

Kuskokwim Area Plan for State Lands



Alaska Department of
**NATURAL
RESOURCES**

May, 1988

STATE OF ALASKA

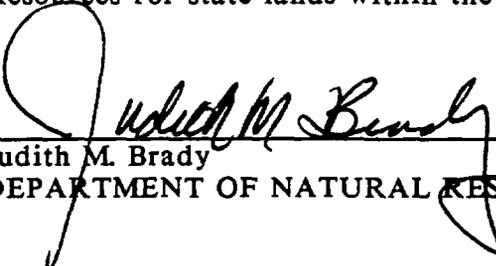
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF LAND AND WATER MANAGEMENT

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The Commissioner of the Department of Natural Resources finds that the Kuskokwim Area Plan meets the requirements of AS 38.04.065 and 11 AAC 55.010-.030 for Area Land Use Plans and does hereby adopt it as policy of the Department of Natural Resources for state lands within the planning area.



Judith M. Brady
DEPARTMENT OF NATURAL RESOURCES

22 March 88
Date

The Alaska Department of Fish and Game endorses the Alaska Department of Natural Resources land planning process as the best method available to make decisions regarding land management practices and allocations. We appreciate the opportunity to represent fish and wildlife values and fish and wildlife uses during the development of the Kuskokwim Area Plan. The department will use the plan policies and guidelines in meeting its constitutional and statutory mandates to protect, preserve, maintain, and enhance fish and wildlife resources in the planning area.



Don W. Collinsworth
DEPARTMENT OF FISH AND GAME

5-19-88
Date

Kuskokwim Area Plan

May 1988

Prepared by:

Alaska Department of Natural Resources

Alaska Department of Fish and Game

Advisory Board, Planning Staff, and Technical Advisors

The Kuskokwim Area Plan was prepared by an inter-disciplinary advisory board representing state agencies, major landowners, and regional governmental organizations within the planning area. The work of the Advisory Board was coordinated by staff from the Resource Allocation Section of the DNR Division of Land and Water Management. Staff of the DNR Division of Geological and Geophysical Surveys served as technical advisors to the planning staff and advisory board. A list of advisory board, staff members, and technical advisors follows.

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Tanana Chiefs Conference

Rich Montagna (before February, 1987), Ernie Holmberg (after February, 1987)

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Linda Brenton, DNR-DLWM - Settlement Element
Tom Bundtzen, DNR-DGGS - Materials, Minerals, and Energy elements
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Dave Swanson, USDA-SCS - Grazing Element
Merlin Wibbenmeyer, DGGS - Trails, transportation, and land use mapping

How to Use This Plan

Although this plan is lengthy, it is organized to make it simple to use. The plan has two main sections which form the bulk of the plan.

Chapter 2 has land management policies that apply throughout the planning area. It is organized by types of land uses or resources -- forestry, settlement, lakeshore management, etc.

Chapter 3 describes the management intent for each individual unit in the planning area. It is organized by watershed -- Takotna River, Holitna River, etc.

In addition to these chapters, Chapter 1 presents an introduction to how and why the plan was done, and gives a summary of the plan's overall goals. Chapter 4 describes actions that will be done to implement the plan. Examples of how to use the plan are shown below. The Table of Contents is on the following page.

Examples:

If you want to know how the plan affects a particular land use or resource -- for example, mining, wildlife habitat, or land sales -- turn to Chapter 2. This chapter presents general policies that apply to the whole planning area. It also summarizes the amount and location of land allocated to each type of land use. For example, pages 2-35 through 2-43 present policies on state land sales and describe the areas that will be available for sale in the planning area.

2 Resources



If you want to know how the plan affects a particular place -- for example, a parcel on the North Fork of the Kuskokwim -- turn to Chapter 3. The planning area is divided into 18 management units by watershed. The units are shown on the map on pages 1-2 and 3-3. Chapter 3 has a section on each unit. To find the unit you are interested in, check the map in Chapter 1, then turn to that unit in Chapter 3. For example, the North Fork of the Kuskokwim is in Management Unit 1, page 3-7.

3 Locations

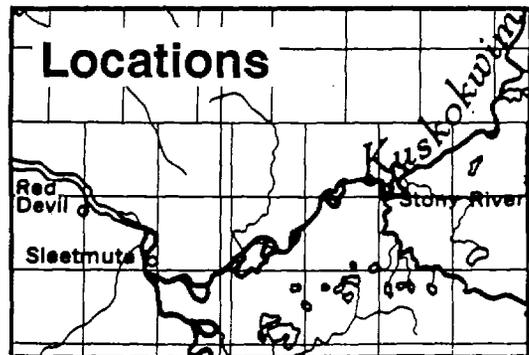


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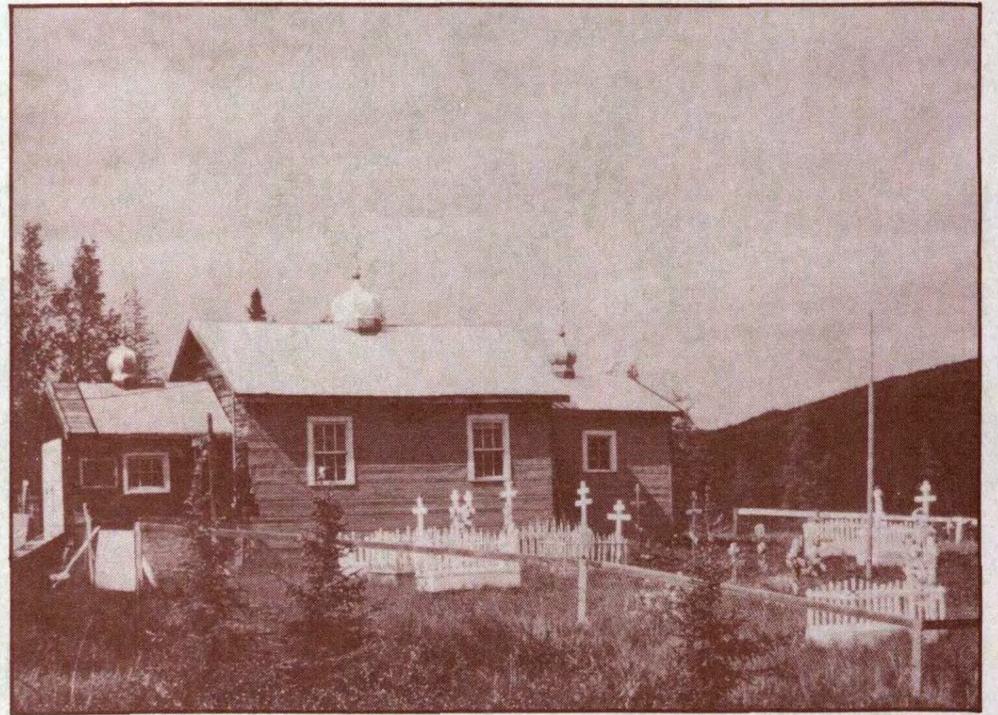
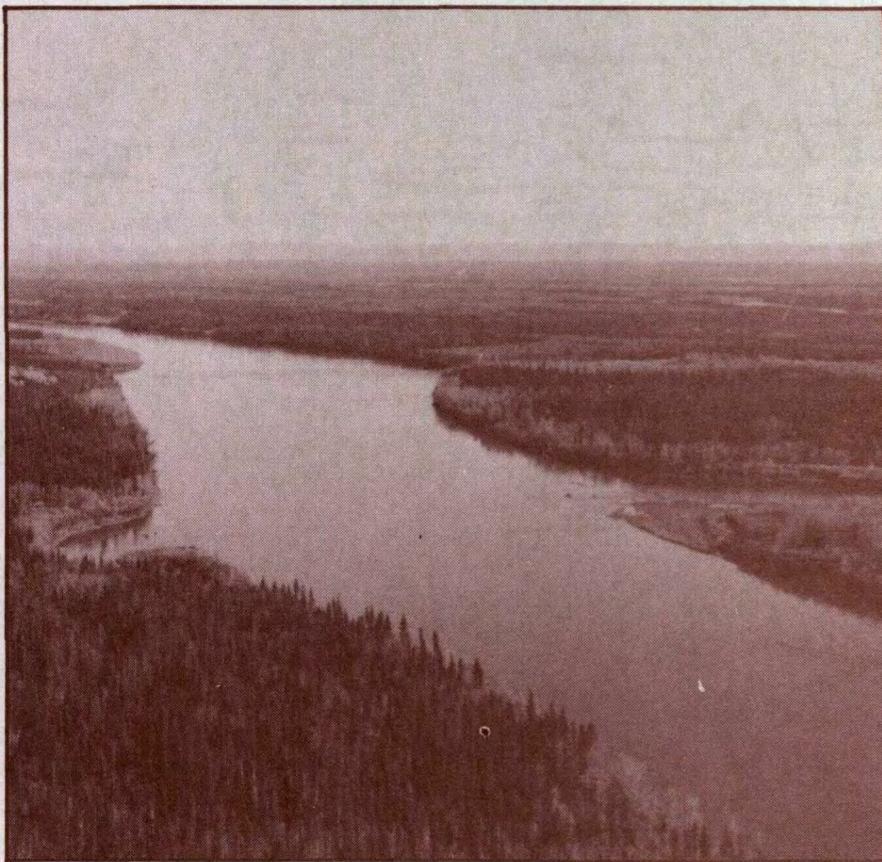
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Chapter 1 Introduction & Background

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Chapter 1

INTRODUCTION AND BACKGROUND

Summary of Purpose

The Kuskokwim Area Plan describes how the Department of Natural Resources (DNR) will manage state land in the Kuskokwim River basin and a portion of the Innoko River basin. The plan determines land offering locations, remote cabin areas, land classifications, land selections and relinquishments, areas open to mineral entry, and guidelines for leases and permits on state lands. The plan does not make decisions on federal, Native, or private lands.

How this Document is Organized

Chapter 1 describes the planning area, the purpose of the plan, and the process used to develop the plan. It includes a summary of how the plan will be implemented and the process for modifying the plan after it is adopted. The first chapter also documents the decisions made between the alternatives and the draft plan and between the draft and final plan.

Chapter 2 presents policies that guide state land management throughout the planning area. These policies are generally consistent for all state lands where area plans have been prepared. However, because the Kuskokwim Area is unique, some policies are tailored to reflect particular conditions in this area.

Chapter 3 contains detailed descriptions of the plan's land use designations. The study area is organized into 18 management units by watersheds. Each unit includes a statement of management intent, tables that list major resource values and land use designations, and guidelines specific to the individual management unit.

Chapter 4 discusses specific actions needed to implement the plan: classifications,

mineral orders, new state land selections, relinquishments of previous selections, municipal entitlements, recommendations for field staff and research, and recommendations for legislative action. This chapter also describes the procedures for modifying the plan.

Appendix A is a glossary of terms used in the plan. **Appendix B** identifies the organizations that should receive official public notices of pending state actions in each management unit. **Appendix C** contains maps that show important trails in the planning area. **Appendix D** lists various reports written as background for this plan. **Appendix E** presents the criteria used to establish the ratings in the Resource Information Summary charts in Chapter 3. The maps in **Appendix F** show habitat ratings for all state lands. **Appendix G** is a summary of permits and leases issued or applied for on state lands in the planning area. **Appendix H** lists areas reopened to mineral entry, closed to new mineral entry, or subject to leasehold location requirements by the mineral orders that implement this plan. **Appendix I** lists the approximate acreage in each subunit.

Why Plan for State Land?

The state lands in the Kuskokwim planning area can provide fish, wildlife, water, timber, minerals, materials, transportation routes, places to live, and recreation areas. There are many different ideas as to how these lands should be used, and some of the uses conflict with each other. However, if the land is managed carefully, many uses can occur together.

The planning process openly reviews resource information and public concerns before long-range land use decisions are made. It is a way

of settling differences among possible uses. Through planning, the people who use these lands can help choose the ways the land should be managed. The planning process also lets the public know what choices were made and why.

Land use plans for state lands are required under Title 38 of the Alaska Statutes. Once a plan is adopted, permits, leases, land sales, cooperative agreements, and other DNR land management actions will be based on the plan.

Description of Planning Area

The Kuskokwim planning area includes all the lands in the Kuskokwim River basin upriver from Aniak (Map 1.1, following page). It also includes part of the Innoko River basin around Flat, Ophir, and Folger. In all, there are 22.8 million acres of land, including 14.3 million acres that are state-owned, and 1.7 million that are state-selected. The federal Bureau of Land Management controls 4.5 million acres, and 3.1 million acres are owned or selected by Native corporations -- Doyon, MTNT, Calista, Kuskokwim Corp., Lime Village Corp., and Cook Inlet Region, Inc. Some state and Native selections overlap. Less than one percent of the land (approximately 50,000 acres) is in other private ownerships, although there are over a thousand private parcels.

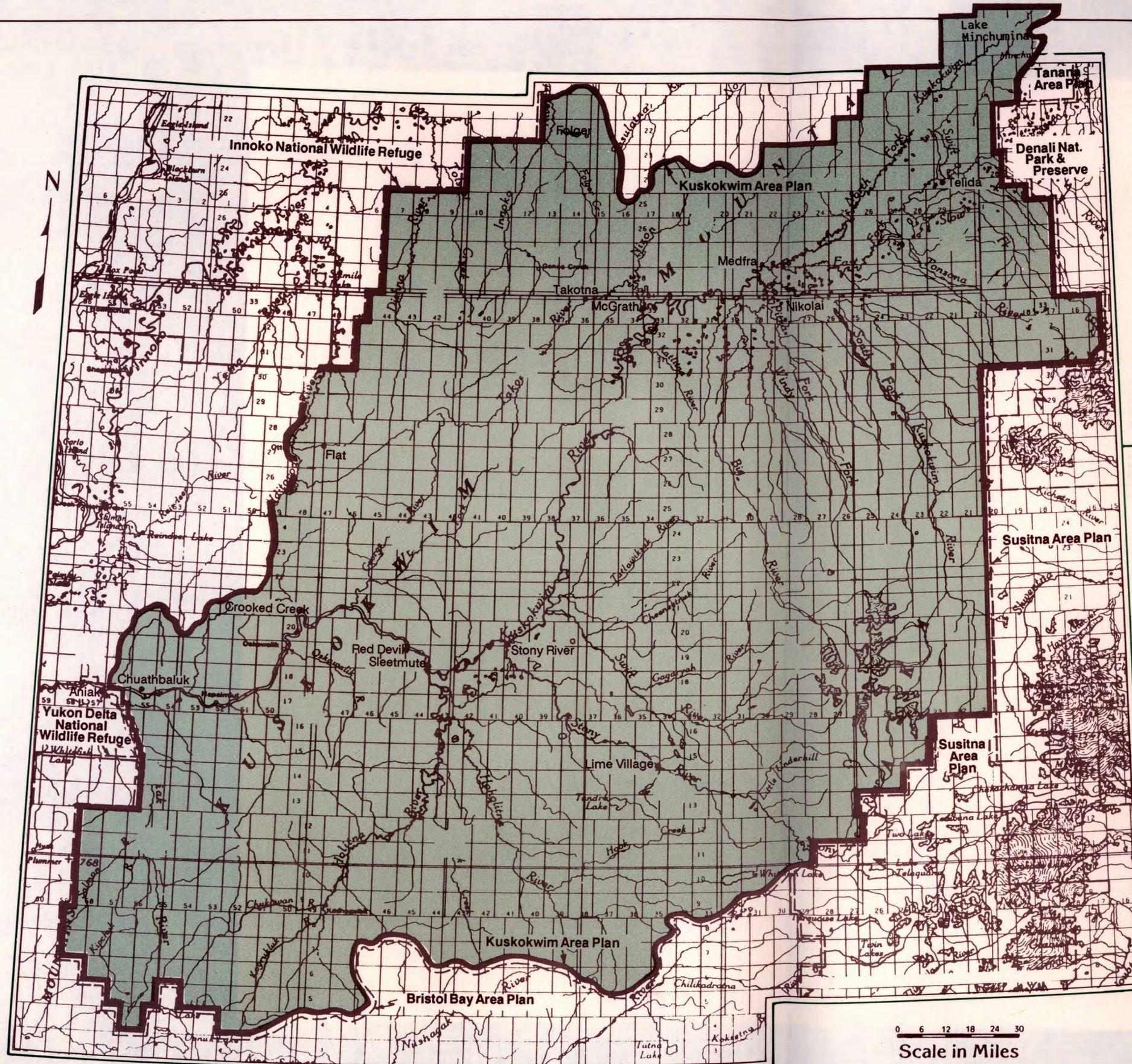
The central portions of the planning area are lowlands along the Kuskokwim and its major tributaries, especially the Holitna River, Nixon Fork, Big River, North Fork, and South Fork. The Innoko basin and the western part of the Kuskokwim basin are within the Kuskokwim Mountains which includes hilly terrain ranging up to 4,000 feet elevation. The eastern Kuskokwim is dominated by the

higher, rugged peaks of the Alaska Range. The major rivers are lined with white spruce and hardwood forests, but the vast majority of the lowlands are muskeg. The uplands are predominantly shrublands and alpine tundra.

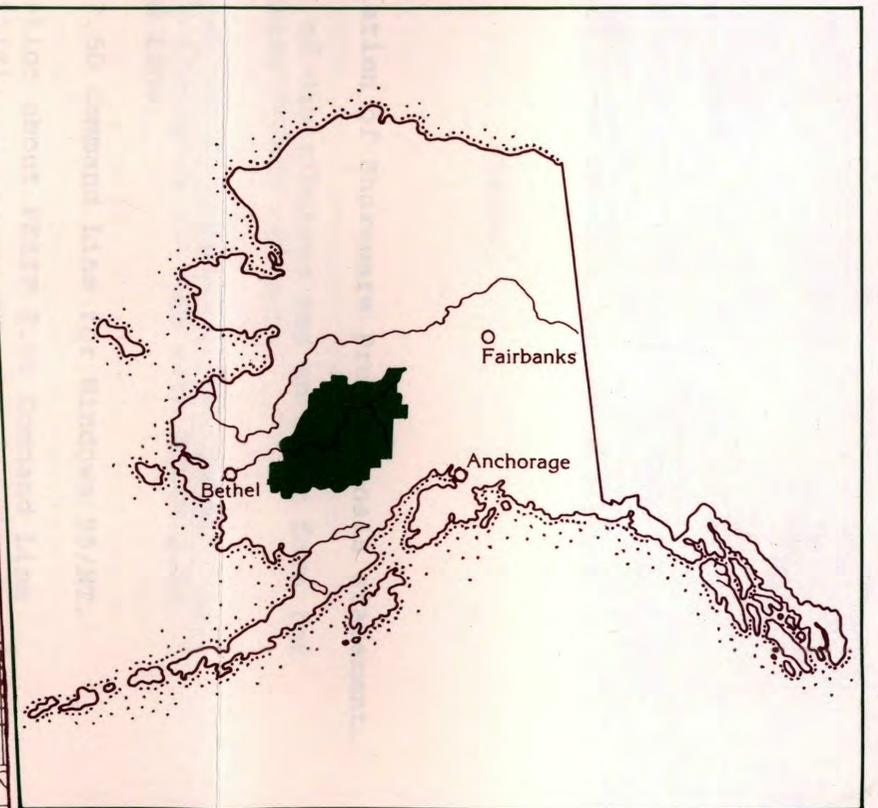
There are eleven year-round communities within the planning area -- Telida, Nikolai, McGrath, Takotna, Lime Village, Stony River, Sleetmute, Red Devil, Crooked Creek, Chuathbaluk, and Aniak -- with a total population of approximately 1,800. In recent years, the regional centers and adjacent villages have grown, while the population in smaller and more remote villages has declined. This trend is likely to continue as decreases in government funding reduce employment opportunities in the smaller villages. All the communities are located on major rivers. Access to the planning area is by boat along the Kuskokwim and its major tributaries; by commercial flights to Aniak and McGrath; by small plane to riverbars, lakes, and open tundra; and by snowmachine and off-road vehicles along trails throughout the region.

Location Map

MAP 1.1



The Kuskokwim planning area includes all the lands in the Kuskokwim River Basin upriver from Aniak. It also includes the parts of the Iditarod and Innoko river basins around Flat, Ophir, and Folger. The plan is only for state-owned and state-selected lands within this area. There are about 1800 year-round residents in the planning area. Most people live in the communities of Aniak, Chuathbaluk, Crooked Creek, Red Devil, Sleetmute, Stony River, Lime Village, McGrath, Takotna, Nikolai and Telida.



0 6 12 18 24 30

Scale in Miles

Government, private sector employment, and subsistence activities form the basis of the regional economy. Government-funded employment such as school jobs, fire-fighting, and construction and maintenance of public works projects presently provide the great majority of cash income in the planning area. Local mineral, fish, wildlife, and timber resources are the basis for much of the private sector employment. These jobs include mining, guiding, trapping, and a small amount of commercial timber harvesting within the planning area, and commercial fishing in downriver communities and in Aniak and

Chuathbaluk. In the regional centers of Aniak and McGrath, transportation services and retail sales also contribute to the economy. Cottage crafts such as skin-sewing and basket-weaving provide a small amount of income to some village residents. A high percentage of residents supplement cash income with subsistence activities. Hunting, fishing, berry-picking, and timber harvesting provide food, fuel, and building materials to members of the communities in the planning area and in downriver villages.

How was the Plan Developed?

The Kuskokwim Area Plan is the product of two and a half years of work by state agencies; representatives of other landowners, local governments, and interest groups; and the general public. Sixty-one public meetings and workshops have been held in Telida, Nikolai, Takotna, McGrath, Lime Village, Stony

River, Sleetmute, Red Devil, Crooked Creek, Chuathbaluk, Aniak, Anchorage, Bethel, and Lake Minchumina to gather public comments and ideas. The steps in the process are shown in Table 1.1

Table 1.1 Kuskokwim Area Planning Process

- Step 1- Issues** are identified through public meetings to learn about local interests and problems on state lands. (*Fall 1985*)
- Step 2 - Information** is collected about natural resources, present land use, land ownership, local history, economics, etc. (*1986 and throughout planning process*)
- Step 3- Land Use Alternatives** are prepared and are reviewed by the public. (*Spring 1987*)
- Step 4- Agency Review Draft** is prepared and reviewed by Kuskokwim Area Plan Advisory Board. (*Summer 1987*)
- Step 5- Revised Draft** is reviewed by public. (*Fall 1987*)
- Step 6- Final Plan** is prepared (*Winter 1987-88*) and approved by commissioner. (*March 1988*)
- Step 7- Implementation.** The plan is used to guide state land management decisions in the Kuskokwim planning area.
-

The plan was developed by the Kuskokwim Area Plan Advisory Board. The board is made up of representatives of the agencies that manage state resources and work with communities in the planning area, other major landowners, and regional governmental organizations. The following agencies and organizations are represented on the board.

- Alaska Department of Natural Resources
 - Divisions of Agriculture, Forestry, Land and Water Management, Mining, Oil and Gas, and Parks and Outdoor Recreation
- Alaska Department of Fish and Game
- Alaska Department of Transportation and Public Facilities
- Alaska Department of Community and Regional Affairs
- Alaska Department of Environmental Conservation
- U.S. Department of the Interior, Bureau of Land Management
- Upper Kuskokwim Regional Strategic Committee
- Calista Corporation
- Doyon, Limited
- Kuskokwim Corporation
- Kuskokwim Native Association
- MTNT, Limited
- Tanana Chiefs Conference

Public Participation

Private citizens, private organizations, local councils, and other state and federal agencies took part in the process by attending public meetings and workshops, submitting written and oral comments, and participating in working groups and advisory board meetings on specific issues. Four rounds of public meetings and a set of workshops were held before the plan was completed. Nine informal meetings were held in June 1985 to introduce the local communities to the planning process,

and to introduce the planners to the Kuskokwim Area. Fourteen meetings were held in October 1985 to identify issues in the planning area. Eight workshops were held in April and June 1986 to document local land use preferences. Fifteen meetings were held in March and April 1987 to review and gather comments on the plan alternatives, and again in October and November 1987 to collect comments on the draft plan.

Summary of Plan Implementation and Modification

The Kuskokwim Plan will be implemented through administrative actions such as land sales, leases, permits, land selections and relinquishments, interagency memoranda of agreement, cooperative agreements with other landowners, research, classification orders, and mineral opening and closing orders, and leasehold location orders. In addition, DNR and ADF&G may make recommendations to the state legislature on legislative designations or changes in legislation consistent with the plan.

Land classification orders, mineral closing orders, and mineral opening orders, and leasehold location orders implementing the plan were adopted concurrent with adoption

of this plan. These orders are the formal record of primary uses allowed on state lands, and are recorded on state status plats.

Economic and social conditions in Alaska and in the Kuskokwim planning area are sure to change, and the plan must be flexible enough to change with them. The Kuskokwim Area Plan will be reviewed approximately every five years to determine if revisions are required. In addition to the regularly scheduled review of the full plan, specific modifications may be made at any time when conditions warrant. Substantive changes to the plan can be made by amendment when approved by the Commissioner of DNR, with public review and consultation with affected agencies. A minor change to the plan, for example, correction of

an error, does not require public review. Special exceptions to the plan may be allowed when compliance is impossible or impractical

in a particular case. See Chapter 4 for a more detailed description of implementation and modification of the plan.

Documentation of Changes to the Draft Plan and Alternatives

This plan is designed to balance competing interests in state lands in the Kuskokwim Area and to contribute to DNR's statewide goals in a manner appropriate to the resources, economy, and communities of the area. The six statewide goals are:

1. Economic Development. Provide jobs and income through the management of state lands and resources to support a vital, self-sustaining local and statewide economy. Subsistence activities are a part of the local economy.

2. Public Use. Provide diverse opportunities for public use of state lands, including such uses as hunting, fishing, recreation, and firewood collection.

3. Private Land. Provide opportunities for the private ownership of state land.

4. Quality of Life. Maintain or enhance the quality of the natural environment and cultural resources, and the character of existing communities.

5. Fiscal Costs. Minimize the cost of providing necessary government services and facilities, such as state land management programs, schools, and transportation facilities.

6. Public Safety. Protect public safety, for example through avoiding development in areas of natural hazards.

The policies, land use designations, management guidelines, and implementation actions in this plan describe the way resources in the Kuskokwim Area will be managed to contribute to these goals. The main provisions of the plan, and the reasons for these decisions are summarized below. Chapters 2, 3, and 4 are the detailed descriptions of these actions.

Proposals and alternatives for resolving the major issues in the planning area were described in a brochure, "Land Use Alternatives for State Lands", circulated for public and agency review, and discussed at public meetings in March and April 1987. Public and agency comments on these proposals were used to revise the proposals and choose among the alternatives to form the draft plan. The draft plan was then reviewed by the public and state and federal agencies. As a result of public and agency comment, numerous changes were made to the draft before the final plan was adopted.

Land Disposals

At the alternative stage of plan development, 19 areas with a net acreage of 47,200 were proposed for land disposal. These areas were selected because they offered accessible sites that would be attractive for private ownership, but were thought to avoid the areas of severe conflict with community preferences and current land uses. An additional 21 areas with a net acreage of 63,000 were identified as alternative disposal sites. The alternatives also had good land for private ownership, but were in areas that were thought to have more conflicts with present uses.

Numerous changes to the land disposals were made as a result of public comment on the alternatives and draft plan. In general, sales in the final plan are concentrated in the McGrath area because of interest in additional private land in that region. Land offerings in the Alaska Range were reduced and concentrated near past sales because of concern over conflicts with guiding. Land is not proposed for sale along the Holitna, South Fork, upper Aniak, or Stony rivers because of strong local opposition.

In the final plan, 14 sites are designated for disposal over the next twenty years (Table 1.2 and Map 2.3): nine of the original proposals, three of the alternatives, and two new sites. These areas offer 33,855 acres net for private ownership. They were chosen because they either had the most public support or received little opposition. The net acreage available for private ownership on two proposals --

North Fork and Big River Reoffer -- was reduced from the level originally suggested because of local concern about conflicts with existing use, or because of determinations that the amount of land suitable for settlement was less than previously estimated. Offering of two sites near communities -- Aniak-Doestock and Sleetmute North -- will be delayed for ten years to allow other landowners to make land available for private use; the state will retain these lands for public use if other land offerings eliminate the need for additional private land. Two new disposal areas -- McGrath Townsite and Fuller Creek -- were identified as a result of public comment favoring land offerings in the Red Devil and McGrath areas. The area offered at Dillinger River was increased to include some of the original Farewell area.

Four of the proposals and sixteen of the alternative areas were dropped from the disposal list for the draft plan. These were the most controversial of the potential settlement areas. Two areas -- Tonzona and Door Mts. -- were changed from land sale to remote cabin areas because of the limited resources to support settlement. Five areas, Candle, Nunsatuk, Gagaryah, Dishna, and Iditarod, are designated as resource management areas. They have good settlement potential, but support conflicting uses. They will be kept in public ownership and managed for general use in the near term. When the plan is updated they will be reevaluated to determine whether they should remain in public ownership or be offered for sale.

Table 1.2 Land Disposal Areas in Final and Draft Plans

Land Disposals in Final Plan		Proposals and Alternatives Dropped at Draft Plan Stage	
<u>Name</u>	<u>Net Area Offered</u>	<u>Name</u>	<u>Net Area Offered</u>
Upper N. Fork	800 ac. ¹	Upper N. Fk. Addn.	2,100 ac.
Appel II/III	3,000 ac.	Lower North Fork	5,500 ac.
McGrath Townsite	55 ac.	Halfway Mountain	1,600 ac.
Vinasale	5,500 ac.	Halfway Mt. North	1,000 ac.
Selatna Mt.	5,000 ac.	Halfway Mt. South	600 ac.
Nunsatuk North	4,600 ac.	South Fork	4,000 ac.
Big R. Reoffer	1,200 ac.+	Lower South Fork	2,900 ac.
Big R. South	1,400 ac.	Farewell	9,400 ac.
Mt. Rich Addn.	2,100 ac.	Windy Fork Reoffer	1,000 ac.
Dillinger River	4,600 ac.	Windy Fork Addn.	2,900 ac.
Sleetmute North	2,200 ac.	Big River West	1,200 ac.
Fuller Creek	600 ac.	Hartman River	1,300 ac.
Aniak-Doestock	1,400 ac.	Door Mountains	2,200 ac.
<u>Boundary Lakes</u>	<u>1,400 ac.</u>	Stony Headwaters	4,000 ac.
TOTAL:	33,855 ac.+	Sparrevohn-Hoho.	2,200 ac.
		Stony River West	300 ac.
		Lower Aniak	5,400 ac.
		Aniak-Kipchuk	6,200 ac.
		Upper South Fork	2,900 ac.
		<u>Chuilnuk Mountains</u>	<u>3,400 ac.</u>
		TOTAL	60,300 ac.

Proposals and Alternatives Designated as Resource Management Areas in Final Plan

Dishna River	3,100 ac.
Iditarod River	2,200 ac.
Nunsatuk River	750 ac.
Gagaryah	3,700 ac.
<u>Sterling-Candle</u>	<u>3,700 ac.</u>
TOTAL	12,150 ac.

Proposals and Alternatives Dropped in Final Plan

Shohomish Hills	600 ac.
Tonzona	2,100 ac.
<u>Takotna R. & Ext.</u>	<u>2,250 ac.</u>
TOTAL	4,950 ac.

¹Net area offered for sale is decreased from level proposed in alternatives brochure.

Remote Cabin Areas

The alternatives brochure proposed six areas for remote cabin permits, and identified as alternatives an additional five areas with more potential for conflicts with current use. The proposals offered 230 to 460 cabin permits, and the alternatives an additional 140 to 270 permits.

As a result of public comment, the remote cabin area boundaries and permit numbers were modified significantly. Parts of all six proposed areas are open to remote cabin permits in the final plan, as well as parts of three of the alternative areas (Table 1.3). In the northwestern part of the planning area, remote cabin area boundaries were redesigned to avoid important mining and trapping areas. However, there has been local interest in the program and the cabin permit density in remaining areas was increased to three per township. The area open to permits in the Alaska Range was reduced from the area shown in the alternatives due to opposition by guides and concerns about public and

commercial recreation. The density of permits allowed was reduced to 1 permit per township to minimize impacts on guiding operations and scenic quality. The Shotgun Hills and Titnuk-Taylor permit areas were reconfigured to avoid important brown bear denning areas. Two permits per township are allowed in these areas. Remote cabin permits will not be allowed in the Holokuk and Aniak River areas due to strong local opposition.

Because the amount of land suitable for settlement in the proposed Door Mountains and Tonzona disposals was very limited, these areas were combined with the North Door Mountains and Alaska Range permit areas, and are proposed to be open to cabin permits rather than disposal. A small area at the east end of Whitefish Lake which was proposed by the plan working group for remote cabins was included for consideration in the draft plan, but was dropped from the final plan due to conflicts with local subsistence activities, the availability of other permit areas in the Upper Hoholitna drainage, and the small number of sites available at Whitefish Lake.

Table 1.3

Areas Open to Remote Cabin Permits in Final and Draft Plans

Areas Open in Final Plan

<u>Name</u>	<u># Permits Allowed</u>
Dishna-Folger-Tatalina	121
Alaska Range (incl. Swift Fork)	54
Door Mountains	18
Holitna Headwaters (incl. Shotgun Hills and Titnuk-Taylor) ²	38
TOTAL	231

Four additional permits may be offered near Boundary Lakes (subunits 15b, 15d, and 15e) if the land quality is not sufficient to justify a disposal.

Proposals and Alternatives Dropped for Draft Plan Stage

<u>Name</u>	<u># Permits Allowed</u>
Holokuk	55 - 110
<u>Upper Aniak River</u>	<u>25 - 50</u>
TOTAL	80 - 160

Proposals Dropped from Final Plan

<u>Whitefish Lake</u>	<u>3</u>
TOTAL	3

In total, 231 remote cabin permits will be available in the planning area. Permit density will be kept very low -- one to three permits per township -- in keeping with public opinion. (See Table 2.4 and Map 2.2 for more detailed information on cabin permit areas in final plan.)

Commercial Recreation Leases

The alternatives brochure proposed that all state lands be available for leasing for commercial recreation facilities subject to the standard areawide guidelines on leasing, new guidelines requiring notification of the local Fish and Game Advisory Committees and community representatives, and new guidelines protecting important fish and wildlife populations.

These guidelines are included in Chapter 2 of the final plan. In addition, new commercial recreation leases are prohibited on state lands in the Aniak drainage and on Tishimna Lake. A single new lease is allowed in the Holitna drainage, with up to three more leases allowed in the future if the initial lease has not caused significant adverse impacts on salmon populations or public use in the area. A limit of two leases is placed on the Beaver Mts. subunit. These additional restrictions are the result of public concern for trout, salmon, and moose populations in the Aniak drainage; subsistence fishing at Whitefish Lake; salmon populations and fish and wildlife harvests in the Holitna drainage; and public recreation, wildlife habitat, and scenic values in the Beaver Mts. In both the Holitna and Aniak watersheds, there is ample private land to meet near-term demand for additional commercial facilities.

Agriculture

The alternatives brochure proposed that no land be offered for disposal as agricultural homesteads or larger agricultural parcels. Public and agency comments concurred that state lands in the Kuskokwim Area have low suitability for agriculture and there is little demand for agricultural land. Therefore, the final plan does not designate any areas for agricultural use. Agriculture can take place on homesteads offered through settlement programs (see Table 1.2) and on private lands.

Trapping Cabins

Trapping is an important part of the regional economy and public comments stressed the importance of protecting traplines and the wildlife populations that support trapping. The plan cannot control trapline location, but it can guide the siting of trapping cabin permits on state land. As a result of public comment, the final plan increases the required distance between trapping cabin permits from 2 miles to 5 miles. Guidelines in Chapter 2 also require notification of local Fish and Game Advisory Committees and community representatives before a trapping cabin permit is granted.

Mining

The alternatives brochure proposed that all lands kept in state ownership remain open for new mineral entry, subject to existing laws and regulations, and to new guidelines on mitigation of mining impacts. Lands offered for disposal would be closed to mineral entry prior to sale. There was little comment about mining management in upland areas, but public opinion on mining along anadromous streams was strongly divided.

Thirty-nine percent of those who responded to the brochure's question on mining policy favored keeping all state lands open to mineral entry. Mining organizations supported this position. Forty-two percent of the respondents favored closing lands along all salmon spawning streams in the southern part of the planning area. This position was strongly supported by commercial fishing groups. Comments at public meetings within the planning area were split on the issue of mining near anadromous streams. Few people (6%) favored the alternative of closing lands only along nine important king salmon spawning streams in known mineralized areas.

Public opinion on the draft plan proposals remained strongly divided between those opposing any mineral closures and those sup-

porting more widespread closures. DNR and ADF&G reviewed the comments and recommended increasing the closures to cover salmon rearing areas as well as spawning beds in the southern part of the planning area. Closures are limited to the actual streambed where mitigation of adverse impacts of mining on fish is most difficult. The final plan recognizes the importance of both mining and salmon to the regional economy. The goal of the plan is to protect salmon populations while keeping opportunities for new mineral development available on as much state land as possible. The draft plan proposed a combination of mineral closures and leasehold location on spawning areas in mineralized zones, and leasehold location on rearing areas in the southern part of the planning area where fishery values are highest. Two streambed segments that provide all the sheefish spawning areas in the planning region also were closed to mineral entry.

Mineral management in the final plan is as follows:

On anadromous streams in the Tatlawiksuk, Swift, Stony, Holitna, Oskawaik, Holokuk, Aniak, and George river drainages,

1. Portions of the streams identified as salmon spawning and rearing areas in the ADF&G catalog of anadromous waters will be closed to new mineral entry bank-to-bank (between the ordinary high water marks on either side of the stream). Sheefish spawning areas also are closed bank-to-bank.
2. On identified salmon spawning and king salmon rearing areas, uplands within 200 feet either side of the ordinary high water mark will be subject to leasehold location requirements.
3. All other retained lands will remain open to new mineral entry by location. Lands offered for sale will be closed before they are sold. Existing claims will not be affected by these mineral closures or leasehold location requirements.

4. In leasehold location areas, the following guidelines will apply:

- a. Instream mining will not take place unless it can be demonstrated that mining will not significantly affect salmon productivity.
- b. An application for a mining lease will be required when the owner of the leasehold location is prepared to produce minerals for sale in commercial quantities or to process more than 500 cubic yards of material during bulk sampling or production.

Oil and Gas

The alternatives brochure stated that state lands in the Kuskokwim Area would continue to be available for oil and gas leasing. The decision on whether to lease state lands will be made through the DNR Five-year Leasing Program. The Five-year Program will develop specific guidelines for any future leasing, and will include a public outreach program. In addition DNR encouraged local groups interested in oil and gas issues to form an organization to coordinate local comments and exchange information on these issues.

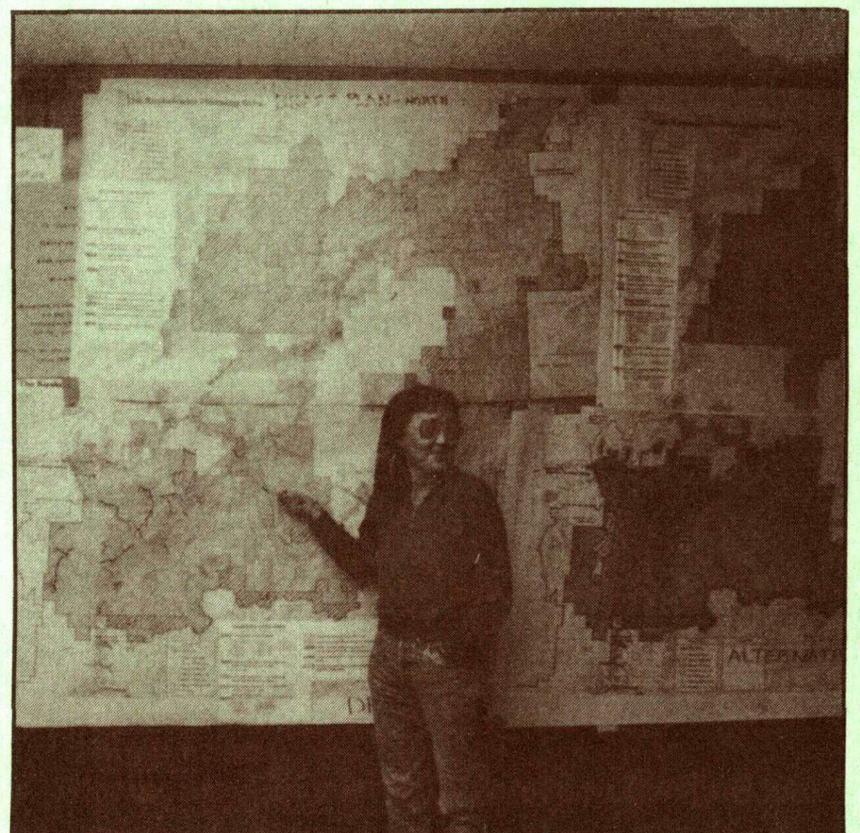
Public meetings on the alternatives included a briefing on the potential for oil and gas in the Kuskokwim Area, and on the oil and gas leasing process. There were many questions on the methods and effects of oil and gas exploration and development, and interest in public involvement in the leasing process, but relatively few comments and no consensus on the desirability of oil and gas activities.

The final plan reiterates the description of the oil and gas leasing policy from the alternatives brochure. It includes the standard areawide guidelines on oil and gas, and a new guideline restricting development of commercial and industrial facilities adjacent to the Aniak, Holitna, Hoholitna, and Kuskokwim rivers.

Chapter 2 Areawide Land Management Policies

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Chapter 2

AREAWIDE LAND MANAGEMENT POLICIES

Introduction and Definitions

This chapter presents land management policies for each of the major resource or land use categories affected by the plan: agriculture and grazing, cultural resources, fish and wildlife habitat, forestry, materials, public and commercial recreation resources, remote cabins and trapping cabins, settlement, subsurface resources, and transportation. The chapter also presents management policies for several specific land management concerns: lakeshore management, public access, stream corridors, instream flow, trail management, and wetlands management. These policies apply to state land throughout the region, regardless of the land use designation.

In addition, this chapter summarizes the land allocations for each resource.

The policies in this chapter consist of goals and management guidelines. Goals are the general condition the department is trying to achieve and the guidelines are specific directives that will be applied to land and water management decisions as resource use and development occur.

Definitions for terms commonly used in this chapter are listed in the Glossary in Appendix A.

AGRICULTURE AND GRAZING

Goals

Economic Opportunities

-Provide opportunities for individuals to produce their own food and derive income from gardens and small farms.

-Provide opportunities for commercial grazing operations and for grazing permits to support guiding operations, homesteads, and other commercial activities.

Preserving Future Options. Preserve the option to use potential agricultural lands for agricultural uses in the future.

Management Guidelines - Agriculture

Protecting Options for Agricultural Development. Land identified in this plan as having agricultural potential and classified in retention categories 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, oil and gas, and forestry management. Lands to which this guideline applies are identified in the land allocation summary on page 2-5 and the guidelines for individual subunits in Chapter 3.

Management Guidelines - Grazing

A. 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
- Other important habitats identified on a case-by-case basis by DNR in consultation with ADF&G

Areas where grazing will generally be prohibited are shown on Map 2.1 and described in the management intent for individual subunits in Chapter 3

B. Multiple-use Management of Lands with Grazing Potential

1. Lands with grazing potential will be managed as multiple use lands to support a variety of public benefits in addition to livestock production, including:

- Fish and wildlife maintenance
- Water quality maintenance
- Public recreation
- Timber
- Soil conservation
- Oil and gas

2. Lands under grazing lease or permit will be managed to ensure sustainable forage for domestic stock and wildlife.

3. Public access across and public use of lands under grazing lease or permit may not be limited by persons holding grazing leases or permits unless approved as part of a grazing operations plan.

C. Grazing Permits and Leases. A grazing lease or permit issued by DNR is required for any person who proposes to release livestock on state lands.

D. Permits and Short-term Leases. Permits may be granted for 1 to 5 years. Permits may be issued wherever grazing is not prohibited if fish and wildlife and other significant resources or uses are not adversely affected. Permits or short-term leases rather than long-term leases should be issued in areas especially susceptible to soil erosion or water quality degradation, environmentally sensitive areas, areas with potentially conflicting uses, or areas where the level of activity and investment by the lessee does not require a long-term commitment of the land. These areas will be identified through DNR's range management plans or through management plans.

E. Long-term Leases. Long-term leases (up to 55 years) may be issued where the level of activity and investment by the lessee is significant enough to require a long-term commitment of the land. Leases will establish reasonable use standards that, if not met, may be cause for cancellation of the lease. Long-term leases may be issued unless the best interest finding determines that significant impacts to important fish and wildlife or other resources and uses cannot be adequately mitigated in the terms and conditions of the lease.

F. 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 (RMPs) separately or as part of a general land management plan as described before issuing grazing leases or permits. RMPs will be developed by the Division of Land and Water Management, in consultation with the Divisions of Agriculture and Forestry, ADF&G, SCS, and Soil and Water Conservation Districts. The provisions of RMPs, listed below, 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 a 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.

1. 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 (AUMs), and grazing schedules shall be used to establish maximum allowable stocking densities. Stocking densities will also consider wildlife forage requirements and will not exceed the sustainable range production level.

2. Water Quality Protection. Range management plans will state how anadromous fish streams, other waterways, and lakes will be protected from the adverse impacts of grazing. Fencing may be required to protect portions of waterbodies and their riparian habitat. Identification of specific watering sites, feeding stations, headquarter sites, or other improvements, may be required to minimize the adverse impacts of grazing.

3. Annual Grazing Schedule. Range management plans will establish 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.

4. Map of Proposed Grazing Areas. Range management plans will include a map that shows the location, acreage, and configurations of proposed lease and permit areas.

5. Physical Improvements. Range management plans will show proposed feed lot sites, stock watering sites, supplemental feeding stations, farm headquarters 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, or use of roads, trails, bridges, and other improvements or actions that may be necessary or incidental to grazing operations.

6. 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.

7. Livestock-predator Conflicts. Range management plans will establish measures necessary to minimize livestock-predator conflicts. The state will not be responsible for loss of livestock to predators.

8. Examination for Disease. All livestock shall be examined by a state licensed veterinarian for diseases and parasites. All livestock will be free of visible symptoms of any infectious or contagious disease and parasites before placing stock on the permit or lease area. Livestock that carry an infectious or contagious disease will be restricted from placement on the range for a 60-day period to allow for treatment and retesting by a licensed veterinarian. Diseased livestock will not be released.

9. Parasite Treatment. Before release, all livestock will be treated for ectoparasites and endoparasites with an approved anthelmintic. Diseased livestock will not be released.

10. Modification of Vegetation. Artificial modification of natural vegetation (for example, clearing, burning, crushing, or seeding) will be permitted only in the locations and under the guidelines specified by applicable range management plans.

G. Grazing Operations Plans. Before receiving a 2-5 year grazing permit or receiving or converting a lease, a person must have an approved grazing operations plan that will become part of the lease or permit. A grazing operation plan will be approved by DNR only when it is in compliance with an existing range management plan. DNR will assist a lessee or permittee in preparing a plan in consultation with ADF&G and SCS. Minimum requirements of a grazing operations plan are listed below.

1. Lessee will have a cooperative agreement with the appropriate Soil and Water Conservation District or Subdistrict.

2. A physical resource map will identify the location, acreage, and configuration of the proposed lease or permit area(s); the proposed feedlot sites, stock watering sites, and supplemental feeding stations; the farm headquarters site, outbuildings, fences, and other proposed improvements; and existing facilities on the applicants own land.

