

design timber harvests in this area in consultation with the Department of Fish and Game and the Division of Parks and Outdoor Recreation.

The buffer zone and special management zone will be reviewed when the plan is updated. In the interim, DFG should monitor the road, the buffer, and the special management zone. The monitoring program should estimate the number of users along the road, determine the amount of hunting along the road, and compare the success rates of hunters along this road with those of hunters in other road-accessible areas.

Harvesting in Subunit c. Small amounts of land will remain public between agricultural homesteads in Subunit c (see Map 6). Timber on these public lands will be available for personal use harvesting only. If any of the proposed agricultural homestead parcels are not sold, larger blocks of land may remain public. Timber on unsold parcels may be harvested for either personal or commercial use.

GRAZING

The guidelines in this section are the Range Management Plan for Kashwitna area.

The goals for grazing in this area are:

1. Use and manage grazing resources in the Kashwitna area on a sustained yield basis as a permanent source of supplementary forage for on-farm hayland and cropland for the dairy and red-meat industry, and for agricultural homesteads.
2. Preserve the integrity of the ecosystem to allow long-term management of forest, habitat, and grazing resources.
3. Minimize conflicts between domestic livestock and wildlife.
4. Manage grazing to be compatible with the primary uses. Forestry and Fish and Wildlife Habitat are the primary uses in Subunit b; Agriculture is the primary use in Subunit c. Grazing is a secondary use in these subunits. Forestry and wildlife habitat are the primary uses in Subunit a. Grazing is not a designated use in this subunit. The guidelines in this section and the grazing operating plan for each permit or lease will be used to ensure that grazing is compatible with the primary uses.

