

AGRICULTURE

1. GOALS

A. Economic Development. Diversify and strengthen the state's economy by increasing the availability of competitively priced Alaskan food products through:

1. encouraging expanded production and availability of competitively priced farm products from existing agricultural lands;
2. increasing the acreage available for agricultural production for both in-state and export production;
3. preserving the future option to use potential agricultural lands for agricultural uses.

B. Agrarian Lifestyle. Provide the opportunity for Alaskans to pursue an agrarian lifestyle.

C. Conservation of Agricultural Resources and Protection of the Environment. Design all agricultural projects in a manner that maintains or enhances the productive capability of the soil and protects or enhances the quality of the natural environment.

2. MANAGEMENT GUIDELINES

A. Disposal of Agricultural Development Rights.

Agricultural development rights only will be conveyed to private ownership where the Department disposes of state lands that are designated for agricultural use.

B. Farm Development Schedules and Conservation Plans.

When agricultural development rights are conveyed to private ownership, terms of conveyance will include the requirement to comply with a farm development schedule and farm conservation plan. Conservation plans will be approved by ADNR in consultation with ADF&G prior to farm development. The plans will incorporate soil, water and wildlife conservation practices as developed by the SCS and other affected agencies. ADF&G's technical assistance to farmers and Soil and Water Conservation Districts in the preparation of farm conservation plans will be the primary means of incorporating fish and wildlife concerns into these plans.

C. Agricultural Disposal Program. Large blocks of designated agricultural lands (2,000 or more generally contiguous acres) should be used primarily to support commercial farming under the state's standard agricultural land disposal program (rather than under the homestead program, which limits farm size to 160 acres, and imposes a relatively lenient development schedule). Scattered, smaller parcels of designated agricultural lands should be considered for disposal under the agricultural homestead program. (See the Forestry guidelines for requirements regarding timber salvage on agricultural lands.)

D. Protecting Options for Agricultural Development.

Remote state land with good agricultural potential, but not scheduled for sale or homesteading, should generally remain in public ownership and be classified "resource management" to protect the option for agricultural use. Exceptions to this policy may occur when exceptionally high forestry, habitat, or recreation values merit a long-term retention classification. Potential agricultural lands classified resource management will be available for uses that do not preclude agricultural development or impact other primary resource values. Such uses include habitat protection and enhancement, recreation and forestry management.

Parcels of 40 acres or larger which are owned by the Matanuska-Susitna Borough must be classified agriculture if they contain more than 40% Class II and III soils (Soil Conservation Service capability classification). Exceptions to this can be made by the Assembly, under the provision of Ordinance 13.25.070, if it is found to be in the public interest. Such a finding can be made only if the land is determined to be unsuitable for agriculture, if the proposed alternative use contributes to agricultural development, or if the other proposed use is essential to the welfare of the borough and no reasonable non-agricultural alternative site is suitable and available.

E. Retention of Publicly-owned Land Adjacent to Wetlands, Waterbodies and Streams.

Publicly owned buffers should be retained on all lands slated for disposal for agricultural purposes adjacent to wetlands, streams or other waterbodies that have important hydrologic, habitat or recreational values. The specific width of a buffer shall be determined after consultation with affected agencies and in accordance with the management guidelines contained in the lakeshore, stream corridor, and

wetlands sections of this chapter. A minimum buffer width of 100 feet shall apply to agricultural land disposals. This width should be increased as necessary where, because of steep slopes or other conditions, the potential for sedimentation or pollution is high. Buffer widths should also be increased where appropriate to provide or maintain public recreation opportunities or important habitat.

F. Timber Salvage on Agricultural Lands. See forestry management guidelines, this chapter.

G. Depredation. Efforts will be made to minimize depredation of crops by wildlife. Means of achieving this may include avoiding agricultural disposals in areas where depredation is likely to be a major problem and integrating game movement corridors into the design of agricultural projects. When depredation does occur on agricultural land, non-lethal means of wildlife control are preferred.

H. Floodplains. DNR will generally avoid agricultural disposals in the 10-year flood plain. Where the 10-year floodplain has not been identified, the best available information will be used to identify areas where flooding is likely to be a severe limitation on agriculture. Agricultural disposals in such areas will be avoided.

I. Grazing

1. Grazing in Remote Areas. In the Susitna Basin grazing generally will be discouraged in roadless areas with little natural grazing potential and in areas where there are no feasible farm headquarters sites. This policy is intended to direct the department's leasing and permit program and range management plans to areas where grazing is economically feasible and to minimize the impacts of grazing on soil stability, water quality and habitat.