3. A statement of the lessee's proposed management activities will include range management practices considered essential or desirable, including clearing and modification of vegetation; livestock species to be stocked; annual grazing schedule and forage balance sheet.

4. 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.

5. Modification of grazing operation plans may be required if grazing activities are determined to impair water quality or soil stability or if sustainable forage for stock cannot be maintained under an existing grazing operations plan. Determination that modification of a grazing operations plan is necessary will be made by the Division of Agriculture in consultation with the lessee, Alaska Department of Environmental Conservation, Alaska Department of Fish and Game, and the USDA Soil Conservation Service.

H. Standards of Approval for Grazing Operation Plans. A grazing operations plan will be approved only when it complies 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, stocking density, 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.

I. 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. Modifications may also be made to accommodate greater carrying capacity. Determination that modification of a grazing operations plan is necessary will be made by DNR in consultation with the lease or permit holder, the Department of Environmental Conservation, and ADF&G.

J. Other Guidelines Affecting Grazing.

Several other guidelines may affect agricultural development. See the following sections of this chapter:

- Fish and wildlife habitat
- Forestry
- Materials
- Subsurface resources
- Transportation
- Lakeshore management
- Public access
- Stream corridors and instream flow
- Trail management
- Wetlands management

Land Allocation Summary

Agriculture. Detailed soil surveys and climatic data do not exist for the Kuskokwim Area, so there is little information for identifying lands with agricultural potential. Current assessments of potential are based on the general information in the USDA Exploratory Soil Survey and proximity to transportation

routes. Based on this information, less than 1 percent of the planning area -- 100,000 acres -- has high agricultural potential and most of this land is Native owned (High potential agricultural areas are defined as accessible lands with more than 40 percent of the soils suitable for crops). An additional 2.3 million acres of land which have 20-40 percent of their soils suitable for crops and have access within two to six miles, were rated moderate. Over half the moderate potential lands are state owned.

The Kuskokwim Area Plan determines whether state land will be offered for private agricultural homesteads or other agricultural sales over the next 20 years. Because of relatively low suitability for agriculture, lack of detailed data on soils and climate, remoteness, and lack of demand for land agricultural development, the plan does not designate any areas for agriculture. Agricultural development may occur on existing Native and other private lands or on lands offered for private ownership through the state's fee-simple homestead program. (see Map 2.3 and Table 2.5)

In areas retained in state ownership, lands that have moderate or high agricultural potential are identified in the individual subunits. In order to protect options for long-term use of these lands, they are subject to a requirement that the Division of Agriculture be consulted prior to issuance of permits or leases for any activities which would significantly diminish their capability to support agriculture. The following management subunits contain retained lands with moderate or high agricultural potential: 1a, 1b, 1c, 2a, 4a, 4b, 4c, 5a, 5i, 5j, 14a, 14c, 15a, and 15c.

Grazing. Interest in grazing on state lands in the Kuskokwim Area is likely to focus on two types of operations -- moderate- to large-scale reindeer grazing operations, and grazing of a few pack or livestock animals to support guiding operations or individual homesteads. Except for the high mountains of the Alaska Range and some forest and muskeg land near the Kuskokwim River and the North Fork, nearly all the planning area, including most state land, has high potential for reindeer grazing based on preliminary information in the USDA Exploratory Soil Survey.

Over two-thirds of all state lands are open to grazing permits and leases. However, grazing

is not allowed on certain important habitat lands identified in the grazing guideline A, Grazing on Important Habitat Lands, page 2-2. These lands -- Dall sheep habitat in the Alaska Range; caribou calving grounds in the Alaska Range, the Beaver Mountains, around Aniak Lake, and south of the Nixon Fork; brown bear concentration areas in the Sunshine Mountains and Beaver Mountains and along the South Fork, Salmon River (Pitka Fork Drainage), Salmon River (Aniak River Drainage), Aniak River, Holitna River, and Kogrukluk River; and winter moose range along most of the major rivers -- total approximately 5.1 million acres. (see Map 2.1)

Grazing Guidelines

Important Habitat Areas Where Grazing is Generally Prohibited

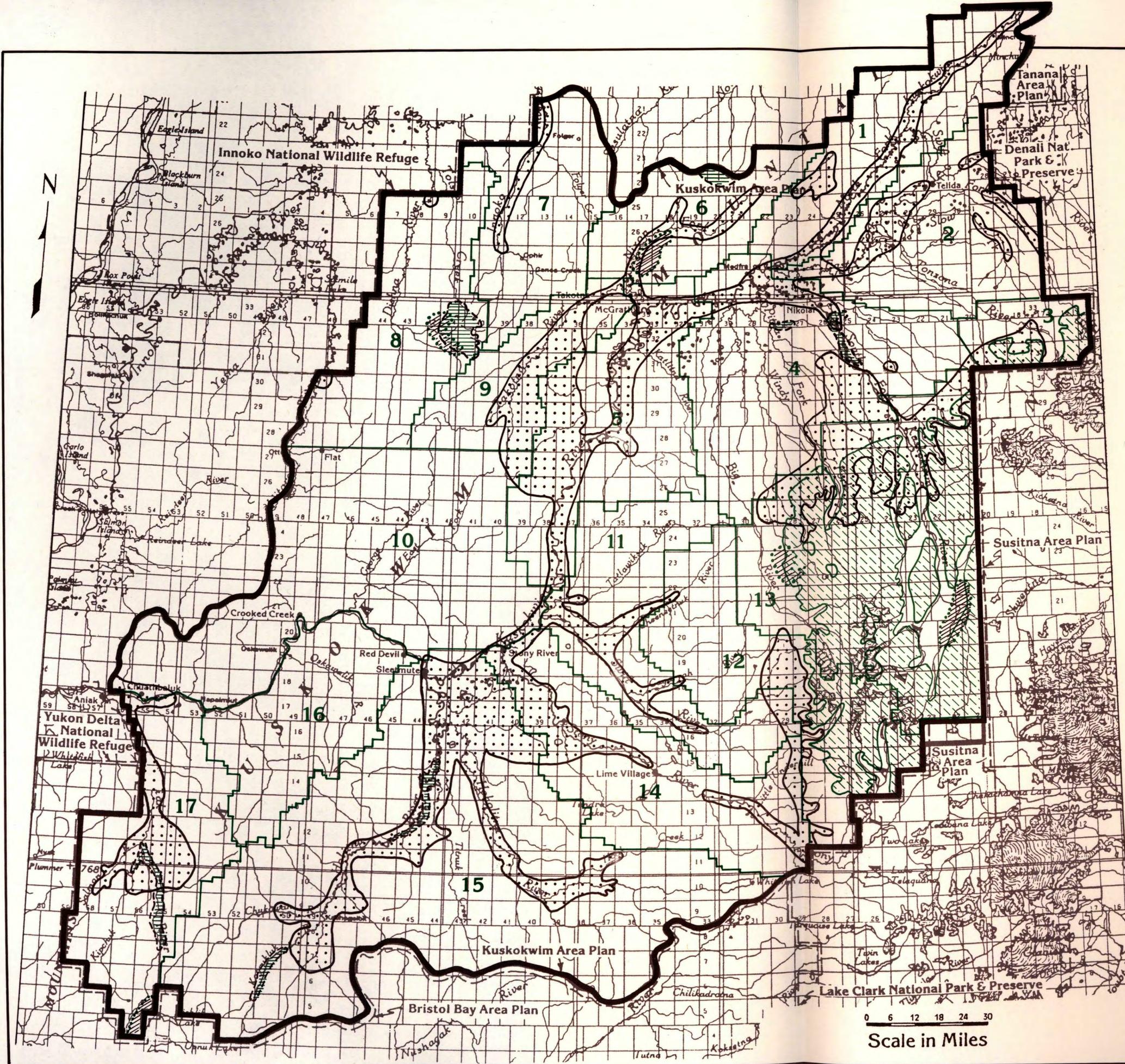
SUMMARY OF GRAZING GUIDELINES

Grazing leases or permits generally will not be allowed in the areas listed below because of their importance for wildlife habitat. Temporary passage of livestock is not prohibited through these areas to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands"). Legal descriptions of these areas are listed by unit under guidelines in Chapter 3.

-  Moose Winter Concentration Area
-  Caribou Calving Area
-  Brown Bear Concentration Area
-  Dall Sheep General Distribution

Areas Where Grazing is Permitted

-  Grazing Permitted
-  Management Unit Boundary



CULTURAL RESOURCES

Goals

Cultural Resources. The Alaska Historic Preservation Act establishes the state's basic goal which is to preserve and protect the historic, prehistoric, and archaeological resources of Alaska.

Management Guidelines

A. Cultural Resource Identification. Identify and determine the significance of all cultural resources on state land through:

1. Surveys conducted by Department of Natural Resources personnel,
2. Encouraging research about cultural resources on state lands by qualified individuals and organizations, and,
3. Cooperative efforts for planned surveys or inventories between state, federal, and local or Native groups.

B. Cultural Resource Protection. Protect significant cultural resources by:

1. Reviewing construction projects or land uses for potential conflict with cultural resources.

2. Cooperating with concerned government agencies, statewide or local groups, and individuals to develop guidelines and recommendations on how to avoid or mitigate identified or potential conflicts.

3. Where feasible and prudent, conduct cultural resource surveys or inventories prior to the design of land offerings in the areas the state Office of History and Archaeology determines have high potential to contain important cultural sites and for which existing information is inadequate to identify and protect those sites.

C. Other Guidelines Affecting Cultural Resources. Several other guidelines may affect cultural resource management practices. See the following sections of this chapter:

- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Public access
- Stream corridors and instream flow
- Trail management
- Wetlands management

FISH AND WILDLIFE HABITAT

Goals

Maintain and Protect Publicly Owned Habitat Base. The state will maintain in public ownership and protect the habitat values of sufficient suitable lands and waters to provide for the habitat needs of fish and wildlife resources necessary to maintain or enhance public use and economic benefits.

Ensure Access to Public Lands and Waters. Ensure access to public lands and waters, where appropriate, to promote or enhance public use and enjoyment of fish and wildlife resources. Access improvements should be designed to match the public use objectives for the area under consideration.

Mitigate Habitat Loss. When resource development projects occur, reduction in the quality and quantity of fish and wildlife habitat should be avoided or minimized.

Contribute to Economic Diversity. Protect and enhance fish and wildlife resources and habitats to contribute directly or indirectly to local, regional, and state economies through commercial, subsistence, sport, and non-consumptive uses, while working to achieve the economic development of other resources.

Management Guidelines

A. Habitat Manipulation. Habitat manipulation through controlled burning, water control, timber management practices, or other measures may be used to improve habitat for certain fish and wildlife species where feasible and compatible with other primary uses.

B. Activities in Important Waterfowl Habitat. In important waterfowl habitat, activities that require a permit, lease, or development plan and produce high levels of acoustical or visual disturbance from sources such as boat traffic, blasting, dredging, and

seismic operations will, to the extent feasible and prudent, be avoided during sensitive periods. Where it is not feasible and prudent to avoid such activities, other mitigative measures will be considered to attempt to avoid significant impacts. The Department of Fish and Game will be consulted for assistance in identifying areas of important waterfowl habitat.

C. Structures in Fish Habitat. Structures in fish habitat will, to the extent feasible, be designed to minimize impacts on fish migration, spawning, and rearing.

D. Water Intake Structures. When issuing appropriations for waters that provide fish habitat, DNR will require that practical water intake structures be installed that do not result in entrainment or impingement of fish. The most simple and cost-effective technology may be used to implement this guideline.

Water intake structures will be screened and intake velocities will be limited to prevent entrapment, entrainment, or injury to fish. The structures that support intakes should be designed to prevent fish from being led into the intake. Other effective techniques may also be used to achieve this guideline. Screen size, water velocity, and intake design will be determined in consultation with ADF&G.

E. Water Withdrawal in the Winter. Water withdrawal during winter months will, to the extent feasible and prudent, avoid fish overwintering areas.

F. Threatened and Endangered Species and Raptors. All land use activities shall be conducted consistent with state and federal Endangered Species Acts to avoid jeopardizing the continued existence of threatened or endangered species of fish or wildlife or their continued use of an area and to avoid modification or destruction of their habitat. Specific mitigation recommendations should be identified through interagency consult-

ation for any land use activity that potentially affects threatened or endangered species and bald or golden eagles. At a minimum, the U.S. Fish and Wildlife Service should be consulted if an activity is proposed within 1/4 mile of a bald or golden eagle nest.

In Alaska, five species are listed under the jurisdiction of the U.S. Fish and Wildlife Service and Alaska Department of Fish and Game as threatened or endangered in accordance with state and federal Endangered Species Acts, as amended:

1. Arctic peregrine falcon
(*Falco peregrinus tundrius*)
2. American peregrine falcon
(*Falco peregrinus anatum*)
3. Aleutian Canada goose
(*Branta canadensis leucopareia*)
4. Eskimo curlew
(*Numenius borealis*)
5. Short-tailed albatross
(*Diomedea alabaturus*)

The Eskimo curlew and short-tailed albatross are not likely found in KAP. The American peregrine falcon is probably in small numbers, and the Arctic subspecies may be present only during migration. However, little effort has been expended in surveying the area for peregrine falcons.

Activities that potentially affect bald and golden eagles will be consistent with the federal and state Endangered Species Act and the Bald Eagle Protection Act of 1940 as amended.

The Anchorage Fish and Wildlife Enhancement Office of the U.S. Fish and Wildlife Service should be consulted on questions that involve endangered species.

G. Trumpeter Swan Nesting Areas. In trumpeter swan nesting areas all land use activities that would disturb nesting swans or detrimentally alter the nesting habitat will be avoided to the extent feasible and prudent. Where these activities are deemed feasible and prudent, they will be conducted to minimize disturbance to nesting swans or

detrimental alteration of habitat. Leases or permits may include seasonal restrictions on activities to avoid disturbance to swans. Consultation with the ADF&G will be used to identify current or potential nesting habitat and to determine guidelines to follow and activities to avoid.

Construction of transmission lines in trumpeter swan habitat should be avoided. If transmission lines are constructed, they should be sited in forested areas and kept close to treetop level; wires should be strung in one horizontal plane rather than in multiple, vertical stacks. Where wires cross rivers, marshes, and other open spaces, they should be marked so that they are visible to swans.

H. Avoid Conflicts with Traditional Uses of Fish and Game. Where feasible and prudent, surface activities authorized under lease or permit will be restricted to prevent significant conflicts with local subsistence harvests and other traditional uses of fish and wildlife resources.

I. Public Notice to Help Avoid Conflicts with Traditional Uses of Fish and Game.

When making decisions on right-of-way permits, trapping cabins, remote cabins, or actions requiring notice under AS 38.05.945, DNR will notify the appropriate regional non-profit associations and other organizations listed in Appendix B using standard procedures and time frames existing at the time the decision is made. The Division of Boards in ADF&G will notify the appropriate fish and game advisory committees of the proposed action. When setting deadlines for responses to proposed actions, DNR will recognize the extra time it takes mail to reach people in rural Alaska. People responding will be expected to be prompt in returning comments to meet deadlines. (Also see guideline B, Public and Commercial Recreation, page 2-26).

J. Avoid Creating Nuisance Animals. Garbage associated with uses authorized under a lease or permit will be thoroughly incinerated or removed for disposal at an approved location (if one is available) to avoid creating nuisance animals that must be relocated or

destroyed. Burning will be done consistent with Division of Forestry burning restrictions.

K. Mitigation. When issuing permits and leases or otherwise authorizing the use or development of state lands, the Department of Natural Resources will recognize the requirements of the activity or development and the benefits it may have to habitat when determining stipulations or measures needed to protect fish and wildlife or their habitats. The costs of mitigation, relative to the benefits to be gained, will be considered in the implementation of this policy.

All land use activities will be conducted with appropriate planning and implementation to avoid or minimize adverse effects on fish and wildlife or their habitats.

The department will enforce stipulations and measures, and will require the responsible party to remedy any significant damage to fish and wildlife or their habitats that may occur as a direct result of the party's failure to comply with applicable law, regulations, or the conditions of the permit or lease.

When determining appropriate stipulations and measures, the department will apply, in order of priority, the following steps. Mitigation requirements listed in other guidelines in this plan will also follow these steps.

1. Avoid anticipated, significant adverse effects on fish and wildlife or their habitats through siting, timing or other management options.
2. When significant adverse effects cannot be avoided by design, siting, timing or other management options, the adverse effect of the use or development will be minimized.
3. If significant loss of fish and wildlife habitat occurs, the loss will be rectified, to the extent feasible and prudent, by repairing, rehabilitating, or restoring the affected area to a useful state.
4. DNR will consider requiring replacement or enhancement of fish and wildlife habitat when steps 1 through 3 can not avoid substan-

tial and irreversible loss of habitat. ADF&G will clearly identify the species affected, the need for replacement or enhancement, and the suggested method for addressing the impact. Replacement or enhancement of similar habitats of the affected species in the same region is preferable. DNR will consider only those replacement and enhancement techniques that have either been proven to be, or are likely to be effective and that will result in a benefit to the species impacted by the development. Replacement or enhancement will only be required by DNR if it is determined to be in the best interest of the state either through the AS 38.05.035 (e) or permit review process. Replacement may include structural solutions such as creating spawning or rearing ponds for salmon, creating wetlands for waterfowl, or non-structural measures such as research or management of the species affected, legislative or administrative allocation of lands to a long-term level of habitat protection that is sufficiently greater than that which they would have otherwise received, or fire management to increase habitat productivity.

L. Management of Trapping Cabins. See Trapping Cabin guidelines A through E, page 2-30 through 2-31.

M. Other Guidelines Affecting Fish and Wildlife Habitat. Several other guidelines may affect the protection and management of fish and wildlife habitat. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Forestry
- Lakeshore management
- Materials
- Public and commercial recreation resources
- Public access
- Settlement
- Stream corridors and instream flow
- Subsurface resources
- Trail management
- Transportation
- Wetlands management

Land Allocation Summary

Background. All lands, including lands in disposal areas, serve as fish or wildlife habitat and harvest areas to some degree.

The most important habitat and public use lands will be retained in public ownership and managed to maintain fish and wildlife production and related public uses. (Table 2.1) These areas total approximately 10.5 million acres.

Within the entire planning area, including state and non-state lands, approximately 13.3 million acres have high value fish and wildlife habitat and harvest values. Approximately 5.5 million acres contain moderate values, and 5.2 million acres contain low values. Lands along the navigable portions of major river systems that contain anadromous fish and provide important habitat for moose, bear, and furbearers have the highest value for fish and wildlife habitat and harvest. The next highest values are found in the Alaska Range and the habitat adjacent to the floodplains of the major rivers. Moderate values were identified in the uplands in the southern half of the planning area and near Ophir. Low value areas for fish and wildlife habitat and use were mostly in the higher elevations in the Kuskokwim Mountains and the Sischu Mountains north of the Kuskokwim River, in portions of the Folger and Innoko drainages, in the foothills of the northern part of the Alaska Range, and in the uplands just east of Devils Elbow.

Fish. Fish and wildlife habitat and harvest are identified as a primary use of state lands along most rivers, streams, and lakes with anadromous fish and important resident fish populations. To protect important salmon spawning and rearing areas, and sheefish spawning areas, certain streams will be closed to new mineral entry (see Map 2.4). In areas identified for land offerings, buffers are required along streams and wetlands, including staking setbacks along streams that support anadromous fish.

Wildlife. State land in the planning area provides habitat for moose, caribou, Dall sheep, bear, fur bearers, and other animals; these resources are used by people from throughout the state and outside of Alaska. Wildlife habitat is designated as a primary use on all lands important for wildlife habitat or those lands used for hunting except in areas identified for land offerings or resource management. In addition, approximately 62,500 acres of land in the Candle Hills, Nun-satuk, Iditarod, and Dishna areas that are designated resource management also have moderate to high fish and wildlife habitat values. These lands will be retained in public ownership in the near term and managed for multiple use, including fish and wildlife habitat. When the plan is reviewed in five years, these areas will be reevaluated to determine whether they should be kept in public ownership for long-term multiple use or offered for private ownership.

The 38 subunits with a primary designation for wildlife habitat include:

TABLE 2.1 Fish and Wildlife Habitat Designations

Lands Where Fish and Wildlife Habitat is Designated a Primary Use

<u>Unit</u>	<u>Subunit</u>	<u>Acreage</u>
North Fork	1b, 1d	287,000 ac.
East Fork	2a, 2d	399,000 ac.
Tonzona	3a	212,000 ac.
Big River - South Fork	4a, 4c	395,000 ac.
Kuskokwim River	5a, 5j	436,000 ac.
Nixon Fork	6a, 6b, 6d	263,000 ac.
Innoko River	7a, 7b, 7d	355,000 ac.
Dishna - Iditarod	8c, 8d, 8f, 8g	522,000 ac.
Takotna River	9b, 9d	193,000 ac.
George River	10a, 10b	385,000 ac.
Swift River	11a	143,000 ac.
South Alaska Range	12a	726,000 ac.
North Alaska Range	13a	1,831,000 ac.
Stony River	14a, 14b, 14d	482,000 ac.
Holitna River - West - East	15a, 15b, 15c, 15g	2,658,000 ac.
Holokuk - Oskawalik	16a	424,000 ac.
Aniak River	17a, 17b, 17e	791,000 ac.
<u>Birch Tree Crossing</u>	18a	<u>28,000 ac.</u>
TOTAL:		10,530,000 ac.

Resource Management Lands With Fish and Wildlife Habitat Values

<u>Unit</u>	<u>Subunit</u>	<u>Acreage</u>
Kuskokwim River	5d, 5h	17,000 ac.
<u>Dishna River</u>	8a, 8b	<u>46,000 ac.</u>
TOTAL:		63,000 ac.

FORESTRY

Goals

Economic Development. A forest products industry that offers jobs and income and provides competitively priced products to meet local and regional demand.

Personal Use. Meet the personal use needs of people in the region within the productive capability of the land and limitations imposed by other important uses and resources.

Resource Management. Manage forests of the area to ensure long-term productivity; continuous availability of forest products at reasonable cost; recognition and maintenance or enhancement of other public resources over the long term; and access for public use and enjoyment.

Protection from Destructive Agents. All forests in the area, private and public, will be protected from destructive agents, such as fire, insects, and disease, based on assessments of values at risk, benefits of fire, and protection costs in accordance with applicable laws, regulations, cooperative agreements, and fire management plans and this area plan.

Management Guidelines

A. Multiple Use Management. Unless particular forms of natural resource use are specifically prohibited, all lands designated for forest use are intended to be managed for the fullest possible range of beneficial uses. The relative importance of each use will be specified in the management intent statements and controlled by the management guidelines for each management unit.

B. Timber Salvage. Timber with commercial or personal use value should be salvaged from lands that will be cleared for other uses, such as farms and transportation or utility corridors. This will be accomplished by adherence to the following guidelines.

1. The Division of Forestry will review proposals for significant land clearing actions and determine whether the timber is worth salvaging within the time frame of the proposed project and, if so, advise the Director of the Division of Land and Water Management on appropriate salvage methods.

2. Major projects that involve clearing large areas of forested land will be planned far enough in advance so that schedules can be established to allow a reasonable period of time to arrange for and conduct commercial salvage of the timber. This advance planning will provide sufficient time to conduct the inventories and harvest.

C. Forest Practices Act. Guidelines for forest management in this plan assume compliance with the Forest Resources and Practices Act. That act and implementing regulations will help guide timber harvest and regeneration and ensure its protection of non-timber resources. The guidelines in this plan apply to forest management in addition to those given by the Forest Practices regulations.

D. Wood Harvest for Personal Use. An important objective of forest management is to provide opportunities for people to harvest firewood and houselogs from public land for their personal use. Therefore, when forested lands are available near communities and where harvest for personal use is consistent with other purposes for which the land is being managed, some of this land should be managed to help provide wood products for personal use (see Settlement guideline D-4, page 2-37).

E. Fire Management. Fire management practices, including prescribed burning, will be designed to reflect and be consistent with the land management policies stated in the area plan. These practices are described in the Alaska Fire Management Plans, which have

been developed as part of the planning process for the Alaska Interagency Fire Management Council.

F. Other Guidelines Affecting Forest Management. Several other guidelines may affect forest management. See the following sections of this chapter:

- Fish and wildlife habitat
- Lakeshore management
- Materials
- Public access
- Settlement
- Stream corridors and instream flow
- Subsurface resources
- Trail management
- Transportation
- Wetlands management

Land Allocation Summary

Background. There are approximately 570,000 acres of state-owned land with high or moderate potential for timber harvest in the planning area. An additional 104,000 acres of state selections also have high to moderate timber potential. The highest value timber lands are located along the major rivers where permafrost is absent and wood can be easily transported by barge.

The plan designates forestry as one of the primary use on approximately 1.5 million acres of state land in the Aniak, Holitna, Stony, North Fork, East Fork, Big River, South Fork, Nixon Fork, Innoko, Takotna,

Dishna, and Iditarod drainages and along the main stream of the Kuskokwim River between McGrath and Stony River (Table 2.2). Approximately 58,000 acres of land proposed for state selection also have moderate to high timber values; forestry will be primary use of these areas if they are conveyed to state ownership. These areas encompasses the state lands along the Kuskokwim and Holitna rivers with the highest potential for commercial use, and lands along smaller rivers and near communities and disposal areas where there is a demand for wood for personal use. Forestry is also designated a secondary use on other forested lands, including settlement areas where timber harvesting for firewood and houselogs will be an important use of public lands within the disposal boundaries, and remote forested lands where little harvesting is likely. Approximately 76,000 acres of land in the Candle Hills, Nunsatuk, Iditarod, and Dishna areas that are designated for resource management also have moderate to high timber potential. These lands will be retained in public ownership in the near term and managed for multiple use, including forestry. When the plan is reviewed in five years, these areas will be reevaluated to determine whether they should be kept in public ownership for long-term multiple use or offered for private ownership. Because productive forests in the Kuskokwim are in narrow bands along the rivers whereas the boundaries of the primary use designations are based on aliquot parts, large portions of the designated lands have low timber values.

Table 2.2 Forestry Designations**Lands Where Forestry is Designated a Primary Use.**

<u>Name</u>	<u>Subunit</u>	<u>Approximate Area</u>	
		<u>State Owned or Selected Land</u>	<u>Proposed State Selections</u>
North Fork	1d	144,000 acres	---
East Fork	2a	103,000 acres	---
Big River-South Fork	4c	102,000 acres	44,000 acres
Kuskokwim River	5a	105,000 acres	8,000 acres
Nixon Fork	6a	83,000 acres	---
Innoko River	7b	132,000 acres	---
Dishna-Iditarod	8d	37,000 acres	---
Takotna River	9d	48,000 acres	---
Stony River	14a	29,000 acres	6,000 acres
Holitna River	15a	675,000 acres	---
Aniak River	<u>17a</u>	<u>84,000 acres</u>	<u>---</u>
TOTAL		1,542,000 acres	58,000 acres

Lands With Forestry Values Designated for General Use

Kuskokwim River subunits 5d & 5h	31,000 acres
Dishna - Iditarod subunits 8a & 8b	<u>45,000 acres</u>
TOTAL	76,000 acres

LAKESHORE MANAGEMENT

Goals

Recreation. Protect and enhance a variety of lakeshore public recreation opportunities. Protect visual quality of lakeshores.

Habitat. Protect fish and wildlife habitat along lakeshores.

Private Ownership of Land. Provide opportunities for private ownership of lakeshore property.

Water Quality. Maintain water quality.

Management Guidelines

A. Variety of Management Strategies. DNR, through its management of land surrounding different lakes, will provide a full spectrum of public and private recreation and other land use opportunities. Although a great variety of possible lakeshore management strategies exist, DNR will attempt to provide at least the three general types of lake-related land use opportunities (listed below) in any given region. The appropriate lakeshore management strategy has either been determined by this plan or will be determined when a disposal is proposed near a lake.

1. Wilderness Lakes - Wilderness lakes are lakes that are presently undeveloped and have wilderness characteristics which should be maintained through retention in public ownership and protective management.

Lakes which will be kept in public ownership and managed as wilderness lakes include the following.

Thirty Eight Mile Lakes	Subunit 1b
Spirit Lake	Subunit 1c
Amos Lakes	Subunit 3c
Farewell Lake	Subunits 4c and 13a
John Lake	Subunits 4a and 4c

Submarine Lake	Subunits 4a and 4c
Tolstoi Lake	Subunit 8f
Charlie lake	Subunit 13a
High Lakes	Subunit 13a
Gemuk Lake	Subunit 15b
Tishimna Lake	Subunit 14b
Lake September	Subunit 15
Lake 1125'	Subunit 16a
Aniak Lake	Subunit 17b

State-owned land around these lakes will be kept in a natural state. Land around the lakeshore will be retained and managed so that people using the lake generally do not encounter the sights and sounds of human development. Land within 1 mile of the lake will be kept in public ownership. Land sales are not allowed. Leases and sales of surface resources may be allowed closer than 1 mile if the use(s) are consistent with the management intent and guidelines in Chapter 3. Other lakes within subunits that will be retained in public ownership may be managed as wilderness lakes when consistent with the management intent of the individual unit.

2. Recreational Lakes - Recreational lakes are lakes that have significant existing or potential public recreation values that warrant continued public ownership and management.

Lakes that have been identified as recreational lakes include the following.

North Chleca Lake	Subunit 1a
Wilson Slough	Subunit 5e
Lake 1498'	Subunit 12b

The state land that is retained around these lakes and not sold or leased for surface uses will be managed to maintain its natural character. At least 50 percent of all state land within 500 feet of the shoreline (mean high water) of recreation lakes will be retained in public ownership and not leased for a surface use, including 50 percent of the actual shoreline. The majority of the remaining state land within at least 200 feet of the

state land within at least 200 feet of the shoreline will also be retained in public ownership. Some areas that are beyond this buffer may be sold or leased for surface uses. In some areas staking setbacks of 200 feet are not needed to protect public access and recreation, and narrower setbacks have been established in the guidelines for the individual units.

The retention percentages for recreational lakes may be increased or decreased case by case if topography, amount of use or other local conditions warrant. A significant portion of the lakefront land retained in public ownership should be suitable for recreational activities. Where feasible, the publicly retained land should include the land adjacent to lake inlets and outlets. On all lakes where float planes can land, public access sites should be retained if land is sold or leased. (See also Settlement, guideline C-4, page 2-36.)

The management intent and guidelines found in Chapter 3 may give specific guidance for lands around certain of these recreational lakes. Additional recreational lakes may be identified within disposal areas at the time of disposal design.

3. General Development Lakes - State-owned land around these lakes will be managed to allow a mixture of natural and developed uses. On these lakes, the minimum lakeshore protection standards described in guideline C apply.

Lakes that will be managed as general development lakes include the following. In addition, many small lakes within disposal areas may be managed as general development lakes when consistent with the guidelines of the individual subunits.

South Chleca Lake	Subunit 1a
Boundary Lakes	Subunit 15f
Lake 1594'	Subunits 13b & 13c

B. Activities Allowed in Retained Lakeshore Buffers. Buffers will be managed to protect their natural character. Uses may be allowed in publicly owned lakeshore buf-

fers if the uses are consistent with the purposes for which the buffer was established and do not block public access or adversely affect water quality. For example, if the purpose of the buffer is public recreation, uses such as private docks for adjacent upland owners may need to be consolidated to minimize the impact on public recreation values. If on the other hand, individual docks for upland owners would not adversely affect water quality, then individual docks will be allowed. In the design and review of each disposal adjacent to a publicly owned lakeshore buffer, the Division of Land and Water Management will determine the rights of upland owners within the buffers that do not require specific authorization from DNR.

C. Establishing Widths of Easements and Setbacks When Land is Sold or Leased.

Where lakefront property is conveyed from state ownership or made available for lease, a minimum public-access easement of 50 feet will be reserved along the shoreline on the private property. In addition, a minimum residential building setback of 100 feet from the shoreline will be required unless land adjacent to the lake is stable and development or use of it does not pose a risk to water quality or other values such as wildlife or recreation. In some cases setbacks may need to be reduced to allow for an adequate buffer or setback on a nearby, more valuable stream or wetland. In some management units different minimum staking setbacks have already been established.

D. Activities Allowed in Easements or Setbacks. Water-dependent structures, such as docks or boathouses, are allowed within easements and setbacks if public access is not blocked or alternative public access is provided.

E. Minimize Conflicts. See Remote Cabin guideline A page 2-29

F. Structures in Fish Habitat. See Fish and Wildlife guideline C page 2-10.

G. Water Intake Structures. See Fish and Wildlife guideline D page 2-10

H. Other Guidelines Affecting Lakeshore Management. Several other guidelines may affect lakeshore management. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Materials
- Public access
- Public and commercial recreation resources
- Settlement
- Subsurface resources
- Trail management
- Transportation
- Wetlands management

MATERIALS

Management Guidelines

A. Preferred Material Sites. Altering streams can cause significant negative effects on other resources and lands. Rivers in the Kuskokwim area are important for fisheries, public use, and transportation. Therefore, to the extent feasible and prudent, DNR will give preference to using upland material sources in any ownership when responding to a request for a material sale or identifying a source for materials on public lands. Extracting materials from wetlands, lakes and active¹ or inactive² floodplains of rivers or streams should be avoided unless no feasible upland alternative exists. Sales or permits for sand, silt, or gravel extraction will not be permitted in fish spawning areas identified by ADF&G unless extraction would enhance the site for rearing and if the activity is agreed to by ADF&G. The proliferation of new extraction sites in and along the Kuskokwim River will be avoided unless having more sites is determined to have fewer negative social, economic, or environmental impacts.

B. Material Sites. Material sites should be located as near as is feasible to the site where the material will be used. This is intended to minimize the construction and maintenance costs of facilities.

¹Active Floodplain - that portion of the floodplain that is flooded frequently; it contains flowing channels, high-water channels, and adjacent bars and usually contains little or no vegetation.

²Inactive Floodplain - that portion of the floodplain that is flooded infrequently; it may contain high-water and abandoned channels and is usually lightly to heavily vegetated.

³Some of these guidelines are adopted from, "Gravel Removal Studies in the Arctic and Subarctic Floodplains in Alaska," U.S.F.W.S, Biological Services Program, June 1980.

C. Material Extraction From Floodplains.³

Material extractions from uplands is generally preferred over extractions from floodplains. However, extraction from floodplain sites may take place if:

- the feasible and prudent source of gravel is a floodplain;
- extraction from a floodplain site is desirable for fisheries production, or;
- upland extraction would have adverse impacts on the terrestrial biota or scenery that could be avoided by extraction from floodplain sites, in such cases, material extraction may take place in floodplains under the following guidelines.

1. Stream types should be selected for material extraction based on the following order of preference (most to least preferable): braided, split, meandering, sinuous, and straight. This order of preference reflects the availability of gravel from exposed bars. The largest volumes are available from braided systems and the least from straight systems. An additional factor is the decreasing floodplain width of the stream types identified above. Wider floodplains allow extraction further from the river channel which reduces the environmental impacts.

2. Generally, the largest river feasible should be selected for a gravel operation in a given area. Larger rivers have higher volumes of gravel and a wider floodplain. The proportionally smaller disturbance in large river systems will reduce the overall effect of gravel removal.

3. The rate of deposition and potential for erosion should be considered in rivers or streams when permits are applied for

materials that will be taken from the active floodplain or channel.

4. Whenever possible, avoid vegetated habitats.

5. When scraping gravel in active or inactive floodplains, maintain buffers that will constrain active channels to their original locations and configurations.

6. When small quantities of gravel are required (up to 50,000 yd³), sites should be selected that have only unvegetated gravel deposits.

7. When large quantities of gravel are required (generally over 50,000 yd³), large rivers that contain sufficient gravel in unvegetated areas or terrace locations on the inactive side of the floodplain should be selected and mined by pit excavation.

8. If mining in vegetated areas, save all overburden, vegetative slash, and debris to use during site rehabilitation to facilitate vegetative recovery. This material should be piled or broadcast so that it will not be washed downstream.

9. When uplands adjacent to extraction sites located on river bars are not state-owned, extraction or use of the upland site above the ordinary high water mark will only be conducted with the permission of the upland owner.

10. To the extent feasible and prudent, DNR will avoid authorizing gravel extraction at sites that are in direct conflict with traditional activities such as, but not limited to, fish camps, fish wheels, net drying sites, and set-net locations. This will be accomplished by directing applicants to use alternate sites or stipulating that extraction occur at times that will not overlap with the conflicting use.

11. Stationary fuel storage facilities and unattended storage of fuel, lubricants, or other hazardous substances shall not occur within the active floodplain. Refueling shall occur in a manner that avoids spillage.

D. Maintaining Other Uses and Resources When Siting and Operating Material Sites.

Before materials are extracted, the manager will ensure that the requirements of the permit or lease adequately protect other important resources and uses such as existing water rights; water resource quantity and quality; navigation; fish and wildlife habitat and harvest; commercial forest resources; recreation resources and opportunities; historic and archaeological resources; adjacent land uses; and access to public or private lands. The disposal of materials should be consistent with the applicable management intent statement and management guidelines of the plan.

The manager should also determine if other existing material sites can be vacated and rehabilitated as a result of opening a new material site.

E. Screening and Rehabilitation.

Material sites should be screened from roads, residential areas, recreational areas, and other areas of significant human use. Sufficient land should be allocated to the material site to allow for such screening. Where appropriate, rehabilitation of material sites will be required. For additional guidelines affecting material extraction see policies under the Subsurface Resources section.

F. Other Guidelines Affecting Materials.

A number of guidelines may affect materials. For details of these guidelines, see the following sections of this chapter:

- Cultural resources
- Fish and wildlife habitat
- Public access
- Public and commercial recreation resources
- Transportation and utilities

Land Allocation Summary

Background. State lands will continue to be available for materials extraction subject to the guidelines of the plan. Highest value materials sites are located adjacent to existing communities and between Upper Kalskag and Aniak along the Kuskokwim River (Unit 18). These materials are used for local and Kuskokwim Delta community projects including airports, roads, erosion control, and building foundations. The most frequently used materials site is located at Birch Tree Crossing which has supplied gravel for over 30 years. Materials are found in several other places in the planning area. However, transportation costs to project sites are prohibitive and their potential for use is low.

Proposed Studies. Two studies have been recommended in Chapter 4. The first proposed study would be a cooperative effort to generate data that provides agencies with needed background information to address concerns about the use of Birch Tree Crossing. The second proposed study will investigate feasible and prudent sites for materials extraction in and along the Kuskokwim River. Recommendations and information resulting from this effort would assist agencies in permitting materials extraction at sites in a manner locations that would minimize conflicts with other surface resources and land uses.

PUBLIC ACCESS³

Goal

Public Access. Maintain, enhance, or provide adequate access to publicly owned land and resources.

Management Guidelines

A. Retain Access. Improve or maintain public access to areas with significant public resource values by retaining access sites and corridors in public ownership, by reserving rights of access when state land is sold or leased, by acquiring access, establishing easements, or by asserting rights-of-way through Revised Statute (RS) 2477. (See Appendix C.) No potential RS 2477 trails are recommended for assertion to implement this plan. Generally, section line easements should not be vacated unless alternative, physically usable access can be established or DNR has determined that state lands in the area should be roadless.

B. Management of 17(b) Easements. Generally, DNR will not accept management of 17(b) easements unless it already actively manages a portion of the trail or easement or state management will best protect public access to state lands.

C. Access for Development. When an access route is constructed for resource development, existing public access should be maintained or improved to mineralized areas, recreation, fish, wildlife, and forest resources, agriculture areas, and other public resources. When determining whether or not to improve existing access the potential for increasing user conflicts and increasing demand for limited resources will be considered and solutions will be sought.

D. Adequate Access Rights. Where practical and within the limits of available funding, full public rights of access should be provided when roads are constructed by state or local

governments. Perpetual public easements should be acquired and recorded when the state acquires access rights across property in other ownerships.

E. Coordination with the Department of Transportation and Public Facilities (DOT/PF). Access needs, such as right-of-way widths, airport reserves, or road locations, should be coordinated with DOT/PF.

F. Limiting Access. Access to public lands may be curtailed at certain times and in certain places to protect public safety, allow special uses, and prevent harm to the environment. Examples of situations that may justify limiting public access are fire management; timber harvest operations; developed oil and gas facilities; and high soil moisture content when traffic may cause extensive damage to roads and trails.

G. Purchase of Access Sites. Public appropriations may be requested to purchase access sites, easements, or reservations to public-use areas and to proposed settlement and agricultural projects.

K. Other Guidelines Affecting Public Access. Several other guidelines may affect public access. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Materials
- Public and commercial recreation resources
- Settlement
- Stream corridors and instream flow
- Subsurface resources
- Trail management
- Transportation
- Wetlands management

³ Also see Settlement page 2-33 and Trail Management page 2-60.

PUBLIC AND COMMERCIAL RECREATION RESOURCES

Goals

Recreation Opportunities. Alaska's residents and increasing numbers of out-of-state visitors desire and expect accessible outdoor recreational opportunities. Opportunities to appreciate Alaska's history and diverse cultures should be provided to aid the physical and mental health of a highly competitive society:

1. Provide recreation opportunities on land and water areas that serve multiple purposes such as habitat protection, timber management, settlement, and mineral resource extraction.
2. Assist communities through cooperative planning, conveyance of state lands, and grants-in-aid for parks and trails within population centers.
3. Encourage commercial development of recreational facilities and services through leases, loans, and technical assistance where public recreation needs can most effectively be provided by private enterprise, while avoiding or minimizing conflicts with traditional uses, such as subsistence.

Recreation Resource Protection. Alaska's natural and cultural resources are the foundation of Alaska outdoor recreation and they must be protected. Soil, forests, prehistoric and historic sites and objects, fish and wildlife habitat, scenic areas and access to open space must be preserved if Alaska's scenic and recreation values are to be maintained for future generations. Long-term public appreciation of Alaska's natural and human history and perpetuation of Alaska's distinctive identity can be accomplished by:

1. Protecting natural features of regional or statewide significance and cultural features representative of major themes of Alaska history.

2. Assisting other land management agencies to perpetuate natural and historic features on other state lands, in community park systems, and on private property by providing technical assistance and grants-in-aid.

Economic Development. Alaska is an international tourist attraction. Outdoor recreation has grown dramatically since statehood and is now one of the state's largest industries; its economic potential has just begun to be realized. Areas developed and managed primarily for outdoor recreation and the appreciation of scenic and historic values fulfill expectations of tourists. In addition to the influx of tourism dollars, many jobs and services are created for Alaska residents and pride in Alaska's cultures is generated. The challenge is to provide the benefits of the tourism industry without conflicting with existing community lifestyles.

1. Provide, rehabilitate and maintain recreation facilities that enable greater appreciation of Alaska's scenic and historic resources.
2. Maintain viable fish and wildlife populations.

Management Guidelines

A. Public Use Cabins. A system of public use cabins should be established. The Department will develop administrative procedures for managing a state public use cabin program, set priorities for cabin sites, and seek a budget for construction, maintenance, and program management. Cooperation will be sought with municipal or federal governments or nonprofit organizations for construction or maintenance of cabins. Amos Lakes, Beaver Mountains and the dog mushing trails near McGrath have been identified as general areas suitable for public use cabins.

B. Permanent Commercial Recreation Facilities on State Land. Lodges, or other private facilities designed to be run as private, profit-making recreation facilities may be leased if the facility fulfills the following conditions and a finding in accordance with AS 38.05.035.

1. Commercial recreation development adds to or enhances public recreation opportunities.

2. The use generated by private, recreation development will not result in significant adverse effects on important fish and wildlife populations. In making this determination, DNR shall consult with the Department of Fish and Game.

3. The amount of use generated by the facility will not exceed the best available estimate of the recreation carrying capacity of the area. This estimate will be based on the following information.

a. The number of commercial recreation leases and permits that already exist on state and other land in that unit and the amount of use they generate.

b. Management intent and guidelines of this or subsequent plans for the unit.

c. Management objectives for nearby non-state lands (to the extent this information is readily available).

This information will be gathered as part of the normal permitting and leasing process and the public notice regulations described in guideline I, page 2-11, Public Notice to Help Avoid Conflicts with Traditional Uses of Fish and Game. Commercial recreation uses that exist at this time are identified in the individual management units.

4. The facility can be sited, designed, constructed, and operated in a manner that avoids significant conflict with natural values and traditional uses of the area. See guideline H, Avoid Conflicts with Traditional Uses of Fish and Game, page 2-11 for guidance on deter-

mining the likely impacts on traditional land uses (as required by AS 38.05.830).

5. Additions to existing facilities, rebuilt facilities, or new facilities will be sited and designed in accordance with stream corridor, access, wetlands, and other guidelines of this plan. Final approval of a permit or lease for the facility will be given only after consultation with the Department of Fish and Game and the Division of Parks and Outdoor Recreation.

C. Temporary Commercial Recreation Facilities on State Land. Tent camps and other temporary private recreation facilities designed to be used as private profit-making facilities may be permitted if the facility fulfills the following conditions and is determined appropriate after interagency review.

1. Private recreation development adds to or enhances public recreation opportunities.

2. The use generated by private, recreation development will not result in significant adverse effects on important fish and wildlife populations. In making this determination, DNR shall consult with the Department of Fish and Game.

3. The amount of use generated by this facility will not exceed the best available estimate of the recreation carrying capacity of the area. The estimate will be based on the following information.

a. The number of commercial recreation leases and permits that already exist on state and other land.

b. Management and intent guidelines of this or subsequent plans for the unit.

c. Management objectives for nearby non-state lands (to the extent this information is readily available).

This information will be gathered as part of the normal permitting and leasing process and the public notice regulations described in guideline I, Public Notice To Help Avoid Con-

flict With Traditional Use of Fish and Game, page 2-11. Commercial recreation uses that exist at this time are identified in the individual management units.

D. Optimum Use of Sites. Achieve optimum use of recreation sites consistent with maintaining high quality recreation experiences, wildlife harvest, environmental quality, and safety.

E. Other Guidelines Affecting Public and Commercial Recreation Resources.

Several other guidelines may affect recreation management practices. See the following sections of this chapter:

- Cultural resources
- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Public access
- Stream corridors and instream flow
- Trail management
- Wetlands management

Land Allocation Summary

Background. Because of the small resident population in the planning area and the distance from railbelt and Kuskokwim Delta communities, the amount of nonconsumptive, dispersed recreation activities such as snow-machining, cross-country skiing, hiking, all-terrain vehicle use, and float-boating within the planning area is relatively low. These activities are concentrated near communities, along some of the major rivers, and in the Alaska Range. There are also a number of cultural sites in the area. Most are associated with the Native occupation, the gold rush era, and Russian trading posts. Most of the areas with moderate or high potential for recreation will be retained in public ownership and managed for multiple use, with public recreation as one of the primary designated uses (Table 2.3). These areas total approximately 4.3 million acres. In addition, approximately 62,400 acres of land in the Candle Hills, Nun-satuk River, and Gagaryah River areas that are designated resource management have

moderate to high recreation value. These lands will be retained in public ownership in the near term and managed for multiple use, including public recreation. When the plan is reviewed in five years, these areas will be reevaluated to determine whether they should be kept in public ownership for the long-term multiple use, or offered for private ownership. Where land or remote cabin permits will be offered, specific setbacks and guidelines are identified in this Chapters 2 and 3 in order to protect recreation, cultural, and historic resources. A description of lands designated for consumptive forms of recreation such as fish and wildlife harvest is included in the Fish and Wildlife Habitat section of this chapter.

Public Use Cabins. The Beaver Mountains, Amos Lakes, and areas along popular dog mushing trails are recommended for public use cabin sites. Construction of public use cabins is contingent on funding or interest from nonprofit groups.