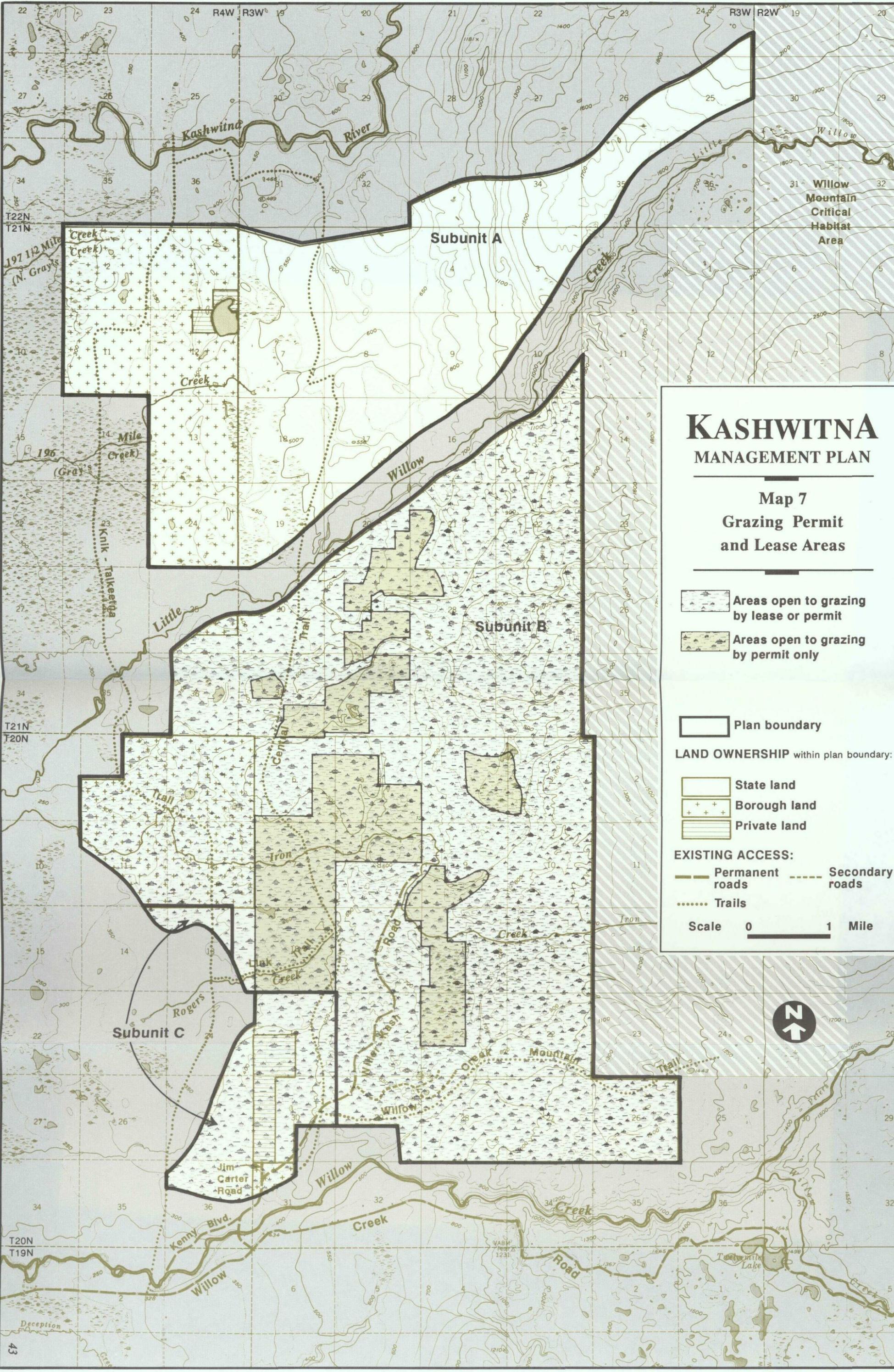
Authorization Requirements

Permit or lease required. All grazing of domestic livestock on state lands shall be authorized by a permit or lease. Permits are not required for incidental grazing use that is generally allowed on state land, such as horse travel.

Compatibility with primary uses. Authorizations for grazing are allowed in subunits b and c only when DNR determines that grazing is compatible with the primary uses.

Permits and leases. Authorizations in Subunit c and in those portions of Subunit b shown on Map 7 may be by permits or leases. Grazing will be authorized only by permit in the remaining areas of Subunit b. Grazing generally supports the agricultural activities planned for Subunit c. Those portions of Subunit b where leasing is allowed are areas where conflicts with habitat and timber management are likely to be less significant based on current information on moose distribution and vegetation type. Permit-only areas are lands where grazing is more likely to conflict with active timber and habitat management, largely closed hardwood and open white spruce forest lands.

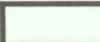
Length of authorization. Permits may be issued for up to five years; leases may be issued for up to 10 years.



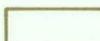
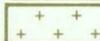
KASHWITNA MANAGEMENT PLAN

Map 7 Grazing Permit and Lease Areas

-  Areas open to grazing by lease or permit
-  Areas open to grazing by permit only

 Plan boundary

LAND OWNERSHIP within plan boundary:

-  State land
-  Borough land
-  Private land

EXISTING ACCESS:

-  Permanent roads
-  Secondary roads
-  Trails

Scale 0 1 Mile



Range survey. Prior to DNR issuing a lease or permit, a range survey must be completed by the USDA Soil Conservation Service, University of Alaska, or other recognized range management specialist.

Grazing operating plan. A grazing operating plan is required for each permit or lease. The grazing operating plan will be made part of the grazing lease. Grazing operating plans require approval by the DNR Division of Agriculture and DNR Division of Land and Water. DNR will consult with DFG before approving a grazing operating plan and give due deference to DFG's recommendations directly relating to the impacts on fish and wildlife habitat and harvest.

Termination. Grazing authorizations will be terminated for failure to comply with the terms of the permit, lease, or grazing operating plan. Standard DNR appeal procedures will be followed.

Annual review. DNR and DFG will review grazing operating plans for compliance annually. Grazing authorizations will be modified to mitigate conflicts with management for the primary uses; when conflicts cannot be adequately mitigated through permit or lease stipulations, the authorization will be terminated. Examples of activities that may conflict with grazing are active timber harvest, forest regeneration, and habitat enhancement projects. A one-year notice will be provided prior to termination of a grazing lease for conflict with a primary use. Permits are revocable immediately with cause, and are revocable after 30 days notice without cause under current department policy.

Grazing operating plan process. A grazing operating plan will be completed by the lessee through the following process:

1. Consultation with the USDA Soil Conservation Service. The Soil Conservation Service participates only if a lessee is a district cooperator and requests assistance.
2. Approval by the DNR Division of Agriculture.
3. Approval by the DNR Division of Land and Water with due deference to the Department of Fish and Game.

