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**RANGE MANAGEMENT IN ALASKA**

**Presented at the Bureau of Land Management Range, Soil, and  
Watershed Technical Workshop, Phoenix, Arizona.**

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**February 18, 1965**

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## INTRODUCTION

Visualize a land mass one-fifth the size of the continental United States, extending from the coast of Georgia to Los Angeles, and from International Fall, Minnesota, to El Paso, Texas, and you have the state of Alaska. Imagine the inherent problems of administering the resources on 75% of this land mass, when it contains less than 5,000 miles of primary roads, and you have the role of the Bureau of Land Management in Alaska.

Along with the major programs of issuing mineral leases, protecting the lands from fire, and, since 1959, identifying and surveying 103 million acres of land to be selected by the State of Alaska, under its Statehood Act, BLM is responsible for a balanced program in the management of the lands and resources on some 300 million acres of public domain.

BLM's role in administering nearly 40 million acres of land having potential grazing values is but a part of its resource management program in Alaska.

## HISTORY OF GRAZING IN ALASKA

As early as 1794, the Russians introduced livestock in widely scattered settlements in the Aleutian-Shumagin island group. In 1853, Americans brought 500 sheep to Dutch Harbor, on Unalaska Island, and after 1886 American whaling ships introduced domestic livestock to the Aleutian, Shumagin, and Kodiak island areas. Their intent was to provide fresh

meat for whaling vessels working the Bering Sea and the Arctic Ocean. After the decline of the whaling industry, these livestock were abandoned, and were eventually eliminated through natural causes and by local hunters.

More recently, concerted efforts have been made to establish a permanent livestock industry in Alaska. As an example, a sheep operation which was started on Unmak Island in 1917 is still operating successfully.

Most BLM leases were issued in the late 1950's and early 1960's. Lessees on the Aleutian and Shumagin Islands concentrate on wool rather than on beef production. Approximately 1,300,000 acres, involving more than 17,000 sheep, are leased on these islands. Kodiak Island, and several smaller islands nearby, is the center of beef production in Alaska. Approximately 380,000 acres, involving 2,400 head of beef cattle, are under lease in this area. Some efforts have been made to start livestock operations near Fairbanks, but no real success has been noted to date. Long winters, with the need for expensive feeding operations, limit livestock operations in the interior of Alaska.

Reindeer were first introduced into Alaska in 1892 from Russia. The primary reason for the establishment of reindeer was the urgent need to provide the coast-dwelling Eskimos with a steady meat supply after their usual source of whale and sea mammal meat was practically eliminated by the whaling industry. Northwest Alaska, with its lichen-covered tundra, has proved to be well suited for reindeer. This

initial herd of 1,280 deer multiplied to an estimated 650,000 head by 1932. Partly as a result of overgrazing, due to lack of management, the reindeer population decreased to 26,000 in 1952. Since that time, however, reindeer numbers have steadily increased. Present estimates of reindeer population in northwest Alaska place the number near 40,000.

#### ALASKAN GRAZING REGIONS

Grazing areas on lands presently administered by the Bureau of Land Management in Alaska can be divided into 4 distinct regions, based on geographical location, climate and forage types.

##### 1. The Aleutian-Shumagin Island Group

These treeless islands are of recent volcanic origin, with some volcanism still evident. Most of the Aleutian islands are covered by extremely rugged mountains. The climate is definitely marine, providing lush growth of grasses and forbs. Extremes of temperatures are uncommon, although high winds and fog are common.

The major livestock grazed on these islands are sheep, predominantly of Columbia and Romney strain. Summer grazing is concentrated in the lower and middle elevations. Grazing in winter is done almost exclusively on beaches and tideland flats.

On the beaches and lowlands, the major forage species are beach rye, also called dunegrass (Elymus mollis), reedgrass (Calamagrostis spp.), brome grass (Bromus spp.), lupine (Lupinus spp.), and fireweed (Epilobium spp.).

Fescues (Festuca spp.), blue grasses (Poa spp.), and timothy (Phleum spp.) are found on the higher summer ranges.

## 2. Kodiak and adjacent islands

The climate of the Kodiak island group is also a marine type, producing weather conditions somewhat more severe than that of the Aleutian island group. Winter feeding is normally required.