Trails and Access. To ensure continued opportunities for public use of trails, those recreation and historic trails of regional or statewide significance will be protected through public ownership of trail corridors. The Iditarod National Historic Trail System and the sites associated with it, and the Iditarod race trail have special significance because of their historic value and present public use. The race trail will be protected by a publicly-owned corridor 200 feet or greater when passing through land offerings. The Iditarod Trail Advisory Council (or equivalent body) or the BLM trail coordinator and the State Office of History and Archeology will be consulted when land offerings or remote cabin permits are considered near the INHTS. The State Office of History and Archeology will be consulted for other permits or leases along the INHTS.

Commercial Recreational Facilities on Public Land. Commercial recreation facilities are allowed on most state lands. In the near term, most of these facilities are likely to be built on non-state lands in or adjacent to communities or on state lands in the Alaska Range and other more remote parts of the planning area. Along the Aniak, Holitna, and

Hoholitna rivers, in the Beaver Mountains, and adjacent to Tishimna Lake where wildlife habitat and human use values are high, the number or location of lodges are restricted.

New permanent facilities for commercial recreation are not permitted in the Aniak drainage

Table 2.3 Public Recreation Designations

Areas Where Public Recreation is Designated a Primary Use

<u>Name</u>	<u>Subunit</u>
Tonzona River	3a
Kuskokwim River	5a and 5c
Nixon Fork	6a
Dishna-Iditarod	8f
Takotna River	9d
George River	10a
South Alaska Range	12a
North Alaska Range	13a
Stony River	14d
Aniak River	17a, 17b, and 17e

Areas with Recreation Potential Designated Resource Management

Candle Hills	5d
Kuskokwim River	5h
South Alaska Range	12b

REMOTE CABINS AND TRAPPING CABINS

Goals

Providing Opportunities for Private Use of State Lands. The remote cabin program is the preferred method of providing opportunities for isolated cabin development in remote parts of the Kuskokwim planning area where survey and conveyance are impractical, where disposal of land would cause potential conflicts with other resources and uses, and where a long-range interest in public ownership and use exist.

Community and Social Impacts. When offering remote cabins, consider the needs and demands of all state residents and minimize the impacts on communities and resources.

Trapping Cabins. Support the trapping economy of the region by providing sites for trapping cabins.

Management Guidelines For Remote Cabins⁴

A. Minimize Conflicts. To avoid conflicts with public access, important fish and wildlife habitat, public use, and trapping, permittees will not be allowed to build remote cabins in the following areas:

1. Within 50 feet of the ordinary high water mark of a lake, stream, river, wetland, or existing trail unless a greater distance is required in a specific management unit, or;
2. Where public access for hunting, trapping, fishing, recreation, or mining would be hindered.
3. Within 1/4 mile of existing airstrips used by the public.
4. Within 1 mile of a guide site authorized under a state permit or lease.

⁴Under current regulations trapping is not allowed from a remote cabin.

Persons receiving a remote cabin permit are responsible for installing a wastewater system that complies with the Department of Environmental Conservation's wastewater regulations.

B. Fire Protection. DNR will not alter fire management plans because of the presence of remote cabins. Cabin permit holders will be advised before permit issuance and in the permit that DNR does not assume liability due to loss or damage to the cabin from wildfires and will not provide fire protection if the fire management plan does not call for such protection in the area.

DLWM will notify the Division of Forestry Fire Management Planning Team of the location of all authorized remote cabins.

C. Spacing Cabins. Remote cabins will be spaced at least 1/2 mile from another remote cabin or trapping cabin unless a different spacing requirement is established for a particular management unit in Chapter 3. The distance between a remote cabin and a trapping cabin may also be reduced if one person is the permittee for both structures or the adjacent permittee expresses a non-objection.

D. Legal Access. To avoid trespass problems DNR will provide remote cabin permit holders with information on legal access routes to the remote cabin area.

E. Pacing the Distribution of Remote Cabin Permits. Remote cabin permits will be offered periodically over the next twenty years in order to make them available to as many different people as possible. Remote cabin permits also will be offered in several locations at one time and in sufficient numbers to avoid a sense of scarcity.

F. Buildings, Density, and Specific Guidelines. Limitations on the number or size of buildings, location of cabin sites, allowed or prohibited forms of access, and any

other considerations appropriate to the area and consistent with remote cabin regulations may be established before remote cabin permits are offered.

The densities established for remote cabin permits in each unit are for new cabins and are not affected by the existence of unauthorized cabins or their eventual disposition.

In order to reduce cost to the state and increase satisfaction for the permittee, remote cabin permittees should be allowed to choose their own cabin sites within the constraints of the guidelines of this plan and the remote cabin regulations, rather than having the department establish the sites.

G. Type of Interest in Land. Remote cabin permits are not intended to be converted to fee simple disposals of land that otherwise would be retained in state ownership. Guidelines for remote cabins in each area are designed to avoid creating future pressures for actual disposal (for example, by setting appropriate number and density limitations).

H. Rights-of-Way. New rights-of-way to remote cabin sites will not be granted unless doing so protects other important public values.

I. Mineral Entry. Unless closed for other reasons than the presence of permitted remote cabins, remote cabin permit areas will remain open to mineral entry.

J. Public Notice to Help Avoid Conflicts with Traditional Uses of Fish and Game. See guideline I, Public Notice To Help Avoid Conflicts With Traditional Uses Of Fish and Game, page 2-11 for a description of public notice required for remote cabin permits.

K. Use of Remote Cabins for Trapping. Under the current remote cabin regulations trapping and other commercial uses are not allowed from a remote cabin. Trapping from remote cabins would create significant conflicts with existing trappers in the planning area. Remote cabin permits given in the Kuskokwim Area will contain provisions prohibiting trapping. Therefore, if the remote cabin

regulations are changed to allow commercial uses, trapping will still be a prohibited use from the remote cabins in the Kuskokwim Planning Area.

L. Other Guidelines Affecting Remote Cabins. Several other guidelines may affect remote cabin management practices. See the following sections of this chapter:

Fish and wildlife habitat
Public access

Management Guidelines for Trapping Cabins

A. Trapping Cabins in Settlement Areas. New trapping cabin permits may be allowed in designated settlement areas before the area is scheduled for sale (prior to entering the Land Availability Determination System [LADS]). Permits may be issued or renewed in designated settlement areas for up to 10 years or until the time the area is offered for sale or staking, which ever is shorter.

Existing trapping cabin permits will be renewed in proposed disposal areas. When an area is offered for sale or staking, permittees will be given the option of:

1. relinquishing the trapping cabin permit and taking a chance on acquiring fee simple title to the cabin site through staking, or;
2. keeping the trapping cabin subject to the trapping cabin regulations (not acquiring title). If the permittee keeps the cabin, the cabin site will be deleted from the staking area prior to opening staking. At this time there are five existing trapping cabin permits in proposed disposal areas, four in the Tonzona area, and one in the Mount Rich Addition.

Trapping cabins may be allowed in past land sale areas that are not proposed for reoffer.

B. Distance Between Trapping Cabins.

New trapping cabin permits will not be issued within 5 miles of a known actively-used trapping cabin on either state or non-state land unless a physical barrier such as a mountain range separates the two cabins, or both cabins are permitted to one person, or the permittee of the adjacent cabin expresses a non-objection to a lesser distance.

C. Minimize Conflicts. To avoid conflicts with public access, important fish and wildlife habitat, and public use, permittees will not be allowed to build trapping cabins within 50 feet of the ordinary high water mark of a lake, stream, wetland, or existing trail unless a greater distance is required in a specific management unit.

D. Public Notice to Help Avoid Conflicts With Traditional Uses of Fish and Game Resources. Through the public notice and consultation procedures described in guideline I, Public Notice to Help Avoid Conflicts With Traditional Uses of Fish and Game, page 2-11, DNR will make a reasonable effort to provide notice so that an adjacent trapper may learn of the proposed action, including the permitting of another trapping cabin, and make known the location of his or her trapping cabin.

It is the responsibility of the adjacent trapper to prove that his or her cabin or trapping site is actively used by providing evidence such as a valid state trapping license, tax returns, fur receipts showing previous income derived from trapping, or official records of the Alaska Department of Fish and Game or the Division of Fish and Wildlife Protection. Trappers operating under leases or other permits on non-state lands must provide evidence similar to that required for trappers on state land.

E. Other Guidelines Affecting Trapping Cabins. Other guidelines may affect trapping cabin management practices. See the following section of this chapter:

Fish and wildlife habitat

Land Allocation Summary

Background. Very little land with high settlement suitability is required within remote permit areas, because cabin sites can be widely scattered and permits do not convey title to the surrounding land. Based on land characteristics -- vegetation, slope, etc. -- over two million acres of state land are rated moderate to high for remote cabins. However much of this land has no present access. In addition, many lands rated low for remote cabins have some sites suitable for cabin construction.

Cabin Permit Areas. Approximately 2.8 million acres of land in eleven areas will be open to remote cabin permits. Included are lands in the Alaska Range; in the Dishna, Innoko, and Takotna drainages in the northwest part of the planning area, and in the Holitna-Hoholitna drainages. Permits will be allowed at a density of one to three permits per township. A total of 231 permits will be allowed. Areas open to remote cabin permits are listed in Table 2.4.

Trapping cabin permits are allowed on nearly all state lands throughout the planning area. They are not permitted along the shores of a few lakes with high recreation and habitat values specified in Chapter 3, nor in areas proposed for land sales.

Table 2.4 Areas Open for Remote Cabin Permits

<u>Permit Area Name</u>	<u>Subunits Included^a</u>	<u># Permits Allowed</u>	<u>Density of Permits Allowed</u>
Dishna-Folger-Tatalina Area			
A -- Dishna	7c, 7d, 8e, 8f 8g, 9a, 9c	74	3 per township
B -- Folger	6a, 6c, 7c, 7d	36	3 per township
<u>C -- Tatalina</u>	5i, 5j, 9b	<u>11</u>	3 per township
Subtotal		121	
Holitna Basin Area			
D -- Door Mountains	15c, 15d	18	2 per township
E -- Shotgun Hills ^b	15b, 15d (15f)	6	2 per township
<u>F -- Titnuk-Taylor</u>	15b, 15c, 15d	<u>32</u>	2 per township
Subtotal		56	
Alaska Range Area			
G -- Little Underhill	11a, 11b, 12a, 14c, 14d	19	1 per township
H -- Styx River	13a	9	1 per township
I -- Upper Cheneetnuk	11a, 11b, 12a, 12c	4	1 per township
J -- Middle Fork	13a	3	1 per township
K -- Tonzona-South Fk.	2c, 2d, 3a, 3b, 4a, 4b, 13a	19	1 per township
Subtotal		54	
TOTAL		231 remote cabin permits	

^aIn most cases only parts of the subunits are open for remote cabin permits. See Map 2.2 for boundaries of the remote cabin permit areas.

^bFour additional permits may be offered near Boundary Lakes (subunits 15f) if the land quality is not sufficient to justify a disposal.

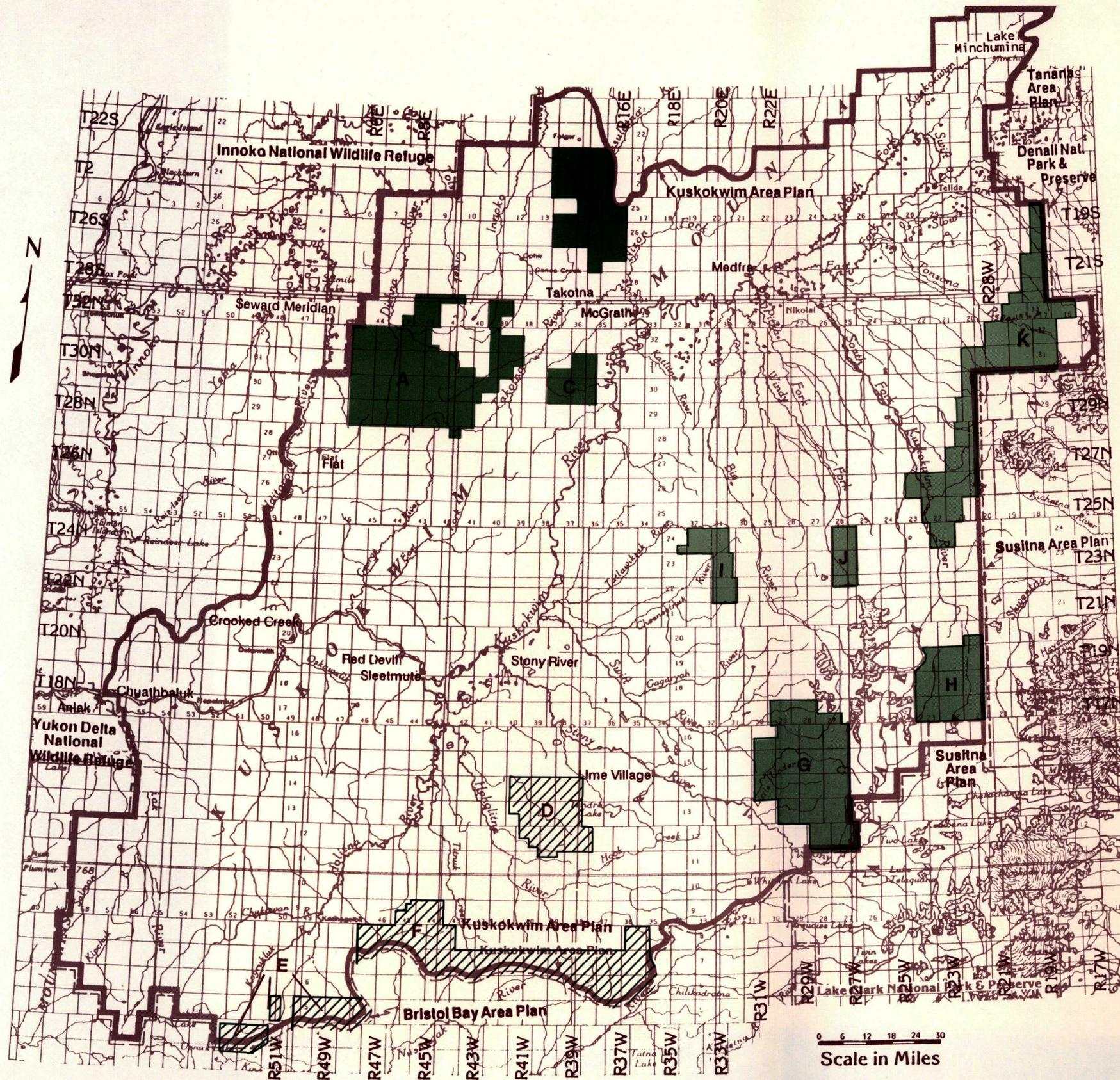
Remote Cabin Areas

MAP 2.2

REMOTE CABIN PERMIT AREAS

AREA	PERMITS ALLOWED / TOWNSHIP	TOTAL # PERMITS ALLOWED
 Dishna-Folger-Tatalina	3	121
 Holitna Basin	2	56
 Alaska Range	1	54

See Table 2.2 for a list of remote cabin permits allowed in each area.



SETTLEMENT

Goals

Private Land Use. Make available to present and future Alaskans suitable public land needed for private settlement purposes. DNR can identify and offer lands that have characteristics which make them suitable for year-round residence, seasonal residence, or self-sufficient remote residence, but once the land is sold the owner must decide how to use the land. DNR can not guarantee that, for instance, land sold to satisfy the demand for seasonal residences will not be used for permanent residences. Nor can DNR assure that future land owners will not demand public services and improvements such as schools. DNR is trying to satisfy five categories statewide. Within the planning area DNR will attempt to meet at least some of the demand for each of the following five categories of settlement. However, given the nature of demand for settlement lands in the region and the fact that there is little state land near existing communities or on the major rivers, the department's emphasis has to be on meeting demand for recreational use and seasonal residences.

A. Recreational Use or Seasonal Residences. This category is the most common use of land disposed of by the state. DNR will, where feasible, avoid poor quality sites, such as north-facing slopes, and offer quality sites with characteristics such as proximity to water, views, good hunting, or interesting topography. Because there is a limited supply of state land with characteristics that make it highly desirable, the state will have to offer some lands that do not have exceptional amenity values to meet the demand for recreational and seasonal use.

The state will also offer opportunities for short term-private use of state-owned lands through the state's remote cabin program (see the Remote Cabin section of this chapter).

B. Year-round Residences or Community Expansion. Although there is little state land

near existing communities, where it can, DNR will offer accessible land that is suitable to meet the needs of growing communities. This category serves people whose principal place of residence--and usually work--is or will be in the area of the disposal.

C. Year-round, Relatively Self-sufficient Remote Residences. DNR will provide opportunities for a few people who wish to pursue a remote, more or less self-sufficient lifestyle. Generally, the state will not offer tracts large enough for families to subsist on, but rather will offer smaller parcels adjacent to public land on which the public can gather firewood and houselogs and hunt and fish. Under current programs, homesteads are limited to 40 acres or less adjacent to public land on which the public can gather firewood and houselogs and hunt and fish.

This category, although important, will not be a high priority in the disposal program because it is expensive (due to survey costs) and requires a commitment of large amounts of public land to satisfy relatively few people; and it is less in demand than the preceding two categories.

D. Settlement Associated With Natural Resource Development Projects. The state will set a high priority on making land available for the development of new towns or the expansion of existing communities adjacent to major resource development projects. In some cases, the state must decide if leasing lands for a campsite or temporary settlement is preferable to selling land for a townsite.

E. Industrial or Commercial Development. To stimulate or facilitate economic development, DNR will sell, lease, or protect for future use suitable land for private, commercial, and industrial use. Requirements for these uses are highly site-specific, and disposal decisions will be made case by case as demands arise.

Resource and Economic Impacts. Contribute positively to other uses of natural resources and minimize the undesired impacts of land offerings on opportunities for resource use.

Land Acquisition. At this time it is the state's goal to provide individuals a range of options for acquiring title to state land. Under the current homestead and homesite programs state land may be acquired by various combinations of residing on the property, constructing a dwelling on the property, and purchasing the property. Public lands offered for private ownership under the general land disposal program will be sold for current, fair market value, subject but not limited to the exceptions noted in AS 38.05.055 and 38.05.057.

Fiscal Impacts. Minimize future fiscal costs to local or state government for services, wildfire management, and infrastructure requirements that result from settlement of state lands.

Community and Social Impacts. Minimize undesired changes in the character of life among nearby communities or residents caused by land disposal projects while considering the needs and demands of all state residents.

Coordination With Local Governments and Landowners. Coordinate state land offering programs with similar programs of local governments and major landowners to best achieve common objectives. Consider availability of land in private ownership when determining the amount, type, and location of state land offerings.

Management Guidelines

A. Planning and Coordination

1. Long-term Program. Under this plan 33,855⁵ acres may be offered for settlement. Another 12,150 acres with settlement potential are to be kept in public ownership for the short-term and classified resource manage-

ment. When the plan is reviewed in five years the resource management lands will be reexamined and a decision made whether to offer them for sale or keep them in public ownership.

With the exceptions that are noted in Chapter 3, the acreage offered in any given area designated for settlement may be adjusted up or down based on the amount of land determined suitable for offering during the land disposal and planning process.

The disposal program will be designed to make land available for at least 20 years to ensure that Alaskans have the opportunity to acquire public land in the future. The pacing of land disposals will be controlled through the statewide disposal plan and through the guidelines in Chapter 3. Specific guidelines are established for timing of land offerings in North Fork (subunit 1a), Big River Reoffer (subunit 13b), Boundary Lakes (subunit 15f), Aniak-Doestock (subunit 17d), Vinasale (subunit 5e), and Sleetmute North (subunit 15e).

2. Competition. Although the state will coordinate its offerings with those of other landowners, it may compete with the private sector or local governments if necessary to satisfy demand, provide market choice, or moderate prices.

3. Local Plans. DNR will comply with provisions of local comprehensive plans regarding the pace, location, and density of land development except to the extent that local requirements are inconsistent with a major overriding state interest.

4. Design Review Boards. In addition to holding public meetings, a local design review board will be established when, in the opinion of the Director of the Division of Land and Water Management, it would be a constructive way to involve persons affected by a disposal project.

⁵ The total acreage of land available will be at least 33,855 acres. This figure may increase if parcels are relinquished in the Big River area and reoffered for sale.

A design review board will consist of a maximum of five citizens and local government officials appointed by an appropriate local government official. Where local government does not exist or is unwilling to appoint such a board, DNR will make the appointments if sufficient interest exists.

The design review board is advisory and will participate in and review all stages of design, including location, design of parcel size, transportation routes, and open space. The board will make recommendations to the Director of the Division of Land and Water Management at appropriate times during the design process.

5. Coordination with Local Governments.

Where DNR and a municipality both have land, state land offering programs should be coordinated with similar programs of local government to best achieve common objectives. To this end, DNR would develop a joint disposal plan for state and municipal lands with any municipality that is interested. This plan would consider the municipality's fiscal planning for road extension priorities and its plans for levels of services in different areas. If a municipality has a comprehensive land use plan, that plan will provide direction for disposal priorities. The disposal plan should demonstrate what community objectives would be met and how the requested capital improvement funds would support municipality-wide priorities for roads and service extensions to benefit current and future residents. The disposal plan should demonstrate how increased access and development will promote use of other resources such as agriculture, mining, forestry and recreation, and thus provide statewide and regional benefits.

B. Types of Offerings

The types of offerings are established by the legislature and are subject to change. The following guidelines relate to several types of offerings available to the department at this time.

1. Predesignated Parcels. In areas where severe land use conflicts and inefficient use of

resources are expected to result from owner staking by the entrant, DNR may offer homestead parcels with predesignated boundaries.

2. Staking Outside Designated Project Areas.

Entrants are responsible for establishing the location of their parcels accurately. Title will not be granted to parcels located outside the boundaries of project areas. Entrants who incorrectly locate parcels outside designated areas may be given a second opportunity to stake within the proper area.

3. Isolated Parcels of State Land. The state has acquired--and will continue to acquire--isolated parcels of land through foreclosure, escheat, and other methods. The following guidelines apply to management and possible disposal of these parcels.

- **In or Near Existing Communities.** If the parcel is in or immediately adjacent to an existing community or past state land offering, the parcel can be offered for settlement unless it is appropriate as a site(s) for schools, gravel pits, roads, parks, sewer treatment plants, or other public facilities.

- **Parcels Near Other State Land.** If the parcel adjoins or is surrounded by other state land, it should be managed according to the management intent and guidelines applicable to the adjacent lands.

- **Parcels Not Near Other State Land.** Parcels, such as mineral patents federal or homesteads acquired in the middle of non-state lands should be considered for sale or exchange to the adjacent land owner.

4. Leases for Private Recreation Cabins.

Leases for private (non-commercial) recreational cabins are prohibited.

C. Protection, Management, and Enhancement of Other Resources

1. Protection of Life and Property. The state will, to the extent feasible and prudent, discourage development in areas of flooding, unstable ground, significant avalanche risk, and other hazards. The department will achieve this objective by retaining public land, requiring building setbacks, or public education.

DNR will discourage development of non-water-dependent structures in the 100-year floodway by requiring necessary residential building setbacks and by providing available information about flood zones in land disposal brochures when a disposal is in a potential flood hazard area.

In drainages where the 100-year floodway has not been surveyed, the best available information will be used to determine the flood hazard zone that should remain in public ownership.

2. Protection and Management of Valuable Environmental Processes. In areas to be conveyed to private ownership, the state will provide a publicly owned open-space system to preserve important fish and wildlife habitats and natural areas such as shorelands, freshwater wetlands, riparian lands, watersheds, and surface and ground water recharge areas. (See policies on these subjects for details, especially: guideline H in the Fish and Wildlife Habitat section, Avoid Conflicts With Traditional Uses of Fish and Game.)

Wetlands with important hydrologic, habitat, or recreational values and adjacent buffer strips will be retained for open space. Systems of publicly owned land will be designed to provide the necessary linkage and continuity to protect or increase values for human uses and wildlife movements. In some places, large areas may be retained to provide adequate terrestrial habitat.

3. Protection and Enhancement of Scenic Features. The state generally will retain in public ownership unique natural features such as cliffs, bluffs and waterfalls, and foreground open space for panoramic vistas. Public access to such amenities will also be preserved-

Unusual land forms or scenic features will be retained in state ownership for enjoyment and use by the public. Such lands include islands in rivers or lakes unless land disposals can be designed to prevent negative effects on the scenic and recreational values of the area.

4. Protection and Enhancement of Recreational, Educational, and Cultural Opportunities. Project the need for and retain appropriate areas for outdoor recreation, trails, campsites, boat launches, historic sites, and areas for scientific study. Areas for intensive and dispersed use will be preserved. (See also Cultural Resources guideline B-3, page 2-9 regarding cultural resource surveys for land offerings.)

5. Protection of Subsurface Resources. Generally settlement areas designated by this plan avoid areas with high mineral potential, mining locations in good standings, existing coal leases, or moderate to high coal potential as defined in 11AAC 85.010.

6. Protection of Material Sources. Generally if a designated settlement area contains sand and gravel deposits, rock sources or other similar, high value material resources, a pit area will be identified before land offerings and retained in public ownership for future use.

D. Design

1. Provision of Public Land for Communities. Project the need for and retain appropriate greenbelts, public-use corridors, personal-use woodlots, buffer areas, commons, building setbacks, sites for schools, gravel pits, roads, parks, and other public facilities such as sewer treatment plants and health clinics, and other open spaces to help create a desirable land use pattern in developing areas.

2. Cost of Public Services. In accordance with AS 38.04.010, DNR will attempt to guide year-round settlement to areas where services exist or can be provided with reasonable efficiency. State land that is located beyond the range of existing schools and other necessary public services or that is located where development of sources of employment is

improbable will be sited and designed to encourage seasonal use with sufficient separation between residences so that public services will not be necessary or expected. Wildfire management costs that result from settlement will be considered and minimized to the extent feasible.

3. Provision of Access. The State will ensure that legal, practical public access (landing areas, rivers, trails, or other options most appropriate to the particular situation) is identified and reserved within land offerings.

Within land offering areas made available through random staking or predesignated sites, section line or other easements should not be relied on for access without field inspection of the practicality of the route. Identified access will be described in the land offering brochure. Where needed to reduce the likelihood of conflicts with existing private owners, DNR may brush or flag public access routes to land offering projects.

When they exist and where DNR proposes a subdivision, DNR will comply with the applicable provisions of local government subdivision ordinances, including those concerning capital improvements. Where no subdivision ordinance is in effect, DNR will ensure actual physical access is available or can be developed (road, air, or water) to each new state subdivision project. The department will evaluate the need to construct new access to a subdivision case by case.

4. Personal Use of Nearby Resources. One of the considerations in deciding the location, size, and design of land disposal projects will be the nearby supply of resources such as firewood and houselogs and the expected demand from people who will own the parcels. Where it is anticipated that land recipients will want to use timber resources, nearby woodlots may be retained instead of selling individual parcels large enough to meet the personal use demands of the owner. This would provide some nearby public land on which firewood and houselogs can be gathered while keeping open options for other uses of those lands when access develops or new demands are identified.

5. Subdivision Design. If subdivisions are offered, they will be designed to preserve and enhance the quality of the natural setting and the recreational opportunities that make an area attractive to potential buyers.

The following slope and lot size standards should generally be applied in state subdivisions, assuming that the parcels have been reviewed and approved as required by Department of Environmental Conservation (DEC) regulations:

<u>Percent Average Slope</u>	<u>Minimum Lot Size</u>
0-12	1 acre
13-20	4 acres
21-30	10 acres
greater than 30	No development

Other procedures and standards for subdivision design will be as set forth in "Design of Residential and Recreational Subdivisions," in the Division of Land and Water Management's Policy and Procedures Manual.

6. Boundaries of Settlement Designations. Boundaries of land use designations shown on the maps in Chapter 3 may be modified through on-the-ground implementation activities -- for example, site planning for disposals -- if the modifications adhere to the management intent for the subunits affected.

7. Easements. Easements will be used as one means to acquire rights through privately owned lands needed for public use.

Easements generally will not be used to retain a public interest in lands within a subdivision. Instead, DNR will generally retain such lands in public ownership. Exceptions to this policy may be made where the interest protected is very limited such as for local pedestrian access that is not part of an integrated neighborhood or community trail system. This policy will minimize confusion between public use and private ownership rights.

E. Other Guidelines Affecting Settlement.

Several other guidelines may affect settlement. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Materials
- Public access
- Public and commercial recreation resources
- Stream corridors and instream flow
- Subsurface resources
- Trail management
- Transportation
- Wetlands management

Land Allocation Summary

Background. Approximately 590,000 acres of state-owned or state-selected land have high suitability for settlement, or 4 percent of the total state-owned or state-selected area. These are lands with closed forests or open woodlands of white spruce and hardwoods that have some access by boat, plane, or road, or by trail from a nearby community. About 1.3 million acres -- remote forested lands or shrublands near access -- have low settlement suitability. Most high and moderate suitability lands are along the major rivers or in the valleys of the Alaska Range.

Designated Settlement Areas. Fourteen areas are designated for offering for private ownership over the next twenty years. These areas were chosen for the following reasons:

1. They offer attractive sites capable of supporting residential or private recreation use.
2. They have some present access, or areas where access could be developed with relative ease in the future.

3. Most of the land is state-owned; in some areas that are highly desirable for settlement, the land is state-selected.

4. Conflicts with fish and wildlife habitat, forest management, public recreation, mining, and other public uses are less than in other parts of the region that are capable of supporting settlement. However, because so much of the land suitable for settlement also is valuable for other uses, conflicts with other land uses inevitably exist on some of these areas.

5. There is likely to be public interest in disposal of the unit.

The disposal areas in the Kuskokwim Plan cover a total of approximately 372,000 acres, or 2.3 percent of the state-owned and selected lands in the region. Of this total, a net area of about 33,855 acres will be offered for private ownership. The project areas include approximately 55,700 acres of high suitability land, 68,000 acres with moderate suitability, and 55,100 acres rated low suitability.

There are disposal sites throughout the region, but the greatest number of sites are concentrated in the McGrath area and along the Kuskokwim River between McGrath and Stony River. These sites are designed to respond to interest in land sales from residents of the McGrath area, to provide sites for community expansion in and adjacent to this community, and to provide private recreation sites along the main river and the Sterling Landing Road for both local residents and other Alaskans. Two disposals are located near the communities of Aniak and Sleetmute. These are designed to make additional private land available near these communities if other landowners do not provide opportunities for private use or acquisition of land in the future. In response to requests for settlement lands near Red Devil, a new state selection is proposed along Fuller Creek with intent to offer land for sale if it is conveyed to state ownership. Several disposals are located in the Alaska Range to provide private recreation opportunities in accessible and very scenic areas. Offerings near Boundary Lakes, and along the North Fork, and Snohomish Hills areas provide sites

for private recreation or residential use in more remote areas.

In addition, five areas totaling 107,900 acres, are given "Resource Management" as the primary designation. Of this total, approximately 12,150 acres are suitable for settlement. Resource management areas have high value for both settlement and other surface uses. Because of potential conflicts between current uses and sale of land for private ownership, these areas will not be included in the lists of lands available for disposal nor designated with settlement a primary use.

However, they have some of the highest potential for settlement of any state land in the planning area. They will be kept in public ownership in the near term; when the plan is updated -- approximately every five years -- they will be reevaluated to determine whether they should continue to be retained in the public ownership, or offered for sale.

The areas designated for land offerings or resource management in the Kuskokwim Area are listed in Table 2.5.

Table 2.5. Gross and Net Acreage of Kuskokwim Area Land Disposals and Resource Management Areas.

<u>Name</u>	<u>Subunit Name</u>	<u>Gross Acreage</u>	<u>Net Acreage</u>	<u>Ownership</u>
North Fork	North Fork 1a	39,000 ac.	800 ac.	State
Appel II	Kuskokwim River 5b	16,300 ac.	3,000 ac.	NS/SS
Selatna	Kuskokwim River 5f	33,300 ac.	5,000 ac.	St.; NS/SS
McGrath Townsite	Kuskokwim River 5c	55 ac.	55 ac.	State
Vinasale	Kuskokwim River 5e	27,500 ac.	5,500 ac.	NS/SS
Nunsatuk North	Kuskokwim River 5g	23,000 ac.	4,600 ac.	SS; NS/SS
Dillinger River	North Alaska Range 13e	46,000 ac.	4,600 ac.	State
Big River Reoffer	North Alaska Range 13b	104,800 ac.	1,200+ac.	State
Big River South	North Alaska Range 13c	9,000 ac.	1,400 ac.	State
Mt. Rich Addn.	North Alaska Range 13d	14,000 ac.	2,100 ac.	State
Boundary Lakes	Holitna River 15f	15,400 ac.	1,400 ac.	State
Sleetmute North	Holitna River 15e	16,000 ac.	2,200 ac.	SS/NS; SS
Fuller Creek	Holokuk-Oskawalik R. 16c	18,600 ac.	600 ac.	Prop.Selec.
Aniak-Doestock	Aniak River 17d	<u>2,000 ac.</u>	<u>1,400 ac.</u>	State
TOTAL		371,955 ac.	33,855+ ac.	

Resource Management Areas

Candle	Kuskokwim River 5d	10,900 ac.	2,400 ac.	SS
Nunsatuk	Kuskokwim River 5h	6,200 ac.	750 ac.	State
Dishna	Dishna-Iditarod 8a	30,700 ac.	3,100 ac.	State
Iditarod	Dishna-Iditarod 8b	14,700 ac.	2,200 ac.	State
Gagaryah	S. Alaska Range 12b	<u>45,400 ac.</u>	<u>3,700 ac.</u>	State
TOTAL		107,900 ac.	12,150 ac.	

Settlement Areas

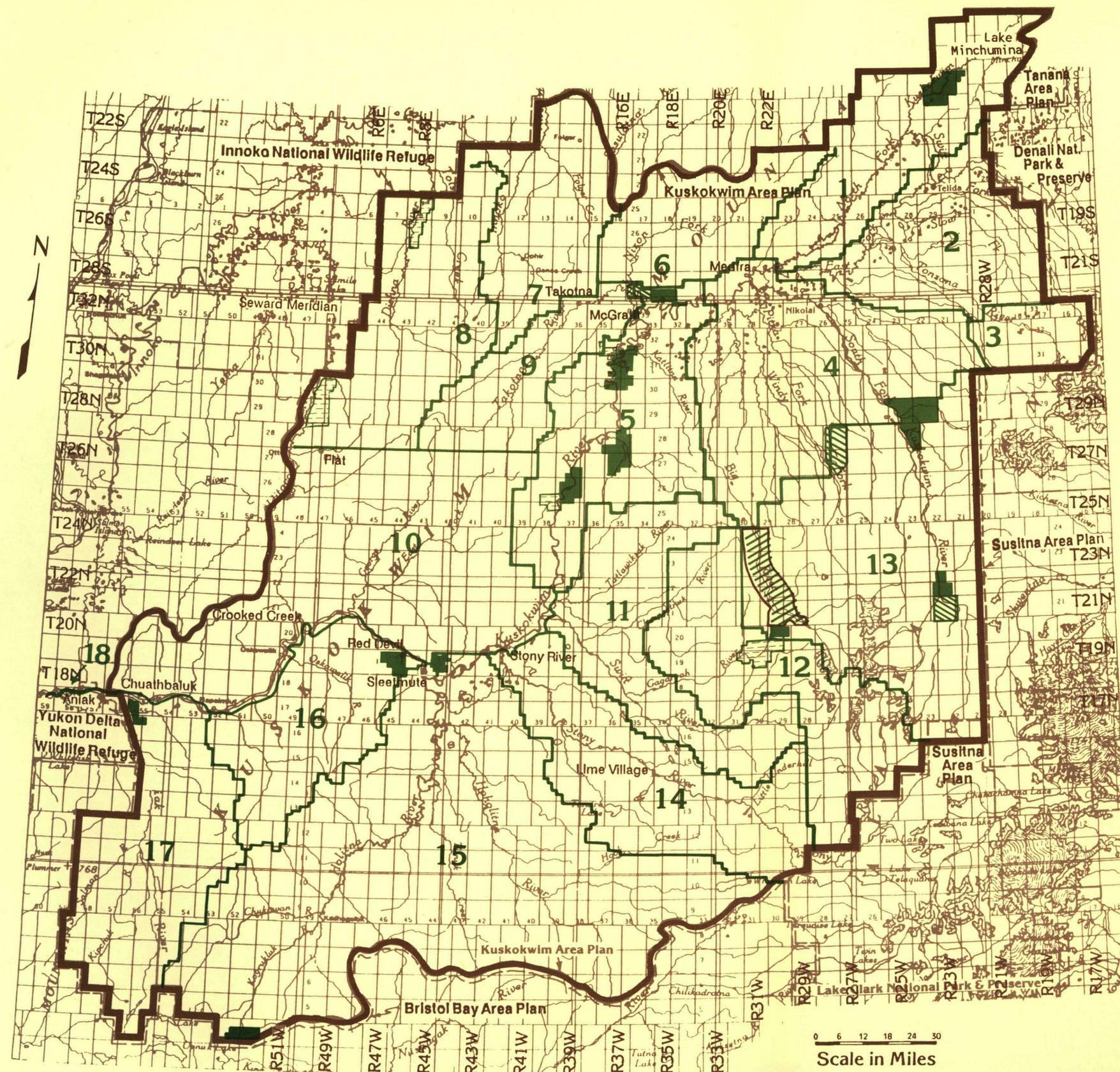
MAP 2.3

SETTLEMENT AREAS

- 
Future State Land Offerings
 Actual acreage planned for sale varies from 5 - 30 percent of the area shown.
- 
Past State land Offerings
 Additional land available. In this area a portion of the developable land is available for additional settlement.
- 
Past State Land Offering
 No additional disposal. In these areas most lands suitable for development has already been sold.
- 
Resource Management Areas
 These areas will be kept in public ownership in the near term. When the plan is updated they will be reevaluated to determine whether they should be kept in public ownership or offered for sale.

— Management Unit Boundary

Subsurface Resources. Land scheduled for homesteading and subdivision sale will be closed to mining and mineral location at the end of the first year of the Land Availability Determination (LADS) process (that is, approximately 2 years before the anticipated land sale). Those portions of the area with few or no homesteads after staking may be reopened to mineral entry and location.



STREAM CORRIDORS AND INSTREAM FLOW

Goals

Recreation. Provide opportunities for a variety of recreational activities within publicly owned stream corridors, including both wilderness and developed recreational activities.

Habitat. Protect riparian fish and wildlife habitats and harvest.

Private Ownership of Land. Provide opportunities for private ownership of land near streams.

Water Quality. Protect water quality to support domestic uses, fish and wildlife production, and recreational activities.

Forest Products. Where consistent with the management objectives of a stream corridor, provide for the harvest of timber from riparian forests.

Management Guidelines for Stream Corridors

A. Priority of Public Uses in Stream Corridors. As a general rule, DNR will set a higher priority on protecting public use values in stream corridors than providing opportunities for private ownership of land. However, DNR recognizes the strong demand for property along streams and will provide land for private purchase in some stream corridors. Before lands in a stream corridor are disposed of, DNR in consultation with other affected agencies and the public, will assess existing and projected public use needs associated with the stream corridor. Disposals near streams with important recreation value will be designed to protect access to, across, and along the stream for fishing, hiking, camping, and other recreational activities.

B. Retention of Publicly Owned Buffers as a Management Tool in Stream Corridors.

1. When the management intent for land adjacent to a stream is to permit uses such as public roads, fishing, picnicking, hunting, timber harvest, building fires, camping, or other similar active uses, public ownership of stream buffers should be used rather than easements on private property.

2. In state subdivisions or agricultural sales, when it has been determined that stream buffers should be kept in public ownership (see B-1 above), the buffers will either be retained in state ownership or dedicated to a local government. If streams in subdivisions or agricultural sales have recreation, public use, or habitat values of regional or statewide importance, buffers should be retained in state ownership.

3. Publicly owned buffers adjacent to a stream may be retained along the full length of the stream or on the segments determined to have high current or future public use and habitat values.

C. Retention of Access Easements as a Management Tool in Stream Corridors.

1. When the primary management intent is to protect the public's right to travel along or across a stream bank rather than to establish a public use area, an easement should be used to protect this right. The public rights reserved in an easement shall be explicitly defined and normally will include only the right of ingress and egress, inclusive of the right to pause briefly to observe wildlife, take photographs, or rest. On an individual basis, the state may reserve other rights (for example, the right to fish or picnic) as necessary to protect the public interest. The public use rights protected by previously established easements are not affected by this policy.

2. Easements along or across streams should establish the right to travel by foot, dogsled, horseback, and snowmobile (unless the use of snowmobiles is prohibited in a given area). On an individual basis, the right to travel by all-terrain vehicles and wheeled vehicles may be reserved, where doing so is in the public interest. Easements should be reserved for roads or railroads only if they are likely to be built in the foreseeable future.

3. Easements and publicly owned buffers may be used in combination on a stream to provide opportunities for private ownership near the stream and still protect public use, access to public waters, or habitat values on other portions of the stream. Therefore, although easements should not be used where significant public use will be encouraged, they may be used on portions of a stream with important public recreation and habitat values when most portions of the stream are retained for public use.

D. Establishing Widths of Publicly Owned Buffers, Easements, and Setbacks Along Streams.

1. Widths of easements, setbacks, and publicly owned buffers along streams will vary according to the management intent for the stream and adjacent uplands. In addition, the buffer, easement, or setback width for any given stream may vary along the stream course depending on topography, vegetation, and land ownership. Establishing buffer, easement, or setback widths for particular streams will be based, at a minimum, on specific objectives: recreational activities to be accommodated, habitat protection and management, noise abatement, visual quality, water quality, prevention of river bank erosion (in which case the buffer widths should be increased to compensate), and land disposals.

2. Although buffer and easement widths may vary among streams, a basic level of consistency is needed to avoid confusion about the widths of public use and access areas along the state's many streams; also, fieldwork and site analysis to establish separate widths for each stream corridor would be prohibitively expensive. The following guidelines are intended to

establish a reasonable degree of consistency in buffer, easement, and setback widths used by the department when disposing of an interest in state land.

-When it is determined that a publicly owned buffer is appropriate, a standard minimum buffer width (for example a staking setback) of 100 feet should generally be established landward from the ordinary high water mark on each bank. This width may be reduced in individual cases when consistent with the management intent of the unit or when land adjacent to the stream is stable and development or use of it does not pose a risk to water quality or other values such as wildlife or recreation. In some cases stream buffers may need to be reduced to allow for an adequate publicly owned buffer or setback on a nearby, more valuable wetland or lake.

-As a general standard, publicly owned buffers of at least 1/4 mile landward from the ordinary high water mark on each bank should be retained on streams recommended for legislative designation. Exceptions to this policy may be made where land ownership, topography, or the nature of anticipated public uses in a proposed legislative designation warrant.

-When it is determined that a public access easement will be reserved along a stream, a minimum easement of 50 feet will be reserved landward from the ordinary high water mark on each bank.

E. Separation Between Waterbodies and Potential, Conflicting Uses

-Where feasible and prudent, there should be setbacks between commercial and industrial uses, transportation facilities and pipelines, and adjacent water bodies unless these uses are water dependent. The width of this setback may vary depending on the type and size of the

use, but will be adequate to maintain public access to riparian areas and protect water quality in accordance with water quality standards established by the Department of Environmental Conservation. For non-water-dependent uses allowed adjacent to designated anadromous fish waters, this setback, to the extent feasible and prudent, will be a minimum of 100 feet landward of the ordinary high water mark.

-Where it is not feasible and prudent to maintain a setback of non-water dependent uses adjacent to fish habitat, public water supplies, or recreational waters, other measures will be implemented to meet the intent of this guideline.

-Where land is sold near a stream, a minimum residential building setback of 100 feet will be established landward from the ordinary high water mark on each bank unless land adjacent to the stream is stable and development or use of it does not pose a risk to water quality or other values such as wildlife or recreation. In a few cases setbacks may need to be reduced to allow for an adequate buffer or setback on a nearby, more valuable lake or wetland. In some management units different minimum staking setbacks already have been established.

F. Uses Allowed in Easements, Setbacks and Publicly Owned Stream Buffers. Water-dependent structures, such as docks and boathouses, are allowed within easements, setbacks and publicly owned buffers. If a structure would block public access alternative access will be provided. Other uses such as commercial and industrial uses, transportation facilities, pipelines, or uses associated with residential areas may be allowed adjacent to water bodies if these uses are consistent with the management intent for the easement, setback or publicly owned buffer.

G. Alteration of the Hydrologic System. To the extent feasible, channelization, diver-

sion, or damming that will alter the natural hydrological conditions and have a significant adverse impact on important riverain habitat will be avoided.

H. Soil Erosion. Soil erosion will be minimized by restricting the removal of vegetation adjacent to streams and by stabilizing disturbed soil as soon as possible.

I. Structures in Fish Habitat. See Fish and Wildlife guideline C page 2-10.

J. Water Intake Structures. See Fish and Wildlife guideline D page 2-10.

Management Guidelines for Instream Flow

A. Stream Uses to Consider for Instream Flow Reservations. DNR has statutes that establish a process for considering instream flow reservation. Under DNR's statutes, reservation of instream flow is possible for four types of uses:

1. Protection of fish and wildlife habitat, migration, and propagation. Instream flow reservations to protect habitat may be made for streams that have significant anadromous or resident fish populations; flow into wetlands that support significant waterfowl, fur bearer or other wildlife populations; or provide the water supply needed for other habitat types that support significant wildlife populations.
2. Recreation and park uses.
3. Transportation uses.
4. Sanitary and water quality uses.

Other uses of water, such as hydropower which is a diversion of water, are covered by the Alaska water rights statutes and regulations.

B. Priorities. Consumptive use of water and potential conflicts with instream water use are not significant issues in the Kuskokwim area

at present. There are no streams where near-term development is likely to result in consumptive use of water that will adversely affect instream water uses. Three streams have been identified where development could result in increased demand for water consumption in the future. If development is authorized on these waterways, instream flow studies may be needed prior to development to determine whether water reservations are needed to protect instream uses. The identified streams are the Jones River (subunit 13e, North Alaska Range subregion), Gagaryah River (subunit 12b, South Alaska Range subregion), and Takotna River (subunits 9d & 9e, Takotna River subregion). Guidelines for instream flow studies on these streams are included in the individual management units.

C. Process for Determining Reservations.

The process for determining instream flow reservations should include the following steps for each stream or other waterbody.

1. Identify the management objectives.
2. Estimate the quantity of water seasonally available by direct measurement (hydrograph), predictive methods (regional hydrographic models), or other appropriate methods.
3. Determine the quantities of water already appropriated.

4. In consultation with appropriate agencies, use site-specific studies or other information to determine the instream flow requirements for the resources and uses to be protected. For habitat resources this will require cooperative work and consultation with the Department of Fish and Game to identify necessary conditions for staging, reproduction, spawning, over wintering, and migration of valuable fish and wildlife resources.

D. Other Guidelines Affecting Stream Corridors. Several other guidelines may affect stream corridors. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Materials
- Public access
- Public and commercial recreation resources
- Settlement
- Subsurface resources
- Trail management
- Transportation
- Wetlands management

SUBSURFACE RESOURCES

Goals

Mineral and Energy Supplies. Make metallic and nonmetallic minerals, coal, oil and gas, and geothermal resources available to contribute to national and state energy and mineral supplies and independence.

Economic Development. Contribute to Alaska's economy by making subsurface resources available for development, which will provide stable job opportunities and stimulate growth of secondary and other primary industries.

State Revenues. Establish a stable source of state revenues.

Environmental Quality and Cultural Values. When developing subsurface resources, protect the integrity of the environment and affected cultural resources to the extent feasible and prudent.

