

# FORESTRY

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## RESOURCE DESCRIPTION

The forest resource potential in the Matanuska Valley Moose Range has not been completely assessed. The limited data available, including the Susitna Basin Study, and reconnaissance of commercial and personal-use sale areas covers only that portion of the range west of the Buffalo Mine Road. In addition to this, there is some data that describes the forest lands owned or selected by the Chickaloon Moose Creek Native Association along the Kings, Chickaloon, and Matanuska Rivers. Aerial photography analysis of vegetation types has been completed, but on-the-ground field analysis has not yet been performed. This data indicates that there are areas within the Range that can be managed for forest products. These areas can be subdivided into three zones, which are described below and are also shown on Map 4, page 27.

- Zone 1: High potential - These areas are below 1000 feet in elevation. These areas are covered by a mixed forest of paper birch, quaking aspen and white spruce. The spruce volumes will average around 500-1,000 board feet per acre, sometimes running as high as 1,500 board feet per acre. The birch averages about 8 to 10 cords per acre, with highs approaching 15 cords. The aspen will average around 2 to 3 cords per acre, with some almost-pure stands containing as high as 10 to 15 cords per acre. There may be stands of black cottonwood along some of the larger drainages. In rare cases these may reach as high as 20,000 gross board feet per acre. Averages will be much lower, usually around 5,000-10,000 board feet per acre.
- Zone 2: Moderate potential - These areas are usually located between 1,000 and 1,500 feet in elevation. They are typically covered by a mixed forest but may contain areas of almost-pure stands of aspen, birch, spruce or cottonwood. The volumes are generally less than similar stands growing in Zone 1. This is a result of poorer form usually encountered at these elevations. Mixed stands will usually be located nearer the lower elevations, with almost-pure stands occurring at near 1,500 feet. Volumes range around 300 to 500 board feet of spruce per acre, 5 to 8 cords of birch per acre, and 2 to 3 cords of aspen per acre, in the mixed stands. The pure stands will usually run at 800 to 1000 board feet per acre for spruce, 10 to 12 cords per acre for birch, and 10 to 12 cords per acre for aspen.
- Zone 3: Low potential - These stands are located above 1,500 feet in elevation. They are broken into "fingers" with open grasslands or shrublands between the stands. The forested areas consist primarily of pure stands of white spruce, cottonwood, aspen and sometimes birch. They will be bordered by willow or alder, which in turn is generally bordered by alpine tundra or grass.

Expected volumes will be considerably less than similar stands in the other forested zones within the Moose Range. These stands will be less dense, resulting in a grass understory.

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### RESOURCE EVALUATION

Growth rates in Zone 1 are very good, with potential growth being excellent relative to Zones 2 and 3. Regeneration can usually be accomplished easily with scarification. Form is generally good with many straight stems and light branching.

Growth is poor to moderate in Zone 2, with a moderate-to-high potential for improvement. Regeneration may be difficult, due to the competition from grass on most sites in this zone. Intensive silvicultural practices and/or planting may be required to properly regenerate, especially at the higher elevations. Timber quality may be lower than Zone 1 as a result of climatic conditions and more open stand features.

Regeneration in Zone 3 may be difficult to very difficult. More often than not, intensive silvicultural practices will be required, usually followed by planting to ensure a proper stand. Growth rates will be slow. Diameter growth will be high relative to growth in height, causing the trees to appear very conical, resulting in poor form and less volume per tree than that found at lower elevations. Trees may often be "wolf" trees with many large branches, reducing the timber quality.

The current market situation, coupled with the present knowledge of regeneration requirements, allows Zone 1 and the lower portions of Zone 2 to be managed for timber products at this time. A significant change in the market situation, such as the development of a chip market, combined with improved access and regeneration techniques, may allow some operation up to about 2,000 feet, especially in the eastern portion of the Moose Range. Higher elevations are likely to remain inoperable due to climatic conditions which have precluded natural afforestation.

The forest resource, although providing valuable moose habitat, can provide more valuable habitat than it is providing at present. Forest management will clearly augment the availability of forage for browse species. For example, as a mature stand is harvested the plants that quickly regenerate are preferred for browse. Subsequently, moose populations may increase.