Beef production is favored over wool production. Kodiak is only 300 miles from Anchorage which will undoubtedly be the main future market for Kodiak beef. Kodiak Island is also volcanic in origin. Cattle grazing is limited to the lower foothills and tideland flats.

The main grass species are bluejoint (Calamagrostis canadensis), hair grass (Deschampsia spp.), beach rye (Elymus mollis), blue grass (Poa spp.), and sweet grass (Hierochloe odorata). Forbs include horsetail (Equisetum spp.), sedges (Carex spp.), Nootka lupine (Lupinus nootkatensis), angelica (Angelica genuflexa), and yarrow (Achillea multiflora).

Water hemlock (Cicuta spp.) contributes to some early spring losses.

## 3. Western Alaska

In the area bordered by the Bering Sea on the west, and extending approximately 200 miles inland, lie lands suitable for reindeer grazing. Typically, reindeer are herded near the coastal areas in summer and are wintered inland. It is not uncommon to drive reindeer herds over 100 miles between summer and winter ranges.

This vast area is basically treeless tundra, with a high percentage of the area covered by countless lakes and swamps. Winter climatic

conditions are severe. Ecological changes, due to past overgrazing and wildfires, have decreased the available winter forage for reindeer.

Reindeer, in some respects, have habits similar to domestic sheep-- they tend to follow other animals. This trait has caused some losses in reindeer herds. The deer will follow caribou if the latter's migration routes happen to be in the vicinity of reindeer. Both animals belong to the genus Rangifer, look similar, and will interbreed.

Reindeer are slaughtered from July to February. Prime steer carcasses will dress out near 200 pounds. The meat from native-owned herds is consumed locally by the natives. However, ever-increasing markets are being established in Anchorage, Fairbanks, and even in the west coast states for reindeer meat from government-owned herds on Nunivak Island. Reindeer on this island are controlled by the Bureau of Indian Affairs. Each year approximately 3,000 deer on this island are slaughtered under strict state meat inspection standards.

Plant composition in the coastal area consists mostly of sedges (Carex spp.), cottongrass (Eriophorum spp.), and various dwarf willows and birches. The inland areas are covered with foliose lichens (Cladonia spp.), and shrubs with a smaller mixture of mosses, grasses, and forbs.

#### 4. Interior Alaska

Certain small areas in the interior of the state, along the Tanana and Nenana Rivers, are being developed by livestock growers. Severe winter climate for extended periods, with correspondingly short growing

seasons, can result in feeding seasons of up to 7 months.

Main forage species are bluejoint (Calamagrostis canadensis), blue grasses (Poa spp.), wild pea (Lathyrus spp.), fireweed (Epilobium spp.), sedges (Carex spp.), horsetail (Equisetum spp.), and lupine (Lupinus spp.).

Leases in this area are made primarily to big game guides and outfitters, for their horses and immediate beef supply.

#### WILDLIFE

The brief description of the four major regions would be incomplete without giving proper recognition to the wildlife values on these lands. Without exception, these four regions are the nesting grounds of millions of waterfowl. Some areas hold concentrations of unique wildlife, such as caribou, moose, and bear.

It would be naive to believe that the introduction of domestic livestock does not affect resident wildlife, and that no conflicts of land use will result.

It is immediately apparent that BLM's role in managing these lands must be based on:

1. A critical analysis of the interrelationship of wildlife and livestock use on the lands now being leased and proposed for lease.
2. The development of management plans in cooperation with other interested public agencies, to foster and maintain the livestock industry with the least possible conflict with wildlife.

It must be recognized that certain areas, due to topography, cover, and climatic conditions, will be best suited for the sole purpose of wildlife management. These areas may well preclude livestock grazing.

#### ALASKA GRAZING LEGISLATION

1. The Alaska Grazing Act (43 CFR Part 4131)

The Act of March 4, 1927 (44 Stat. 1452; 48 USC 471, 471a-471o) provides for the establishment of grazing districts in Alaska, and for the utilization of the public lands in Alaska for the purpose of livestock grazing.