State Support for Mining. Aid in the development of infrastructure (such as ports, roads, or railroads) and continue to provide geologic mapping and technical support to the mining industry.

Mineral and Coal Development Guidelines

A. Mineral and Coal Exploration. State land in the Kuskokwim area may be leased or opened for coal prospecting permits if the department determines it is in the best interest of the state as required by AS 38.05.035. Before a permit is issued, DNR will determine if the surface values are significant enough to warrant restricting surface entry. Decisions on surface entry for coal adjacent to streams will be made in consultation with the affected agencies.

B. Open to Mineral Entry. All state lands that are open to mineral entry are multiple use

areas where mineral development will be accommodated and encouraged. Recognized exploration methods for locatable minerals will be allowed on all state lands unless specifically closed to mining and will be subject to the conditions of a land use permit. DNR may determine that some traditional forms of access will not be allowed in specific areas to avoid resource damage.

Where an area is open to mineral entry, a miner has the right to stake a claim regardless of the surface use designation or classification. Any adverse effects of mining on surface resources or uses will be managed through compliance with state laws and regulations and the management intent and guidelines of this plan.

C. Best Management Practices. ADF&G uses their Best Management Practices for Placer Mining in their review and recommendations for mining plans of operations. Any recommended modifications or rejections of the plans of operations will consider the Best Management Practices. (This document is available from ADF&G or DNR for reference to any miner interested for use in designing the mining plan of operations).

D. Reclamation of Mineral Land. Land use permits and approved plans of operations for mineral developments will specify the measures required of the operator to reclaim the land to a useful condition. In the absence of other post-mining land uses identified by this plan, such as settlement, developed recreation, or material sites, the primary purpose of reclamation will be to provide useful fish and wildlife habitat.

The degree of reclamation stipulated shall be determined on an individual basis and reasonably correlate with the habitat suitability categories A-1 to C shown on the maps in Appendix F. Reclamation will among other things be based upon an evaluation of the fish and wildlife resources and habitats

characteristic of the mining area and the mining methods and other appropriate site features that will facilitate reclamation. Reclamation techniques will conform to appropriate Best Management Practices (BMPs) and will occur concurrently with mining, though not necessarily annually. The costs of reclamation relative to the benefits to be gained will be considered when implementing this policy.

General stipulations for A class areas, include: segregation and salvage of the combined soil, vegetation and fine overburden, to the extent feasible and prudent regrading of tailings to eliminate oversteepened slopes; general preservation of water areas produced by mining; and replacement of soil, vegetation, and fine overburden over areas of regraded tailings to promote natural revegetation. Site drainage and stream rehabilitation stipulations will be required as necessary to stabilize water courses and minimize erosion and non-point source pollution. Stipulations will correlate with the anticipated size and scope of the mining operation. Restoration of fish habitat will be done in conformance with ADF&G Fish Habitat permits.

General stipulations for B class areas include regrading of tailings to eliminate oversteepened slopes; replacement of soils (subject to preexisting soil conditions), sustaining revegetation (subject to preexisting vegetation conditions), and revegetation as necessary to stabilize soils and eliminate erosion.

General stipulations for C areas include partial regrading to eliminate oversteeped slopes subject to erosion and if soil types permit, redistribution of fine soil on the regraded areas to promote natural revegetation.

E. Access for Mineral and Coal Development. Existing roads and trails should be used to provide access to mine sites wherever feasible. Regulations for miscellaneous land use permits require that access will be managed so that damage is minimal. See guidelines for Trail Management (page 2-60) and Transportation (page 2-63). The fact that an area is closed to new mineral entry will not be cause for denying access across state lands.

F. Control of Visual Impacts. Stipulations will be developed as necessary through the land use permit or leasing process to minimize the adverse visual impacts of mining especially in settled areas and recreation areas. In such areas, stipulations should consider, at a minimum, the following items: control of solid wastes; removal of vegetation; siting of mining structures, tailings and overburden; roads; and rehabilitation of mining sites.

G. Approval of Plans of Operation. Using procedures established under existing leasing laws and regulations, DNR reviews plans of operation required for locatable mineral leases and will consult with and carefully consider recommendations of ADF&G and the DEC. DNR will approve plans of operation if they adequately address the guidelines of the area plan and applicable laws and regulations and if it can be demonstrated that instream mining will not significantly affect salmon productivity. Violation of the plan of operations is cause for revocation of the approved plan of operation or termination of the lease.

H. When to Apply for a Mineral Lease. An application for a mining lease will be required when the owner of the leasehold location is prepared to produce minerals for sale in commercial quantities or to process more than 500 cubic yards of material during bulk sampling or production.

I. Land Sales in Areas with Subsurface Resources. See Settlement guideline C-5, page 2-36.

Guidelines for the Application of Locatable Mineral Closures and the Locatable Mineral Leasing Program

A. Background

Locatable mineral closures are the most restrictive management tool that can be used by DNR to resolve subsurface and other resource conflicts. AS 38.05.185(a) requires that before an area of state land can be closed to mining or mineral location, the commis-

sioner must make a written finding that mining would be incompatible with significant surface uses.

Requiring that locatable mineral developments occur under a lease is a more flexible management tool than mineral closure. Therefore, mineral leasing is preferred over mineral closure as a management option to resolve conflicts between other significant resources and mining and mineral location. AS 38.05.185(a) requires that for mining to be allowed only under written leases issued under AS 38.05.205 the commissioner must determine that either there are potential use conflicts on state land or the land was mineral in character at the time of state selection. Under 11 AAC 86.135(b), if a surface disposal area is not closed entirely to mineral entry, it will be made available only by leasehold location.

After consultation with ADF&G and DEC, and concurrent with the designation of an area being open to locatable mineral entry under lease, DNR will identify potential conflicts between mining and other resources that need protection. DNR will also state the general nature of stipulations to be used in leases to protect those other resources.

B. Areas Closed to Mineral Entry

Using the criteria established in AS 38.05.185(a), DNR generally finds mining to be incompatible with the types of surface uses listed below and closes the area to mining or mineral location at the specified times in the decision making process. However, each situation will be evaluated separately when mineral orders are prepared and a determination made that the requirements of AS 38.05.185(a) have been met.

1. Lands Offered for Sale or Transfer to Other Owners.

a. Areas Scheduled for Disposal. Land scheduled for commercial, industrial, agricultural, or subdivision sale will be closed to mining and mineral location at the end of the first year of the Land

Availability Determination System (LADS) process (that is, approximately 2 years before the anticipated land sale).

b. Homesteading Areas. Lands available for homesteading (including agriculture homesteading) will be closed to mining and mineral location at the end of the first year of the LADS process (that is, approximately 2 years before the anticipated land sale). These areas will remain closed until the allowed number of homestead entries has occurred. At that time, those portions of the project area with few or no homesteads will be reopened for mineral entry and location unless it is determined that the settlement pattern that has resulted creates significant, irreconcilable land use conflicts.

c. Land Proposed for Exchange. Lands proposed for exchange or trade will be closed to mineral entry and location at the time a preliminary agreement to exchange the land is reached.

d. Land to be Transferred to Another Public Agency. Lands reserved for transfer to another public agency for development of a public facility or reserved as a future townsite will be closed to mineral entry and location at the time the area is classified "Reserved Use" or an Inter-agency Land Management Agreement is signed.

2. Retained Lands.

Lands and waters that support production or maintenance of fish or wildlife species that have significant economic, recreational, scientific, educational, or cultural values or which have been given special protection through state or federal legislation or international treaty. In the Kuskokwim Area, lands and waters in this category include the portions of streams used for salmon spawning or rearing, or sheefish spawning identified in Appendix H (see also Map 2.4 in this section).

C. Leasehold Location Areas

Using the criteria established in AS 38.05.185, DNR has determined that on certain lands in the Kuskokwim Area, mining will be allowed only under leases issued under AS 38.05.205. The areas subject to leasehold location requirements are uplands within 200 feet of the ordinary high water mark on either side of the portions of streams used for salmon spawning or king salmon rearing in Appendix H (see also Map 2.4 in this section).

These leasehold location areas will be subject to the following guidelines.

1. Instream mining will not take place unless it can be demonstrated that mining will not significantly affect salmon productivity.
2. An application for a mining lease will be required when the owner of the leasehold location is prepared to produce minerals for sale in commercial quantities or to process more than 500 cubic yards of material during bulk sampling or production.
3. At the time an application for a lease is received, DNR will distribute the application to ADF&G and DEC for comment. Based on comments, appropriate stipulations to protect salmon productivity will be developed and attached to the lease.

D. Other Resource Values That May be in Conflict with Coal or Mineral Development

In some circumstances, the commissioner may find that some resource values may require locatable mineral leasing, closure, or a prohibition of coal leasing and prospecting to protect their continued productivity and availability. In other circumstances, care during mineral development is all that may be necessary to protect these resources. It is impossible to predict the degree of conflict that could occur between mining and any other resource value in all circumstances. Therefore, in the future updates, the following categories of resource values are evaluated to determine if locatable mineral leasing, prohibition of coal leasing or prospecting, or

another management option is needed to protect the continued productivity and availability of the resource in conflict. The sites within the planning area that are judged at this time to need these types of protection are identified in sections B. and C. above.

1. Retained Lands with Significant Commercial, Industrial, or Public Use Values

-Lands with significant coal, oil and gas, timber or other commercial potential.

-Lands recognized as future transportation corridors where access for pipelines, road, railroads, or other surface transportation infrastructure could be blocked or impeded by mining claims. (After the alignment is established, areas will be reopened if they are surplus land.)

-Lands and waters that provide unique or unusual opportunities for human use and enjoyment, such as fishing, hunting, trapping, photography, and fish and wildlife viewing.

-Lands and waters that provide significant recreation opportunities, such as clear water rivers that are now or are expected to be important for recreation, key public access sites, and recreation facilities.

-Lands and waters that are the watershed of a community water supply.

-Sand and gravel pits, stone quarries, or other significant known material sites where development might be impeded if mineral claims were staked.

2. Retained Lands with Significant Fish or Wildlife Resources

-Lands and waters that support protected species of plants, fish or wildlife (bald and golden eagles), threatened species (arctic peregrine falcon), or endangered species (American peregrine falcon).

-Lands and waters that support production or maintenance of fish or wildlife species that have significant economic, recreational, scientific, educational, or cultural values or which have been given special protection through state or federal legislation or international treaty.

-State game refuges, critical habitat areas, and sanctuaries. In decision Memorandum 44, signed by the commissioner in January 1984, DNR set the statewide policy that in legislatively established Critical Habitat Areas and Wildlife Refuges mining will occur under lease,

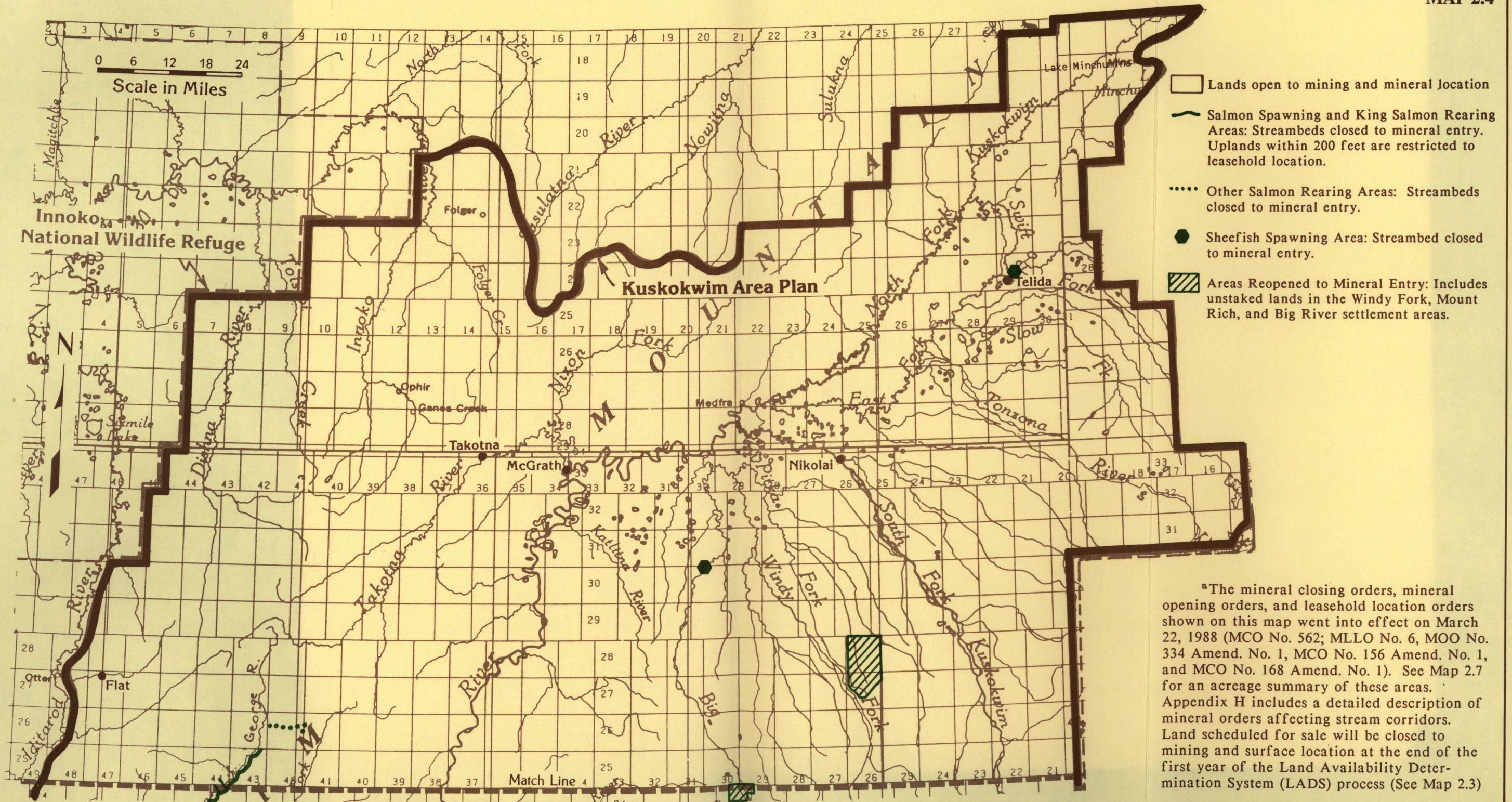
though the policy has not been implemented yet. Also, individual legislatively designated areas may be recommended for mineral closure, but such a closure would be decided on a case by case basis using the criteria found in AS 38.05.185(a).

-Other lands and waters not included above that are known to support unique or unusually large assemblages of fish or wildlife.

SUBSURFACE DESIGNATIONS

MAP 2.4

MAP 2.4 SUBSURFACE DESIGNATIONS -- LEASEHOLD LOCATION AREAS, AREAS CLOSED TO NEW MINERAL ENTRY, AND AREAS REOPENED TO MINERAL ENTRY^a



^aThe mineral closing orders, mineral opening orders, and leasehold location orders shown on this map went into effect on March 22, 1988 (MCO No. 562; MLLO No. 6, MOO No. 334 Amend. No. 1, MCO No. 156 Amend. No. 1, and MCO No. 168 Amend. No. 1). See Map 2.7 for an acreage summary of these areas. Appendix H includes a detailed description of mineral orders affecting stream corridors. Land scheduled for sale will be closed to mining and surface location at the end of the first year of the Land Availability Determination System (LADS) process (See Map 2.3)

SUBSURFACE DESIGNATIONS

MAP 2.4

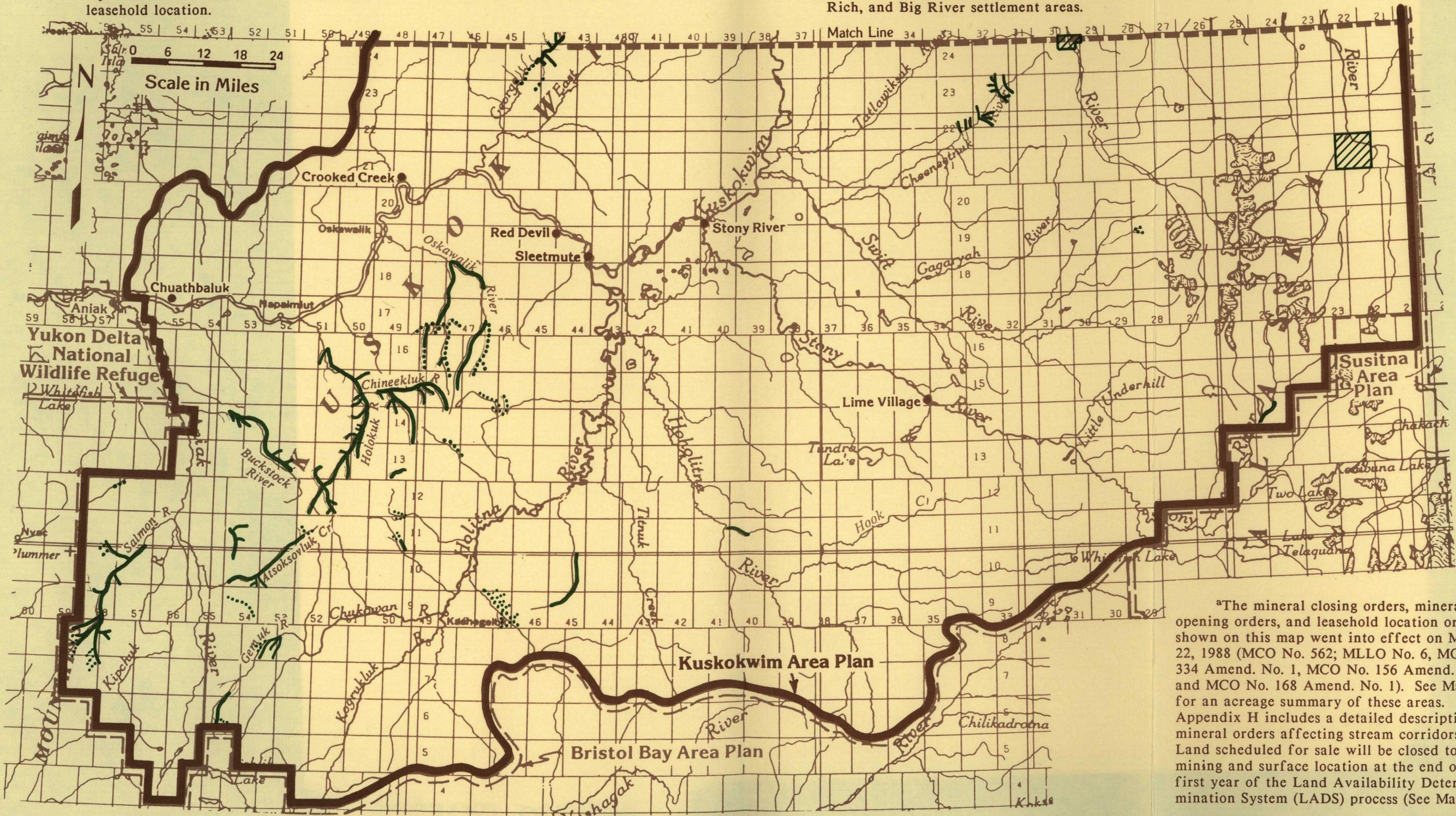
MAP 2.4 SUBSURFACE DESIGNATIONS -- LEASEHOLD LOCATION AREAS, AREAS CLOSED TO NEW MINERAL ENTRY, AND AREAS REOPENED TO MINERAL ENTRY^a

 Lands open to mining and mineral location

Salmon Spawning and King Salmon Rearing Areas: Streambeds closed to mineral entry. Uplands within 200 feet are restricted to leasehold location.

 Other Salmon Rearing Areas: Streambeds closed to mineral entry.

 Areas Reopened to Mineral Entry: Includes unstaked lands in the Windy Fork, Mount Rich, and Big River settlement areas.



^aThe mineral closing orders, mineral opening orders, and leasehold location orders shown on this map went into effect on March 22, 1988 (MCO No. 562; MLLO No. 6, MOO No. 334 Amend. No. 1, MCO No. 156 Amend. No. 1, and MCO No. 168 Amend. No. 1). See Map 2.7 for an acreage summary of these areas. Appendix H includes a detailed description of mineral orders affecting stream corridors. Land scheduled for sale will be closed to mining and surface location at the end of the first year of the Land Availability Determination System (LADS) process (See Map 2.3)

Oil and Gas Guidelines

The Kuskokwim area's potential for oil and gas is poorly understood. Based on preliminary exploratory work, the Holitna and Minchumina sedimentary basins are thought to have low potential for oil and gas. In the past, lease sales have been proposed for both basins, but neither is on the current (January 1988) DNR 5-year leasing program. If and when any areas in the Kuskokwim area are added to the 5-year schedule, measures will be designed to protect current uses of the land, such as traplines, and fish and wildlife resources. DNR will consider methods to protect particularly important areas such as river corridors. To assure that the public is informed and has the opportunity to comment, the Division of Oil and Gas, through its public outreach program, will request comments several times in the sale planning process, and will conduct public meetings or hold teleconferences in the area. In recognition of the fact that the Kuskokwim area has many dispersed communities that do not have easy access to information on oil and gas leasing issues, DNR also encourages local groups interested in these issues to form an organization for the purpose of commenting and exchanging information on any proposed oil and gas lease sales.

A. Exploration Techniques that Minimize Clearing. Techniques that minimize the clearing of trees will be used wherever feasible in order to avoid alteration of valuable fish and wildlife habitats, avoid increasing access to sensitive areas, and avoid increasing the chance of bark beetle infestation. Clearing of forested areas through bulldozing, or other means, for the sole purpose of seismic exploration will not be approved by the Director of the Division of Oil and Gas unless there is no feasible alternative and only after consultation with the Division of Forestry and the Department of Fish and Game.

To prevent bark beetle populations from building up beneath the bark of felled trees and infesting nearby living trees, white spruce that is felled must be hydro-axed, burned, buried or similarly disposed of, as required by the Division of Forestry.

B. Removal of Abandoned Facilities. Upon abandonment of sites used under lease or permit, roads, buildings, and other facilities, will be removed and the site rehabilitated, unless it is shown to the satisfaction of the Director, Division of Oil and Gas, after consultation with the Department of Fish and Game, that such removal and restoration is not in the state's best interest.

C. Pipeline Design. Pipelines should be buried. Where conditions prevent burial, pipelines will be sited and elevated, ramped, or otherwise designed to allow free passage of big game animals.

D. Worker Education. Many people working on oil and gas exploration and development will not be aware of the environmental and social considerations essential to proper development of the sale area. Therefore, lessees shall include in any exploration and/or development plans a proposed environmental training program for all personnel involved in exploration or development activities (including personnel of the lessees' contractors or subcontractors) for review and approval by the Director of the Division of Oil and Gas.

The program should be designed to inform each person working on the project of specific types of environmental, social, and cultural concerns that relate to the individual's job. The program shall also be designed to increase sensitivity and understanding of personnel to community values, customs, and lifestyles in areas in which these personnel will be operating. When ADF&G reviews the oil and gas worker education program it will give operators information the operators can use to make their employees aware of harvest regulations.

The program should be formulated and implemented by qualified instructors experienced in each pertinent field of study, and should employ effective methods to ensure personnel understand and use techniques necessary to preserve archaeological, geological, and biological resources. The program should be developed in consultation with local people (such as fish and game advisory committees)

who have the expertise and willingness to participate.

Lessees shall submit for review and approval a continuing technical environmental briefing program for supervisory and managerial personnel of the lessee and its agents, contractors, and subcontractors.

Other Guidelines Affecting Subsurface Resources

Several other guidelines may affect subsurface resources. See the following sections of this chapter:

- Fish and wildlife habitat
- Public access
- Settlement
- Stream corridors and instream flow
- Transportation
- Trail management
- Wetlands management

Land Allocation Summary

Background. This plan determines whether lands are open or closed to mineral entry and where minerals are designated. Primary surface use designations for primary use minerals are made in certain cases where there is currently intensive subsurface resource exploration or development of statewide significance or where major subsurface development is likely to occur within the 20 year planning period. Primary use designations are established to recognize that mineral development is one of the major surface and subsurface activities in these areas.

Resource Potential and Use. The Minerals Element published by DNR in October, 1986 describes the mineral resources, their uses, and management in the planning area. The following background information summarizes some of the key information in this report. The Kuskokwim Area Plan includes nine mining districts that have produced 2.5 million ounces of gold, several hundred

thousand ounces of by-product silver, over 40,000 flasks of mercury, and minor amounts of tungsten, lead, zinc, copper, and bismuth. Between 1898 and 1985, gold worth approximately \$826 million (1985 prices) was produced in the area and \$26 million in silver, mercury, copper, lead, and zinc.

Extraction of locatable minerals is still an important locally operated industry in the upper Kuskokwim region. Between 1981 and 1985 alone, approximately \$15 million was spent on mineral exploration and development in the area. Thirty-three gold and mercury mines employing at least 125 people were active in 1985. Seventy-one percent of all mine employees in 1985 were residents of the Kuskokwim Area. Labor costs accounted for 35 percent of the total expenses for the average placer mine. Placer mining is the largest private sector employer in the region.

Today placer gold mining, mineral exploration, and minor mercury (hardrock) mining are the principle mining industry activities. The mineral deposits currently being evaluated by the mining industry can be grouped into five major categories: 1) gold-silver-copper-tin deposits related to volcanic and granitic rocks of the Kuskokwim Mountain province; 2) lead-zinc-silver-cobalt-skarn deposits in the southern Alaska Range; 3) mercury deposits in both areas; and 4) lead-zinc deposits in limestone north of Medfra.

Based on analysis conducted by the Minerals Section of the Alaska Division of Geological and Geophysical Surveys, of the 1,089 township that were analyzed, about 2.4 percent or 28 townships have extremely high mineral potential; 5.3 percent or 57 townships have high mineral potential; 31 percent or 350 townships have fair mineral potential; 43 percent or 460 townships have relatively low mineral potential region wide.

Management. DNR has accommodated and encouraged mineral prospecting, location, and development throughout most of the planning area. When subsurface resources are developed, the plan includes guidelines that protect the integrity of the environment

and affected cultures. Currently exploration and development of locatable minerals is allowed on all state lands within the planning area except in a few small areas specifically closed to mineral entry.

The Department's policy for mineral entry for each subunit is shown by the land use designation summary charts in Chapter 3 which indicate whether the subunit is open to mineral entry or surface location, requires that locatable mineral development occur under lease, or are closed to mineral entry (Map 2.4). Under this plan, approximately 15.5 million acres (97 percent) of the state land in the planning area remain open to mineral entry. These include lands in the following mining districts: McGrath, Innoko-Tolstoi, Innoko-Ophir, Innoko-Candle, Iditarod-Moore, Iditarod-Flat, Iditarod-George, Iditarod-Donlin, and Aniak. Virtually all land with high to very high mineral potential will continue to be open to new mineral entry. Approximately 46,000 acres of unstaked lands within in the past Windy Fork, Big River, and

Mount Rich disposals will be reopened to mineral entry (see Map 2.4).

Mining is primary use in seven subunits in the planning area which encompasses approximately 936,000 acres of state land near Medfra, Nixon Fork River, Ganes Creek, Madison Creek, Moore Creek, Ophir, Folger, Flat, Beaver Mountains., Taylor Mountains, Fortyseven Creek, and the George River (see Table 2.6). These areas were designated because of their high mineral values and because these are actively mined or are likely to have subsurface resource development in the near term. However, mineral potential ratings were based on whole townships. Portions of the designated lands have low or moderate mineral values. Lands in the Horn Mountains, Upper George River, and Flat areas proposed for state selection also have moderate to high mineral potential. If conveyed to state ownership, they will be open to mineral entry and minerals will be designated as primary use.

Table 2.6 Minerals Designations

<u>Subunit</u>	<u>Approximate Area</u>
Nixon Fork subunit 6b	23,000 acres
Innoko River subunit 7a	169,000 acres
Dishna - Iditarod subunit 8c & 8f	290,000 acres
Takotna River subunit 9c	46,000 acres
George River subunit 10b	368,000 acres
Holitna River subunit 15g	40,000 acres
TOTAL	936,000 acres

Approximately 18,000 acres or .11 percent of state land will be available for locatable mineral development under a lease. These are uplands within 200 feet of the ordinary high water mark on both sides of 356 miles of streams which contain king salmon rearing habitat and moderate to very high mineral potential.

Table 2.7 is a summary of the areas open to mineral location, reopen for mineral location, open to leasehold location, or closed to mineral location. Uplands which are private, Native, or federally owned are not affected.

Table 2.7 Lands Currently Open to Mineral Location, Reopened to Mineral Location, Open to Leasehold Location, or Closed to Mineral Location.

<u>Mineral Order</u>	<u>Acreage</u>	<u>Miles of Streams</u>	<u>Percent of State Land in Planning Area</u>
Lands Opened to Mineral Location	15,559,000 ac.	----	97.2 percent
Lands Reopened to Mineral Entry after Staking for Settlement	46,380 ac. ^a	----	0.3 percent
Uplands Open to Mineral Entry Under Lease Because of Salmon Spawning and King Salmon Rearing	17,568 ac.	356	<0.1 percent
Streambeds Closed to New Mineral Entry Because of Salmon Spawning and Rearing or Sheefish Spawning	3,917 ac.	499	0.1 percent
Lands Closed to Mineral Entry Prior to Land Sales	372,000 ac.		2.3 percent

^a Note: A small amount of state land adjacent to unsurveyed private parcels within past disposal areas remains closed to new mineral entry. These lands will be reopened when surveys are completed.

Approximately 372,000 acres (2.3 percent) of state lands proposed for disposal will be closed to new mineral entry prior to offering the areas for sale (Table 1.2 and Map 2.3). In general, subunits where settlement is the primary use have low mineral potential with the exception of subunit 16c. Land offered in this subunit will be configured to minimize conflicts with mining claims and areas with high mineral potential. Similarly, remote cabin areas are configured to avoid areas with large numbers of mining claims.

Another 3,900 acres along 500 miles of stream bottoms (.02 percent of state lands in planning area) will be closed to new mineral entry to protect salmon and sheefish spawning or king salmon rearing streams where mineral potential is moderate to very high (see Map 2.4). Existing claims in these areas are not affected.

Mineral closures and other policies resulting from this plan do not alter or replace existing regulations, nor do they affect existing mineral closures (with the exception of the three settlement areas that will be reopened to mineral entry). The areas that are closed by the plan apply only to new exploration and development activities. Any existing leases, prospecting permits, or mining claims will not be affected.

Lands Available for Oil and Gas Exploration and Leasing. Both the Holitna and the Minchumina sedimentary basins are located within the planning area. All state lands are available for oil and gas exploration and leasing. Lands in the larger South Fork drainage proposed for state selection also have long-term potential for gas development.

Lands Available for Exploration and Development of Other Leasable Minerals. (Coal, sedimentary uranium, potassium, sodium, oil shale, geothermal). Approximately 470,000 acres of state-owned or state-selected land in the planning area show high or moderate coal potential. All state lands will remain available to coal leasing and prospecting. Any leases for coal or other leasable minerals will be dealt with case by case consistent with the management intent for the unit, plan guidelines, and existing laws and regulations.

TRAIL MANAGEMENT

Goals

Public Use Opportunities. Ensure continued opportunities for public use of important recreation, public access, and historic trails of regional and statewide significance.

Local Trails. Assist in establishing local trail systems that provide access to community recreation areas.

Trail Corridors. Protect or establish trail corridors to meet projected future use requirements and protect current use.

Management Guidelines

A. Special Trails. These are trails that require unusual widths or management practices because of historical significance or unique values. Management guidelines should be developed for such trails on an individual basis. As a general policy special trails will be protected by publicly owned buffers that will generally be wider than the 100-foot minimum trail buffer width established for trails of regional or statewide significance in guideline C below.

1. The Iditarod Race Trail. Where the Iditarod race trail passes through an area that is to be offered for settlement or other development, the trail will be located (see maps in Appendix C) and protected by a public ownership corridor 200 feet wide (100 feet on either side of the centerline). The corridor width may be expanded to minimize potential land use conflicts or the impacts of the trail on adjacent land uses. Rerouting of the trail corridor may be permitted in specific instances with the consultation of the Alaska Division of Parks and Outdoor Recreation, the Division of Forestry and the Iditarod Trail Committee or similar body in place at the time a decision is made. A wider corridor may be desirable in certain instances to incorporate

cultural and historic sites or to buffer adjacent land uses that would adversely affect the trail.

No permanent structures or equipment should be placed in the trail corridor if they could adversely affect the trail experience or access along the trail. Where necessary, trail crossings may be permitted to allow access to lands on both sides of the trail. Crossings should be limited to a few discrete areas rather than scattered crossings in many places along the trail. In areas where the trail has been used previously for transporting heavy equipment to mining claims, primarily on the trail sections west of McGrath, this use will not be restricted unless there is documented damage to the trail and there is a feasible and prudent alternative access to mining claims.

2. The Iditarod National Historic Trail System (INHTS). There are a number of trails and historic sites within the northern half of the planning area that have been identified as part of the INHTS (see maps in Appendix C). Some of these trails and sites are well defined while others are not. Minimum trail buffers will generally be wider than the 100-foot minimum (50 feet each side of centerline) established for trails of regional or statewide significance. Prior to areas being offered for disposal or remote cabin permits in areas which include the INHTS, the Iditarod National Historic Trail Advisory Council (or equivalent organization in place at the time a decision is made) and/or the BLM trail coordinator and the State Office of History and Archaeology will be consulted. For permits and leases along the INHTS, only the State Office of History and Archaeology will be consulted.

The State of Alaska and BLM have signed a memorandum of agreement covering management of the INHTS. The trail will be managed in a manner consistent with this agreement.

B. Neighborhood and Community Trails.

Local trails that are not of regional or statewide significance will be identified and protected through management plans or disposal design. Guidelines recommended in DNR's subdivision design manual should be used in areas offered for subdivision. Once identified, trails will be recorded on the state's Land Record System and reserved through issuance of a trail permit. The following criteria should be used to determine whether a local trail should be protected by easement or public ownership:

1. If the local trail serves as a neighborhood collector trail that connects to a public open space system or regional or statewide trail, it will be kept in public ownership.
2. If the trail will be used almost entirely by neighborhood residents for their own use, it should be kept in state ownership or dedicated to the local government.
3. If the objective is to provide local pedestrian access and does not have the characteristics of criteria 1 or 2 (above) an easement may be used. This would typically occur when the purpose is to establish access between two lots to improve pedestrian circulation within a subdivision where a greenbelt and neighborhood trail system does not provide adequate access or where it is impractical to establish such an integrated trail system.
4. In cases of land offerings other than subdivisions (for example, land opened to homesteading) a publicly owned buffer or an easement will be used to protect trails. If a trail has the characteristics described in criterion 1 or 2 (above), it will be retained in public ownership; if it has the characteristics described in criterion 3, an easement will be reserved.

C. Buffer Width for Trails of Regional or Statewide Significance. This category includes the majority of trails on state land that are identified in this plan. These trails are generally traveled by foot, dogsled, horse and sometimes vehicle access for a variety of purposes. Most standard trails have a history of

public use and can be expected to see increased use as the state's population increases.

Trails of regional or statewide significance on state land shall be protected by a publicly owned buffer that has a minimum width of 100 feet (50 feet each side of center line). This buffer should be sized to protect the quality of the experience of the user and to minimize negative effects such as noise or dust from adjacent land uses. Buffer widths may be increased to minimize land use and ownership conflicts, to protect the privacy of adjacent landowners, to separate motorized from non-motorized uses, to allow future siting of public facilities, to allow flexibility for rerouting, or to adopt a trail to specific public uses or aesthetic or environmental concerns. Buffer widths may vary along the length of a trail because of the above considerations. The width of a buffer on any portion of a trail should also be based on the management intent for adjacent public land as expressed through applicable land use plans. However, the minimum width of the buffer will be 100 feet. Trail buffers should be located and designed in consultation with affected divisions of DNR, the ADF&G and the Department of Transportation and Public Facilities (DOT/PF), affected private land owners, and local trail committees. Activity areas of 10 to 40 acres may be identified along trails for other uses such as camping or rest areas.

D. Land Use Adjacent to Trails. Land adjacent to trails, including land in trail buffers, generally will be managed to avoid trail damage, maintain trail use and retain the natural vegetation adjacent to the trail or within the buffer. Timber sales, materials sales, and permits and leases for activities that impact trail use or the natural vegetation adjacent to the trail will, to the extent feasible and prudent, be managed so as to not adversely affect trail use or the aesthetic character of the trail. This guideline does not preclude trail crossings or rerouting of trails as described below.

E. Trail Crossings. When it is necessary for powerlines, pipelines or roads to cross trail buffers, crossings should be at a 90° angle to

the buffer when feasible. Vegetative screening should be preserved at trail crossings.

F. Identification of Trails. Before public lands are leased or disposed of, trails that merit consideration for protection by one of the methods described in guidelines A through C (above) should be identified. The Division of Land and Water Management will be the lead agency for identification of trails and will consult with the other divisions of DNR, DOT/PF, ADF&G, affected private land owners, and local government when identifying trails. In addition, any agency, organization, or individual may identify public trails to be considered for protection.

G. Rerouting Trails. Rerouting of trails may be permitted to minimize land use conflicts or to facilitate use of a trail if alternate routes provide opportunities similar to the original. If trails are rerouted, provision should be made for construction of new trail segments if warranted by type of use. Rerouting trails should be done in consultation with affected divisions of DNR, DOT/PF, and ADF&G, private land owners, and local trail committees. Historic trails which follow well-established routes should not be rerouted unless necessary to maintain trail use.

H. Other Guidelines Affecting Trail Management. Several other guidelines may affect trail management. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Materials
- Public access
- Public and commercial recreation resources
- Settlement
- Stream corridors and instream flow
- Subsurface resources
- Transportation
- Wetlands management

TRANSPORTATION AND UTILITIES

Goals

These goals pertain to all forms of surface, air, and water transportation and all forms of utility or resource transportation corridors.

Support Plan Designations. Design a transportation system needed to implement this plan and integrate it with other area wide transportation needs.

Minimize Costs. Design a transportation system that has the lowest possible long-range costs, including construction, operations, and maintenance. Avoid unnecessary duplication of transportation facilities

Minimize Adverse Impacts. Design a transportation system with minimal adverse impact on the environment and aesthetic and cultural features.

Promote Efficiency. Design a transportation system that uses land and energy resources efficiently and encourages compact, efficient development patterns.

Ensure Public Safety. Design a transportation system with a high standard of public safety.

Management Guidelines

A. Identification of Potential Transportation Routes. With the exception of the proposed Innoko River transportation corridor, no major, new transportation routes are necessary to support the land use designations made in this plan. To the extent feasible and prudent, DNR will avoid actions incompatible with the eventual construction of this proposed road corridor until final decisions are made on the feasibility of these routes.

B. Access Plans for Land Offerings or Resource Development Projects. Before a land offering or the start of a resource

development project, DNR will work with DOT/PF to identify appropriate locations, if any are needed, for access and will also identify responsibilities for design, construction, and maintenance of any proposed transportation facilities. Access plans will be developed in consultation with affected local governments.

C. Joint Use and Consolidation of Surface Access. Joint use and consolidation of surface access routes and facilities will be encouraged wherever it is feasible and prudent to do so. Surface access also should be sited and designed to accommodate future development and avoid unnecessary duplication. The feasibility of using an existing route or facility should be evaluated before the use of a new route or facility is authorized.

D. Protection of Hydrologic Systems. Transportation facilities will, to the extent feasible and prudent, be located to avoid significant effects on the quality or quantity of adjacent surface water resources or detracting from recreational use of the waterway. The following guidelines apply:

1. Minimize Stream Crossings. Stream crossings should be minimized. When a stream must be crossed to construct a road, the crossing should be as close as possible to a 90° angle to the stream. Stream crossings should be made at stable sections of the stream channel.

2. Minimize Construction in Wetlands. Construction in wetlands, floodplains, and other poorly drained areas should be minimized and existing drainage patterns maintained. Culverts should be installed where necessary to enable free movement of fluids, mineral salts, and nutrients.

3. Designing Bridges and Culverts. Bridges and culverts should be large enough to accommodate or positioned to avoid altering the direction and velocity of stream flow or inter-

fering with migrating or spawning activities of fish and wildlife. Bridges should span the entire nonvegetated stream channel. Bridges and culverts intended for permanent use should be large enough to accommodate at least the 25-year peak discharge (where known) and should provide adequate clearance for boat, pedestrian, horse, and large game passage whenever these uses occur or are anticipated at significant levels.

4. Rehabilitating Disturbed Stream Banks

Disturbed stream banks should be recontoured, revegetated, or other protective measures should be taken to prevent soil erosion into adjacent waters.

5. Winter Stream and Lake Crossing. During winter, snow ramps, snow bridges, or other methods should be used to provide access across frozen rivers, lakes, and streams to avoid cutting, eroding, or degrading of banks. These facilities should be removed immediately after final use.

E. Protection of Fish and Wildlife Resources. Important fish and wildlife habitats such as riparian areas, wildlife movement corridors, important wintering or calving areas, and threatened or endangered species habitat should be avoided in siting transportation routes unless no other feasible and prudent alternatives exist. Location of routes and timing of construction should be determined in consultation with the Department of Fish and Game. (See also Fish and Wildlife, guideline H, Avoid Conflicts With Traditional Uses of Fish and Game, page 2-11.)

F. Road Pullouts. Where road corridors contact streams, habitat corridors, or other areas of expected recreational use, sufficient acreage should be retained in public ownership to accommodate public access, safety requirements, and expected recreational use. The size and location of pullouts should be determined in consultation with the Division of Parks and Outdoor Recreation, DOT/PF, and ADF&G.

G. Timber Salvage From Rights-of-Way. All timber having high value for commercial

or personal use should be salvaged on rights-of-way to be cleared for construction.

H. Off-Road Vehicle Activity. Most off-road vehicle activity does not require a permit on state lands. By law, off-road use of vehicles such as snowmachines, jeeps, and small all-terrain vehicles requires a permit on lands designated by DNR as 'special use' lands (depending on the restrictions made for each particular area) and usually requires a permit on state park system lands, fish and game sanctuaries, refuges and critical habitat areas, and for crossing anadromous fish streams. In addition, activity by larger vehicles will require a permit on any state lands.

When permits are issued for off-road vehicle use under 11 AAC 96 or in specially designated areas, they will require that disturbance of soils, vegetation, fish and wildlife populations, drainage patterns, and water quality be minimized. Operations should be scheduled when adequate snow and ground frost are available to protect the ground surface, or should require the use of low ground pressure vehicles, avoidance of problem areas, or other techniques to protect areas likely to be damaged. Before permits are issued, the land manager will consult with affected agencies.

In addition, off-road vehicle permits generally should not be given for vehicle use in important wildlife habitats during sensitive periods. If such vehicle activity is essential and no other practical alternative exists, it should be allowed only as an occasional use. This policy will be applied only when significant wildlife populations are likely to be present. ADF&G will be consulted to help identify important habitat areas and sensitive periods that might warrant this restriction.

I. Roadless Areas. Some areas may be designated by the state or future local governments as roadless and managed to exclude construction of new roads to protect particular resources or forms of resource use. Settlement projects may be included in roadless areas. Roadless areas would be designated during transportation planning, the disposal project review process, or other inter-

agency decision process conducted with public participation.

J. Other Design Standards. For other guidelines that affect the design of transportation structures, see DOT/PF's preconstruction guidelines.

K. Siting Utilities. Settlement support facilities, including but not limited to, generation and transmission structures or cables and buried sewage and water lines, will be sited to minimize adverse impacts to other valuable resources or uses.

L. Access for Mineral and Coal Development. See Mineral and Coal Development, guideline E, page 2-48.

M. Other Guidelines Affecting Transportation. Several other guidelines may affect transportation. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Forestry
- Materials
- Public access
- Public and commercial recreation resources
- Settlement
- Stream corridors and instream flow
- Subsurface resources
- Trail management
- Wetlands management

WETLANDS MANAGEMENT

Goal

Protect Wetland Values. Protect the hydrologic, habitat, and recreational values of important public wetlands. Land management practices will be directed to avoid or minimize adverse impacts on the following important functions of wetlands.

-Wetlands filter nutrients and sediment from upland runoff.

-Wetlands stabilize water supplies by storing excessive water during flooding and by recharging groundwater during dry periods.

-Wetlands provide important feeding, rearing, nesting, and breeding grounds for many species; related recreational use and aesthetic values also are important.

Management Guidelines

A. Definition of Wetlands. For purposes of inventory and management of freshwater wetlands, DNR will use the definition adopted by the State of Alaska under the regulations of the Coastal Management Program [6 AAC 80.900(19)]:

Freshwater wetlands means those environments characterized by rooted vegetation that is partially submerged either continuously or periodically by surface water not exceeding 3 meters in depth.

For purposes of these management guidelines, wetlands are further divided into two classes: Class I are wetlands with a locatable stream outlet (the stream shall be considered part of the wetland); Class II are wetlands with no outlets.

Activities in wetlands may also be subject to provisions of the Federal Clean Water Act and the U.S. Army Corps of Engineers permit requirements related to the Clean Water Act. Compliance with these guidelines in this plan does not replace the need to comply with federal requirements.

B. Retention of Wetlands and Land Adjacent to Wetlands

1. Class I wetlands and surrounding lands will remain in public ownership unless DNR determines--after research and analysis and consultation with affected agencies--that they do not have sufficiently high water quality, water supply, habitat, or recreation values to merit public ownership. Restrictive use covenants and public access easements, rather than public ownership, may be used to protect Class I wetlands and associated buffers under conditions specified in C below.

See guideline F Stream Corridors and In-stream Flow, page 2-45 for types of structures allowed in publicly owned buffers, easements, and covenants.

Class I wetland buffers that are to be retained in public ownership will include, at a minimum, a 100-foot strip adjacent to the wetland unless the conditions in guideline B-3 below are met.

2. Class II wetlands and surrounding lands will be evaluated on an individual basis through the land disposal process or a land management plan to determine whether public retention or other measures are necessary to protect their values. Criteria used in this evaluation will include the wetland's importance to water quality, water supply, habitat, or recreation values, and the costs of retaining the wetland. Generally, Class II wetlands less than 5 acres in size will not be retained.

3. Wetland buffers will be increased from the standards set in item 1 (above) if necessary because of the potential for adverse impacts on wetlands from development on adjacent lands. If, for instance, surrounding lands are steep and have high erosion potential or the proposed use poses a high risk to water quality or other values, buffer widths will be increased accordingly. When steep conditions exist, general guidelines should be used for increasing buffer width: if a 10 to 40 percent slope exists, the buffer width should increase 25 percent; if the slope exceeds 40 percent, the buffer width should increase 50 percent.

Wetland buffers may be decreased if land adjacent to the wetland is stable and development or use of it does not pose a risk to water quality or other values such as wildlife or recreation. In some cases buffers may need to be decreased to allow for an adequate buffer or setback on a nearby, more valuable river or lake.

C. The Use of Restrictive Use Covenants, Public Access Easements, or Setbacks. Restrictive use covenants, public access easements, or staking or building setbacks rather than public ownership may be used to protect Class I wetlands under the following conditions.

1. Where the configuration of the wetland is such that surveying the meandering boundary of the wetland would be excessively expensive. In this case an aliquot-part (rectangular) survey rather than a meander survey may be used along the edge of the wetland. This may result in small portions of wetlands being conveyed to private ownership. Where justified by the value of the wetland, restrictive use covenants, public access easements, building setbacks, or staking setbacks will be applied to ensure that those portions of wetlands and associated buffers conveyed to private ownership remain in a natural state and that public access and use are maintained.