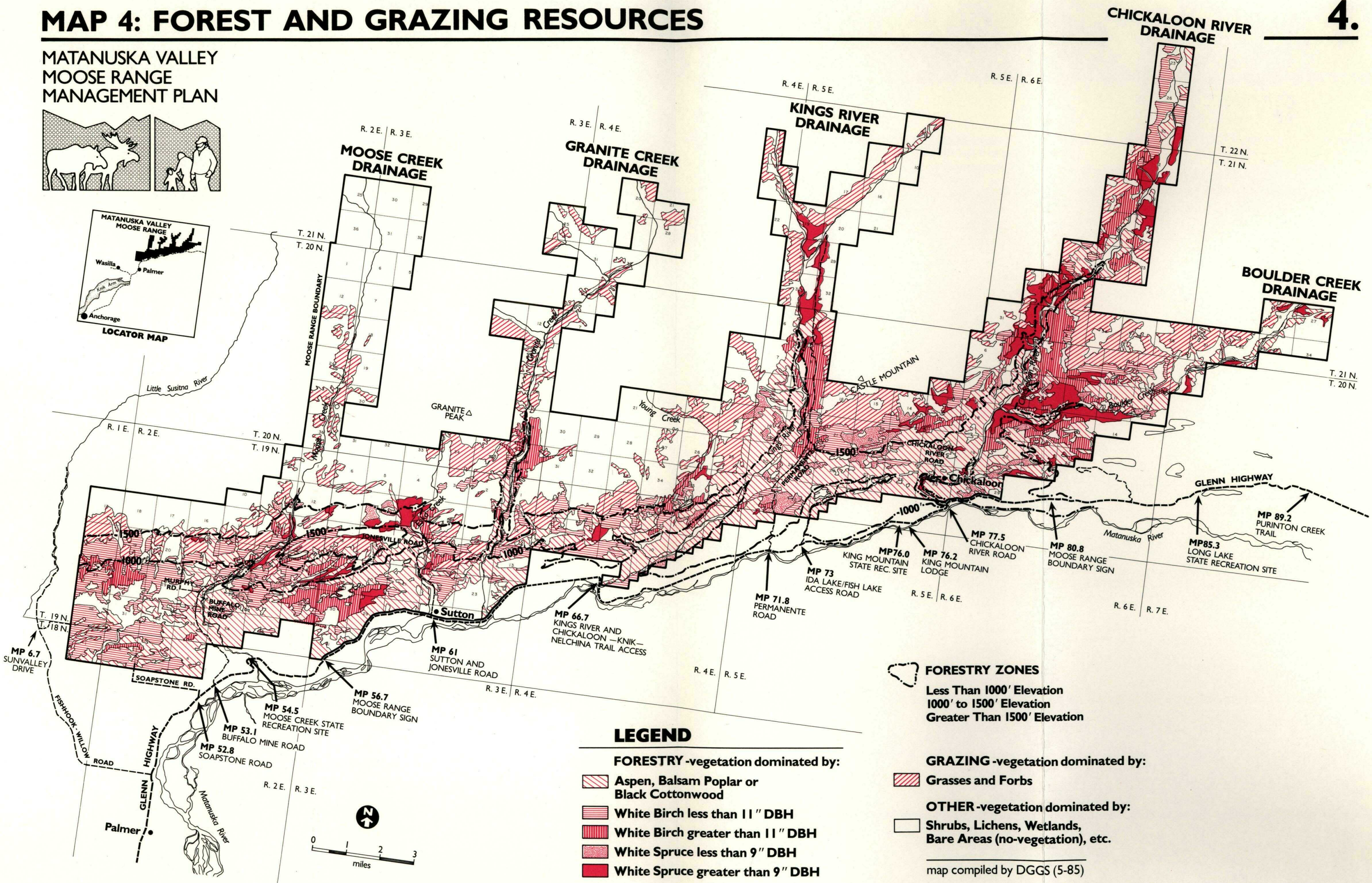
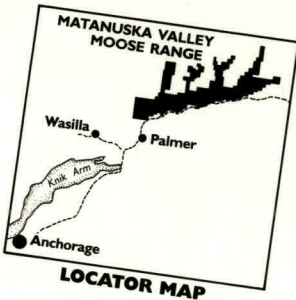
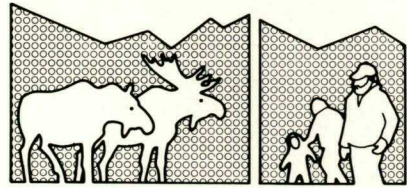
The locations of timber harvest/habitat enhancement are limited as a result of determining factors such as environmental considerations (water quality, potential soil erosion, critical wildlife habitat, etc.), access and market demand. Areas that have been determined suitable for harvest are identified in the five-year timber harvest/habitat enhancement schedule in Chapter Four, on pages 151-161, 174-178, and 189-190. Timber sales will be offered in these areas for both commercial and personal uses. More detailed studies or changes in the determining factors may increase or decrease the acreages, exact locations of the sites and the date of offering.

Resource development, like opening of material sites, road construction and mineral development, may create additional areas in which timber harvest will be encouraged in order to utilize the resource prior to the primary development.



# MAP 4: FOREST AND GRAZING RESOURCES

## MATANUSKA VALLEY MOOSE RANGE MANAGEMENT PLAN



### LEGEND

- FORESTRY -vegetation dominated by:**
- Aspen, Balsam Poplar or Black Cottonwood
  - White Birch less than 11" DBH
  - White Birch greater than 11" DBH
  - White Spruce less than 9" DBH
  - White Spruce greater than 9" DBH

- FORESTRY ZONES**
- Less Than 1000' Elevation
  - 1000' to 1500' Elevation
  - Greater Than 1500' Elevation

- GRAZING -vegetation dominated by:**
- Grasses and Forbs
- OTHER -vegetation dominated by:**
- Shrubs, Lichens, Wetlands, Bare Areas (no-vegetation), etc.

map compiled by DGGS (5-85)