Required elements. A grazing operating plan for a lease or permit longer than one year will include the elements listed below. Grazing operating plans will be reviewed annually and revised to allow changes in stocking rates, improvements, etc. as indicated by range conditions and trend information.

1. Updated range survey and soils data.
2. Documentation of range condition and trend information, annually.
3. Range conservation practices, including
 - grazing system
 - proper grazing use guidelines
 - stocking rates
 - seasons of use
 - key areas for range readiness and utilization studies
 - non-technical range site descriptions and interpretations for grazing suitability
 - riparian buffers.

Range conservation practices should be developed prior to release of livestock and during a time frame which allows the Soil Conservation Service and the cooperator to examine the potential lease or permit areas during the growing season (May through August).

4. Range improvements and support facilities.
5. Fencing plan.
6. Monitoring system.
7. Location and legal description.
8. Maps
 - range site map
 - soils map
 - range improvements
 - condition and trend maps.
9. Future considerations.
10. Special treatment areas and their fencing requirements where a restrictive grazing policy should be applied will be identified by DFG and DNR during the development of the grazing operating plan.

One-year grazing permits. One-year permits may be issued with a simplified grazing operating plan. The grazing operating plan will be a part of the permit. The grazing operating plan for one-year permits should address the following subjects:

1. Soil Conservation Service range survey data or sufficient on-site range inspection by DNR, DFG, Soil Conservation Service, and the applicant to verify existing range conditions.
2. Range conservation practices, such as
 - grazing system
 - use guidelines
 - stocking rates
 - seasons of use
 - riparian buffers.
3. Range improvements required.
4. Fencing plan.
5. Monitoring system to be used.
6. Location and legal description.
7. Range site map and map of range improvements.

Common use areas. A grazing operating plan is required for common use areas. Common use areas are encouraged to reduce fencing and facility requirements and fully use the grazing resources.

Future leases or permits will be structured to allow common use. Leases and permits will stipulate that the area is not an exclusive use area and that DNR maintains the option to allow other grazing within the lease or permit area in order to use the grass resources. The authorization method will be worked out on a case-by-case basis, but two options are a sub-lease by the lessee or short-term permits. Where existing leases are in place, lessee cooperation should be pursued to allow stocking of range areas that are underutilized.

Public access. A grazing permittee or lessee shall not restrict public access to state land.

Conservation agreement. If a permittee or lessee unilaterally cancels the Conservation Agreement with the Soil and Water Conservation District, DNR will review the lease or permit and determine whether or not it will be terminated.

Examination for disease. Prior to placing stock on the permit or lease area, all livestock shall be examined by a state licensed large animal veterinarian for the diseases and parasites identified in Appendix D. All livestock shall be free of visible symptoms of any contagious diseases, infectious diseases, and parasites prior to being placed on the grazing area. Livestock carrying an infectious or contagious disease will not be placed on the grazing area for 60-days to allow for treatment and re-testing by a licensed veterinarian.

Parasite treatment. Prior to release on public land, all livestock shall be treated for ectoparasites and endoparasites by using standard treatments and acceptable drugs, and shall be free of ectoparasites and endoparasites.

Notification. DNR shall be formally notified by the permittee or lessee a minimum of 48 hours prior to the release of livestock on state land. The notification shall include the number and type of livestock to be released, and the Doctor of Veterinary Medicine certification that the livestock have been inspected for infectious diseases that are a threat to wildlife.

Renewals. Existing grazing leases or permits may be reissued to the lessee or permittee if the lessee or permittee has fulfilled the requirements of the lease or permit. Should the lessee or permittee forfeit the lease or permit, the grazing privileges may be reissued to another party. The grazing operating plan should be reviewed by DNR, DFG, and the Soil Conservation Service prior to reissue to a new lessee or permittee to determine if changes are needed. A new range conservation plan must be written for a new lessee or permittee. The length of reissued permits will not exceed five years; reissued leases will not exceed ten years.

Range Conservation Practices.

Proper range use. Use of key species (bluejoint and fescues) shall be *limited to no more than 30%* of the annual forage production of those species. This guideline may be modified as a result of range condition and trend studies and utilization checks if those studies or checks prove a higher utilization will benefit forage production without adverse effect on wildlife habitat or forest regeneration. Modification can also be authorized if higher utilization is desired for wildlife habitat enhancement, forest management, or recreation management. Consultation with the DNR Division of Forestry and the Department of Fish and Game is required for modification of the 30% utilization guideline.