2. Grazing on Important Habitat Lands. Grazing generally should be prohibited in the following habitat types unless DNR determines, in consultation with ADF&G, that impacts can be mitigated through specific management guidelines:

- 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 winter concentration areas;
- caribou calving areas; and,
- other important habitats identified on a case-

by-case basis by DNR in consultation with ADF&G.

3. Multiple Use Management of Grazing Lands

- a. Grazing lands will be managed as multiple use lands to support a variety of public benefits in addition to livestock production, including the following:
 - fish and wildlife maintenance
 - water quality maintenance
 - public recreation
 - timber
 - soil conservation
- b. Grazing lands will be managed to ensure sustainable forage for domestic stock and wildlife.
- c. Public access across and public use of grazing lands may not be limited by persons holding grazing leases or permits unless approved as part of a grazing operations plan.

4. Grazing Permits and Leases. A grazing lease or permit issued by DNR is required for any person who releases livestock on state grazing lands. Grazing leases will be granted for a period not to exceed 25 years. Permits must be renewed annually. Permits, rather than leases, should be issued in areas especially susceptible to soil erosion or water quality degradation, and in other environmentally sensitive areas. These areas will be identified through DNR's range management plans (see 5 below).

The requirements stated in these guidelines will be implemented through appropriate lease and permit stipulations.

Provisions of existing grazing leases and permits are not affected by these guidelines. In areas where grazing leases and permits have been issued previously, new permits may be issued and existing leases may be renewed prior to the completion of range management plans. However, such permits or leases will be subject to these management guidelines.

5. Range Management Plans. Where grazing is anticipated to be a significant, widespread land use with potential for creating environmental harm, DNR will develop range management plans (RMP) before issuing grazing leases or permits. RMPs will be developed by DL&WM in consultation with the Divisions of Agriculture and Forestry, ADF&G, SCS and Soil and Water Con-

servation Districts. The provisions of RMPs will provide the basis for approval of grazing operations plans (see below) and of stipulations to be included in grazing leases and permits. RMPs will not be required where grazing is a minor use with few animals and little land area involved. DNR will determine where range management plans are appropriate based on consultation with other affected agencies, including ADF&G. In the Susitna planning area it is the Department's intention to complete RMP's for the following management units: Management Unit 3C, in the Talkeetna Mountains Subregion; Management Unit 6a, in the Glenn Highway Subregion; Management Unit 2, in the Mt. Susitna Subregion; and Management Unit 1a, in the Chugach Mountains Subregion. Preparation of RMP's will be contingent on funding. RMPs shall address, at minimum, the following items:

- a. Stocking Densities.** The state shall use standard United States Department of Agriculture range assessment procedures or other scientifically acceptable methods to identify the abundance, distribution, annual productivity, nutrition, and seasonal availability of range vegetation available for grazing. Forage availability, expressed as animal unit months (AUM's) shall be used with proposed grazing schedules to establish maximum allowable stocking densities, with consideration for meeting wildlife forage requirements, that will provide sustained range production and condition.
 - b. Water Quality Protection.** Range management plans will state how anadromous fish and streams, other waterways and lakes are to be protected from the adverse impacts of grazing. Fencing may be required to protect portions of waterbodies. Identification of specific watering sites, feeding stations, headquarter sites, or other improvements, may be required to minimize the adverse impacts of grazing.
 - c. Annual Grazing Schedule.** Range management plans will establish spring and fall dates for release and removal of stock on grazing lands. This may be necessary to protect the range and to minimize competition between stock and wildlife.
 - d. Map of Proposed Grazing Areas.** Range management plans will include a map which shows the location, acreages, and configurations of proposed lease and permit areas.
 - e. Physical Improvements.** Range management plans will show proposed feed lot sites, stock watering sites, supplemental feeding stations, farm headquarter sites, fences and other improvements necessary to minimize conflicts between grazing and other resource values. Range management plans shall include, where appropriate, guidelines for the design, location, and/or use of roads, trails, bridges and other improvements or actions that may be necessary or incidental to grazing operations.
 - f. Environmental Monitoring.** Range management plans will establish procedures to monitor the impacts of grazing on wildlife, vegetation and soil stability and establish conditions under which a lessee's or permittee's grazing operations plan may be modified to prevent environmental degradation.
 - g. Disease Transmission and Livestock-Predator Conflicts.** Range management plans will establish measures necessary to minimize transmission of disease between domestic stock and wildlife and to minimize livestock-predator conflicts.
 - h. Modification of Vegetation.** Artificial modification of natural vegetation (e.g., clearing, burning, crushing, seeding, etc.) will be permitted only in the locations and under the guidelines specified by applicable range management plans.
- 6. Grazing Operations Plan.** Before receiving a grazing permit or lease, a person must have an approved grazing operations plan. DNR will assist a lessee or permittee in plan preparation with the consultation of ADF&G and SCS. A grazing operations plan will be included as a condition of a lease or permit. Minimum requirements of a grazing operations plan are as follows:
- a. Cooperative agreement between the lessee and the appropriate Alaska Soil and Water Conservation District.
 - b. A physical resource map identifying: (1) location, acreage, and configuration of the proposed lease or permit area(s); (2) proposed feedlot sites, stock watering sites, and supplemental feeding stations; (3) farm headquarter site, outbuildings, fences, and other proposed improvements.
 - c. A statement of the lessee's proposed management activities, including (1) range management practices considered essential or desirable, including clearing and modification of vegetation; (2) livestock species to be stocked; (3) annual grazing schedule and (4) forage balance sheet.