2. Where an entire wetland is included within a parcel of land to be sold for private use. In this case, the wetland and associated buffer may be conveyed to private ownership. Where justified by the value of the wetland,

restrictive use covenants should be used to ensure that the wetland and associated buffer remain in a natural state. If there is a stream outlet from such a wetland, public access easements shall be reserved adjacent to the outlet of the wetland.

D. Establishing Widths of Covenants, Easements, and Setbacks. Widths of covenants, easements, and setbacks will be determined using the same criteria used in establishing the widths of publicly owned buffers (guideline B-3).

E. Defining Wetlands and Wetland Buffer Boundaries. Boundaries should be defined through field inspection, interpretation of aerial photographs, or both. Field inspection is preferred, but will not always be possible because of cost. Where wetlands are particularly valuable and field inspection is not possible, boundaries should be sufficiently generous to allow for errors in interpretation. This will often be the case where aliquot parts are used to define wetlands rather than meander surveys.

Where covenants are used to protect wetlands conveyed to private ownership, boundaries of where the covenants apply may be defined by aliquot parts, or otherwise described so the landowner can clearly define where the covenant applies.

F. Permits for Dredge and Fill in State-Owned Wetlands. Permits that authorize dredging and filling in wetlands, including permits for gravel, sand, silt, and peat extraction and the construction of roads and pads, will not be granted unless it is determined that the proposed activity will not cause significant adverse impacts to important fish and wildlife habitat or important ecological processes or that no feasible and prudent alternative exists. Where it is not feasible and prudent to avoid such activities, other mitigative measures will be considered to meet the intent of this guideline.

G. Operation of Heavy Equipment in Wetlands. Permits issued for activities that require the use of heavy equipment in wetlands that have important hydrologic, recreation or

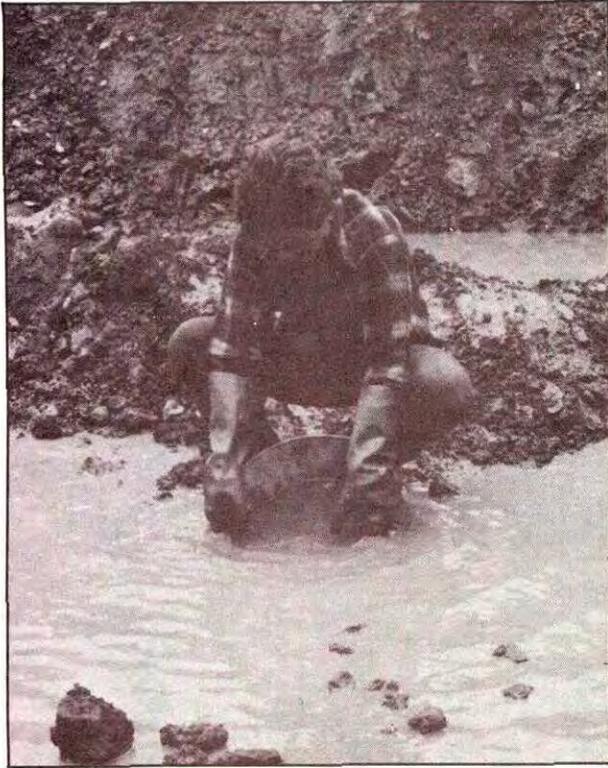
habitat values will, to the extent feasible and prudent, require that damage to wetlands and wetland vegetation be avoided. Only winter access should be used in or across wetlands whenever feasible. DNR will consult with other affected agencies prior to issuing permits when the ground is not frozen.

H. Approval of Other Activities in State-Owned Wetlands and Buffers. Activities such as establishing trails or issuing leases for commercial or noncommercial uses shall be considered on an individual basis. Such activities will be allowed if they can occur without significant damage to the water, habitat, or recreation values of the wetland.

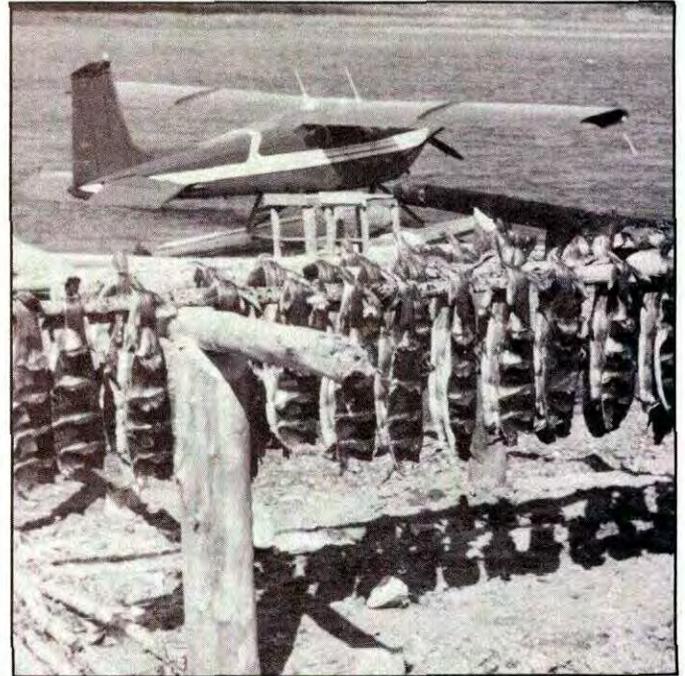
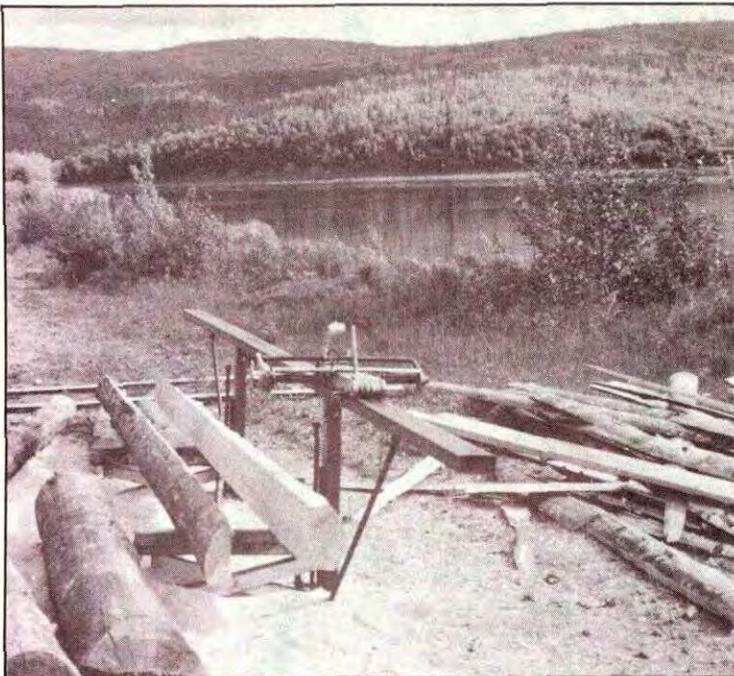
I. Other Guidelines Affecting Wetlands Management. Several other guidelines may affect wetlands management. See the following sections of this chapter:

- Agriculture
- Cultural resources
- Fish and wildlife habitat
- Lakeshore management
- Materials
- Public access
- Public and commercial recreation resources
- Settlement
- Stream corridors and instream flow
- Subsurface resources
- Transportation
- Trail management

Chapter 3 Land Management Policies for each Management Unit



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Chapter 3

LAND MANAGEMENT POLICIES FOR EACH MANAGEMENT UNIT

Introduction

In this chapter, land management policies are presented for specific sites within the planning area. The area is divided into 18 management units by watersheds. The management units are further subdivided into subunits that are generally homogeneous with respect to resources, topography, and land ownership. The land management information presented for each management unit is:

Statement of Management Intent - The statement of management intent defines near-term and long-term management objectives for the management unit and the methods to achieve these objectives. There is a general statement of management intent for the entire management unit, and specific intent for each subunit.

Management Guidelines - Management guidelines that apply to specific subunits are listed and the areawide management guidelines in Chapter 2 that are most likely to apply to the management unit are identified.

Land Use Designation Summary - Charts are included that list primary and secondary land use designations for each subunit, prohibited use, subsurface resource management policy, and land ownership. These charts provide a quick picture of planned uses within a unit, but they must be used with the statement of management intent and the management guidelines to get the complete description of management policy.

Resource Information Summary - Charts are provided that summarize the resource values in each unit.

Map of Land Ownership and Management Unit and Subunit Boundaries - A map of each management unit and the subunits within it is included for each watershed. The maps show land status, subunit boundaries, and major trails in the unit.

Surface and Subsurface Land Use Designations

The plan presents separate land use designations for surface and subsurface resources. For surface activities, it designates the **primary and secondary land uses** for which each subunit is to be managed. A primary surface use is one that is of major importance in a management unit or subunit. The unit will be managed to encourage this use and its conservation or development. A secondary surface use is permitted within a subunit when its occurrence will not adversely affect achieving the objectives for the primary uses. A secondary use may be the main use for a limited area of the subunit. For example, within a management unit where the primary uses are fish and wildlife habitat and public recreation, a small area may be identified for forest management.

The plan also identifies **prohibited surface uses** within each subunit. These are activities that will not be permitted within the subunit without a plan amendment. In an area identified as critical habitat, for example, the subunit or portions of the subunit may be closed to grazing or to construction of remote cabins. Uses that are not specifically prohibited may be permitted on an individual basis if DNR

determines that the proposed activities are consistent with the statement of management intent for the management unit and subunit, and with the applicable management guidelines.

Resource designations for "Minerals", "Materials", "Coal", and "Oil and Gas" generally are not applied as primary or secondary surface land use designations. The problems in locating and measuring subsurface resources make it difficult and misleading to apply these categories in the same way they are used for surface resources like timber. However, a primary surface designation for minerals is used where intensive mineral exploration or development is currently taking place or is highly likely in the near term (5 - 10 years). The Department's policy for mineral development is shown by the **subsurface designations** which state whether the subunit is open or closed to new mineral entry. All state lands are available for subsurface leasing. Where a management unit is open to new mineral location and has a primary surface designation such as wildlife habitat or public recreation, the surface designation will not be construed to prevent mineral development.

General Use Lands

In remote areas, lands with little access and low surface and subsurface resource values are designated for "General Use" rather than more specific uses such as settlement or forestry. These lands will be retained in public ownership unless the plan is amended and they are proposed for land offering. These lands will be available for public use and open to mineral entry. They will be classified "Resource Management".

Resource Management Lands

Several areas are given "Resource Management" as the primary use designation and classification. These areas have high value for both settlement and other surface uses. Because of potential conflicts between current uses and sale of land for private ownership,

these areas will not be included in the list of lands available for disposal nor designated with Settlement a primary use. However, they have some of the highest potential for settlement of any state land in the planning area. They will be kept in public ownership in the near term; when the plan is updated -- approximately every five years -- they will be reevaluated to determine whether they should continue to be retained in the public ownership or offered for sale. A plan amendment is required if the primary use designation is changed.

Management Guidelines

Almost all state land addressed by this plan will be managed for multiple use. Exceptions are lands that will be offered for private ownership and public recreation sites that are less than 640 acres. For this reason, the plan establishes management guidelines that will allow various uses to occur without serious conflicts. Management guidelines can direct the timing, amount, or specific location of different activities to make the permitted uses compatible. For example, land disposals will be designed to protect public trails.

Flexibility of the Plan

The land use designations shown on the maps and charts in this chapter are intended to be flexible. Uses not shown may be permitted on a case-by-case basis if DNR determines they are consistent with the statement of management intent for the management unit and subunit and the applicable management guidelines. Boundaries of land use designations shown on the maps in this chapter may be modified through on-the-ground implementation activities -- for example, site planning for disposals -- if the modifications adhere to the management intent for the subunits affected. Similarly, in the implementation of the plan, uses not originally designated may be permitted if they are consistent with the management intent for a particular management unit. This plan should not be construed to preclude site-specific decisions

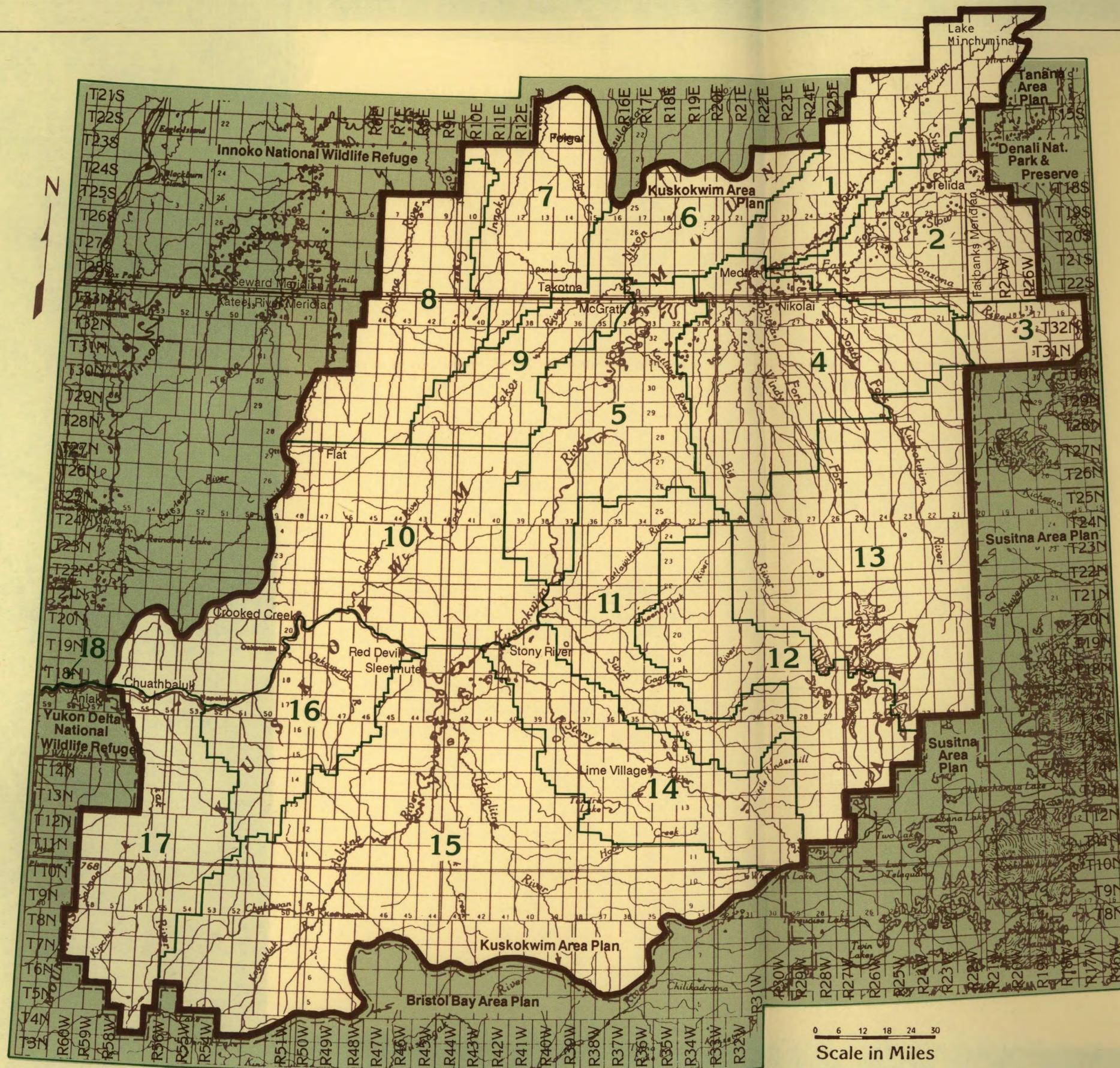
that comply with the management intent and guidelines. Because it covers such a large area, the plan will not provide individual answers for all the site-specific issues encountered by state land managers. The plan does, however, clarify the general management objectives for state lands in the Kuskokwim Area and thereby provides the basis for more informed decisions.

Definitions

Definitions of terms frequently used in this chapter are given in Appendix A.

Management Unit Index

- Management Unit 1: North Fork
- Management Unit 2: East Fork
- Management Unit 3: Tonzona
- Management Unit 4: Big River — South Fork
- Management Unit 5: Kuskokwim River
- Management Unit 6: Nixon Fork
- Management Unit 7: Innoko
- Management Unit 8: Dishna — Iditarod
- Management Unit 9: Takotna River
- Management Unit 10: George River
- Management Unit 11: Swift River
- Management Unit 12: South Alaska Range
- Management Unit 13: North Alaska Range
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- Management Unit 16: Holokuk — Oskawalik
- Management Unit 17: Aniak River
- Management Unit 18: Birch Tree Crossing



MANAGEMENT UNIT 1: NORTH FORK

Background

Location and Land Ownership. This management unit consists of the North Fork of the Kuskokwim River drainage that is located within the planning area. Most of the land in this unit is state owned; however, some Native-owned land exists near Telida, Medfra, and Nikolai; the remainder is state or Native selected. Approximately 25 Native allotments exist in the unit along the North Fork. Only a few mining claims are located in the area north of Dyckman Mountain.

Resources and Land Use. Although no villages exist within this unit, residents of Telida, Nikolai, Lake Minchumina, and Medfra use the area for trapping, hunting (primarily moose and bear), and fishing. A few permanent residents live along the North Fork. Trapping cabins, hunting camps, and fish camps are widely dispersed. The unit is not heavily used for recreation, sport hunting, or fishing because of its distance from population centers, the time required to reach the area by boat or snowmachine from McGrath, and the low fish and game populations compared to other parts of the planning area. Timber in the area is used for house logs and firewood. The unit is covered primarily by black spruce and shrubs with some stands of hardwoods located mostly on south-facing slopes. However, accessible riparian lands along the North Fork contain productive stands of white spruce, birch, and cottonwood.

Access. Winter access is by snowmachine on established trails, traplines, and along frozen rivers. Regional trails pass through the unit and connect Lake Minchumina, Medfra, Nikolai, Telida. Power boats are used on the North Fork by residents of Telida, Nikolai, Lake Minchumina, and the North Fork area. The North Fork is also floated with non-motorized boats for hunting and recreation and accessed by a portage from Lake Minchumina. Although no established airstrips exist in the area, numerous lakes and

straight stretches of the North Fork River provide float plane access.

Management Intent

The general management intent for this unit is to provide a mix of opportunities for private land acquisition and public use. One area totalling 800 net acres within this unit has been identified for future disposal. The lands along the North Fork not identified for disposal will be managed primarily for hunting, trapping, fishing, and personal-use forestry. The lands away from the North Fork are currently used to a limited degree for hunting, trapping, and transportation. These lands have generally low resource values and will be managed for general multiple use. One state-selected area north of the river should be relinquished to the federal government because of low resource values.

All state lands retained in public ownership will remain open to new mineral entry. Lands proposed for disposal will be closed to mineral entry prior to sale. The entire unit will be closed to remote cabin permits. Areas with winter habitat for moose will be closed to grazing.

Although bordered by Native-owned lands, the riverbed of the North Fork and many of its navigable tributaries are state owned and subject to the Chapter 2 guidelines. All lands retained in state ownership will remain open to mineral entry.

Subunit 1a - Upper North Fork

This subunit contains state-owned lands along the upper North Fork and adjacent to several small lakes. Settlement is a primary use. Approximately 800 acres will be offered for private ownership. The subunit will be closed to mineral entry prior to the sale. Remaining public lands will be available for forestry and wildlife habitat.

Subunit 1b - North Fork Uplands

Most of the land in this subunit is state owned with some overlapping selections. One trapping cabin permit has been applied for on the upper North Fork. The land in this subunit will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat. Access along the Telida - Sulukna River trail in this subunit will be protected consistent with the trail management guidelines in Chapter 2.

Subunit 1c - North Fork Uplands

This subunit contains mostly state and some state-selected or Native-selected lands. State lands in this unit will be managed for general multiple use. These lands are composed primarily of higher elevation lands away from the North Fork and have low surface resource values. Two trapping cabin permits have been issued in this subunit near Fish Creek Lake and Spirit Lake. Parts of the subunit have moderate mineral potential and are located adjacent to the highly mineralized Nixon Fork gold deposits. Access along the Lake Minchumina - Telida, Telida - Medfra, and the Telida - Sulukna River drainage trails on state lands will be protected consistent with the trail management guidelines in Chapter 2. Additional lands may be added to this subunit northwest of Sprucefish Lake if a land exchange between the state and the National Park Service is completed. One state selection near Von Frank Mountain will be relinquished.

Subunit 1d - North Fork Lowlands

Most of the land in this subunit is state owned with some overlapping selections. One trapping cabin permit has been issued on the north end of Munsatli Ridge. The lands in this subunit will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat and forestry. Access along important trails in this subunit on state-owned lands will also be protected: the winter trail on the North Fork, and the Telida - Medfra, Nikolai - Telida, and Telida - Sulukna River drainage trails.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Lakeshore management
- Public access
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Stream corridors and instream flow
- Trail management
- Wetlands management

Subunits 1a, 1b, and 1d - Upper North Fork, North Fork Uplands, and North Fork Lowlands

Grazing. Grazing leases or permits will not be allowed in the following areas because of their importance as winter concentration zones for moose (Map 2.1). Temporary passage is not prohibited through these areas to reach areas where grazing is permitted. Grazing may be allowed in portions of these prohibited areas if consistent with the guideline in Chapter 2 ("Grazing on Important Habitat Lands"). All the following townships are in the Kateel River Meridian.

- Within 1.25 miles of the North Fork River;
 - T23S R25E Sec. 17-20, 29 & 32 (all K.R.M.)
 - T25S R27E Sec. 11
 - T23S R24E Sec. 25-26 & 35-36
 - T24S R25E Sec. 4-9, 16-21 & 28-33
 - T24S R24E Sec. 1-3, 9-36
 - T24S R23E Sec. 23-27 & 32-36
 - T25S R24E Sec. 1-3 & 10-12
 - T25S R23E Sec. 1-4, 9-12, & 13-16

Subunit 1a - Upper North Fork

Lakeshore Management. The northern Chleca Lake is located entirely in the disposal area of subunit 1a; only the northern half of the southern Chleca Lake is located within the disposal area of subunit 1a. At least 50 percent of the public land within 500 feet of the

shore of the northern Chleca Lake will be retained in public ownership. Retained lands shall include 50 percent or more of the actual shoreline. A significant portion of the lakefront land that is retained in public ownership should be suitable for recreational activities. If feasible, the publicly retained land should include land adjacent to the lakes' inlet and outlet. Because 50 percent of the southern portion of Chleca Lake is located outside the disposal, the 50 percent retention guideline along lakes will not apply. Retention sites on numerous smaller ponds and oxbows in subunit 1a will be determined at the time the sale is designed.

Stream Corridors and Wetlands. The North Fork meanders, and has many oxbows. White spruce and hardwood vegetation is a typically narrow band between the rivers, oxbows, and wetlands inland from the river. To protect public access and recreation along the rivers, the disposal will require a 100-foot staking setback on the Kuskokwim River. Staking will be allowed up to wetlands, but there will be a 50-foot building setback from the wetlands. Out-houses, septic tanks, and other waste-disposal facilities must be sited to meet the Department of Environmental Conservation (DEC) guidelines that require a 100-foot setback from wetlands and water bodies. This subunit will be closed to mineral entry prior to the sale.

Land Sales and Trapping. There are several existing traplines along the upper North Fork and trapping is an important part of the local economy. Opportunity for trapping by new residents may be limited if parcels in subunit 1a are sold. If this condition exists at the time a sale is designated, DNR, in consultation with ADF&G will develop language to be included in the annual state land offering brochure advising applicants of this situation and encouraging them to contact local trappers before establishing new traplines.

Subunit 1c - Munsatli Ridge - Sischu Mountains

Historic Sites. The Division of Parks and Outdoor Recreation will be consulted before a permit or lease is issued within one-quarter mile of Spirit Lake, which has a historic site.

Selections - Relinquishments. One-half township of state-selected land east of Von Frank Mountain has low surface and subsurface resource values and will be relinquished. This includes township T22S R25E K.R.M. sections 1-3, 10-15, 22-27, and 34-36 (Map 4.1).

Additional Access Needs. Legal access may be needed across T21S R26E K.R.M. just south of Stone Mountain if this overlapping Native and state selection is not conveyed to the state. The existing trail connects Telida to the Sulukna River drainage which has moderate to high fish and wildlife values. See Chapter 4, "Recommendations for Additional Access" for more information.

Management of Exchange Lands. The lands northwest of Sprucefish Lake (T15S R27W F.M. sections 1-11, 15-21, and 29-31), proposed to be conveyed to the state through an exchange with the National Park Service, will be managed consistent with the management intent of subunit 1c.

Subunits 1a, 1b, and 1d, - Upper North Fork, North Fork Uplands, and North Fork Lowlands

Campsites Along North Fork River. Lands along the North Fork River are frequently used for hunting, trapping, fishing, berry picking, personal use forestry, and transportation. Opportunities for camping will be maintained at reasonable intervals along the North Fork.

Subunits 1a, 1c, and 1d - Upper North Fork, Munsatli Ridge-Sischu Mountains, and North Fork Lowlands

Agricultural Potential. Although preliminary ratings in the USDA Exploratory Soil Survey show portions of these subunits as having moderate potential for agriculture, detailed information is unavailable to confirm these ratings. To protect options for long-term use of these lands, the Division of Agriculture should be consulted before permits or leases are issued for any activities that would significantly diminish their capability to support agriculture.

RESOURCE INFORMATION SUMMARY

Management Unit 1 - North Fork

Resource	Subunit			
	1a	1b	1c	1d
Agriculture	Moderate to low potential	Low potential	Most low to unsuitable, some moderate	Moderate to low potential
Energy	Very low coal potential			
Fish	Resident fish	Resident fish	Resident fish	Salmon & resident fish
Forestry	High potential along river; rest unsuitable	Low to unsuitable	Most unsuitable, some low to moderate potential	High potential along river; rest unsuitable
Grazing	Mixed: high to low potential	High to low	Moderate to low potential	Most moderate to low potential; some high
Historic/cultural	Unknown	Unknown	Unknown	Unknown
Materials	Low potential	Low potential	Low potential	Low potential
Minerals	Low potential	Low potential	Low to moderate potential; a few mining claims	Most low potential; some moderate along Von Frank Mts.; a few mining claims
Oil & gas	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary
Public access	Plane to lakes or winter landings; boat North Fork; trails	Plane to lakes or winter landings, boat on North Fork; trails	Plane to lakes or winter landings; trails	Plane to lakes or winter landings; boat on North Fork; trails
Recreation	Low use and potential			
Settlement suitability	Mixed: high and unsuitable	Very low to low potential	Most unsuitable; some low	Some high along river; most low to unsuitable
Wildlife	Mostly B-1, some A-2; Moose winter range, bear, ducks, and geese	A-2 and B-1; moose winter range, bear, ducks, and geese	C; Bear, moose	A-2 and B-1; Moose winter range, bear, ducks, and geese
Important trails	Winter trail along North Fork	Winter trail along North Fork, Telida-Sulukna River trail	Telida-Sulukna River trail and Minchumina-Telida trail	Winter trail along North Fork, Telida-Medfra trail, and Telida-Nikolai trail

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

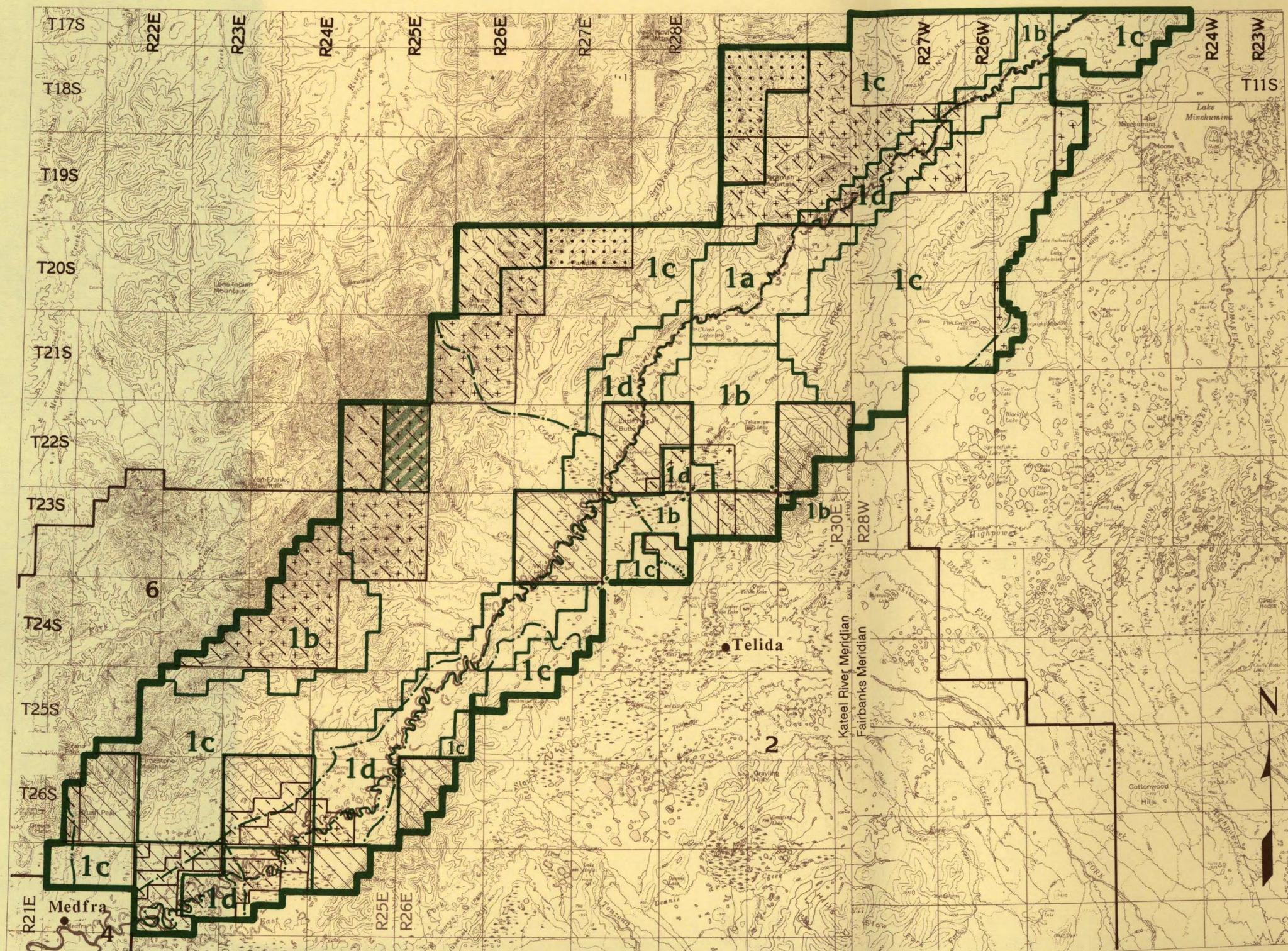
MANAGEMENT UNIT 1 - NORTH FORK

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
1a Upper North Fork	State	Settlement Wildlife habitat	Forestry	Grazing in part of subunit Remote cabins Trapping cabins after sale is scheduled	Closed prior to sale	Net sale area = 800 acres
1b North Fork Uplands	State, state/ Native select.	Wildlife habitat		Grazing in part of subunit Remote cabins	Open	
1c Munsalti Ridge - Sischu Mountains	Most state, some state/ Native sel.	General use: low resource values		Land disposals Remote cabins	Open	2 blocks in Sischu Mts. proposed for relinquishment; Historic sites present; Lands may be added as part of a proposed land exchange.
1d North Fork Lowlands	Most state, some state selections, some state/ Native sel.	Forestry Wildlife habitat		Grazing in part of subunit Land disposals Remote cabins	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

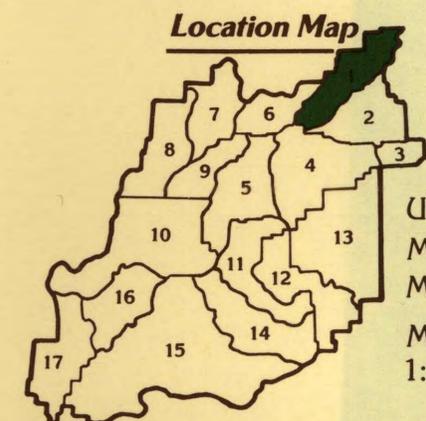
^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

1: North Fork



-  Management Unit Boundary
-  Subunit Boundary
-  No Pattern State Owned
-  State Selected
-  Native Owned
-  Native Selected
-  Federal
-  Proposed Relinquishments
-  Trails on public lands
-  ANCSA 17 (b) easements & State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.



U.S.G.S. Quads:
Mt. McKinley
Medfra
Map Scale:
1:500,000

MANAGEMENT UNIT 2: EAST FORK

Background

Location and Land Ownership. This management unit consists of the watersheds that drain into the East Fork. Included are portions of the Tonzona, Slow Fork, and Swift Fork River watersheds. The land within this unit is poorly drained and has large areas of continuous permafrost. Rivers tend to meander and be slow moving. A few areas of rolling uplands exist including the Slow Fork Hills, East Fork Hills, and Telida Mountains. Over half the unit is state owned; approximately one-third is Native owned or Native selected; the remainder is state selected, overlapping selections, or private. A few homesites, one trade and manufacturing site, and approximately 37 Native allotments exist in this unit. Most of the population resides in Telida. A few people reside on homesites and Native allotments outside the village year-round.

Resources and Land Use. Anadromous fish occur in the Tonzona, Slow Fork, and East Fork rivers; resident fish occur throughout the area's waterways. Moose are distributed throughout the area, but are concentrated in winter along the lower East Fork River, Tonzona River, Highpower Creek, and along portions of the Slow and Swift Fork rivers. Caribou are found on the upper Tonzona River.

The western half of the unit is used by residents of Nikolai; the northern half is used by the residents of Telida. Subsistence uses on state lands include trapping, fishing, hunting, personal-use forestry, berry picking, and transportation. The southeastern third of the planning area is not frequently used for subsistence; however, it includes guiding areas on the Tonzona and the Slow Fork Rivers. No mining claims exist in this unit and mineral potential is low throughout most of the area.

The unit is mostly covered with black spruce with a few large continuous areas of shrubs. Few continuous stands of white spruce exist in

this unit, except for of the upper reaches of the river bottoms in the eastern part of the unit: the Swift Fork River, Slow Fork River, Telidaside Creek, Highpower Creek, and Fish Creek. Relatively few stands of hardwoods exist in this unit. Some are located on the lower Swift Fork river bottom; the remainder are confined to the uplands in the Telida Hills and the Grayling Hills. White spruce and hardwoods in this unit are used primarily by the residents of Telida and Nikolai for house logs and firewood.

Access. Access to the area is by boat and floatplane in the summer and snowmachine and skiplane in the winter. Several lakes exist where floatplanes can land but no maintained or bladed airstrips exist except the Telida airstrip. Several trails pass through this unit that connect the following locations within the unit: Telida - Nikolai (also identified as part of the Iditarod National Historic Trail), Telida - Lake Minchumina, Telida - Camp Creek Mine (in the Alaska Range), and Telida - Medfra. Several traplines also exist in the area. The major rivers are used by residents of Nikolai and Telida.

Management Intent

Lands within the unit are remote and used by residents of Telida and Nikolai. This unit will be managed for hunting, trapping, personal-use timber, and wildlife habitat. Remote cabin permits will be allowed along the upper Swift Fork and Slow Fork Rivers. The lands between the Swift Fork River and the boundary of Denali National Park and Preserve were identified in the park's general management plan for a possible land exchange. If the park boundary is moved to follow the Swift Fork River, the fire protection for state and Native lands will be enhanced because the river forms a natural fire barrier. The lands east of the Swift Fork River were also identified as valuable caribou habitat by recent surveys. The area identified for exchange will

not be available for remote cabin permits for 10 years to avoid complicating the proposed exchange.

Grazing will not be allowed in certain areas along river bottoms in order to protect moose winter concentration and calving areas. The beds of Swift Fork and Slow Fork rivers and other navigable waters are state owned and are subject to the guidelines of this plan. The beds of a small section of Highpower Creek where sheefish spawn are closed to new mineral entry. The state-owned beds of all other navigable waters will remain open to mineral entry.

Subunit 2a - Lower East Fork

This subunit is primarily state owned or state selected. Approximately three townships are both state and Native selected. This subunit contains valuable fish and wildlife habitat and timber that occur along the East Fork, Slow Fork, Tonzona, and Swift Fork rivers. This land will be retained in public ownership and managed for multiple use with emphasis on trapping, hunting, fishing, berry picking and personal-use forestry.

Subunit 2b - Hinterlands

This subunit is primarily state owned; approximately two townships were selected by both the state and Native corporations. One trapping cabin permit has been issued on Haynes Lake. Uplands in the southeastern third of the subunit are generally inaccessible, have little timber, are poorly drained, and generally have low surface resource values. This subunit will be retained in public ownership and managed for general multiple use. Remote cabins will be allowed along the west side of the Swift Fork River. Additional lands may be added to this subunit along the Swift Fork River if a land exchange between the state and the National Park Service is completed.

Subunit 2c - Swift Fork

Land east of the Swift Fork River contains low-value surface resources. One trapping cabin permit has been issued on the upper

Swift Fork. This land was identified for a possible land exchange with the National Park Service. If kept in state ownership, remote cabin permits will be allowed, but offerings of remote-cabin permits will be delayed for 10 years in this subunit to avoid complicating this exchange. In addition, after the preliminary exchange agreement is signed, lands within this subunit will be closed to new mineral entry.

Subunit 2d - Upper East Fork

This subunit is primarily state owned with some overlapping selections. One trapping cabin permit has been issued on Haynes Lake. Lands in this subunit are located along the Tonzona, East Fork, and Swift Fork rivers. Access to them is by boat, trail, and floatplane. Remote cabins are allowed in part of this subunit along the west side of the Swift Fork River. With the exception of wildlife habitat, surface values are low. This subunit will be retained in public ownership and managed primarily for wildlife habitat and harvest. Approximately 2,560 acres in two parcels are recommended for state selection in order to consolidate state land holdings in the area. These include T28S R26E K.R.M. section 31 and T26S R28E K.R.M. section 33-35. If conveyed to the state, they will be managed as part of subunit 2d. Additional lands may be added to this subunit west of the Swift Fork River if a land exchange between the state and National Park Service is completed. If conveyed to the state, these exchange lands will be managed as part of subunits 2b and 2d.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Cultural resources
- Fish and wildlife habitat
- Forestry
- Public and commercial recreation resources
- Remote cabins & trapping cabins
- Trail management

Subunits 2a, 2b, and 2d - Lower East Fork, Hinterlands, and Upper East Fork

Grazing. Grazing leases or permits will not be allowed in the following areas which include the lower East Fork River, Tonzona River, Highpower Creek, and portions of the Slow and Swift Fork rivers, because of their importance as moose wintering and calving areas (see Map 2.1). Temporary passage of domestic grazing animals through this area is not prohibited to reach areas where grazing is permitted. Grazing may be allowed in portions of prohibited areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands"). Also see "Management of Exchange Lands" in this section.

- Within 1 mile of Highpower Creek upstream from the Shisnona River
- Within the following townships:
 - T24S R27E K.R.M. sec. 36
 - T25S R27E K.R.M. sec. 1, 12-17, 20-29 & 31-35
 - T25S R28E K.R.M. sec. 1-26 & 31-35
 - T26S R27E K.R.M.
 - T27S R24E K.R.M. sec. 23-28 & 31-36
 - T27S R26E K.R.M. sec. 1-3, 9-16 & 20-35
 - T27S R27E K.R.M. sec. 1-24
 - T27S R28E K.R.M. sec. 4-9 & 16-20
 - T28S R25E K.R.M. sec. 1-15
- Within 2 miles of the Slow Fork River in townships:
 - T19S R28W F.M.
 - T20S R28W F.M.
 - T20S R27W F.M.
 - T21S R27W F.M.
- Within 2 miles of the Swift Fork River in townships:
 - T18S R27W F.M.
 - T19S R27W F.M.
 - T19S R26W F.M.
 - T20S R26W F.M.

Subunits 2a and 2d - Lower and Upper East Fork

Iditarod National Historic Trail System. The Nikolai-Telida trail that transects these units is part of the Iditarod National Historic Trail System (see maps in Appendix C). The State Office of History and Archeology will be consulted before permits or leases are authorized along this trail.

Mineral Closures - Sheefish Spawning and Land Exchange. Though formal population estimates are not available, the Kuskokwim sheefish population is probably small. The only known sheefish spawning areas for the Kuskokwim River drainage are located on the Big River (unit 4) and Highpower Creek. The uplands adjacent to Highpower Creek where these fish spawn are Native owned. Sheefish that spawn in Highpower Creek use the spawning ground in late September. These sheefish spawn in the lower 200 meters of Highpower Creek, mainly near one gravel bar. This section of Highpower Creek is navigable and the beds of the river in this area are state owned. To protect this discrete sheefish spawning area, the beds of the navigable portion of Highpower Creek from the junction with the Swift Fork River up to the unnamed creek that drains Lake 689' will be closed to mineral entry. This closure is located within T24S R30E K.R.M. section 17. The boundaries of the closures are described in Appendix H and shown on Map 2.4. In addition, after the preliminary land-exchange agreement is signed with the National Park Service, subunit 2c will be closed to new mineral entry.

Subunits 2b, 2c, and 2d - Hinterlands, Swift Fork, and Upper East Fork

Remote Cabin Permits. Parts of these subunits are within Tonzona - South Fork block of the Alaska Range remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunits 2c and 2d are also within this block. A total of 19 remote cabin permits will be allowed in the Tonzona - South Fork block, with a maximum of one remote cabin permit allowed in any one township. The lands along the Swift Fork River have been recommended

for a possible exchange with the National Park Service. The area identified for exchange will not be available for remote cabin permits for 10 years to avoid complicating the proposed exchange.

Subunit 2a - Lower East Fork

Agricultural Potential. Although ratings in the USDA Exploratory Soil Survey show portions of these subunits as having moderate potential for agriculture but detailed information is unavailable to confirm these ratings. To protect options for long-term use of these lands, the Division of Agriculture should be consulted before permits or leases are issued for any activities that would significantly diminish their capability to support agriculture.

Subunits 2b and 2d - Hinterlands and Upper East Fork

Management of Exchange Lands. If the Swift Fork land exchange is completed, lands west of the Swift Fork River that are conveyed to the state in townships T21S R25W F.M. and T22S R25W F.M. will be managed consistent with the management intent of subunits 2b or

2d. Decisions on whether remote cabin permits will be allowed on these proposed additions to state lands west of the Swift Fork will be made at the time of the exchange agreement or after the exchange is completed.

- Exchange lands to be managed as part of subunit 2b:
 - T21S R25W F.M. sec. 7, 18-20 & 29-32
 - T22S R25W F.M. sec. 4-9, 16-18 & 23
- Exchange lands to be managed as part of Subunit 2d:
 - T21S R25W F.M. sec. 5, 6, 8-9, 16, 17, 21, 28 & 33-34
 - T22S R25W F.M. sec. 3, 10, 15, 18, 19-22 & 26-35
- Grazing will not be allowed in the following sections of Subunit 2d within the exchange lands in order to protect winter moose habitat:
 - T21S R25W F.M. sec. 5, 6, 8-9, 16, 17, 21, 28 & 33-34
 - T22S R25W F.M. sec. 3, 10 & 15

RESOURCE INFORMATION SUMMARY

Management Unit 2 - East Fork

Resource	Subunit			
	2a	2b	2c	2d
Agriculture	Moderate to unsuitable	Low to unsuitable	Low to unsuitable	Moderate to unsuitable
Energy	Very low coal potential	Mostly very low; some low on upper Slow Fork	Very low coal potential	Mostly very low; some low potential on upper Slow Fork
Fish	Salmon and resident fish	Resident fish	Resident fish	Salmon and resident fish
Forestry	High potential along parts of East and Slow forks; rest moderate-low	Unsuitable	Unsuitable	Low to unsuitable
Grazing	High to low potential	High to low potential	High to moderate potential	High to low potential
Historic/cultural	Iditarod National Historic Trail	Unknown	Unknown	Iditarod National Historic Trail
Materials	Low potential	Low potential	Low potential	Low potential
Minerals	Low to very low potential	Low to very low potential	Low to very low potential	Low to very low potential
Oil & gas	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary
Public access	Boat on rivers, snow machine trails, natural landing areas	Snowmachine trails, natural landing areas	Boat on rivers, snow machine trails, landing on lakes	Boat on rivers, snow machine trails, natural landing areas
Recreation	Low potential	Low potential	Low potential	Low potential
Settlement suitability	High along East Fork & Highpower Cr., rest low to very low	Low to very low	Very low	Low to very low
Wildlife	Mixed: A-2, B-1, C; Moose winter range & calving; bear, ducks & geese	Mostly C, some B-2; Caribou, bear, ducks, moose	Mostly C, some A-1; Caribou, bear, moose	Mostly B-1, some A-1; Caribou; moose winter range & calving; bear, ducks, geese
Important Trails	Telida-Nikolai trail (Iditarod NHT), Telida-Minchumina trail, Telida-Camp Cr. trail, Telida-Medfra trail	Telida-Camp Cr. trail	None identified	None identified

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 2 - EAST FORK

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
2a Lower East Fork	State, state select. & state/Native selected	Forestry Wildlife habitat		Land disposals Remote cabins Grazing in part of subunit	Open except along part of Highpower Creek	
2b Hinterlands	State & state/Native selected	General use: low resource values	Land disposals Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit Grazing in part of subunit	Open	Lands may be added to this unit as part of a proposed land exchange.
2c Swift Fork	State	General use: low resource values	Remote cabins in part of subunit	Remote Cabins in part of subunit	Currently open, will be closed to mineral entry after preliminary exchange agreement is signed	Identified for possible land exchange; remote cabin opening delayed 10 yrs.
2d Upper East Fork	State, state selected & state/Native	Wildlife habitat	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit Grazing in part of subunit	Open	Includes two proposed selections

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

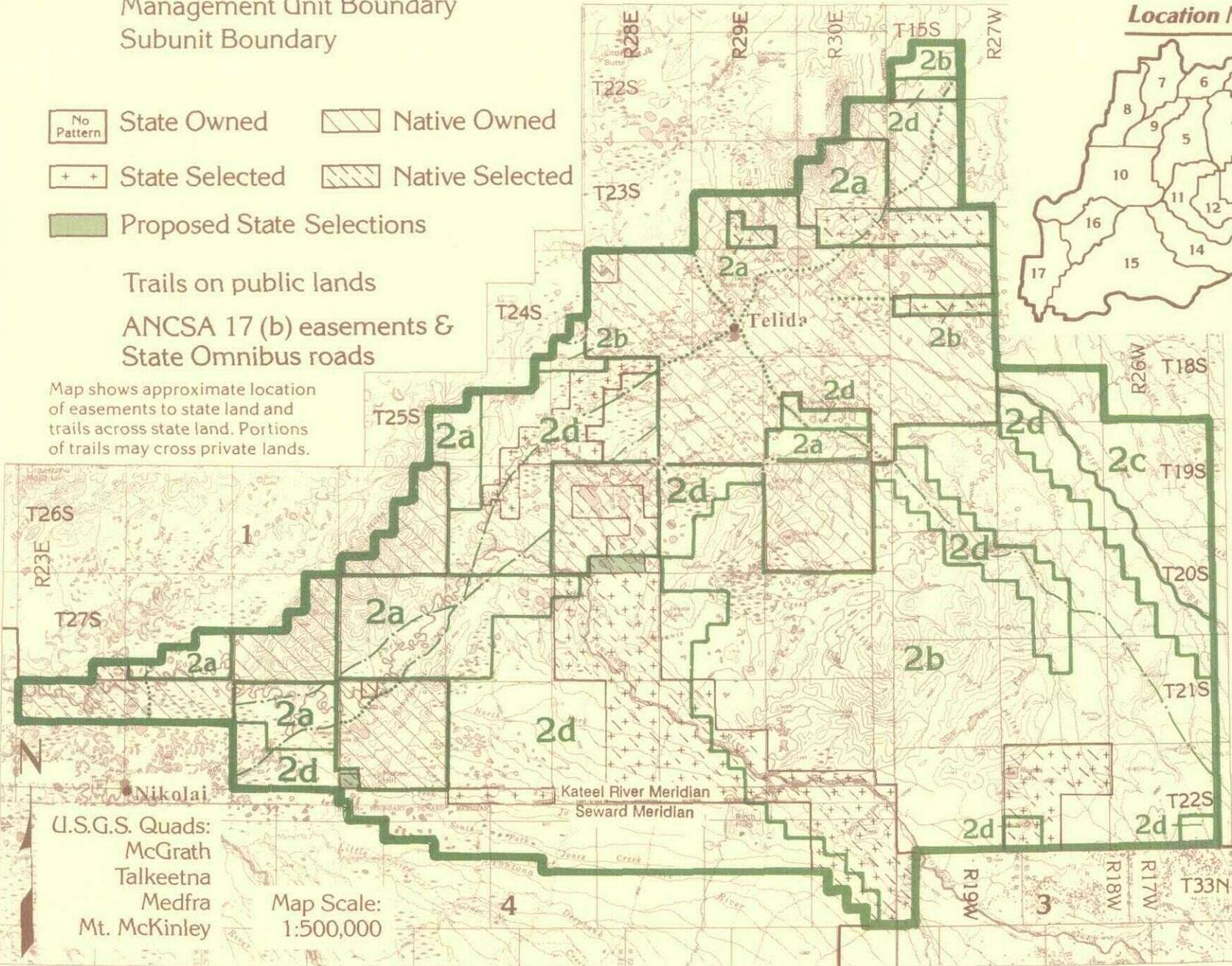
Management Unit Boundary
Subunit Boundary

- No Pattern State Owned Native Owned
- + + State Selected Native Selected
- Proposed State Selections

Trails on public lands
ANCSA 17 (b) easements &
State Omnibus roads

Map shows approximate location
of easements to state land and
trails across state land. Portions
of trails may cross private lands.