Grazing systems. Where season-long grazing occurs, utilization shall be no more than 40% of the forage during any 30-day period. Other systems may be developed as a result of research and used if approved by the DNR Division of Agriculture and Department of Fish and Game. A multiple pasture (rotational) grazing system is generally preferred for long-term lease areas.

Stocking rates. Initial stocking rates for first-generation leases and permits will be determined from existing Soil Conservation Service range survey site productivity data as a general guide. Stocking rates may be modified as a result of changes identified through annual utilization checks or changes in the condition or trend of grazing resources. More than one seasonal check should be made, staff and funding permitting.

Monitoring. DNR or its qualified designee shall monitor grazing operations by conducting timely seasonal grazing resource condition, trend, and utilization surveys to ensure that overgrazing does not occur and that recommended stocking rates and densities are followed. Survey findings shall be reported to the lessee or permittee, DNR Division of Agriculture, DNR Division of Land and Water, and DFG.

If environmental degradation is caused by livestock activities, the grazing operating plan and livestock activities shall be modified to eliminate the undesirable action. Any restoration or rehabilitation needed as a result of overgrazing must be approved by DNR and DFG.

Changes in grazing use. Stocking rates, densities, length of season, and forage utilization levels may change as a result of research activities sanctioned by the DNR divisions of Land and Water and Agriculture, and conducted in cooperation with DFG.

Riparian zones and waterbodies. Riparian zones will be recognized as special treatment areas when developing the grazing operating plan. Riparian zones are lands along anadromous and high value resident fish streams. (See Glossary, Appendix A for definition of anadromous fish streams). The grazing operating plans will identify waterbodies requiring special consideration. These include streams and lakes shown on the USGS 1:63,360 topographic maps.

Riparian buffers and access to certain waters. Livestock shall be prevented from open access to streams and riparian habitat identified by DNR and DFG and noted in the grazing operating plan. Buffers will be established to protect identified riparian zones. The buffers will be at least 100 feet wide on each side of the waterbody above the ordinary high water mark. No grazing will be allowed in these buffers. The grazing operating plan will identify these riparian zones. Livestock may have access to these streams at predesignated fenced watering areas.

Salting. Salting may be used to disperse concentrations of livestock.

Overuse of moose browse. Stock shall be removed from that portion of the management unit where the annual production of moose forage species (willow, aspen, and birch) has been determined by DFG and the Soil Conservation Service to be overused. Overuse occurs if approximately 10% or more of the existing annual growth is consumed above what moose normally consume each year.

Season of use.

Range readiness. Stocking the range shall not occur before bluejoint grass (*Calamagrostis spp.*) is four to eight inches in height. A determination on range readiness shall be made by DNR. Key locations to determine range readiness shall be established where grass growth can be determined. The Soil Conservation Service in cooperation with DNR shall assist in making the determination of how and where these plots shall be established.

Stock removal date. Stock removal dates will be specified in each permit. Generally, all stock shall be removed from the range two weeks prior to moose hunting season or August 31, whichever comes first. However, in some cases, the grazing period and stock removal date may be extended depending on the individual grazing operating plans, current utilization checks, and DFG approval. In some cases, a date earlier than August 31 may be specified.

Wildlife Coordination

Grazing on important habitat lands. Unless DNR determines, in consultation with DFG, that impacts can be mitigated through specific management guidelines, grazing should be prohibited in the following habitat types:

- Dall sheep range
- Brown bear concentration areas
- Habitats of endangered species and species afforded special protection, if such species would be threatened by grazing
- Moose summer and winter concentration areas
- Caribou calving areas
- Other important habitats identified on a case-by-case basis by DNR in consultation with DFG.

Domestic sheep. Domestic sheep shall not be grazed above 1,500 feet in elevation or in the alpine transition zones in or near wild sheep range as determined jointly by DNR and DFG.

Browse species. Browse species will be conserved for primary use by wildlife through selection of areas and season of use guidelines.

Livestock predation. Grazing in known or suspected predator range (wolf or bear) is done at the permittee's or lessee's own risk. DFG will not conduct predator control activities for the purpose of reducing livestock losses from predators. Permittees or lessees must comply with 5 AAC 92.410: Taking Game in Defense of Life or Property.