Most leases are issued for a 20-year period and no base land is required. Preference rights are given to Natives, bonafide settlers, and finally, to other qualified applicants. The major requirements of an applicant for grazing leases include a showing of his financial responsibility, proposed stocking schedule, range improvement schedule, and his plans for placing the stock on the lease area, as well as his plans for marketing the products. The applicant is solely responsible for finding and selecting the lease area. Issuance of year long leases is based primarily upon the carrying capacity of the winter range, rather than on summer range capacities. A few summer leases are issued in the Matanuska Valley, some 50 miles from Anchorage. At present a fee of five cents per AUM is charged. During 1964, a total of 76 livestock leases were administered by BLM in Alaska.

2. The Alaska Reindeer Act (43 CFR Part 4132)

The Act of September 1, 1937 (50 Stat. 902; 48 USC 250k) provides for the issuance of permits for the grazing of reindeer in Alaska. The purpose of the Act is to provide for the development and maintenance of a stabilized reindeer industry. The Bureau of Land Management is responsible for the issuance and administration of these reindeer permits.

Ownership of reindeer is restricted to Eskimos and other native races of Alaska. Except for an initial application fee of \$10.00, no use fees are charged. At present there are 14 reindeer permits in effect, covering approximately 21,500 reindeer over an area of 18,000,000 acres.

The Bureau of Indian Affairs has control of a federally-owned reindeer herd. This 16,000 head herd is located on Nunivak Island, some 30 miles off the coast of the mainland. The BIA "lends" a specified number of deer to a qualified applicant who intends herding reindeer on the mainland. After a predetermined period of time in which the applicant has had an opportunity to increase his herd, he is required to return the same number of "loaned" deer to the BIA. A good herder can usually double the size of his herd in less than 5 years.

RECENT BLM RANGE MANAGEMENT EFFORTS IN ALASKA

Although leases were issued in the past, BLM's range management program in Alaska was officially initiated when a Range Manager was

hired in 1959. In addition to keeping up-to-date with the issuance of grazing leases, BLM, in cooperation with the SCS, conducted a range survey on the south half of Kodiak Island, covering 300,000 acres.

In 1963 another Range Manager was hired. A BLM range survey was then made on the south half of Umnak Island on 115,000 acres. These initial surveys were made using "stateside" standards and techniques, and will require adjustments after Alaskan range survey techniques are developed.

A Wildlife Specialist position was established in the State Office in November 1964. In January 1965, a 2-year agreement with the University of Alaska was signed, establishing a cooperative project for research in reindeer range evaluation techniques. This project will also be applicable, to some extent, to caribou range areas.

Total funds for range administration work in Alaska have been allotted as follows: FY 1963 - \$32,000; FY's 1964 and 1965 - \$49,000. Although these sums may appear adequate, they have not provided for realistic grazing lease administration. Inherent high cost of travel in the state, plus the financing of the newly created Wildlife Specialist position, indicates the need for an additional \$12,000 in FY 1966, if the present level of operation of this program is to be maintained.

#### PROPOSED LONG-RANGE PLANS

Relying on statistics compiled by various federal and state agencies,

it can be assumed that Alaska's present human population of 230,000 will increase to 322,000 by 1976, and to over 600,000 by the year 2000.

Assuming also that the present annual per capita beef consumption of 95 pounds will remain constant, it is apparent that the demand for high quality beef in the state will continue to rise at the same rate as the projected population growth.

Alaskan grown beef could supply a major portion of this market, provided a high quality product can be supplied on a continuing basis to local markets by Alaskan stockmen.

It is indicative that public domain grazing lands play an increasingly active role in Alaska's future livestock industry. Every effort should be made by BLM to accelerate its range management program in the state. By doing so, it can assume its proper role in contributing to the economy of Alaska and the nation.

Present estimates show that less than 10 percent of the potential carrying capacity of public domain grazing lands is now being utilized in the state.

Our future range program is aimed to:

1. Establish methods of determining range carrying capacities in Alaska for both domestic livestock and reindeer.
2. Establish and use range condition and trend studies on livestock lease and reindeer permit areas.

3. Maintain a high level of range use supervision.
4. Initiate programs of range improvement and range rehabilitation. The costs of these programs in the future would depend heavily upon the degree of range supervision exercised now.
5. Cooperate with wildlife management agencies and other land management agencies, to provide for optimum use of public domain wildlife habitat.

Range management is in its infancy in Alaska. The Bureau of Land Management is in a position to assume leadership in developing the livestock and reindeer industries in the state; however, such leadership should be assumed now, in order to keep in stride with the many other expanding industries in the state.