Location Map



2: East Fork

Kuskokwim Area Plan

Map Scale:
1:500,000

U.S.G.S. Quads:
McGrath
Talkeetna
Medfra
Mt. McKinley

MANAGEMENT UNIT 3: TONZONA

Background

Location and Land Status. The Tonzona management unit consists of the upper watershed of the Tonzona River and a small portion of the Little Tonzona and Swift Fork River drainages. The upper sections of these rivers are highly scenic; the rivers originate at glaciers in the Alaska Range and passing through steep glacial valleys. About two-thirds of these lands are state owned; the remaining third, most of which overlaps with Native selections, is state selected. Denali National Park and Preserve borders this unit on the east; state lands within the Susitna Area Plan are to the south.

Land Use and Access. The area is used for hunting, trapping, and guiding. The area also has some potential for expanded future recreation as an access point into Denali National Park and Preserve. Two lodges (one on Amos Lakes and the other on Camp Creek), a few BLM homesteads, and several hunting camps are located in the area. Access is primarily by plane. Amos Lakes, Scotty Lake, and other small lakes provide floatplane access in summer. An airstrip is located on Camp Creek. Natural landing areas along stream bottoms provide access by wheeled plane in summer. Winter access is primarily by ski plane. No major trails exist in the area. The few trails that exist are traplines, trails used by local residents, and a larger trail up Camp Creek. The Tonzona River is seldom used by boats.

Resources. This unit is vegetated with hardwoods, black spruce, shrubs, and open white spruce. Open white spruce are mostly confined to the areas adjacent to the Tonzona River. Hardwoods, primarily birch and cottonwood, occur on south-facing slopes. These timber resources are used locally for firewood and house logs.

The southwest portion of the unit has moderate to high potential for coal and maybe underlain by a significant coal-bearing basin

but lack of access makes coal extraction unlikely in the near future. Some claims are located along the upper tributaries of the Swift Fork River. Significant tin-uranium-silver mineralization occurs on Boulder Creek. The riparian habitat in the southern part of the unit provides winter moose habitat and portions of the Alaska Range within the unit provide habitat for sheep.

Management Intent

The general management intent for this area is to provide opportunities for remote cabins and public use of state lands. The lands along the Tonzona River provide the most suitable vegetation in this unit for remote cabins, and the location of state land in this highly scenic area next to Denali National Park and Preserve make these sites desirable. Some of the proposed disposal area contains overlapping state and Native selections and cannot be offered until land ownership is resolved. Lands outside the disposal will be kept in public ownership and managed for multiple use with emphasis on wildlife habitat, hunting, trapping, personal-use forestry, and public recreation. Other uses will be allowed on an individual basis whenever consistent with the management intent for each subunit. Although bordered by federal or Native-owned lands, the beds of navigable waters are subject to the guidelines in the plan. State-owned beds of navigable waters in this unit will remain open to mineral entry and materials extraction.

Subunit 3a - Amos Lakes

Most of this unit is state owned; the remainder has overlapping state and Native selections or is state selected. Two trapping cabin permits have been issued on Red Paint Creek, one guide site has been applied for on Red Paint Creek, and an airstrip has been applied for on Amos Lakes. This subunit will remain in public ownership and be managed for multi-

ple use with emphasis on wildlife habitat, public recreation, hunting, trapping, and personal-use timber harvest. A guidesite, airstrip, and trapping cabin permit have been applied for in this subunit. Four trapping cabin permits have been issued. Amos Lakes and many of the smaller lakes in this subunit are used for public recreation and access to public and private lands in the area. This area is receiving increased public use particularly in the fall for hunting. The upper reaches of the Tonzona drainage in the Alaska Range are highly scenic and include productive sheep habitat. A lodge is located on Amos Lakes, and a lodge and airstrip are located on Camp Creek. Several hunting camps are also in this subunit. This area contains moderate to high mineral potential. A significant tin-uranium-silver system exists on Boulder Creek and may be underlain by significant coal reserves. State lands near these lakes should be considered for a public use cabin because of the recreational value of Amos Lakes and the fact that they will be retained in public ownership. Part of this subunit will be open to remote cabin permits.

Subunit 3b - Boulder Creek

This subunit has low surface resource values and will be retained in public ownership and managed for general multiple use. This subunit also contains moderate to high mineral potential. A significant tin-uranium-silver system exists on Boulder Creek and may be underlain by significant coal reserves. This subunit contains exposed outcrops of coal on the Little Tonzona River and is probably underlain by a significant coal bearing basin. Though development of this coal in the near term is unlikely because of the lack of access, the land in this unit will be retained in public ownership and managed for public recreation and wildlife habitat so that its potential value for coal extraction is not reduced. Part of this unit will be open to remote cabin permits.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the

guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Lakeshore management
- Public access
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Subsurface resources
- Public access
- Stream corridors
- Trail management
- Wetlands management

Subunits 3a and 3b - Amos Lakes and Boulder Creek

Grazing. Grazing leases or permits will not be allowed in the following areas because of their importance as winter concentration zones for moose. This does not prohibit temporary passage through these areas for travel between areas where grazing is permitted. Grazing may be allowed in portions of these closed areas (Map 2.1) if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands"). The following townships are all in the Seward Meridian:

- T33N R15W sec. 31 & 32
- T32N R19W sec. 36
- T32N R18W sec. 12-15 & 21-36
- T32N R17W sec. 4-10, 14-23 & 26-35
- T32N R16W sec. 1-3, 10-16, 20-29 & 32-36
- T32N R15W sec. 4-9, 16-21 & 28-33
- T31N R20W sec. 23-26 & 36
- T31N R19W sec. 1-3 & 9-36
- T31N R18W
- T31N R17W sec. 1-35
- T31N R16W sec. 1-4, 9-16, 21-29 & 31-36
- T33N R15W sec. 4-8 & 18

Subunits 3a and 3b - Amos Lakes and Boulder Creek

Remote Cabins Permit Areas. Parts of these subunits are within the Tonzona - South Fork River block of the Alaska Range remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2.

Parts of the subunits 3a and 3b are also within this block. A total of nineteen remote cabin permits will be allowed in the Tonzona - South Fork River block, with a maximum of one remote cabin permit allowed in any one township.

RESOURCE INFORMATION SUMMARY

Management Unit 3 - Tonzona

Resource	Subunit	
	3a	3b
Agriculture	Low to unsuitable	Unsuitable
Energy	High, moderate, and low coal potential	Moderate to very low coal potential
Fish	Resident fish	Resident fish
Forestry	Low-unsuitable	Unsuitable
Grazing	High to low potential	High potential
Historic/cultural	Unknown	Unknown
Materials	Low potential	Low potential
Minerals	Moderate potential a few mining claims	Moderate potential; a few mining claims
Oil & gas	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary
Public access	Plane to lakes or winter landings	Airstrip, winter landings
Recreation	Low use and moderate potential	Unknown
Settlement suitability	Most very low to unsuitable; some moderate and low along Tonzona River	Most very low to unsuitable; low along Tonzona River
Wildlife	B-1; moose winter range; Dall sheep, bear	Mostly C; some B-2; bear, moose
Important trails	Local trails	Trail to mining claims on Camp Cr.; local trails

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 3 - TONZONA

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
3a Amos Lakes	Most state, some state/ Native sel. & state sel.	Public recreation Wildlife habitat	Remote cabins in most of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open	Possible site for public use cabin
3b Boulder Creek	Most state, some state/ Native select. & state	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	

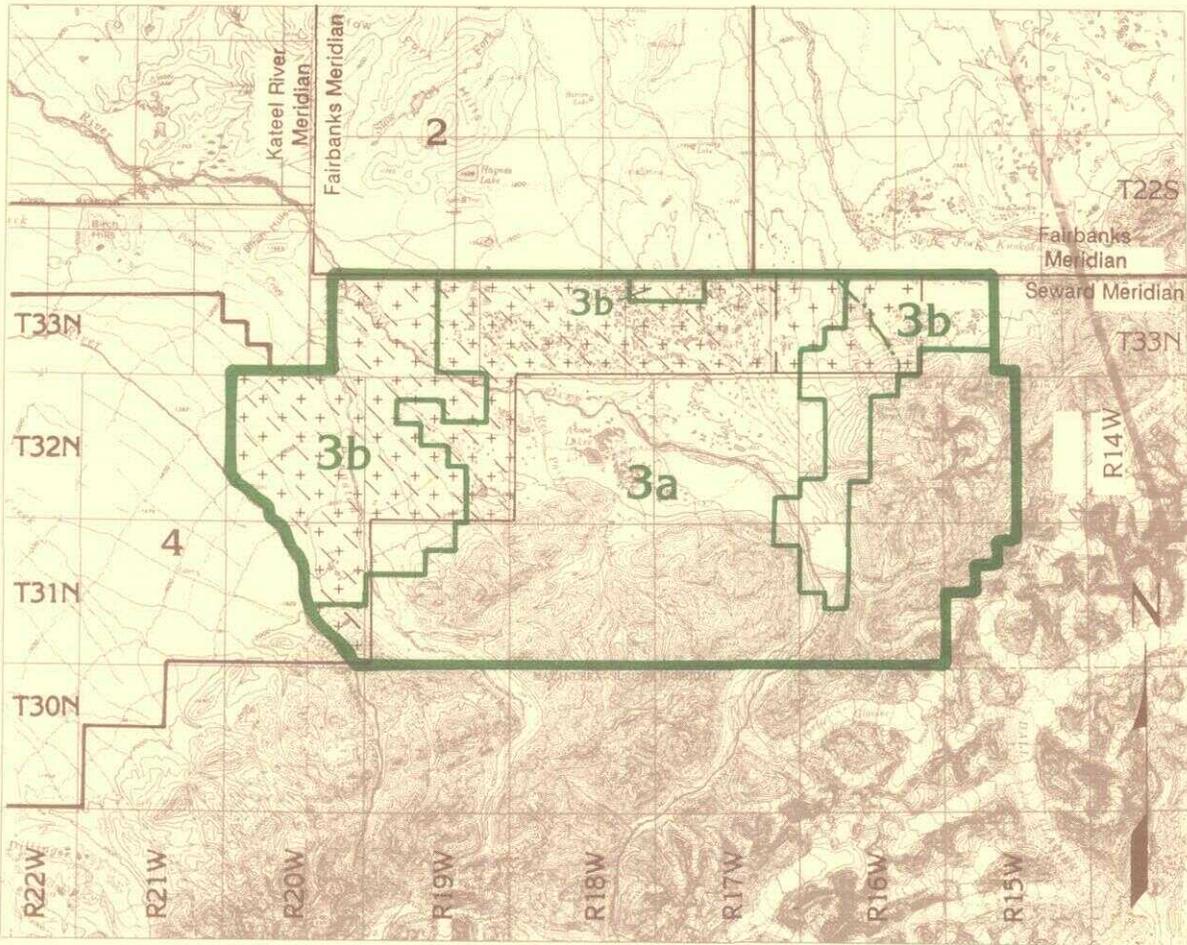
^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

Kuskokwim Area Plan

3: Tonzona

-  Management Unit Boundary
-  Subunit Boundary



-  State Owned
-  State Selected
-  Native Owned
-  Native Selected
-  Federal
-  Trails on public lands

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Map Scale:
1:500,000

U.S.G.S. Quads:
McGrath
Talkeetna

Location Map



MANAGEMENT UNIT 4: BIG RIVER - SOUTH FORK

Background

Location and Land Ownership. The Big River - South Fork management unit consists of the watersheds that drain into the Kuskokwim River, including the South Fork, Big, and Little Tonzona rivers. Less than half the unit is state owned or state selected. Approximately half the unit is in the Upper Kuskokwim block which is owned by BLM. The remainder of the unit is Native owned or selected, or overlapping selections. Approximately 80 Native allotments exist in the unit that are located primarily along the Kuskokwim, South Fork, Windy Fork, and Big rivers. Most of the unit's population reside in Nikolai, though permanent residents also live in Medfra and more remote parts of the unit.

Resources and Land Use. Most of the unit is covered with black spruce and shrubs. A large burn area along the South Fork River north of Farewell is covered with grasslands and fallen timber. There are some narrow bands of white spruce growing along several rivers; including the Kuskokwim, Big, Windy Fork, Pitka Fork, Little Tonzona, and South Fork rivers and Blackwater Creek. Hardwoods, primarily cottonwoods and birch, are also found in bands along the rivers, including lower Blackwater Creek, the upper Big River, and the middle sections of the Windy Fork and Middle Fork rivers. Some south-facing slopes along the Kuskokwim River, such as Halfway Mountain, are also covered with hardwoods. These timber resources are primarily used for house logs and firewood by residents of McGrath, Nikolai, and Medfra.

The Kuskokwim River, the lower reaches of the major tributaries in the unit, including the Big, Pitka Fork, South Fork, and Little Tonzona rivers, and many of the streams that lead into them contain anadromous fish. Moose, bear, and caribou are generally distributed throughout the unit. Concentrations of brown bear and caribou calving areas exist along the lower South Fork River. The buffalo herd in-

roduced into the Alaska Range along the South Fork River drainage now uses the land adjacent to this river as far north as Nikolai. Moose concentrate in the winter along the South Fork and Kuskokwim Rivers. Large areas of wetlands exist in this unit where ducks and geese are widely distributed.

The area is primarily used by the residents of McGrath, Medfra, and Nikolai. No guiding areas exist in the unit, and recent mining activity is limited to the area north of Medfra. Residents of McGrath and Nikolai use the northwestern part of the unit, particularly along the Kuskokwim River, for moose, bear, caribou, furbearers, berries, fish, firewood, and house logs. Nikolai residents also use this area, areas next to the major rivers in the eastern half of the unit, and the South Fork drainage upriver almost as far as Farewell Lake. The area around Deepback Creek and the upper Little Tonzona River has very high potential for coal although the likelihood of near-term development is low.

Access. The most heavily used trails in the unit are along the Kuskokwim River between Nikolai and McGrath. Several trails connect Nikolai with Farewell Lake, Telida, Medfra, and McGrath. In the Medfra area, trails connect to Nikolai, Telida, McGrath, and several local mines. Also, major winter trails connect Farewell Lake with Farewell Landing, the Big River roadhouse, and McGrath. Many of these trails date back to the gold rush and are recognized as part of the Iditarod National Historic Trail System. The Iditarod race trail also passes through the area and connects Farewell Lake, Salmonberry Lake, Nikolai, and McGrath. Traplines are also prevalent in the unit. Summer travel is primarily by boat along major rivers and by plane. State-maintained, -operated, and -owned airports are located in Nikolai and Medfra. A private airstrip also exists at Farewell Landing, two airstrips at Farewell Lake, and one at Farewell. Floatplanes can land on several lakes and natural or minimally maintained

landing areas exist along river bars. Winter travel in winter is primarily by snow machine or dog team along the trails or major rivers. Ski planes are also commonly used in winter.

Management Intent

The general management intent for areas along the heavily used rivers, particularly the Kuskokwim and South Fork, is to provide opportunities for public use of resources, including hunting, fishing, trapping, forestry, transportation, and recreation. Because of the high use the area receives from the residents of Nikolai in the eastern half of the unit and the valuable resources and public use along the Kuskokwim River, remote cabin permits will not be allowed. Lands along the South Fork and Kuskokwim rivers will be managed for multiple use with emphasis on forestry and fish and wildlife habitat and harvest. Lands along the foothills of the Alaska Range and uplands with low resource values will be managed for general multiple use.

The Upper Kuskokwim block is owned by BLM and the lands near McGrath and Nikolai are owned by the Native corporations. However, the beds of the Kuskokwim River and other navigable waters such as the Big, South Fork, and Kuskokwim rivers are state owned and therefore subject to the guidelines in this plan. Nearly all state lands in this unit will remain open to mineral entry. The beds of one short segment of the Big River where sheefish spawn, will be closed to mineral entry.

Resources on federal lands in this unit have been studied for possible selection or relinquishment. Lands along Sheep Creek will be relinquished because of low resource values. Lands along the lower Big River and the Kuskokwim River will be selected because of high resource values or to consolidate state land ownership.

Subunit 4a - South Fork Uplands

This subunit consists of lands next to the Kuskokwim and South Fork rivers with low timber value but high wildlife values. One

trapping cabin permit has been issued in this subunit on the Big Salmon Fork. Most of this subunit is state owned or selected with some overlapping selections in this subunit. These lands will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat. Some additional lands along the Big River will be selected based on wildlife habitat, oil and gas, and recreation values and to consolidate state land ownership. If conveyed to the state, these lands will be managed as part of subunit 4a. Lakes around Farewell have documented cultural and historic sites. The Division of Parks and Outdoor Recreation should be consulted before leases or permits are authorized on these lakes.

Subunit 4b - Hinterlands

The hinterlands consist of several blocks of state-owned and state-selected lands and overlapping selections. These lands are located away from the rivers, have poor access, and low surface resource values. These lands will be retained in public ownership and managed for general multiple use. One township that is state selected on Sheep Creek will be relinquished because of its low resource values.

Subunit 4c - Lower Big River and South Fork River

Most of the land in this unit is state owned, but some is state selected or overlapping selections. One trapping permit has been issued in this subunit on Submarine or Steele lake. These lands are located along the Kuskokwim, Big, South Fork, and Little Tonzona Rivers and have high timber and wildlife values and good access. Very high coal potential exist on the upper Little Tonzona though the likelihood of near-term development is low. These lands will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat and forestry. Approximately two townships in this subunit along the Kuskokwim and Big Rivers will be selected for timber, wildlife habitat, oil and gas, and recreation values and to consolidate state land ownership. If conveyed to the state, they will be managed as part of subunit 4c. Some lakes around Farewell have been docu-

mented cultural and historic sites. The Division of Parks and Outdoor Recreation should be consulted before leases or permits are authorized on these lakes.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Public and commercial recreation resources
- Remote cabins & trapping cabins
- Trail management

Subunits 4a, 4b, & 4c - South Fork Uplands, Hinterlands, Lower Big River, & South Fork River

Grazing. Grazing leases or permits will not be allowed in the following areas because they support large concentrations of moose in winter and are concentration areas for brown bear (Map 2.1). This does not prohibit temporary passage through these areas for travel between areas where grazing is permitted. Grazing may be allowed in portions of these closed areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands").

- T27S R22E K.R.M. sec. 23, 24-29 & 31-36
- T29S R22E K.R.M. sec. 1-6
- T28S R19E K.R.M. sec. 36
- T28S R20E K.R.M. sec. 31-36
- T28S R21E K.R.M. sec. 1, 12-15, 21-29, 31-36
- T29S R20E K.R.M. sec. 1-6
- T34N R27W S.M. sec. 31-36
- T34N R29W S.M. sec. 31-36
- T33N R30W S.M.
- T33N R28W S.M. sec. 1-12
- T33N R26W S.M. sec. 7, 8, 15-18, 20-25 & 36
- T32N R26W S.M. sec. 1-3 & 11-13

- T32N R25W S.M. sec. 6-7, 17-20, 28-30, 32 & 33
- T31N R25W S.M. sec. 4, 5, 8-10, 14-16, 22, 23 & 26
- T31N R24W S.M. sec. 13, 24 & 25
- T31N R23W S.M. sec. 19, 20 & 29-32
- T30N R25W S.M.
- T30N R24W S.M. sec. 5-9, 16-21 & 27-34
- T29N R26W S.M. sec. 1-3, 10-15 & 22-36
- T29N R25W S.M.
- T29N R24W S.M. sec. 3-10 & 18-36
- T29N R23W S.M. sec. 17-20 & 27-34
- T28N R25W S.M.
- T31N R20W S.M. sec. 23-28 & 32-36

Subunits 4a and 4c - South Fork Uplands, Hinterlands, Lower Big River, and South Fork River

Cultural and Historic Sites. Historic sites have been reported near Farewell, Submarine, and John lakes. The State Office of History and Archaeology in DOPOR should be consulted before leases or permits are granted adjacent to these lakes.

Selections and Relinquishments. The following land will be selected for known timber and wildlife habitat values and oil and gas potentials (Map 4.1).

- T33N R30W S.M. sec. 19-36
- T32N R30W S.M. sec. 1-4, 10-15, 22-27 & 34-36
- T32N R29W S.M. sec. 18, 19, 30 & 31

The following land will be selected for known wildlife habitat, and recreation values, and oil and gas potential and to consolidate state land ownership:

- T32N R29W S.M. sec. 1-18, 20-29 & 32-36
- T33N R28W S.M.
- T34N R27W S.M.
- T33N R26W S.M. sec. 19-21 & 28-33

The following land will be selected to consolidate state land ownership:

- T28S R21E K.R.M. sec. 1, 12-15, 22, 23, 26 & 27

The following township on Sheep Creek will be relinquished because of low resource values:

T29N R26W S.M.

Mineral Closures. One of the only two known sheefish spawning areas that exist in the Kuskokwim drainage are on the Big River. Sheefish spawn over a 2-mile segment of the Big River, approximately 40 to 42 miles up from the mouth. The best spawning area is probably 2 to 2.5 miles above the last large meander in the river. Sheefish enter the Big River from July through early September and probably arrive at the spawning grounds in late September. Though the uplands of this portion of the Big River are owned by BLM, the bed of the river is state owned. To protect this important spawning area, state lands below ordinary high water in the following sections of the Big River will be closed to new mineral entry. This area currently has low mineral potential and no existing mining claims. The boundaries of the closures are described in Appendix H and are shown on Map 2.4.

T31N R30W S.M. sec. 33 & 34

T30N R30W S.M. sec. 4, 5, 7, 8, 9, 17, & 18

Iditarod National Historic Trail System and Race Trail. Both trail systems pass through portions of all this unit (Appendix C). Setbacks along them will be consistent with policies in Chapter 2.

Subunits 4a, 4b, and 4c - South Fork, Hinterlands, and Big River

Agricultural Potential. Although preliminary ratings in the USDA Exploratory Soil Survey show portions of these subunits as having moderate potential for agriculture, detailed information is unavailable to confirm these ratings. To protect options for long-term use of these lands, the Division of Agriculture should be consulted before permits or leases are issued for any activities that would significantly diminish their capability to support agriculture.

RESOURCE INFORMATION SUMMARY

Management Unit 4 - Big River-South Fork

Resource	Subunit		
	4a	4b	4c
Agriculture	Moderate to low potential	Moderate to low potential	Moderate to low potential
Energy	Very high coal potential on Little Tonzona River; rest low to moderate	Very high coal potential on Deepbank Creek; rest low to moderate	Mostly very low, some low potential
Fish	Salmon & resident fish	Salmon & resident fish	Salmon & resident fish
Forestry	Low to unsuitable	Most unsuitable; some moderate potential near Kuskokwim River	High potential along South, Pitka, & Windy Fork rivers ; rest unsuitable
Grazing	High potential	High potential	High potential
Historic/cultural	Iditarod NHTS	Unknown	Iditarod NHTS
Materials	Low potential	Low potential	Low potential
Minerals	Low potential	High near Medfra; rest low potential; mining claims near Medfra	Low potential
Oil & gas	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary	Partially within currently mapped estimated Minchumina sedimentary basin boundary
Public access	Boat on rivers; plane to natural landing areas and airstrips; snow machine trails	Snowmachine trails	Boat on rivers; plane to lakes & riverbars; snowmachine & dog trails
Recreation	Moderate on Iditarod Race Trail; rest low potential	Low potential	Moderate on Iditarod Race Trail; rest low potential
Settlement suitability	Unsuitable	Most unsuitable; pockets of high and low	Most unsuitable; some high and low along rivers
Wildlife	A-1 and B-1; Moose winter range; bear	B-2 and C; Moose winter range; bear	Mostly A-1; some C; Brown bear conc. area; moose winter range
Important trails	Iditarod Race Trail & NHTS; local trails near Medfra; little Tonzona trail	Local trails near Medfra	Iditarod Race Trail & NHTS; Nikolai trail; South Fork River trail; trails near Medfra

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

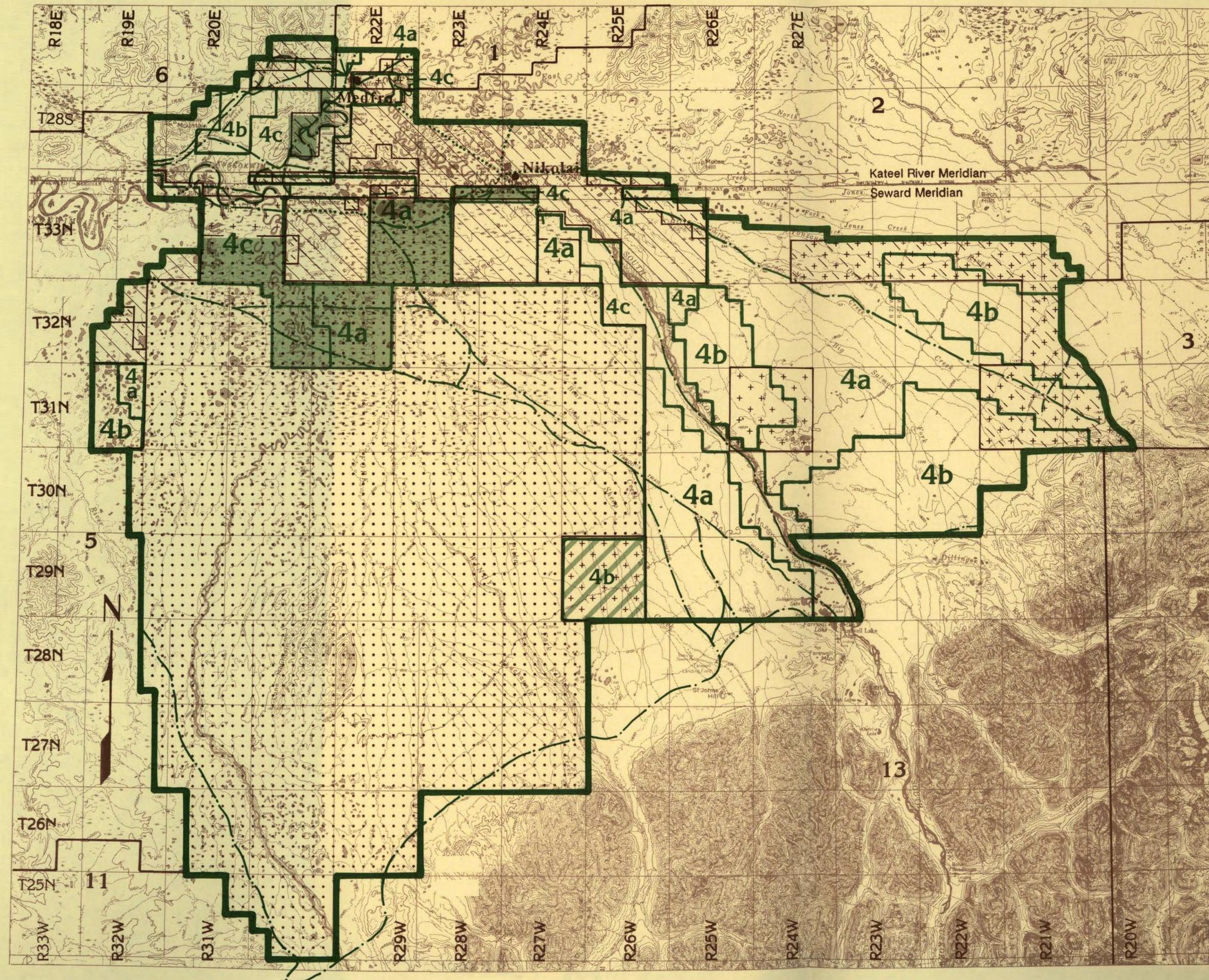
MANAGEMENT UNIT 4 - BIG RIVER-SOUTH FORK

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS			COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a Subsurface ^b	
4a South Fork Uplands	State, state selected, state/Native selected & federal	Wildlife habitat		Grazing in part Land disposals Remote cabins	Open Includes new selections
4b Hinterlands	State, state selected & state/Native select & fed.	General use: low resource values		Land disposals Remote cabins	Open One township proposed for relinquishment
4c Lower Big River and South Fork River	State, state selected & state/Native selected, and federal	Forestry Wildlife habitat		Grazing in part of subunit Land disposals Remote cabins	Open Includes new selections

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

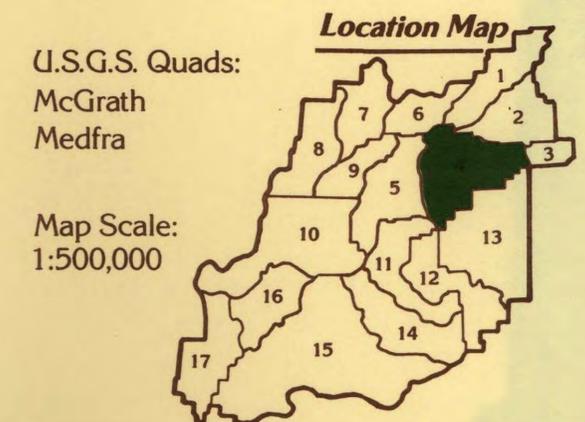
4: Big River - South Fork



— Management Unit Boundary
 — Subunit Boundary

- No Pattern State Owned
- + + State Selected
- / / Native Owned
- / / Native Selected
- Federal
- Proposed State Selections
- / / Proposed Relinquishments
- Trails on public lands
- ANCSA 17 (b) easements & State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.



MANAGEMENT UNIT 5: KUSKOKWIM RIVER

Background

Location and Land Ownership. The Kuskokwim River management unit consists of the watersheds that drain directly into the main stem of the Kuskokwim River between Halfway Mountain and the Tatlawiksuk River. Included are the watersheds of the Nunsatuk, Black, Selatna, Little Selatna, and Katlitna rivers, and Beaver Creek. Two-thirds of these lands are state owned or state selected. Much of the state-selected land overlaps with Native selections. Most of the northern and eastern portions of the unit are Native owned, Native selected, or federal lands. Approximately 35 parcels of private land -- mostly Native allotments -- are scattered along the major rivers. McGrath, the second largest community in the planning area, is in the northwestern corner of the unit.

Resources and Land Use. This unit contains riparian stands of white spruce, birch, and cottonwood. The stands are up to two miles wide along the Kuskokwim River and its major tributaries. Behind the riparian zone are rolling uplands with open black spruce woodlands and shrub vegetation. The main uses of state lands and waters in this area currently are hunting for moose and waterfowl, fishing, trapping, and timber harvest for personal and commercial use. Most use is by McGrath area residents, and in the southern portion of the unit, by people from Stony River and Kwethluk. State lands near McGrath also are important for local recreation. The Roundabout Mountains and the uplands north of Beaver Creek contain moderate to high potential for gold, silver, and base metals. Lands at Appel Mountain were opened for forty homestead entries in 1986. These private parcels are presently used for private recreation; some may be used for residences in the future.

Public Access. State lands near McGrath and those along the rivers are readily accessible. The main stem of the Kuskokwim River is the major transportation route through the

unit; it carries commercial barges and small-boat traffic in the summer and snowmachines and wheeled vehicles in the winter. Some of the Kuskokwim River tributaries are navigable for a part of their length. McGrath serves as the hub for air transportation in the upper Kuskokwim basin. Floatplanes can land on portions of the main river and large sloughs. The Iditarod Race Trail crosses the northern edge of this unit. Other important roads and trails include the Sterling Landing Road, Mail Trail 202, Candle Creek trail, Takotna-McGrath trail, portions of the Iditarod National Historic Trail system, and winter trails on the Kuskokwim River. Local trails are the main access to lands away from the rivers.

Management Intent

This unit contains accessible river corridors and remote uplands. The general management intent for lands along the rivers is to provide opportunities for private land acquisition and to protect public uses of state lands. These lands are some of the most accessible state lands in the Kuskokwim basin, with the highest settlement suitability, forest potential, and habitat value. The highest value forest and habitat lands will be kept in public ownership and managed for forestry for personal and commercial use, fish and wildlife habitat, recreation, and transportation. Interspersed with the retained lands are five areas identified for disposal, in which a total of 18,155 acres are proposed for land offerings. Some of the proposed disposals contain overlapping state and Native selections. These lands cannot be included in state land offerings unless they are conveyed to state ownership. Two areas, one near Candle and the other near Nunsatuk River will be reconsidered for possible sale when this plan is updated.

Lands away from the river will be retained in public ownership and managed for multiple

use. The primary surface use of most of the state land will be fish and wildlife habitat. All state lands retained in public ownership will remain open to new mineral entry. Lands proposed for disposal will be closed to mineral entry before they are offered for sale. Portions of the Beaver Creek and Tatalina River drainages will be open to remote cabin permits.

Although bordered by Native-owned lands, the beds of the Kuskokwim River and other navigable waters such as the Takotna, Katlitna, and Selatna rivers are state owned and are subject to the guidelines in this plan. The state-owned beds of navigable waters in this unit will remain open to mineral entry.

Subunit 5a - Kuskokwim Corridor

The lands bordering the Kuskokwim River from McGrath to Stony River are some of the most productive forestlands in the planning area. The largest commercial timber harvests in the Kuskokwim basin have been in this subunit. In addition, this area provides important moose winter range and migration routes for salmon. People from McGrath, Stony River, Kwethluk, and other downriver communities use this area for moose hunting, fishing, and boating. This subunit is a mix of state-owned lands, state selections, and overlapping state and Native selections. One trapping permit has been issued on state lands south of Devil's Elbow. State lands in this corridor will be kept in public ownership and managed for forestry for personal and commercial use, fish and wildlife habitat and harvest, public recreation, and transportation.

A 6,400 acre block of land along the Kuskokwim River on the southern boundary of this subunit is proposed for state selection because of its good river access and high forestry and habitat values. Most of this block has been selected by Native corporations. If conveyed to the state, it will be managed as part of subunit 5a.

Up to forty entries were allowed in the Appel Mountain disposal in the northern-most block of this subunit. Because of the high density of stakings in the original offering, Appel Moun-

tain will not be reopened for additional stakings; it will be managed as part of subunit 5a.

Subunit 5b - Appel II

This subunit contains state-owned lands and overlapping state and Native selections next to the east boundary of the past Appel Mountain disposal. Approximately 3,000 acres will be offered for private ownership in this subunit to supply land for private recreational and residential use near McGrath. Remaining public lands will be available for timber harvest, fish and wildlife habitat, and public recreation. Because of its proximity to McGrath and accessibility by trail and river, this area is a high priority for near-term disposal.

Subunit 5c - McGrath Townsite

Approximately 55 acres of land that were conveyed to the state for airport facilities have been declared surplus land by the Department of Transportation and Public Facilities and are available for other uses. Because the land is located in McGrath, it is valuable for residential use and local recreation. The City of McGrath has expressed interest in having a part of this land sold for private ownership, but in 1986 decided that a market did not exist for immediate sale. This subunit is designated for settlement and public recreation. If in the future the city council determines that a need exists for additional private land in McGrath, this acreage will be made available for sale. Local recreation sites to be kept in public ownership will be identified at the time a sale is designed. Currently, a city park occupies a small portion of the southwest corner of this subunit.

Subunit 5d - Candle Hills

The Candle Hills subunit is state-selected land along the Sterling Landing Road. The area has high potential for settlement on the south-facing slopes, high potential for hard-rock gold mining, and has been identified as a possible source of riprap for McGrath. Because of current public use of this land, and because of the potential for mineral development, this area will be kept in public ownership in the near term and managed for general public use.

This parcel will be reevaluated when the plan is updated to determine whether it should be kept in public ownership for the long term or offered for sale. This subunit contains approximately 2,400 acres of land that could be offered for sale.

Subunit 5e - Vinasale

The Vinasale subunit consists of one large and two small blocks of overlapping state and Native selections just south of McGrath. These lands have good river access and forest cover and are close to the growing community of McGrath. If the land in this subunit is conveyed to the state, approximately 5,500 acres of land will be made available for private ownership.

This subunit, particularly land around Wilson Slough, is also an important site for pike fishing and moose hunting. Vinasale Mountain is a possible source of riprap for McGrath and is the site of several mining claims. Remains of old villages at Vinasale, two cemeteries, and a Russian-American trading post are contained within the unit. Land offerings in this area will be designed to keep these important public recreation sites, cultural sites, and riprap sources in state ownership.

A 600-acre parcel next to the northernmost block of Native-selected land in this unit is proposed for state selection. If conveyed to the state it will be managed as part of subunit 5e.

Subunit 5f - Selatna

The northern half of the Selatna subunit has overlapping state and Native selections; the southern half is state owned. One trapping cabin permit has been issued on the eastern edge of the subunit. The Native selections are Cook Inlet Region, Inc. (CIRI) out-of-region selections. They are a low priority for CIRI, and are not likely to be conveyed to the corporation. There is one trapping cabin on the eastern boundary of the subunit. The best access through the unit is along the Kuskokwim and Selatna rivers across lands that are overlapping selections. If accessible lands in the subunit are conveyed to the state, ap-

proximately 5,000 acres will be offered for private ownership.

Subunit 5g - Nunsatuk North

Lands west of the Kuskokwim River in this subunit are state selected; east of the river, they are overlapping state and CIRI out-of-region selections. The overlapping selections are a low priority for CIRI and are not likely to be conveyed to the Native corporation. If these selections are conveyed to the state, approximately 4,600 acres of land will be offered for private ownership. If only the lands west of the river become state owned, approximately 3,000 acres of land would be offered. Two possible archaeological sites exist within subunit 5g; land offerings will be designed to avoid disturbance to these sites.

Subunit 5h - Nunsatuk River

The Nunsatuk subunit is state land on the Kuskokwim and Nunsatuk rivers. This land has high potential for settlement and good river access. It is also intensively used by residents of Stony River and downriver communities for trapping and hunting. A possible archaeological site exists in this subunit. Because of the high level of public use, this land will be kept in public ownership in the near term and managed for general use. This parcel will be reevaluated when the plan is updated to determine whether it should be kept in public ownership or offered for sale. This subunit contains approximately 750 acres that could be offered for sale.

Subunit 5i - Hinterlands

The hinterlands comprise several blocks of lands with little access and low to moderate resource values. Most of the hinterlands are state owned, with portions that are state selected or overlapping state and Native selections. Portions of these areas are identified in the USDA Exploratory Soil Survey as having moderate potential for agriculture. However, detailed information on soils and climate is not available to confirm these ratings, and no market currently exists for agricultural land. This subunit will be retained in public ownership and managed for general multiple use.

Most of the block west of the Kuskokwim River in the Beaver Creek drainage will be open for remote cabin permits. Present information indicates that the impacts of military training on state lands south of Tatalina Air Force Station in this subunit or along the upper Dishna River in unit 8 would be less than at other sites proposed in the planning area. Based on preliminary information, these activities appear compatible with the management intent for state lands in this subunit. The Guard has been less interested in this site than the proposed Dishna site described in unit 8 because of the adjacent private lands that may restrict maneuvers. A final decision on the establishment of such a training site will not be made until an environmental assessment is completed (also see units 8 and 9).

Subunit 5j - Black River

The Black River subunit comprises five blocks of high-value habitat lands with little access. Most of the land is state owned; smaller portions are state selected or under overlapping state and Native selections. One trapping cabin permit has been issued in this subunit south of Devils Elbow. High mineral potential and a number of mining claims near Vinasale Mountain occur in T30N R34W S.M. The Iditarod race trail and a section of the Iditarod National Historic Trail System cross the unit.

The lands in the Black River subunit will be retained in state ownership and managed for multiple use with emphasis on fish and wildlife habitat and harvest. The northern half of the main block of state land west of the Kuskokwim River also will be open to remote cabin permits. The north side of Roundabout Mountain is the site of a possible riprap source for McGrath. Extensive bogs west of McGrath in T33N R34W S.M. may have peat of commercial value. Peat and materials extraction is permitted in this subunit when consistent with management of fish and wildlife resources. Present information indicates that the impacts of military training on state lands south of Tatalina Air Force Station in this subunit or along the upper Dishna River in unit 8 would be less than at other sites proposed in

the planning area. Based on preliminary information, these activities appear compatible with the management intent for state lands in this subunit. The Guard has been less interested in this site than the proposed Dishna site described in unit 8 because of the adjacent private lands that may restrict maneuvers. A final decision on the establishment of such a training site will not be made until an environmental assessment is completed (also see units 8 and 9).

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Cultural resources
- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Settlement
- Stream corridors
- Subsurface resources
- Trail management
- Wetlands management

Guidelines specific to this management unit are listed by subunit in the following sections.

Subunits 5a, 5b, 5d, 5e, 5f, 5g, 5h, & 5j - Kuskokwim Corridor, Candle Hills, Appel II, Vinasale, Selatna, Nunsatuk North, Nunsatuk River, & Black River

Grazing. Grazing leases or permits generally will not be allowed in the following areas because of their importance as winter concentration zones for moose. Temporary passage of livestock through this area is allowed to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guideline in Chapter 2 ("Grazing on Important Habitat Lands").

- within 2 miles of the Kuskokwim River within the unit
- within 1 mile of the Takotna River within the unit
- within 1 mile of the Selatna River between its mouth and T27N R34W S.M. sec. 17
- That portion of the unit north of the north half of T26N S.M. and west of the west half of R36W S.M.

Subunits 5a, 5i, and 5j - Kuskokwim Corridor, Hinterlands, & Black River

Agricultural Potential. Although preliminary ratings in the USDA Exploratory Soil Survey show portions of these subunits as having moderate potential for agriculture, detailed information is unavailable. To protect options for long-term use of these lands, the Division of Agriculture should be consulted before permits or leases are issued for any activities that would significantly diminish their capability to support agriculture.

Subunits 5b, 5d, & 5f - Appel II, Candle Hills, & Selatna

Access Needs. If these areas are conveyed to the state and offered for disposal, additional legal access may be needed to be established before sale. See page 4-13 and 4-14 for a more detailed description of access needs.

Subunit 5b - Appel II

Disposal Design. Before offering this subunit for disposal, the Division of Parks and Outdoor Recreation will be consulted to identify a trail route between the Kuskokwim River and the retained lands on the mountain's summit. Fifty-foot staking setbacks will be required along this route to keep public access available between recreation lands on the summit and major trails along the river. The Mail Trail 202 is an important dog-mushing trail, and will be retained in public ownership.

Iditarod National Historic Trail System. Segments of the Iditarod National Historic Trail System cross this subunit. The historic trails

will be retained in public ownership. The width of the publicly owned corridor will be determined at the time the disposal is designed in accordance with the Trail Management guidelines in Chapter 2.

Subunits 5b, 5e, 5f, and 5g - Appel II, Vinasale, Selatna, & Nunsatuk North

Stream Corridors and Wetlands. The rivers within these subunits meander and have many old oxbows. The band of white spruce and hardwood vegetation between the rivers, the oxbows, and wetlands inland from the rivers is typically narrow. To keep good cabin sites available and to protect public access and recreation along the rivers, a 100-foot corridor will be retained in public ownership on each side of the Kuskokwim and Selatna rivers in areas offered for sale in these subunits. Staking will be allowed up to wetlands, but there will be a 50-foot building setback from the wetlands. Outhouses, septic tanks, and other waste-disposal facilities must be sited to meet the Department of Environment Conservation (DEC) guidelines, which include a 100-foot setback from wetlands and water bodies.

Subunits 5b and 5e - Appel II and Vinasale

Local Lotteries. Because these disposals are intended to supply land primarily for local recreation and residential use, lotteries for entry permits in the Appel II and Vinasale disposals should be held in the nearest community, McGrath.

Subunit 5e - Vinasale

Timing of Disposal. Land ownership around this subunit is a complex pattern of state and Native lands. Planning for Native lands is not yet complete in this area. If lands in the Vinasale subunit are conveyed to the state, they will not be offered for disposal until at least 1993 to allow for coordination between state and Native land offerings and consolidation of state lands through land exchanges.

Disposal Design. This subunit contains popular sites for fishing, hunting, boating, and camping by area residents. Wilson Slough is categorized as a recreational lake (see Lakeshore Management guidelines, page 2-18). At least 50 percent of the shore of Wilson Slough will be retained in public ownership, including important public recreation sites. Important public recreation sites on the Kuskokwim River also should be identified before disposal and retained in public ownership.

Navigable Waters on Non-State Lands

Peregrine Falcon Nest. A peregrine falcon nest exists along the Kuskokwim River in T33N R33W S.M. The Habitat Division of the Department of Fish and Game should be consulted before permits or leases are issued on the state-owned beds of navigable waters in the north half of this township.

Subunits 5i and 5j - Hinterlands and Black River

Remote Cabin Permit Areas. Parts of these subunits are within the Tatalina block of the Dishna - Folger - Tatalina remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunit 9b are also within this block. A total of eleven remote cabin permits will be allowed in the Tatalina block, with a maximum of three remote cabin permits allowed in any one township.