Range improvements.

Approval. All range improvements must be approved as part of the grazing operating plan and lease agreement.

Facilities. No permanent headquarter facilities capable of human habitation will be authorized as part of a grazing permit or lease. Support facilities such as holding pens, equipment storage buildings, loafing sheds, and livestock treatment facilities shall be specified in the grazing operating plan. All facilities require DNR approval. Facilities shall be located to minimize impact on fish and wildlife habitat and harvest, timber management, and scenic qualities using the following criteria:

1. **Screening.** Facilities will be screened from view of roads, heavily used trails or areas, and public facilities to the extent feasible either by vegetation or natural contours. Location of such facilities must be pre-approved by DNR.
2. **Containment facilities.** Containment facilities will be sufficient to isolate diseased or contagious livestock temporarily, should the need arise. Extended treatment for recovery purposes should occur off the public grazing lease or permit area.
3. **Grouping.** Facilities will be grouped together and kept to the minimum necessary to support grazing operations.
4. **Habitat.** Facilities will not be allowed within stream, lake, or wetland buffers. DFG will be consulted and will have the opportunity to comment on the location of facilities in seasonally important big game habitat, such as calving areas, winter moose range, or habitat enhancement areas. Proposed facilities in important big game habitat will be located in the least sensitive habitat within the designated grazing area.

Fencing plans and guidelines. Fencing plans are required in the grazing operating plan. Fencing plans should be developed after consultation with DFG and DNR during the grazing operating plan development or amendment process. Fencing plans are intended to ensure that all fencing proposals are consistent with the fencing guidelines in this plan and that DNR and DFG review fencing proposals. This does not require that fences be used on all operations.

1. Fencing plans will address the following subjects:
 - Whether or not fencing is proposed
 - Type of fencing
 - Construction specifications
 - Purpose of fencing (for example, confine livestock, exclude livestock, sub-divide grazing land)
 - Location of fencing
 - Fence management

- drop down areas and requirements
 - intersections with recreation trails and roads
 - maintenance
 - permanent nature of fence.
2. Fences shall to the extent feasible and prudent be located and constructed to permit passage by moose through the area while minimizing the potential injury to moose.
 3. DFG recommends that barbed wire not be used for wire fences. The fence height and spacing of wire will be such that potential injury to moose is minimized and passage of adults and juveniles is maximized. Specific guidelines for fence height and wire spacing will be developed. One-, two-, or three-wire electrified fencing is acceptable.
 4. Fence construction should be designed to allow dropping the fence to the ground, if necessary, at the end of the grazing season in areas of intensive recreational use, established wildlife travel patterns, or areas of heavy snow accumulation.
 5. Fence construction will provide for easy passage for people where recreation trails and fences intersect. Foot traffic can be accommodated by pass-throughs or stile construction. Off-road vehicle or snow machine traffic at trail-fence intersections will be accommodated by cattle guards or similar devices to allow safe off-road vehicle passage.
 6. Fence lines should be cleared of any obstructions prior to construction to allow the fence to be clearly visible by animals and people. Such clearing will be maintained for the life of the fence.
 7. "Poly-tape" or other sight barrier material should be used to make the top wire highly visible.
 8. An alternative permanent fencing method for known moose migration routes may be pole fencing. Pole fencing across known moose trails should be tested as an alternative fencing method to wire fencing.
 9. All materials used in the construction of fences shall have a minimum life expectancy of the length of the permit or lease.

Effect on wildlife. Fencing will be designed, constructed, and maintained so as to reduce to the extent feasible and prudent the adverse effect on wildlife populations or hunting, trapping, and other recreational use. In selected wildlife or recreational areas, some fences will be removed or dropped to the ground at the end of that season's use. DFG should be consulted on fencing options.

Removal at end of permit or lease. Facilities and fencing will be removed at the end of the grazing permit or lease period if not renewed. The permittee's or lessee's responsibilities for removal will be specified in the permit or lease.

HERITAGE RESOURCES

There are no known heritage resource (cultural or historic resource) sites in the Kashwitna Unit. The following goals and guidelines are intended to ensure that sites will be identified prior to resource development activities, and that identified sites are protected.