d. Proposed stocking densities: a maximum stocking density will be based on DNR's range management plan for the area concerned (if such a plan exists). A minimum stocking density with a schedule for achieving it will also be established as a part of each grazing operations plan to ensure efficient use of state grazing land.

7. Standards of Approval – Grazing Operation Plans.

A grazing operations plan will be approved only when it is in compliance with an applicable range management plan. Where there is no range management plan in effect, approval will be based on consideration of the potential effects of grazing on water quality, riparian lands, soil stability, disease transmission, livestock-predator conflicts, and competition between wildlife and stock for forage. DNR, in consultation with affected agencies, may require that appropriate measures be specified in a grazing operations plan to minimize adverse impacts.

8. Modification of Grazing Operations Plan.

Modifications of grazing operations plans may be required if grazing activities are determined to cause significant degradation to the range or wildlife habitat, including, but not limited to, water quality, soil stability or sustainable forage for stock and wildlife. Determination that modification of a grazing operations plan is necessary will be made by ADNR in consultation with the lease or permit holder, ADEC, and ADF&G.

J. Other Guidelines Affecting Agriculture.

A number of other guidelines affect agricultural development. For details of these guidelines, see the following sections of this chapter:

Fish and Wildlife Habitat

Forestry

Subsurface Resources and Materials

Transportation

Lakeshore Management

Public Access

Stream Corridors

Trail Management

Wetlands Management

Resource Management and Borough Land Bank

3. LAND ALLOCATIONS SUMMARY

The Susitna area contains a significant portion of the state's total supply of potential agricultural lands. Preliminary work by the USDA, Soil Conservation Service estimated that there were approximately

400,000 acres of publicly-owned cultivable soils in contiguous blocks large enough to support farming in the Susitna area. Cultivable soils are Class II and III and certain IV soils as defined by the Soil Conservation Service. These soils have the fewest natural limitations, such as wetness, steepness, etc., for farming. These preliminary estimates are now being revised to better consider climate and other factors and to ensure consistency between soil ratings in different locations. The results of these revisions are reducing previous estimations of the amount of potential crop lands. Final soils information should be available in the latter half of 1985.

Most cultivable soils lie in the central lowlands of the study area between the drainage of the Yentna River and the western foothills of the Talkeetna Mountains – the land within the South Parks Highway, Petersville Road, and Susitna Lowlands Subregions. The majority of these potential agricultural areas lack road access now and are not likely to have road access in the next five to ten years. There are, however, several concentrations of potential farmlands, primarily in borough ownership, within a few miles of the Parks Highway and the Petersville Road.

A. State Lands. Most state-owned cultivable soils lie south of Petersville Road and west of the Susitna River. Because of the expense of providing roads to this remote area and the administration's policy of emphasizing the development of farm lands already in private hands, the plan designates little remote agricultural land for near term sale. The plan instead stresses protecting the option for future agricultural use by giving most large blocks of potential agricultural lands a resource management designation. Approximately 100,000 acres of lands that have a high percentage of cultivable soils in the Petersville Road, Mt. Susitna and Susitna Lowlands subregions are designated resource management. The bulk of these lands are in three areas: 1) along both sides of the lower Kahiltna River, 2) between Alexander Creek and the Mt. Beluga-Mt. Susitna area, and 3) in the Deshka Flats area. Although other uses on resource management lands, such as forestry management, recreation and habitat enhancement, are permitted, nothing may be done that precludes future agricultural use unless the plan is amended and the land reclassified. A resource management designation does not, however, commit the land to agricultural use: the land may be evaluated for several possible uses based on additional information, improved access, or changing social and economic conditions. It should be noted that some resource management lands are open to mineral entry. If mining activities or claims on these lands increase significantly, the potential for agricultural development may be reduced.

The one exception to the general policy of not designating remote lands for agriculture is in the Kashwitna Knobs area. At this site, located south of the Petersville Road approximately 30 miles, approximately 18,000 acres of land containing several large contiguous blocks of Class II and III soils are designated for agriculture. This area is intended to be a future commercial agricultural project. It will not be sold until access improves or funding for road improvements is approved.

