderate avalanche or mass wasting hazard unless the facility can be protected through structural design, or the site of the facility (including the facility itself and areas outside the facility where people may be present) can be protected.