RESOURCE INFORMATION SUMMARY

Management Unit 5 - Kuskokwim River

Resource	5a	5b	Subunit	5c	5d
Agriculture	Low to moderate potential	Low potential		N/A	Moderate along river, rest unsuitable
Energy	---	---		---	---
Fish	Takotna R., Nixon Fork, Kuskokwim R., salmon & resident fish	Kuskokwim R.: salmon & resident fish		---	None documented
Forestry	High potential & current use	High along river & south slopes		N/A	Moderate on south slopes
Grazing	High potential	Moderate potential		N/A	Moderate potential
Historic/cultural	High potential along Kuskokwim River & Takotna/Nixon confluence	Moderate potential		N/A	Unknown
Materials	Low potential	Low potential		Unknown	Possible rip-rap source
Minerals	Most low potential, some moderate	Low to very low potential		N/A	Very high potential, existing claims
Oil & gas	Unknown	Unknown		Unknown	Unknown
Public access	Boat, plane, trails on Kuskokwim River & over-land from McGrath	Boat on river, trails from McGrath		Airstrip, city roads	Road from Sterling Landing
Recreation	Moderate along river; local use near Appel Mt.	Local use along river		Local use -- within town of McGrath	Low use and potential
Settlement suitability	Mostly high	High along river & on south slopes		High	High on south slopes
Wildlife	A-2; mosse winter range; bear, wtaerfowl	A-2/C; moose winter range; bear, waterfowl		A-2; bear, moose	B-1; bear, moose
Important trails	Mail Trail 202; Iditarod NHTS	Mail Trail 202 Iditarod NHTS		Local use trails Iditarod NHTS	Sterling Landing - Takotna Road

See glossary for definition of ratings.

RESOURCE INFORMATION SUMMARY

Management Unit 5 - Kuskokwim River

Resource	Subunit			
	5e	5f	5g	5h
Agriculture	Moderate along rivers	Moderate along rivers	Moderate along river	Moderate along Kuskokwim
Energy	---	---	---	---
Fish	Kuskokwim R. & sloughs: salmon & resident fish	Kuskokwim & Selatna: salmon & resident fish	Kuskokwim R.: salmon & resident fish	Kuskokwim & Nunsatuk: salmon & resident fish
Forestry	Mostly high	High along river & on south slopes	High along river	High-moderate along river
Grazing	High potential	Moderate potential	Moderate-high potential	Moderate potential
Historic/ Cultural	Known historic sites	High potential along river	Moderate potential along river	Moderate potential along rivers
Materials	Possible rip-rap source	Low potential	Low potential	Low potential
Minerals	Mostly low potential, some moderate & high potential near Vinasale Mountain	Low potential	Low potential	Very low potential
Oil & Gas	---	---	---	---
Public Access	Boat, plane, trails on Kuskokwim River	Boat, plane, trails on Kuskokwim & Selatna rivers	Boat, plane, trails on Kuskokwim R.	Boat, trails on Kuskokwim & Nunsatuk rivers
Recreation	Moderate use on river and Wilson Slough	Moderate use on rivers	Moderate use on river	Moderate use on rivers
Settlement Suitability	Mostly high	High along rivers	High along river	High in narrow band on rivers
Wildlife	Mostly A-2, some B-1; moose winter range; bear, waterfowl	Mostly A-2, some C; moose winter range; bear, waterfowl	Mostly A-2, some C; moose winter range; bear, waterfowl	A-2; moose winter range; bear
Important Trails	Local trail to Vinasale Mt.	---	---	---

See glossary for definition of ratings.

RESOURCE INFORMATION SUMMARY

Management Unit 5 - Kuskokwim River

Resource	Subunit	
	5i	5j
Agriculture	Mixed: moderate potential to unsuited	Mixed: Moderate potential to unsuited
Energy	---	Peat reserves west of McGrath
Fish	None documented	None documented
Forestry	Most unsuited, pockets with low potential	Most unsuited, pockets with low potential
Grazing	Mixed: low to high potential	Moderate to high potential
Historic/ Cultural	Unknown	Iditarod NHTS west of McGrath
Materials	Low potential	Possible rip-rap source on Roundabout Mt.
Minerals	Most low to very low potential	Most low potential, some moderate; high potential & claims east of Vinasale
Oil & Gas	Part in Minchumina Basin	---
Public Access	Boat on Selatna River	Local trails near McGrath
Recreation	Unknown	High local use near McGrath, rest low potential
Settlement Suitability	Most unsuited, pockets with low potential	Most unsuited, pockets with low potential
Wildlife	B-2/C; bear, moose	A-2/B-1; moose winter range; bear
Important Trails	Trail to White Mt. mine	Iditarod Race Trail Iditarod NHTS Takotna-McGrath trail

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 5 - KUSKOKWIM RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
5a Kuskokwim Corridor	State, state/ Native select. & private	Forestry Public recreation Wildlife habitat		Land disposals Remote cabins Grazing in part of subunit	Open	Includes past Appel Mt. dis- posal; includes proposed selec- tions
5b Appel II	State & state selected	Settlement	Forestry Public recreation Wildlife habitat	Trapping cabins after sale is scheduled Remote cabins Grazing in part of subunit	Closed prior to sale	Net sale area = 3,000 acres
5c McGrath	State	Public recreation Settlement		Trapping cabins Remote cabins Grazing	Closed prior to sale	Net sale area = up to 55 acres
5d Candle Hills	State selected	Resource mgmt.	Forestry Minerals Public recreation Wildlife habitat	Land disposals Remote cabins	Open	Reconsider for sales when plan is updated
5e Vinasale	State/Native selected	Settlement	Forestry Public recreation Wildlife habitat	Trapping cabins after sale is scheduled Remote cabins Grazing in part of subunit	Closed prior to sale	Net sale area = 5,500 acres Historic site present
5f Selatna	State/Native selected	Settlement	Forestry Public recreation	Trapping cabins after sale is scheduled Remote cabins Grazing in part of subunit	Closed prior to sale	Net sale area = 5,000 acres

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 5 - KUSKOKWIM RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
5g Nunsatuk North	State/Native selected	Settlement	Forestry Public recreation Wildlife habitat	Trapping cabins after sale is scheduled Remote cabins Grazing	Closed prior to sale	Net sale area = 4,600 acres
5h Nunsatuk River	State	Resource mgmt.	Forestry Public recreation Wildlife habitat	Land disposals Remote cabins Grazing in part of subunit	Open	Reconsider for sales when plan is updated.
5i Hinterlands	Most state, some state selected, state/Native selected	General use: low values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	
5j Black River	Most state, some state selected, state/Native selected	Wildlife habitat	Public recreation Remote cabins in part of subunit Grazing in part of subunit	Land disposals Remote cabins in part of subunit	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

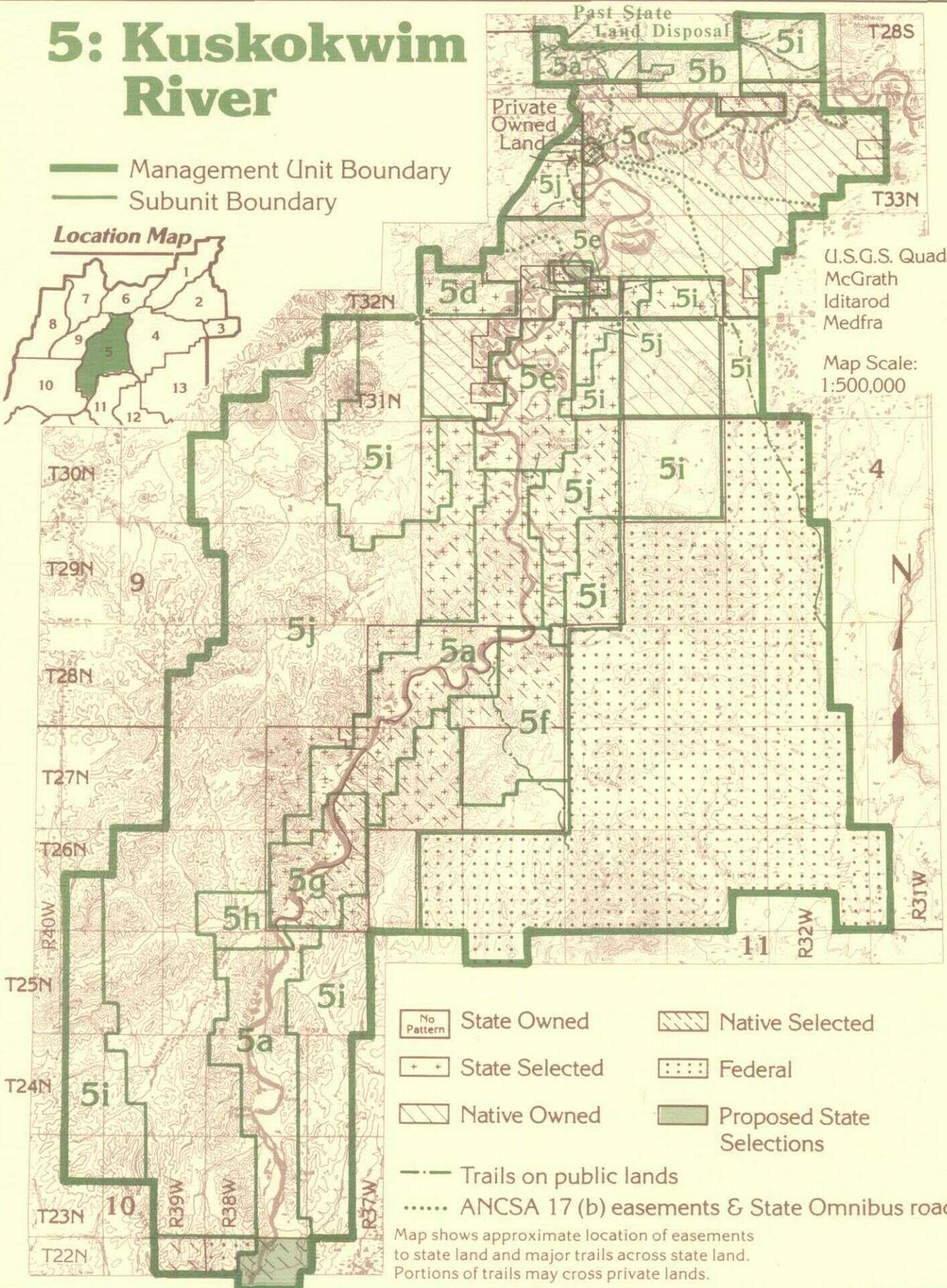
^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

Kuskokwim Area Plan

5: Kuskokwim River

-  Management Unit Boundary
-  Subunit Boundary

Location Map



U.S.G.S. Quads:
McGrath
Iditarod
Medfra

Map Scale:
1:500,000

- | | | |
|--|--|---|
|  No Pattern | State Owned |  Native Selected |
|  + + | State Selected |  Federal |
|  / / | Native Owned |  Proposed State Selections |
|  - - - | Trails on public lands | |
|  | ANCSA 17 (b) easements & State Omnibus roads | |

Map shows approximate location of easements to state land and major trails across state land. Portions of trails may cross private lands.

MANAGEMENT UNIT 6: NIXON FORK

Background

Location and Land Ownership. This management unit consists of the watersheds that drain into the Nixon Fork River. About three quarters of the lands in this unit are state owned. About six percent are state selected, five percent are Native-owned or selected, and the remainder are overlapping selections. There are only a few Native allotments in this unit that are located on the lower Nixon Fork.

Resources. This unit includes large tracts of uplands that are covered primarily with shrubs, black spruce, and sedges. There are some stands of white spruce in the unit along the Nixon Fork and West Fork rivers; along Wabash, Ivy, John Reek, and Broken Snowshoe creeks; and along some minor unnamed creeks. Cottonwood and birch are found on stretches of the Nixon Fork and West Fork rivers and on some south-facing slopes. Major peaks in the area including the Cloudy Mountains and Page Mountain are covered with arctic tundra. Some important wildlife areas exist in this unit. Brown bears concentrate in the Sunshine Mountains. Caribou are known to calve just north of Appel Mountain and concentrate in winter along the Nixon Fork as far upriver as Cottonwood Creek and along West Fork River. Anadromous fish are found in the Nixon Fork upriver to Cottonwood Creek. The known cultural and historic resources within the area are associated with the gold rush era. Several sites are located near Mystery and Ruby creeks and part of the Iditarod Historic Trail System (Mail Trail 202) passes through the southern part of the unit.

Access and Land Use. Access to the area is primarily by boat along the Nixon Fork in summer. Travel in winter is by snowmachine or dog team along a number of established trails, traplines, and rivers. The area is used by residents of McGrath and Takotna. Residents of McGrath use the lower North Fork and its drainages to hunt moose, bear, caribou, and ducks. They trap up the North Fork al-

most as far as Von Frank Mountain and north into the Nowitna drainage. McGrath residents also use the lower Nixon Fork for firewood, house logs and berry picking. Takotna residents also use this unit, but on a more limited basis. They hunt caribou, moose, and bear. Recent state land sales near Appel Mountain and other land sales and remote cabin permit offerings planned in the area should increase the use of this unit, particularly along the Nixon Fork.

Mining activity is currently taking place near Hidden, Ruby, and Mystery creeks. There are also claims near the Cloudy Mountains, Strand Peak, Limestone Mountain, and Von Frank Mountain. The Nixon Fork gold-copper-silver deposits have been a significant producer of these metals in past years, and exploration is currently underway employing local labor each season.

Management Intent

The general management intent for this unit is to provide opportunities for public recreation, and to support the continued public use of fish, game, timber, and mineral resources. All the land in this unit will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat, forestry, public recreation, and mining. Remote cabin permits will be allowed in this unit with no more than three cabins in any one township. Remote cabins are prohibited in parts of the unit to avoid conflicts with brown bear concentration areas, mining activities, trapping and recreation. Grazing will be prohibited in some areas to avoid conflicts with caribou calving, winter moose habitat, and brown bear concentration areas. Although bordered by Native-owned lands, the bed of some tributaries of the Nixon Fork River are navigable and subject to the guidelines in the plan. State land and beds of navigable waters in this unit will remain open to mineral entry.

Subunit 6a - Nixon Fork

This subunit consists primarily of state-owned land along the Nixon Fork and West Fork rivers. The southwestern part of the unit, particularly along the lower Nixon Fork River, is frequently used by residents of McGrath and Takotna. There are a number of trails in this unit along the West Fork and Nixon Fork rivers. There are also local trails which connect Medfra, Takotna, and McGrath on the lower Nixon Fork. This unit will be managed for multiple use with an emphasis on hunting, trapping, fishing, wildlife habitat, public recreation, and forestry. A small part of this unit on Ivy Creek will be open to remote cabin permits. For the most part, remote cabin permits are not allowed along the Nixon Fork River in order to avoid conflicts with existing levels of public use and trapping. Grazing will not be permitted in parts of this unit along the Nixon Fork and West Fork rivers because of their importance as moose wintering habitat and as a caribou calving area.

Subunit 6b - Hidden Creek

This subunit has several active mining claims along Ruby, Mystery, and Hidden creeks. The subunit contains significant gold-copper-silver deposits and exploration is currently underway. Many of these claims date back to the gold rush and have historic significance. There are also a number of trails in this unit that connect the mining district with Takotna, McGrath and Medfra. Grazing will not be allowed in parts of this unit because of its importance as a winter moose concentration area. Remote cabins will not be permitted in this subunit in order to avoid conflicts with mining. This unit will be retained in public ownership and managed for multiple use with emphasis on mining and wildlife habitat.

Subunit 6c - Hinterlands

This subunit is composed of remote lands that are away from the major rivers and have low surface resource values. Grazing will not be allowed along the Nixon Fork and West Fork rivers because of important winter moose habitat and caribou calving. Grazing will not be allowed in the Sunshine Mountains be-

cause of brown bear concentrations. Remote cabin permits are allowed in part of the western-most block of this subunit. Remote cabins are not permitted in the remainder of the subunit to avoid conflicts with trapping, hunting, and public recreation. Dog mushers in McGrath have expressed interest in building a public use cabin on the Mail Trail 202. This type use would be consistent with the management intent of the subunit. These lands will be retained in public ownership and managed for general use.

Subunit 6d - Page Mountain

This subunit is composed of remote lands that include the upper Nixon Fork, the Sunshine Mountains, and uplands adjacent to the lower Nixon Fork. Grazing will not be allowed along the upper Nixon Fork, the lower Nixon Fork Flats, and the Sunshine Mountains because of important moose winter habitat, summer brown bear concentrations, and caribou calving. Remote cabins are allowed in most of the blocks of this unit that are located north of the Nixon Fork River. Dog mushers in McGrath have expressed interest in building a public use cabin on the mail trail 202. This type use would be consistent with the management intent for the subunit. This subunit will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Public access
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Subsurface resources
- Stream corridors and instream flow
- Trail management
- Wetlands management

Subunit 6a, 6b, and 6d - Nixon Fork, Hidden Creek, & Page Mountain

Grazing. Grazing leases or permits will not be allowed along the Nixon Fork River and West Fork River and in the Sunshine Mountains because of their importance as a moose winter concentration and caribou calving area. This does not prohibit temporary passage of domestic grazing animals through this area to travel between areas where grazing is permitted (Map 2.1). Grazing may be allowed in portions of these closed areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands").

Grazing leases or permits will not be allowed in the following areas:

- Within 1.5 miles of the Nixon Fork River between the south boundary of the unit and the west boundary of T24S R22E K.R.M.
- Within .5 mile of the west fork of the Nixon Fork within
 - T26S R18E K.R.M.
 - T25S R18E K.R.M.
 - T25S R19E K.R.M.
 - T23S R20E K.R.M. sec. 20, 21 & 26-35
 - T24S R20E K.R.M. sec. 2-4 & 10-14
 - T24S R21E K.R.M. sec. 7
 - T26S R18E K.R.M. sec. 11-36
 - T27S R17E K.R.M. sec. 1-4, 9-16, 20-29 & 31-36
 - T27S R18E K.R.M. sec. 2-11, 15-22 & 28-33
 - T28S R17E K.R.M. sec. 1-18
 - T28S R18E K.R.M. sec. 5-7

Subunit 6a and 6c - Nixon Fork, Hinterlands, & Page Mountain

Remote Cabin Permit Areas. Parts of these subunits are within the Folger block of the Dishna-Folger-Tatalina remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunits 6a and 6c are also within this block. A total of 36 remote cabin permits will be allowed in the Folger block, with a maximum of three remote cabin permits allowed in any one township.

Subunit 6b - Hidden Creek

Historic and Cultural Sites. There is a known concentration of historic and cultural sites around Hidden, Ruby, and Mystery creeks. These sites are associated with the gold rush era. The Division of Parks and Outdoor Recreation should be contacted prior to leases or permits being authorized in this subunit.

RESOURCE INFORMATION SUMMARY

Management Unit 6 - Nixon Fork

Resource	Subunit			
	6a	6b	6c	6d
Agriculture	Low to unsuitable	Low to unsuitable	Low to unsuitable	Low to unsuitable
Energy	Very low potential	Very low potential	Very low potential	Unsuitable
Fish	Salmon & anadromous fish	Salmon & anadromous fish	Resident fish	Salmon & anadromous fish
Forestry	High along Nixon Fork; moderate along tribs.; rest unsuitable	Low potential to unsuitable	Low potential to unsuitable	Low to unsuitable
Grazing	High to moderate potential	High to moderate potential	High to moderate potential	High to moderate potential
Historic/cultural	Unknown	Historic sites present	Unknown	Unknown
Materials	Low potential	Low potential	Low potential	Low potential
Minerals	Most very low; some moderate; a few existing claims	Very high potential; many existing claims	Low, moderate, & high potential; some existing claims	Very low to moderate; a few mining claims
Oil & gas	Unknown	Unknown	Unknown	Unknown
Public access	Boat on Nixon Fork; local trails	Airstrip; local trails	Local trails	Boat and trails along Nixon Fork
Recreation	Moderate use on Nixon Fork	Low potential	Low potential	Low potential
Settlement suitability	High along Nixon Fork; rest moderate to unsuitable	Low to unsuitable	Most unsuitable; some moderate to low	Mostly unsuitable; some high along Nixon Fork
Wildlife	A-2 and B-1; moose calving & winter range caribou calving; ducks, geese	Mostly C, some B-1; moose calving & winter range; caribou winter range; bear	C and B-2; caribou winter range; bear ducks, moose	A-2 and B-1; moose calving and wintering; brown bear concentration area; caribou calving; ducks, geese
Important trails	Nixon Fork trail; Hidden Cr. trail; West Fork trail; Hosmer Cr. trail; local trails	Medfra-Nixon Fork trail; local mining trails	Iditarod NHTS; Mail Trail 202; Upper Nixon Fork trail; West Fork trail; Hosmer Creek trail; local trails	Trails along Nixon Fork

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 6 - NIXON FORK

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
6a Lower Nixon Fork	State, state selected & state/Native selected	Forestry Public recreation Wildlife habitat	Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open	
6b Hidden Creek	State selected	Minerals Wildlife habitat		Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open	Historic sites present
6c Hinterlands	State, state selected, & state/Native selected	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	
6d Page Mountain	State & state/ Native select.	Wildlife habitat		Grazing in part of subunit Land disposals Remote cabins	Open	

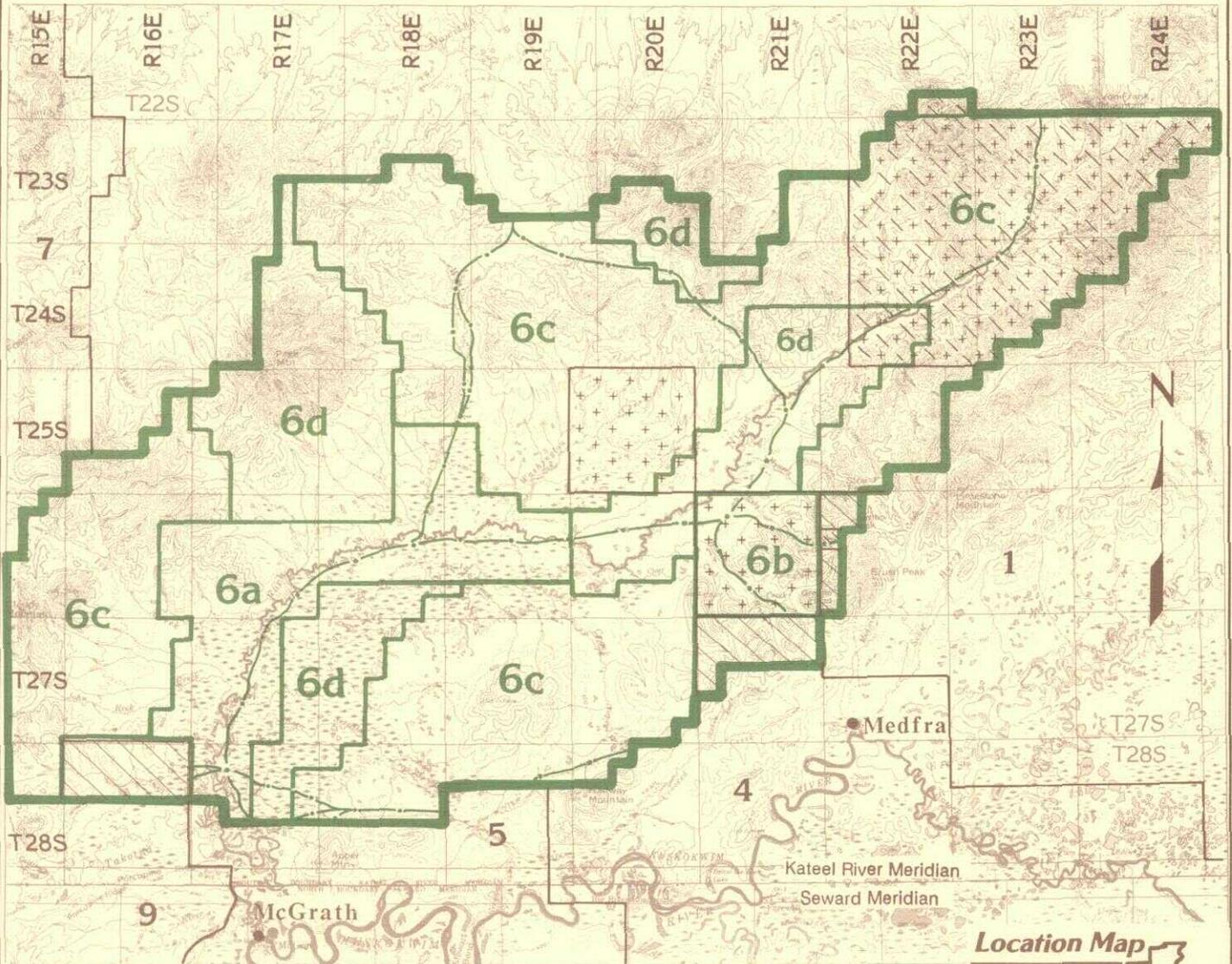
^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

Kuskokwim Area Plan

6: Nixon Fork

-  Management Unit Boundary
-  Subunit Boundary



Location Map



-  State Owned
-  Native Owned
-  State Selected
-  Native Selected

 Trails on public lands
 Map shows approximate location of trails across state land. Portions of trails may cross private lands.

U.S.G.S. Quad:
 Medfra
 Map Scale:
 1:500,000

MANAGEMENT UNIT 7: INNOKO RIVER

Background

Location and Land Ownership. The Innoko management unit consists of the watersheds within the planning area that drain into the Innoko River. Major tributaries that are included in this unit are: Hunch, Colorado, Folger, and Beaver creeks. Approximately 95 percent of the lands in this unit are state owned or state selected. Only a few sections are overlapping Native and state selections. Native-owned land in this unit totals approximately two townships located near Ophir. Approximately 76 mineral claim patents and applications are located in the unit. All of these are located near Ophir. One Native allotment is located near Ophir and three are located near Cripple Landing. Although there are few year-round residents in the area, there is a major influx of miners into the region during the summer months to placer operations, near Folger, Madison Mountain, Ophir, and Ganes Creek.

Resources. This unit contains narrow riparian stands of white spruce along the lower Innoko River, Hunch Creek, and Folger Creek. The upper Innoko floodplain is vegetated primarily with mixed spruce, birch, and cottonwood. Middle elevations support mixed shrubs. Higher elevations are primarily covered with open stands of black spruce with some hardwoods on south-facing slopes.

Land Use. Timber in this unit is primarily used for house logs, firewood, and mining-related activities. The main uses and potential of state lands and waters in the area are mining, trails that access the mining districts, the Iditarod National Historic Trail system and race trail, personal-use timber, and a possible road corridor between Ophir and Poorman.

Because of the distance by river from communities and the lack of diversity of big game, subsistence hunting and trapping are taking place at low levels. McGrath and Takotna residents hunt moose along the upper Innoko River. They also hunt moose and bear and

trap beaver along the Ophir-Takotna Road and Beaver Creek. Caribou are hunted on the upper reaches of Folger Creek. Bear hunting and beaver trapping also take place in the vicinity of Folger. There are only two exclusive use guiding areas in the unit.

Access. State lands near Ophir are readily accessible by a road which connects with Takotna and Sterling Landing. The road to Sterling Landing is owned by the state, is maintained by DOT/PF on a seasonal basis, and is open to the public. A DOT/PF-owned airstrip is located in Ophir which is now closed. Private airstrips are located at Ganes Creek and at Folger. Cat trails are frequently used, primarily in winter, to transport equipment, fuel, and goods to mining operations. Because of its distance from the Yukon River villages, the upper Innoko River is a seldom-used means of access in summer. However, sections of the river are used as a winter trail.

Trails and historic sites in the unit are associated primarily with mining which dates back to the first gold rush into the area in 1907 after gold was discovered at Ganes Creek. Many of these trails are now identified as part of the Iditarod National Historic Trail system (Appendix C) which connected Ophir, Ganes Creek, Folger, Cripple Landing, and Dishkakat. Trails near these heavily-mineralized areas are some of the densest in the entire planning area. Many of these trails are still used by miners to access claims. The Iditarod race trail follows these old trails and passes through Takotna, Ophir, and Cripple Landing. These areas also have documented concentrations of historic sites associated with mining in the early part of this century.

Management Intent

Because of the remote location of this unit, high subsurface values, and distances from population centers, the primary historic and

current use of this area has been activities associated with mining. Activities and resources associated with mining include mining claims, highly mineralized areas, trail use, historic sites, and timber harvest. State lands within this unit will be retained in public ownership and managed for multiple use. Because of the area's distance from existing communities and generally low habitat values (with the exception of winter moose habitat, trapping, and anadromous streams along the Innoko River) this area is suitable for remote cabins at low density. Approximately 30 remote cabin permits will be allowed in this unit with no more than three cabins in any one township. To avoid conflicts with mining activities in areas with both high mineral potential and current mining, remote cabin permits will not be allowed in the Folger, upper Folger Creek, Ganes Creek, Yankee Creek, Spaulding Creek, Ophir, and Madison Creek areas (Map 2.2).

Although bordered by Native-owned lands, the bed of the upper Innoko River and the lower reaches of some of its larger tributaries are navigable and subject to the guidelines in the plan. State-owned beds of navigable waters in this unit will remain open to mineral entry.

Subunit 7a - Ophir-Folger-Madison-Twin Mountains

This subunit contains some of the richest mineralized lands in the planning area. Mining dates back to the gold rush era. Remote cabin permits are not allowed in this subunit because of potential conflicts with mining, public use, and trapping. Wildlife resources are utilized to a limited degree in this subunit. McGrath and Takotna residents hunt and trap in the areas around Ophir and Folger. This subunit contains portions of the Iditarod National Historic Trail system and race trail. These and other trails are extensively used to access mining claims around Folger, Ophir, Ganes Creek, and Eldorado Creek. The subunit will be kept in public ownership and managed for multiple use with emphasis on minerals, transportation, and wildlife habitat.

Subunit 7b - Innoko River Corridor

This subunit is entirely state owned. Two trapping cabin permits have been issued in this subunit on the Innoko River. Lands along the Innoko River contain several trails including the Iditarod National Historic Trail system and race trail. These trails and the Innoko River provide the primary means of access into this subunit. The lands along the Innoko River contain the highest timber values in the unit but are used only to a limited degree at present. The Innoko River corridor contains winter moose concentration and anadromous fish habitat. A proposed road corridor that would connect Ophir and Poorman passes through this subunit; it parallels the Innoko River and Hunch Creek (see Appendix C). Grazing is not permitted along the Innoko River to avoid conflicts with moose habitat. McGrath and Takotna residents hunt and trap along the upper Innoko River and along upper Beaver and Folger creeks. This subunit also contains some mineralized lands near Madison Mountain, Beaver Creek, and Twin Mountain. Lands in this subunit will be retained in public ownership and managed for multiple use with emphasis on forestry, transportation, and wildlife habitat.

Subunit 7c - Hinterlands

Lands in this subunit are state owned, contain low surface resource values and do not have river or road access. One trapping cabin permit has been applied for on the south fork of Folger Creek. State lands in this unit will be managed for general multiple use. Remote cabin permits are allowed in parts of the subunit east of the Beaver Mountains and north of Cloudy Mountain. The subunit is primarily used for access to mineralized areas near Folger, Madison Mountain, Ophir, and Ganes Creek. Options for access will be protected and remote cabins will be set back from identified trails as prescribed in Chapter 2. The land within the subunit will be retained in public ownership and managed for general use.

Subunit 7d - Innoko River Uplands

Lands in this subunit are mostly state owned with some overlapping state and Native selections. With the exception of the block near Ophir, this subunit does not have river or road access. There are, however, cat trails which access mining claims. Segments of the Iditarod National Historic Trail System also cross this subunit. McGrath and Takotna residents hunt and trap in areas around Ophir. This unit contains habitat for moose, bear, and furbearers but other surface resource values are low. Remote cabin permits will be allowed in northern-most block of the subunit. The land within the subunit will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Forestry
- Public access
- Remote cabins and trapping cabins
- Subsurface resources
- Trail management

Subunits 7a and 7b - Ophir-Folger-Madison-Twin Mountains, and Innoko River Corridor

Grazing. Grazing leases or permits will not be allowed within 2.5 miles of the Innoko River between the north plan boundary and the mouth of Warner Creek in subunits 7a and 7b because of the areas importance as a moose winter concentration area (Map 2.1). Temporary passage is not prohibited through this

river corridor to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands").

Subunits 7c and 7d - Hinterlands and Innoko River Uplands

Remote Cabin Permit Areas. Parts of these subunits are within the Dishna and Folger blocks of the Dishna-Folger-Tatalina remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunits 7c and 7d are also within these blocks. A total of 74 remote cabin permits will be allowed in the Dishna block, and a total of 36 remote cabin permits will be allowed in the Folger block, with a maximum of three remote cabin permits allowed in any one township.

Subunits 7a, 7b, and 7c - Ophir-Folger-Madison-Twin Mountains, Innoko River Corridor, and Hinterlands

Ophir - Poorman Road Corridor. Residents of Takotna have expressed interest in maintaining options for a future road corridor between Ophir and Poorman. DOT/PF has conducted a preliminary reconnaissance survey and identified a general corridor through which the road might pass. Because the survey was based on aerial photos and the USDA Exploratory Soil Survey, the possible corridor is a generalized 1-3 mile-wide route (see Appendix C) in subunits 7a, 7b, and 7c. Beginning at Ophir, it follows the Innoko River to just south of Cripple Landing at which point it follows Hunch Creek and passes just southeast of Hunch Mountain.

Iditarod National Historic Trail system and race trail. Both trail systems pass through these subunits. Setbacks along them will be consistent with policies in Chapter 2.

RESOURCE INFORMATION SUMMARY

Management Unit 7 - Innoko River

Resource	Subunit			
	7a	7b	7c	7d
Agriculture	Unsuitable	Most unsuitable, low along Hunch Cr.	Unsuitable	Unsuitable
Energy	Very low coal potential	Very low coal potential	Mostly very low; low coal potential near Fossil Mt.; rest very low	Very low coal potential
Fish	Innoko R., Beaver Cr., Gaines Cr.: resident fish; Innoko R.: salmon	Salmon & resident fish	Resident fish	Resident fish
Forestry	High potential along upper Innoko R.; moderate on some S slopes; rest unsuitable	High to moderate potential along Innoko R., lower Beaver & Hunch Cr.; rest unsuitable	Low along Folger Cr.; rest unsuitable	Low to unsuitable
Grazing	High potential	High potential	High potential	High potential
Historic/cultural	Historic sites at Ophir & Folger; Iditarod NHTS	Iditarod NHTS Historical sites near Ophir	Iditarod NHTS	Iditarod NHTS
Materials	Low potential	Low to moderate potential	Low potential	Low potential
Minerals	High to very high near Ophir, Folger, and Eldorado creeks; numerous mining claims	Low to moderate; numerous mining claims	Moderate to high potential; numerous mining claims	Moderate to low; mining claims
Oil & gas	Unknown	Unknown	Unknown	Unknown
Public access	Ophir-Takotna road, boats on Innoko R., airstrips, cat trails	Boat on Innoko R., airstrips, cat trails	Cat trails	Cat trails
Recreation	Low except along Iditarod Tr.	Low except along Iditarod Tr.	Low except along Iditarod Tr.	Low
Settlement suitability	High along Innoko R.; rest low to unsuited	High along Innoko R.; rest low to unsuited	Low on Folger Cr. & S slopes; rest unsuitable	Unsuitable
Wildlife	Mostly B-2, some A-2 and C; bear, moose	A-2 and B-1; moose winter range, bear, waterfowl	Mostly C, some B-2; bear, moose	A-2 and B-1; bear, moose
Important trails	Iditarod Race Trail & NHTS, cat trails	Iditarod Race Trail & NHTS, cat trails	Iditarod Race Trail & NHTS, cat trails	Iditarod NHTS, cat trails

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 7 - INNOKO RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
7a Ophir-Folger Madison-Twin Mountains	Most state, some state/ Native select. some private	Minerals Transportation Wildlife habitat	Forestry Public recreation	Grazing in part of subunit Land disposals Remote cabins	Open	
7b Innoko River Corridor	Most state, some state/ Native select.	Forestry Transportation Wildlife habitat	Public recreation	Grazing in part of subunit Land disposals Remote cabins	Open	Includes proposed road corridor along Innoko River
7c Hinterlands	State, some state select.	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	Road corridor along Innoko River
7d Innoko River Uplands	State, some state/Native selected	Wildlife habitat	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

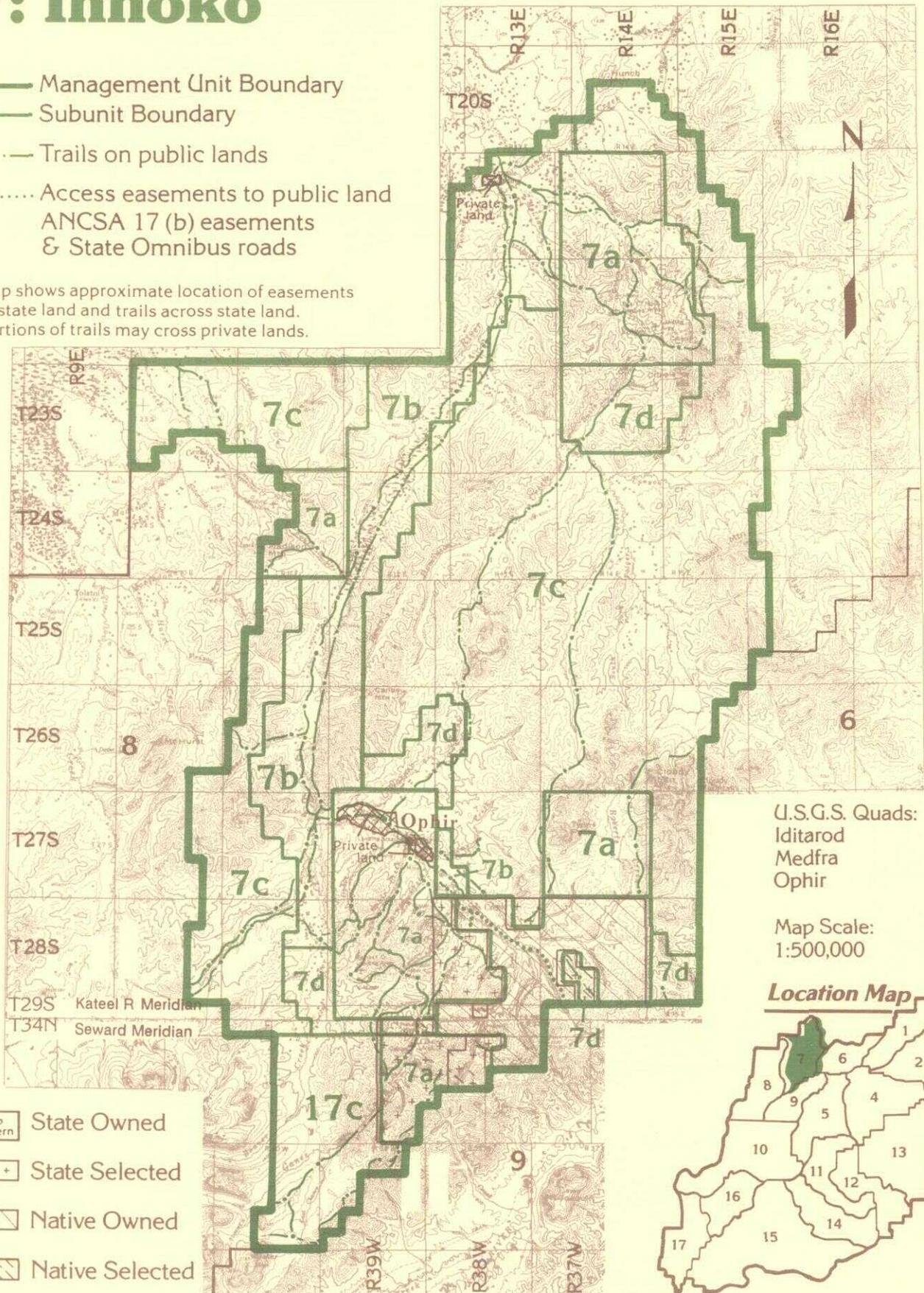
^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

Kuskokwim Area Plan

7: Innoko

-  Management Unit Boundary
-  Subunit Boundary
-  Trails on public lands
-  Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.



U.S.G.S. Quads:
Iditarod
Medfra
Ophir

Map Scale:
1:500,000

Location Map



-  No Pattern State Owned
-  + + State Selected
-  Diagonal lines Native Owned
-  Cross-hatch Native Selected

MANAGEMENT UNIT 8: DISHNA - IDITAROD

Background

Location and Land Ownership. This management unit is in the watersheds of the Dishna River, Iditarod River, and Tolstoi Creek. The terrain is mostly rolling hills with the exception of the Beaver Mountains which are over 3,500 feet and contain several high alpine lakes. The lands within the management unit are entirely state owned with the exception of two Native allotments along the Iditarod River. The Innoko National Wildlife Refuge is located along the western border of this unit.

Resources. Stands of white spruce are found in a corridor along Tolstoi Creek, lower Madison Creek, and along the Dishna River upstream to the junction with Windy Creek. Mixed stands of hardwoods consisting of birch and cottonwood are found along the Iditarod River, the Dishna River between Windy and Porcupine creeks, and Windy, Otter, and lower Billy Goat, and Moose creeks. Scattered stands of mixed hardwoods are also found along south-facing slopes. Open stands of black spruce are found on north-facing slopes, permafrost areas, and in poorly drained areas. Most of the unit is covered with mixed shrubs. The higher elevations of Camelback Mountain, the Beaver Mountains, and Mount Hurst are tundra covered.

Resource Use. Mining claims and mining activity are concentrated in the Tolstoi area, on Mastodon and Madison creeks, in the Beaver Mountains, and adjacent to Flat. Every summer there is an influx of miners into the area particularly around the Beaver Mountains, Flat, Madison Creek, and Mastodon Mountain. Because of its remote location, the area is not heavily used for hunting. Some use occurs, however, in the Beaver Mountains where McGrath and Takotna residents and guides hunt caribou and moose. Residents of Holy Cross and Shageluk use the areas along the Iditarod River for hunting and trapping. There is a limited amount of hunting from miners and the few year-round resi-

dents in the area. A site on the Upper Dishna River is currently being considered for a training facility by the Alaska National Guard. Surrounding areas would be used for maneuvers.

Access. The southern route of the Iditarod race trail passes through the unit and is used on alternate years. Several trails identified as part of the Iditarod National Historic Trail system and historic sites and structures associated with it are found within the unit. These include the Iditarod and Tolstoi mining districts, the Iditarod-Dikeman trail, the Iditarod-Flat tram/trail, the Hunter trail, the Ophir-Diskakat trail, and the Ophir-Iditarod summer trail. These trails and sites date back to the gold rush era and many of them continue to be used today for transporting equipment, fuel, and supplies to mining operations and for travel by local residents. Primary access into the area is by small plane to the Flat airstrip, airstrips associated with mining operations, small lakes in the Beaver Mountains, frozen rivers, and snow-covered open areas. Snow machines and dog teams are used along rivers and trails in winter. Because of their distance from Yukon River villages, the Dishna and Iditarod Rivers are infrequently used by boats during the summer months.

Management Intent

This unit will be retained in public ownership and managed for multiple use with emphasis on forestry, mining, wildlife habitat. Remote cabin permits will be allowed in part of this unit with no more than three cabins in any one township. Remote cabins will not be permitted in the vicinity of the lower Dishna River, the Iditarod River, Tolstoi, and the Beaver Mountains to avoid conflicts with public recreation, wildlife habitat, trapping, and mining. Subunits 8a and 8b have moderate to high suitability for settlement and will be reconsidered for possible sale when this plan is updated but will be managed

for general use until then. Grazing will not be permitted in certain areas to avoid conflicts with moose winter habitat, brown bear concentration areas, and caribou calving. The number of commercial recreation leases will be limited in the Beaver Mountains in order to protect public access and camping on higher elevation lakes. All state lands retained in public ownership will remain open to new mineral entry.

Subunit 8a - Lower Dishna River

This subunit is entirely state owned and includes the river corridor of the lower Dishna River and its adjacent uplands. Public lands will be available for timber harvest, hunting, trapping, and fish and wildlife habitat. A small northern portion of this unit along the Dishna River is important moose wintering habitat; grazing will not be allowed in this area. Remote cabin permits will not be allowed in this subunit to avoid conflicts with trapping. This subunit will be retained in state ownership and managed for general use. When the plan is amended, this parcel will be reevaluated to determine whether it should be kept in public ownership for the long term or offered for sale. The subunit contains approximately 3,100 acres suitable for settlement.

Subunit 8b - Iditarod River

With the exception of a few Native allotments, this subunit is entirely state owned and includes the river corridor on the east side of the Iditarod River and its adjacent uplands. This subunit is bordered on the north by the Innoko National Wildlife Refuge and to the south by private and Native-owned lands around Flat. A small portion of this unit along the Innoko River is important moose wintering habitat; and grazing will not be allowed in this area. Historic sites associated with the gold rush era and Native cultural sites are located in parts of this subunit. The sites are a result of an influx of gold miners at the turn of the century. Historic and probably prehistoric Ingulik Indian villages and campsites are scattered along the river. There has been little historic or archeological study in the area and few sites have been documented. This unit will be

retained in state ownership and managed for general use. When the plan is amended, this parcel will be reevaluated to determine whether it should be kept in public ownership for the long term or offered for sale. The subunit contains approximately 2,200 acres suitable.

Subunit 8c - North Flat

This subunit is entirely state owned. Historic sites associated with the gold rush era and Native cultural sites are located in parts of this subunit. The sites are a result of an influx of gold miners at the turn of the century. There are some mining claims in the subunit. The subunit is used primarily by residents of Flat and some of the villages on the Yukon. Remote cabin permits will not be allowed in this subunit in order to avoid conflicts with mining and public use. This subunit will be retained in public ownership and managed for multiple use with emphasis on mining and wildlife habitat.

Subunit 8d - Upper Dishna River

This subunit contains lands with high potential for forestry and wildlife habitat along the Dishna River. The Alaska National Guard is currently considering the area around the Upper Dishna River for a training facility and maneuver area. Remote cabin permits will not be allowed in this subunit in order to avoid conflicts with trapping. This subunit will be retained in public ownership and managed for multiple use with emphasis on forestry and wildlife habitat.

Subunit 8e - Hinterlands

This unit does not have high surface resource values and is primarily used for transportation between mining areas. The subunit contains some important historic and cultural resources. Many areas along Bonanza Creek have historical importance going back to the gold rush era. Moose Creek halfway cabin on Bonanza Creek is related to the Iditarod National Historic Trail as is the Fourth of July Creek roadhouse on the north side of Camelback Mountain. The Division of Parks and Outdoor Recreation should be contacted

prior to remote cabin permits being authorized in this area in order to avoid or minimize damage to these sites. The Alaska National Guard has expressed interest in applying for a long-term lease for a training facility located approximately two miles northwest of the junction of the Dishna River and Porcupine Creek. The Guard has also expressed interest in applying for permits for maneuvers in the surrounding area. Present information indicates that the impacts of Guard training in the Upper Dishna area would be less than other areas proposed in the planning area. With the preliminary information available, these activities appear compatible with the management intent for state lands in the Dishna area. A final decision on the establishment of such a training site will not be made until an environmental assessment is completed. This does not preclude the Department of Military Affairs from considering a training site south of Tatalina on state lands or negotiating a lease with private landowners in that area (see Units 5 and 9).

Grazing will not be allowed in a small part of this subunit near the Beaver Mountains which is a brown bear concentration area. Remote cabin permits are allowed in portions of this unit but permits will not be allowed in some areas in order to avoid conflicts with mining activity near Tolstoi and the Beaver Mountains; hunting; a brown bear concentration area; and trapping. This subunit will be retained in public ownership and managed for general use.