In portions of the study area with better access, this plan designates approximately 8,000 acres of state land for agricultural disposal. Land designated for agricultural is summarized on the following chart. About 3,620 acres are designated for agricultural homesteads in the South Parks Highway Subregion in an area southeast of Sheep Creek near Caswell Lakes.

Approximately 520 acres of state land are designated for agricultural disposal in the Petersville Road Subregion. These agricultural homesteads are located in several different management units including areas near Rabideux, south of the Petersville Road and just west of the Big Susitna River. The 2,400 acre Rabideaux Project was offered for sale in this area in summer, 1984. This project is just east of the Susitna River, 2-3 miles south of the Petersville Road.

In addition to the 18,000 acre Kashwitna Knobs area, approximately 4,000 acres of land are designated for agricultural homesteads in the Susitna Lowlands and Mt. Susitna Subregions. These parcels are located in the area between the Yentna and Susitna Rivers near Kroto Creek and near Alexander Creek.

Grazing is designated as a permitted use on approximately 150,000 acres of state land in the Susitna Lowlands, Mt. Susitna, Talkeetna Mountains, and Glenn Highway Subregions. Most of this land does not have road access, except for portions of the land within the Matanuska Valley Moose Range east of the Hatcher Pass Road. In addition, there are many millions of acres of state lands where grazing is neither a designated nor a prohibited use — in these areas decisions to issue grazing leases or permits will be made on a case-by-case basis.

B. Borough Lands. The approximately 34,000 acres of borough lands with good agricultural potential are located principally in the South Parks Highway, Petersville Road and Susitna Lowlands Subregions. Particularly large concentrations (10,000 acres or more) occur in the three areas: 1) between the Chulitna and Susitna Rivers near their confluence, 2) on the west side of the Susitna River opposite the

town of Talkeetna, and 3) in the Chijuk Creek area between Amber and Parker Lakes 10-15 miles south of Petersville Road.

A borough ordinance restricts to agricultural use borough-owned Class II and III soils when they occur in parcels of 40 acres or more. In this plan, almost all borough lands with agricultural potential are designated borough land bank, to be managed in the near term as multiple use public lands, with the option for agricultural use protected.

TABLE 1

AGRICULTURAL LANDS DISPOSAL SCHEDULE		
STATE PROJECTS	NET ACRES	LOCATION MANAGEMENT UNIT
Petersville Homesteads	520	Petersville Road Subregion
Caswell Lake Ag. Homestead	3,620	South Parks Highway 13b
Kroto West	2,200	Su Lowlands 11g
Yentna Uplands Addition	980	Su Lowlands 13g
Kashwitna Knobs	18,000	Su Lowlands 14b
Lower Sucker Creek	800	Mt. Susitna 2e
Total Acres of State Projects:	26,120	

4. IMPLEMENTATION

A number of measures are necessary to implement the agricultural goals, guidelines and land designations of this plan. Among these measures are land disposals, additional research and road construction. Recommendations for road construction are presented in Chapter IV where road priorities are established based on a comprehensive consideration of resource value in each subregion. The following material addresses land disposal schedules and research needs.

A. Land Disposal. The preceding table indicates approximate disposal dates for six state agricultural projects. The main limit on the pace of sales of lands designated for agriculture is the lack of road access.

B. Research and Educational Needs. In addition to periodic evaluations necessary to determine when future agricultural land sales are appropriate, continuing research and improved educational services may significantly contribute to successful agricultural development. The following are recommended implementation measures:

1. Plant materials research: As indicated by recent economic feasibility studies, on-farm economic

success is most dependent on plant yields, management and commodity prices. Continuing research of plant varieties best suited to Alaska's climate, and appropriate crop and soil management may improve yields which can off-set Alaska's relatively high production costs.

2. Range inventories: More detailed evaluation and inventory of potential grazing areas will expedite leasing of publicly owned lands for domestic livestock grazing.
3. Assessing the Economics of on-Farm Feasibility:
 - a. Diversified farming may provide better returns than single crop production. The Division of Agriculture is currently evaluating the success of diversified operations on small and medium size farms. Continued study may provide information on optimum crop rotations and investment scheduling which may help improve cash flow and farm management.
 - b. Farm Surveys: Little historical data exist regarding costs of production, crop management and yields. Surveys could provide necessary information which would be useful in determining crop budgets, expected yields and improved management techniques.
 - c. Forecasting: Projecting future price trends, production costs and demand are necessary in planning sales far enough in advance to allow land to be available and in production to benefit from expected market conditions.
4. Educational Services: These services are needed on a regular basis so that farmers can be kept abreast of plant and soil research findings and management techniques.