Subunit 8f - Beaver Mountains-Madison Creek-Mastodon Creek

This subunit includes some important mining areas east of Tolstoi, northeast of Flat, and in the Beaver Mountains. The Beaver Mountains are also an important caribou and moose hunting area for residents of McGrath and Takotna and guides. The Beaver Mountains are also important for brown bear at certain times of the year. Grazing will not be allowed in portions of this area to avoid conflicts with caribou and brown bear. The Alaska National Guard is currently considering the area around the upper Dishna River for a training facility and maneuver area. Remote cabin

permits are allowed in parts of this unit. In the Beaver Mountains and near Tolstoi they are prohibited in order to avoid conflicts with mining and brown bear concentration areas. The number of commercial recreation leases in the Beaver Mountains that are authorized will be limited. Trapping cabins will not be allowed within one-half mile of Tolstoi Lake. There is interest on the part of residents of McGrath and Takotna in building a public use cabin in the Beaver Mountains. This is an allowed use in this subunit. The state lands in this subunit will be retained in public ownership and be managed for multiple use with emphasis on mining, public recreation, and wildlife habitat.

Subunit 8g - Dishna Uplands

This subunit is state owned and has high wildlife habitat values. Other surface resource values are low. Three trapping cabins have been applied for on the upper Dishna River. This subunit consists of the Tolstoi Creek lowlands, uplands west of the Dishna River, the upper Dishna River lowlands, and parts of the Moose Creek drainage. This subunit receives a low level of public use. Cat trails and Iditarod National Historic Trail system and race trail pass through this subunit. There are some documented historic sites associated with the gold rush era near Tolstoi.

The Alaska National Guard has expressed interest in applying for a long-term lease for a training facility located approximately two miles northwest of the junction of the Dishna River and Porcupine Creek. The Guard has also expressed interest in applying for permits for maneuvers in the surrounding area. Present information indicates that the impacts of Guard training in the Upper Dishna area would be less than other areas proposed in the planning area. With the preliminary information available, these activities appear compatible with the management intent for state lands in the Dishna area. A final decision on the establishment of such a training site will not be made until an environmental assessment is completed. This does not preclude the Department of Military Affairs from considering a training site south of

Tatalina on state lands or negotiating a lease with private landowners in that area (see Units 5 and 9).

Remote cabin permits are allowed in parts of this subunit with the exception of areas near the Iditarod and Dishna rivers to avoid potential conflicts with trapping and mining. This subunit will be retained in public ownership and managed for multiple use with emphasis on wildlife habitat.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Forestry
- Public access
- Lakeshore management
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Subsurface resources
- Trail management

General

Iditarod National Historic Trail system and race trail. Both trail systems pass through this unit. Setbacks along them will be consistent with the policies in Chapter 2.

Subunits 8a, 8b, 8f and 8g - Dishna River, Iditarod River, Beaver Mountains-Madison Creek-Mastodon Creek, & Dishna Uplands

Grazing. Grazing leases or permits will not be allowed along portions of the Innoko or Dishna Rivers because of their importance as moose winter concentration areas. Grazing will not be allowed in portions of the Beaver Mountains because of their importance for caribou calving and as a brown bear concentration area (Map 2.1). Temporary passage is not prohibited through these areas to reach areas where grazing is permitted. Graz-

ing may be allowed in portions of prohibited areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands").

Grazing leases or permits will not be allowed in the following areas:

- T25S R8E K.R.M. sec. 1
- T30N R47E K.R.M. sec. 1, 2, 11, 12 & 13
- T25S R9E K.R.M. sec. 6
- T30N R46W S.M. sec. 5, 6, 7, 8 & 18
- T31N R42W S.M. sec. 1
- T34N R41W S.M. sec. 33-36
- T33N R42W S.M. 13, 23-26, 35 & 36
- T33N R41W S.M. sec. 1-5 & 8-36
- T33N R40W S.M. sec. 6, 7, 17-21 & 28-33
- T32N R42W S.M. sec. 1-5, 8-16, 21-27, 35 & 36
- T32N R41W S.M. sec. 3-36
- T32N R40W S.M. sec. 31
- T31N R41W S.M. sec. 1-17

Subunits 8e, 8f, 8g - Hinterlands, Beaver Mountains-Madison Creek-Mastodon Creek, & Dishna Uplands

Remote Cabin Permit Areas. Parts of these subunits are within the Dishna block of the Dishna-Folger-Tatalina remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunits 8e, 8f, and 8g are also within this block. A total of 74 remote cabin permits will be allowed in the Dishna block, with a maximum of three remote cabin permits allowed in any one township.

Subunit 8f - Beaver Mountains

Commercial Leases, Trapping Cabins and Public Use Cabins. Commercial leasing will not be allowed on the highest lake in the Beaver Mountains (Tolstoi Lake). Commercial leases on other lakes in the Beaver Mountains will be limited to two leases total, with a maximum of one lease on any individual lake. Trapping cabins will not be permitted within one-half mile of Tolstoi Lake. The Beaver Mountains and its lakes have been identified as a possible site(s) for a public use cabin(s).

RESOURCE INFORMATION SUMMARY

Management Unit 8 - Dishna-Iditarod

Resource	Subunit			
	8a	8b	8c	8d
Agriculture	Moderate to low potential	Low potential	Unsuitable	Most unsuitable; some low potential
Energy	Very low coal potential	Very low coal potential	Mostly very low potential; some low coal potential	Mostly very low; some low coal potential
Fish	Dishna R.: salmon & resident fish	Iditarod R.: salmon & resident fish	Otter Creek: salmon	Salmon & resident fish
Forestry	High potential along Dishna River; rest unsuitable	High potential along Iditarod River; rest unsuitable	Most unsuitable; some high potential on Iditarod R. & Otter Cr.	High potential on Dishna River
Grazing	High potential	High potential	High potential	High potential
Historic/cultural	Unknown	Historic sites on Iditarod R.; Iditarod NHTS	Historic sites on Iditarod R.; Iditarod NHTS	Unknown
Materials	Low potential	Low potential	Low potential	Low potential
Minerals	Low potential	Very low to low potential	Mixed; very low to high potential; mining claims	Moderate to high potential, a few mining claims
Oil & gas	Unknown	Unknown	Unknown	Unknown
Public access	Boat along Dishna R.; skiplane	Boat along Iditarod R.; trails	Boat along Iditarod R.; trails	Boat along Dishna R.; trails
Recreation	Low potential	Moderate use on Iditarod race trail; rest very low potential	Moderate use on Iditarod Race Trail; rest very low potential	Low potential
Settlement suitability	Most high; some moderate to low potential	Most high; some low potential	Most low to unsuitable; some high on Iditarod River	High on Dishna River
Wildlife	B-1; moose calving & winter range; bear, ducks	B-1 and C; bear, ducks, moose	B-1 and C; bear, ducks, moose	B-1; caribou winter range; moose calving & winter range; bear, ducks
Important trails	None identified	Iditarod race trail & NHTS; Iditarod-Dikeman trail; Iditarod-Flat trail; cat trails	Iditarod race trail & NHTS; Flat-Iditarod trail; cat trails	None identified

See glossary for definition of ratings.

RESOURCE INFORMATION SUMMARY

Management Unit 8 - Dishna-Iditarod

Resource	8e	Subunit 8f	8g
Agriculture	Unsuitable	Most unsuitable; some low	Mostly unsuitable; some low potential
Energy	Mostly low; some low potential	Mostly low; some low potential	Mostly very low; some low potential
Fish	Dishna R. tribs.: resident fish	Windy, Billy Goat, & Moose creeks: resident fish	Tolstoi Ck.: salmon & anadromous fish
Forestry	Most unsuitable; some low potential	Unsuitable	Low to unsuitable
Grazing	High potential	High potential	High potential
Historic/cultural	Iditarod NHTS	Iditarod NHTS	Iditarod NHTS and race trail; Historic sites near Tolstoi
Materials	Low potential	Low potential	Low potential
Minerals	Most very low to low potential; some moderate; mining claims	Moderate to very high potential; numerous mining claims	Mostly low, some high; few mining claims
Oil & gas	Unknown	Unknown	Unknown
Public access	Local trails	Plane to lakes in Beaver Mts., airstrips in mining areas; local trails	Trails
Recreation	Moderate use on Iditarod Race Trail; rest very low potential	Moderate use and potential in Beaver Mts.; rest very low potential	Moderate use on Iditarod Race Trails; rest very low potential
Settlement suitability	Most unsuitable; some low	Unsuitable	Some high on upper Dishna River, mostly low to unsuitable
Wildlife	B-2 and C; bear, caribou, moose	Mostly A-2 & B-2; some C; brown bear conc. area and caribou calving in Beaver Mts.; ducks, moose	B-2; bear, caribou, moose
Important trails	Iditarod Race Trail & NHTS, Hunter trail, Upper Mastodon Cr. trail, Porcupine-Windy Cr. trail	Iditarod NHTS; Iditarod-Ophir trail, Ophir-Dishkaket trail, Madison-Mastodon Cr. trails, cat trails	Trail near Iditarod River, Tolstoi, and Beaver Mts.; Iditarod NHTS and race trail

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 8 - DISHNA-IDITAROD

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
8a Dishna River	State	Resource Mgmt.	Forestry Wildlife habitat	Grazing in part of subunit Land disposals Remote cabins	Open	Reconsider for sales when the plan is updated
8b Iditarod River	State	Resource Mgmt.	Forestry Wildlife habitat	Grazing in part of subunit Land disposals Remote cabins	Open	Reconsider for sales when the plan is updated. Historic sites present
8c North Flat	State	Minerals Wildlife habitat	Forestry	Land disposals Remote cabins	Open	Historic sites
8d Upper Dishna River	State	Forestry Wildlife habitat		Land disposals Remote cabins	Open	
8e Hinterlands	State	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	Historic sites present
8f Beaver Mts. Madison Ck. Mastodon Ck.	State	Minerals Public recreation Wildlife habitat	Remote cabins in part of subunit	Grazing in part of subunit Land disposals in part of subunit Remote cabins in part of subunit	Open	Historic sites present; possible public use cabin sites
8g Dishna	State	Wildlife habitat	Remote cabins in part of subunit Grazing in part of subunit	Remote cabins in part of subunit Grazing in part of subunit	Open	Historic sites present

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

Kuskokwim Area Plan

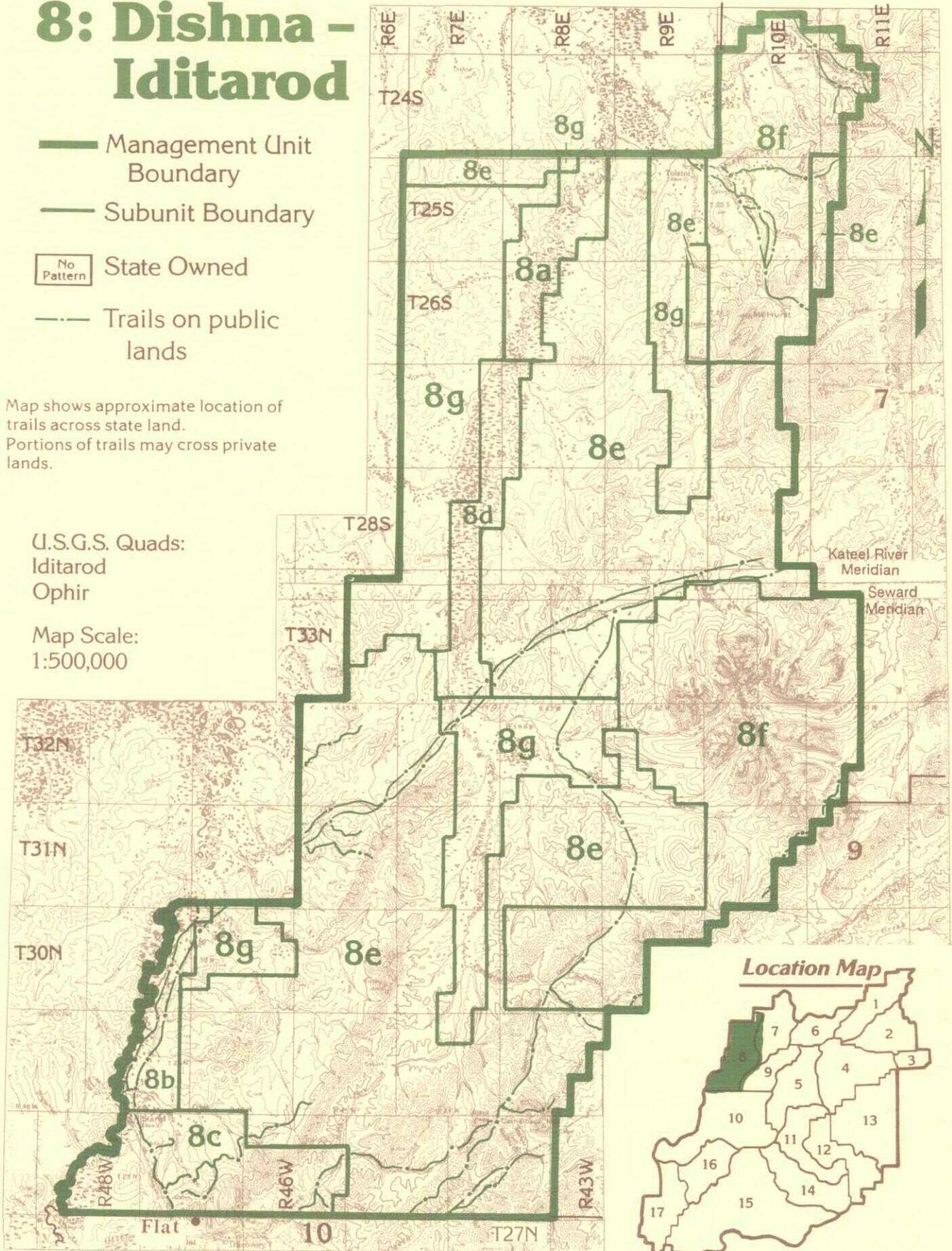
8: Dishna - Iditarod

-  Management Unit Boundary
-  Subunit Boundary
-  State Owned
-  Trails on public lands

Map shows approximate location of trails across state land. Portions of trails may cross private lands.

U.S.G.S. Quads:
Iditarod
Ophir

Map Scale:
1:500,000



MANAGEMENT UNIT 9: TAKOTNA RIVER

Background

Location and Land Ownership. The Takotna River management unit consists of the watersheds that drain into the Takotna River, Fourth of July Creek, and Tatalina Creek. Approximately two-thirds of the land in this unit is state owned. Approximately 20 percent is Native-owned. The remainder is state selected or Native selected or overlapping selections. Private lands are concentrated in the northeastern part of the unit. There are approximately 11 Native allotments within the unit, 19 mineral patents and applications, and 4 BLM homesites. There are also a number of private parcels around the village of Takotna.

Resource Use. The state-owned and state-selected lands in the northeastern two-thirds of this unit, especially lands located adjacent to McGrath and Takotna, are heavily used for hunting, trapping, fishing, berry picking, personal-use timber, recreation, and transportation. The southern part of the Beaver Mountains located within this unit are used by McGrath and Takotna residents and guides for hunting caribou and moose. The southwestern third of this unit is seldom used for these activities. There are claims and active placer mines around Yankee Creek, Moore Creek, Lincoln Creek, and the Candle Hills. The Upper Tatalina and the Upper Dishna River, have been identified as possible sites for a National Guard training facility and maneuver area. The Candle Hills and Roundabout Mountain have been identified as a possible source of riprap for the proposed McGrath erosion control project.

Resources. Valuable stands of white spruce and hardwoods that are used for house logs and firewood are located in the riparian zone along the Takotna River and Tatalina Creek. Stands of hardwoods are also found along Waldren Forks, Moore Creek, Fourth of July Creek, and some south-facing slopes. Open stands of black spruce are found at higher elevations, on poorly drained soils, or in per-

mafrost areas. Shrubs dominate the middle elevations in this unit while the tops of several mountains are tundra covered.

Anadromous fish are found in the Takotna River and in the lower part of the streams just west of McGrath. The Waldren Forks and the Takotna River are important for moose wintering and calving. Caribou calve and brown bears are concentrated in those portions of the unit located adjacent to the Beaver Mountains.

Access. Two maintained airstrips are in this unit and are located at Tatalina Air Force Station and in the village of Takotna. There is also a private airstrip at Moore Creek and at Candle. A DOT/PF maintained road exists between Takotna and Sterling Landing. The unit has numerous trails associated with historic and current mining activity. Many of these trails have been identified as part of the Iditarod National Historic Trail system including the Takotna-Flat, McGrath-Ophir, and Iditarod-Ophir trails. A concentration of local trails are located in and adjacent to McGrath, Takotna, and the Candle Hills. A section of the Iditarod race trail passes through this unit and follows the McGrath to Takotna trail and the Takotna-Ophir road.

Management Intent

This unit contains accessible areas near McGrath and Takotna particularly along the Takotna River and the Ophir-Sterling Landing Road. The general management intent of these areas in the northeastern part of this unit is to provide lands for Forestry, mining, public recreation, and wildlife habitat. Less accessible lands with low surface resource values will be managed for general use including hunting, trapping, mining, and transportation. Approximately 20 remote cabin permits will be allowed in this unit with no more than three cabin permits allowed in any one township. Remote cabins are prohibited in

some areas to avoid conflicts with trapping and mining.

All state lands retained in public ownership will remain open to new mineral entry. Lands proposed for disposal will be closed to mineral entry prior to sale. Although the lower reaches of the Takotna River are bordered by Native-owned lands, the bed of this river is navigable and subject to the guidelines in the plan. State-owned beds of navigable waters including the Takotna River in this unit will remain open to mineral entry.

Subunit 9a - Fourth of July Creek-Little Waldren Fork River

The blocks of land near the village of Takotna in this subunit are all overlapping state and Native selections. The remainder of this subunit along the Upper Takotna River is state owned. The eastern blocks of this subunit are accessible by boat in summer, trails in winter, and the Takotna-Sterling Landing Road year-round, and have high levels of use for hunting, trapping, recreation and personal-use timber particularly near Takotna. The Candle Hills contain valuable mining claims which are currently being worked. This area also has potential for riprap which could be used for an erosion control project in McGrath or for crushed aggregate for surfacing materials. The western block of this subunit along Fourth of July Creek has low surface values, and is generally not as heavily used. The primary trail between Takotna and McGrath, which is also the Iditarod race trail, passes through this unit along Porcupine Ridge. The DOT/PF-maintained Sterling Landing - Takotna Road provides access to overlapping selections south of Takotna. The Tatalina Air Force Station airstrip located nearby is restricted to military and authorized airplanes. Portions of this subunit are within the Tatalina Air Force Station military reservation and will not be available for state selection unless this reservation is relinquished. Parts of this subunit have been considered for an Alaska National Guard training site. The Guard has been less interested in this site than the proposed Dishna site described in Unit 8 because of the adjacent private lands that may restrict maneuvers. Present information indicates

that impacts of military training on state lands south of Tatalina Air Force Station in this area or along the Upper Dishna in unit 8 would be less than at other sites considered in the planning area. Based on preliminary information, these activities appear compatible with the management intent for state lands in this subunit. A final decision on the establishment of such a training site will not be made until an environmental assessment is completed (also see units 5 and 8).

Remote cabin permits are allowed along Fourth of July Creek. However, these permits are not allowed near the Beaver Mountains in order to avoid conflicts with brown bear concentrations and mining. Remaining public lands will be available for forestry, public recreation, and wildlife habitat.

Subunit 9b - Takotna

This subunit is located primarily southeast of the Takotna River and Little Waldren Fork. The area contains overlapping state and Native selections along the road between Takotna and Sterling Landing. The remainder of the land in this subunit is either state owned or selected. Portions of this subunit located just west and across the Kuskokwim River from McGrath have been identified as possible sources of peat for energy. Roundabout Mountain has been identified as a potential source of riprap for an erosion control project in McGrath. Peat and materials will be available for extraction consistent with management intent for fish and wildlife resources. Access is primarily from the DOT/PF-maintained Takotna-Sterling Landing Road and existing cat trails. Parts of this subunit have been considered for an Alaska National Guard training site. The Guard has been less interested in this site than the proposed Dishna site described in Unit 8 because of the adjacent private lands that may restrict maneuvers. Present information indicates that impacts of military training on state lands south of Tatalina Air Force Station in this area or along the Upper Dishna in unit 8 would be less than at other sites considered in the planning area. Based on preliminary information, these activities appear compatible with the management intent for state lands in

this subunit. A final decision on the establishment of such a training site will not be made until an environmental assessment is completed (also see units 5 and 8).

Grazing will not be allowed in most of this subunit because of its importance as a winter moose concentration area. Lands in this subunit will be retained in public ownership and will be managed for multiple use with emphasis on wildlife habitat and public recreation.

Subunit 9c - Upper Moore Creek

Most of this subunit is state owned or state selected. This subunit contains highly mineralized lands with several mining claims that have been intermittently active since the early part of this century. They are located in the vicinity of Moore, Yankee, Lincoln, Candle, and Spaulding creeks. The Candle Hills are a potential source of riprap which could be used for an erosion control project in McGrath or for crushed aggregate for surfacing materials. Remote cabin permits are allowed in parts of this subunit near Moore Creek but will not be authorized in the Beaver Mountains and other areas to avoid conflicts with mining, trapping, hunting, and public recreation. Remains of the Moore Creek roadhouse and the Duffy-Riley Alaska Road Commission cabin are related to the Iditarod National Historic Trail System and are located in this subunit. The remains of the Willow Creek reindeer cabin are also in this subunit. The Division of Parks and Outdoor Recreation should be consulted before remote cabins are authorized in these areas so that these historic sites. This subunit will be retained in public ownership and be managed for multiple use with emphasis on minerals and materials extraction.

Subunit 9d - Middle Takotna River-Big Waldren Fork River

Most of this subunit is state owned. Access is by boat along the Takotna River and on the Takotna-Moore Creek cat trail. The area is frequently used by residents of McGrath and Takotna for hunting and trapping. Grazing is prohibited in most of this subunit because of

its importance as a moose wintering area. Remote cabin permits will not be allowed in this subunit. Portions of this subunit are within the Tatalina Air Force Station military reservations and will not be available for state selection unless the reservation is relinquished. This subunit will be retained in public ownership and be managed for multiple use with emphasis on forestry, public recreation, and wildlife habitat.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Agriculture/grazing
- Fish and wildlife habitat
- Forestry
- Materials
- Public access
- Public and commercial recreation resources
- Remote cabins
- Subsurface resources
- Transportation and utilities
- Stream corridors and instream flow
- Trail management
- Wetlands management

Subunits 9b and 9d - Takotna and Upper Takotna River-Waldren Fork River

Grazing. Grazing leases or permits will not be allowed in the following portions of the Takotna drainage because of its importance as a winter concentration area for moose. Temporary passage is not prohibited through this area to reach areas where grazing is permitted. Grazing may be allowed in portions of prohibited areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands").

- Within 1 mile of the Takotna River in this unit.

- Within 1 mile of the Little Waldren Fork River between its mouth and Wolf Mountain.
- Within 1 mile of the Big Waldren Fork River within this unit.
- Southeast of the Takotna and Big Waldren Fork rivers within this unit.

Subunits 9a, 9b, 9c, and 9d - Moore Creek, Middle Takotna River, Fourth of July Creek, and Waldren Fork Rivers

Iditarod National Historic Trail system and race trail. Both trail systems pass through these subunits and setbacks along them will be consistent with policies in Chapter 2.

Remote Cabin Permit Areas. Parts of these subunits are within the Dishna and Tatalina blocks of the Dishna-Folger-Tatalina remote

cabin permit area. Parts of subunits 9a, 9b, 9c and 9d are also within this block. A total of eleven remote cabin permits will be allowed in the Tatalina block, and a total of 36 remote cabin permits will be allowed in the Dishna block with a maximum of three remote cabin permits allowed in any one township.

Subunits 9a, 9b, and 9d - Takotna River, Waldren Forks, and Fourth of July Creek

Takotna River Drainage Instream Flow. Gold Creek which runs through the village of Takotna is currently being considered as a possible hatchery site. Release sites would be along the Takotna River and its tributaries. If this hatchery is developed and leads to consumptive water use, an instream flow study to determine the flow levels necessary for the successful rearing and release of salmon may be necessary. Following such a study, a flow reservation may be necessary.

RESOURCE INFORMATION SUMMARY

Management Unit 9 - Takotna River

Resource	Subunit			
	9a	9b	9c	9d
Agriculture	Low to unsuitable	Unsuitable	Unsuitable	Unsuitable
Energy	Very low coal potential	Very low coal potential peat potential west of McGrath	Very low coal potential	Very low coal potential
Fish	Resident fish	Salmon and resident fish	None identified	Takotna R.: salmon & resident fish
Forestry	Mostly unsuitable; some low potential	Low-unsuitable	Low potential to unsuitable	High along Takotna R.
Grazing	High potential	Moderate to high potential	High potential	Moderate to high potential
Historic/ cultural	Iditarod NHTS	Iditarod NHTS	Iditarod NHTS	Iditarod NHTS
Materials	High potential near Candle	Low potential	Potential site for riprap and crushed aggregate for McGrath	Low potential
Minerals	Moderate to very low potential	Moderate to very low; a few mining claims	Very high to high potential; mining claims	Moderate to very low potential; mining claims
Oil & gas	Unknown	Unknown	Unknown	Unknown
Public access	Sterling Landing Road; local trails	Local trails and Iditarod trail	Airstrips; local trails	Boat along Takotna R.; trail along Takotna R. Sterling Landing Road
Recreation	High use adjacent to Takotna	High use near McGrath	Very low potential	High use along Takotna River
Settlement suitability	Low to very low except near Takotna	Low to unsuitable	Very low to low	Mixed high and low
Wildlife	Mostly C; some B-2; part brown bear concentrat- ion area; caribou south of Beaver Mts.; moose	Mostly B-2; some A-2 bear, moose calving & winter range	B-2 and C; bear, moose	A-2 and B-2; moose calving & winter range; bear, ducks
Important trails	Iditarod NHTS; Takotna- Flat trail; local trails; Sterling Landing Road	Local trails around Takotna and McGrath; Iditarod Race Trail and NHTS	Iditarod NHTS; Takotna-Flat trail; local trails	Takotna-Moore Cr. trail; Sterling Landing Road; Iditarod NHTS; Iditarod Race trail; local trails

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 9 - Takotna River

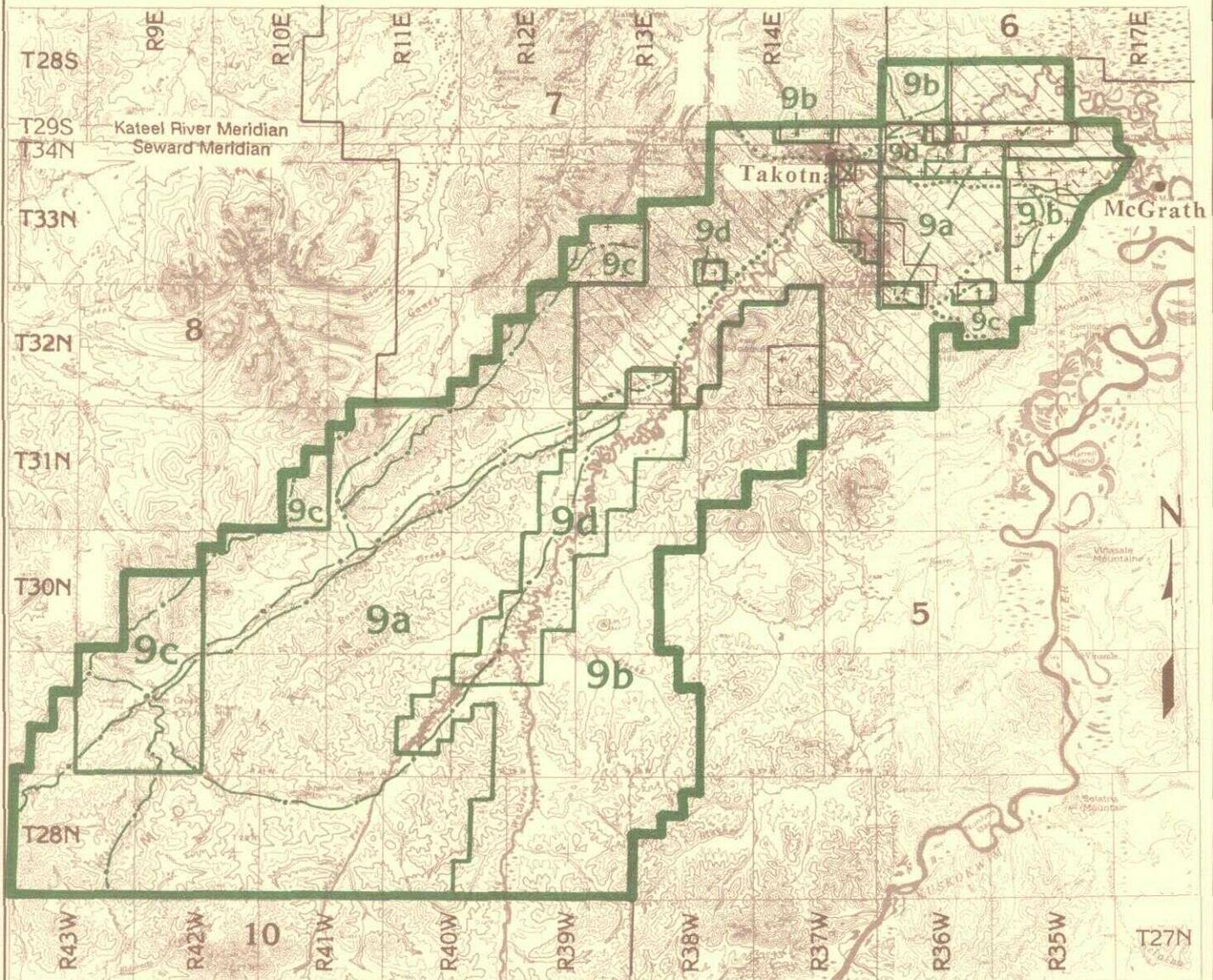
SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
9a 4th of July Creek-Little Waldren Fork	State	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	
9b Takotna	State, state selected, state/Native selected	Wildlife habitat	Public recreation Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open	
9c Upper Moore	State & state selected	Minerals	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	Historic sites present
9d Upper Takotna River- Waldren Forks	State & state selected Native select.	Forestry Public recreation Wildlife habitat	Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

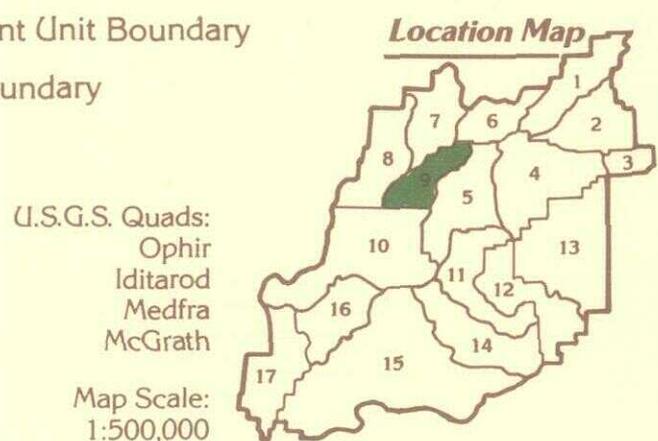
Kuskokwim Area Plan

9: Takotna River



-  State Owned
 -  State Selected
 -  Native Owned
 -  Native Selected
 -  Trails on public lands
 -  Access easements to public land
 -  ANCSA 17 (b) easements
 -  & State Omnibus roads
-  Management Unit Boundary
 -  Subunit Boundary

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.



MANAGEMENT UNIT 10: GEORGE RIVER

Background

Location and Land Use. The George River management unit comprises lands north and west of the Kuskokwim River from Aniak to the confluence of the Tatlawiksuk River. It includes the watersheds of the Owhat, Kolmakof, and George rivers, and Crooked, Inowa, and Moose Creeks. The southern boundary of the unit is the north bank of the Kuskokwim River. Most of the uplands in the George River unit are federally owned; most of the riparian lands along the Kuskokwim are owned or selected by the Native corporations. State lands are limited to three small selections just north of the Kuskokwim River between Chuathbaluk and Crooked Creek. There are over eighty parcels of private land within this unit, mostly Native allotments along the Kuskokwim River and the lower reaches of its major tributaries.

Resources and Land Use. The landscape is dominated by the Kuskokwim Mountains, which rise to elevations of 2000 to 3000 feet. Black spruce woodlands cover most of the valley floors and lower hillslopes, with shrubs and alpine tundra at upper elevations. There are few white spruce and hardwood forests; they are limited to scattered pockets on south-facing slopes and along portions of the Kuskokwim River and its major tributaries.

The villages of Chuathbaluk and Crooked Creek, and the seasonal communities at Napaimiut and Flat are within this unit. While the subsistence harvest in this unit is less intensive than in drainages south of the Kuskokwim River, residents of Crooked Creek and Chuathbaluk, and to a lesser extent Aniak, Red Devil, and Tuluksak, conduct many harvest activities here. Moose are hunted along the Kuskokwim River, Crooked Creek, and the George River. Trapping is widespread in the Crooked Creek and George River drainages. Bear are hunted along the Kuskokwim River and its tributaries, and caribou are hunted in the Horn and Russian Mountains. There is active placer mining in

the Flat-Iditarod, Crooked Creek, Granite Creek, and Moore Creek areas.

Access. Access to most of these lands is limited to tundra landing areas for small planes, and strips established adjacent to mining areas. Public airstrips are located at Chuathbaluk, Flat, and Crooked Creek, and there is a private airstrip at Granite Creek. Numerous trails cross the area, especially the northeastern portion of the unit, along rivers and between mining areas. Most of these trails, including portions of the Iditarod National Historic Trail System, were established to provide access to mines. The Kuskokwim River is used for both transportation and recreational boating.

Management Intent

The state-owned and state-selected lands in this management unit will generally be retained in state ownership and managed for multiple use, with emphasis on mining, habitat, and recreation. Nearly all of this management unit will remain open to mineral entry. However, to protect important salmon populations, spawning beds in known mineralized areas along the upper George River will be closed. Rearing areas in known mineralized areas along the George River and its tributaries will be subject to leasehold location requirements. Lands along the river are mostly in Native ownership. However, the bed of the Kuskokwim and other navigable waters such as the George River, Crooked Creek, Owhat River, Kolmakof River, and Moose Creek are state owned and subject to the guidelines of this plan.

Subunit 10a - Napaimiut Selections

The central and eastern blocks of land in subunit 10a will be retained in public ownership and managed for multiple use with emphasis on fish and wildlife habitat and harvest and

public recreation along the Kuskokwim River.

Subunit 10b - Horn Mountains - Upper George River

These lands are recommended for state selection because of their mineral potential. They are within a recently reactivated mining district, and have high potential for placer gold deposits and lode deposits of gold, silver, tin, bismuth, copper, zinc, and antimony. There are also high habitat values, particularly for moose, on the riparian lands along the Owhat, Kolmakof, and George rivers, and Crooked and Big Waldren creeks. The proposed selections in the George River and Flat areas are adjacent to other state-owned lands. If conveyed to the state they should be retained in public ownership and managed for multiple use including mining and wildlife habitat and harvest.

Nearly all the state land in this subunit is open to new mineral entry. However, because of their importance for salmon spawning and king salmon rearing, the beds of portions of the upper George River and the East Fork of the George River in the northeastern block of subunit 10b will be closed. Additional streambeds and uplands along the George River, Willow Creek, Granite Creek, Julian Creek, an unnamed tributary of Granite Creek, and two unnamed tributaries of the George River will be closed to mineral entry or subject to leasehold location requirements if land now managed by BLM is selected and conveyed into state ownership.

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit; however, guidelines that are most likely to apply are as listed below:

- Fish and wildlife habitat
- Public access
- Subsurface resources

Guidelines specific to this management unit are listed by subunit in the following section.

Subunit 10b - Upper George River - and Navigable Waters

Mineral Closure and Leasehold Location. The beds of the George River in T25N R43W, T25N R44W, and T24N R44W S.M. are state owned and closed to mineral entry to protect important salmon spawning and king salmon rearing habitat. Adjacent uplands are currently managed by BLM and are open to mineral entry. Uplands are proposed for state selection. If conveyed to the state, uplands within 200 feet of the high water mark will be subject to leasehold location requirements.

The beds of the George River in T24N R45W S.M. and the East Fork of the George River in T24N R44W S.M. are state owned and are closed to new mineral entry to protect salmon spawning and king salmon rearing habitat. Adjacent uplands are managed by BLM, are not proposed for state selection, and will remain open to mineral entry.

The beds uplands along Willow Creek in T26N R42W S.M., and Granite Creek and its unnamed tributary in T26N R41W S.M. sections 11, 12, 14, and 15 are currently managed by BLM and are open to mineral entry. If conveyed to the state, the streambeds will be closed to new mineral entry to protect salmon rearing habitat.

The beds and adjacent uplands of Julian Creek and two unnamed tributaries in T24N R44W S.M. (one unnamed creek is in sections 5, 6, and 8 and the other unnamed cree is in sections 7, 17 and 21) are currently managed by BLM and open to mineral entry. These lands are proposed for state selection. If they are conveyed to state ownership the streambeds will be closed to new mineral entry and uplands within 200 feet of the high water mark will be subject to leasehold location requirements in order to protect salmon spawning and rearing habitat.

The boundaries of the closure and leasehold location areas are described in Appendix H.

Lease stipulations for leasehold location areas are listed in the Mining section of Chapter 2.

Access Needs. If selected lands in this subunit are conveyed to the state, legal access to the Kuskokwim River may be needed. Until the land is surveyed, it is unclear whether state lands have river frontage. If there is no state land on the river, access may need to be established through T19N R50W S.M. sections 19 and 20.

RESOURCE INFORMATION SUMMARY

Management Unit 10 - George River

Resource	Subunit	
	10a	10b
Agriculture	Unsuited	Unsuited
Energy	--	--
Fish	Kuskokwim River: salmon & resident fish	Iditarod R., George R. & tributaries, salmon & resident fish
Forestry	Unsuited	Personal use near Flat
Grazing	High potential	High potential; past grazing in Horn Mtns.
Historic/ cultural	High potential along Kuskokwim R.	Known historic sites at Flat
Materials	Potential sites along Kuskokwim R.	Unsuited
Minerals	Moderate to high some claims	High potential, some claims & active mining
Oil & gas	Unknown	Unknown
Public access	Boat on Kuskokwim to limited areas	Boat on Kuskokwim to one point; tundra landings and mining airstrips
Recreation	Moderate on Kuskokwim River, rest low or unknown	Unknown
Settlement suitability	Low along river, rest unsuited	High along Iditarod, rest low to unsuited
Wildlife	Most A-2, some B-1; Bear, moose, waterfowl	Most C, some A-2 & B-1; Bear, moose, ducks
Important trails	None identified trail, Owhat-Iditarod R. trail, Michigan Cr. trail	George R. trail, Sute Cr., numerous trails near Flat

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 10 - GEORGE RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
10a Napaimiut Selections	State & state selected	Public recreation Wildlife habitat		Land disposals Remote cabins	Open	
10b Horn Mts.- Upper George River	Most federal, small part Native select.	Minerals Wildlife habitat	Public recreation	Land disposals Remote cabins	Open except bed of part of George R.; additional areas closed to mineral entry and subject to leasehold location requirements contingent on conveyance to state ownership.	Proposed for state selection

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

10: George River

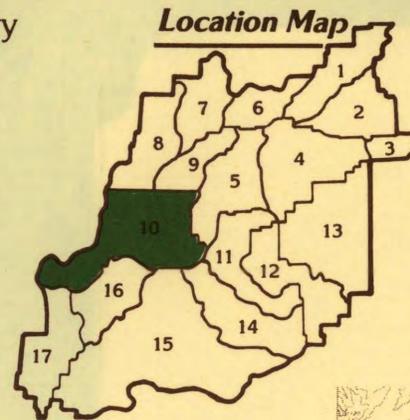
— Management Unit Boundary
 — Subunit Boundary

-  State Owned
-  State Selected
-  Native Owned
-  Native Selected
-  Federal

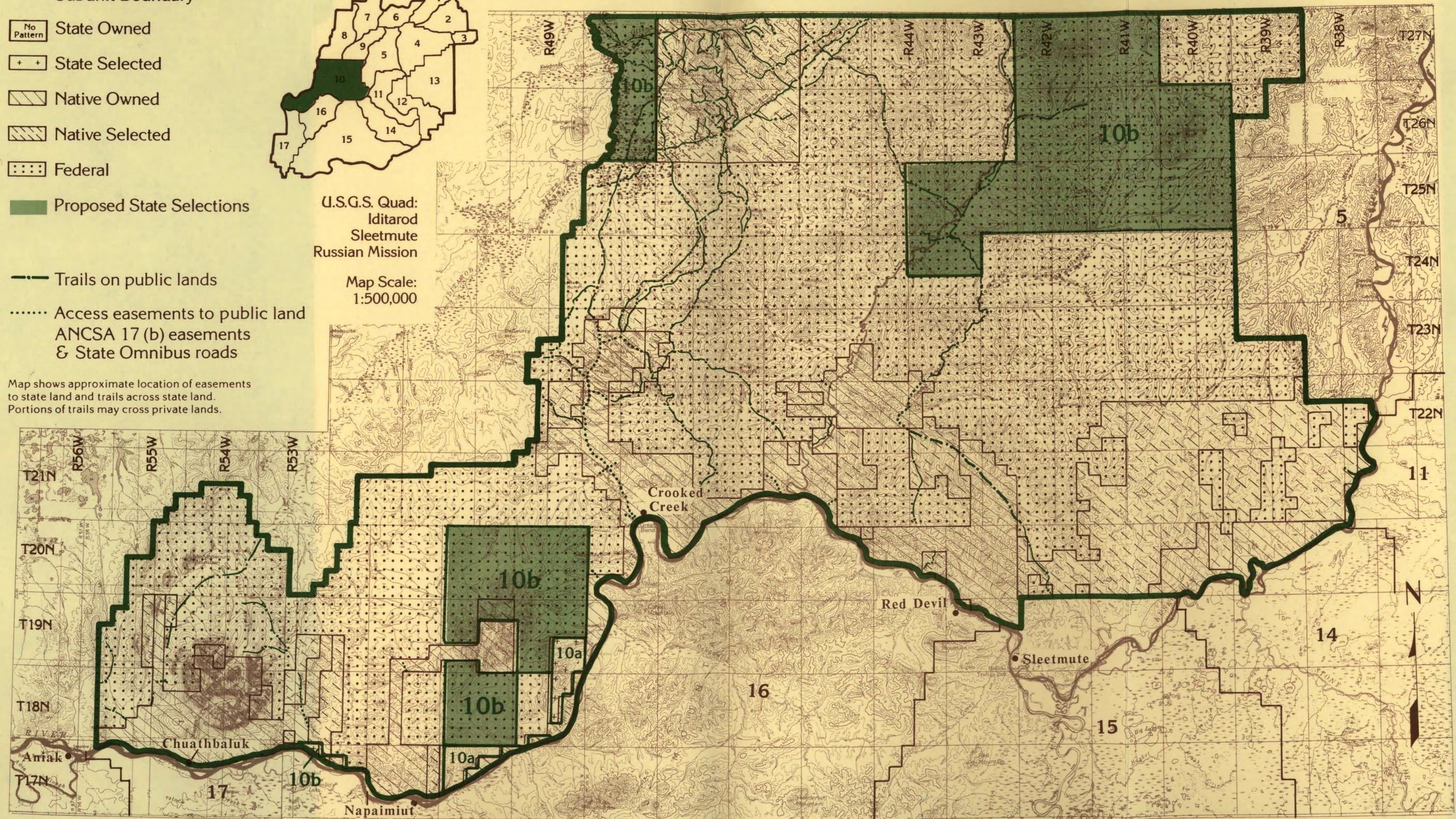
 Proposed State Selections

-  Trails on public lands
-  Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.



U.S.G.S. Quad:
 Iditarod
 Sleetmute
 Russian Mission
 Map Scale:
 1:500,000



MANAGEMENT UNIT 11: SWIFT RIVER

Background

Location, Land Ownership, and Access.

The Swift River covers the watersheds of the Swift, Tatlawiksuk, and Cheeneetuk rivers. The great majority of the land is federally-owned, with Native-owned and Native-selected land near the Kuskokwim River, Why Lake, and the middle Swift River. Approximately a dozen Native allotments are scattered along the major rivers.

There are three blocks of state-owned land in this unit. The western block is in the lowlands near the confluence of the Swift and Kuskokwim Rivers. A small segment of the Swift River flows through the northeastern corner of the block, making it accessible by boat. The southern block is a broad lowland area between the Lyman Hills and Revelation Mountains, at the confluences of the Swift, Babel, and North Fork Swift rivers. It is accessible by float plane to a number of lakes. The northern block is in the upper Tatlawiksuk watershed on land sloping north from the foothills of the Alaska Range. The Tatlawiksuk River crosses the northwestern edge of the block, providing access in some seasons.

Resources and Land Use. Black spruce woodlands and muskegs dominate the valleys in all three state-owned blocks, with shrub tundra on the hillslopes. Hardwood and white spruce forest cover is limited to narrow bands on the Swift, Tatlawiksuk, and Babel rivers. Suitability for settlement and forestry is low, as is mineral potential. The Swift River has some potential for recreational float trips, but the river braids and debris make navigation difficult, and the river silt reduces its value for fishing.

There are no communities within this unit, but residents of the neighboring communities of Lime Village, Stony River, and McGrath use

lands in this unit for trapping and hunting. Most activity is concentrated along the rivers, however, and there is little riverfront land in state ownership. Guided hunting for big game in the Alaska Range extends west into the Swift River drainage. One registered guide area covers the northern block of state land, and four guide areas cover all or part of the southern block.

Management Intent

State lands within this unit will be kept in public ownership and managed for multiple use. They will remain open to new mineral entry. The beds of the Swift, Tatlawiksuk, and other navigable rivers also are state owned and are subject to the guidelines of the plan.

Subunit 11a - Swift-Babel-Tatlawiksuk

Fish and wildlife habitat and harvest are the primary surface uses in this subunit. Part of the southern block on the upper Swift River will be open for remote cabin permits. Most of the activity on state land in the Swift River management unit occurs on lands in this subunit because there is some riparian habitat, and there is boat and fly-in access to portions of the subunit. There is one trapping cabin in the northeastern block of this subunit.

Subunit 11b - Hinterlands

The hinterlands are areas back from the rivers that have low surface values. The only access is by floatplane to lakes in the southern block of the subunit. This land will be retained in state ownership and available for general use. Parts of the northern and southern blocks will be open for remote cabin permits.

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

Fish and wildlife habitat
Remote cabins

Guidelines specific to this management unit are listed by subunit in the following sections.

Subunit 11a - Swift-Babel-Tatlawiksuk

Grazing. Grazing leases or permits generally will not be allowed in the following areas because of their importance as moose winter concentration zones (Map 2.1). Temporary passage of livestock is not prohibited through these areas to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guideline in Chapter 2 ("Grazing on Important Habitat Lands).

T20N R38W S.M. sec. 1-2 & 12
T18N R29W S.M. sec. 19-36
T18N R30W S.M. sec. 24, 25, and 36
T17N R29W S.M. sec. 1-17, 20-28, and 33-36
T17N R30W S.M. sec. 1
T16N R29W S.M. sec. 1-5, 7-17, and 21-24

Subunit 11a and 11b - Swift-Babel-Tatlawiksuk and Hinterlands

Remote Cabin Permit Areas. Parts of these subunits are within the Little Underhill and Upper Cheeneetnuk blocks of the Alaska Range remote cabin permit area. Boundaries of the areas open for remote cabin permits are shown on Map 2.2. Parts of subunits 12a, 12c, 14c, and 14d are also within these blocks. A total of nineteen remote cabin permits will be allowed in the Little Underhill block and four in the Upper Cheeneetnuk block, with a maximum of one remote cabin permit allowed in any one township.

RESOURCE INFORMATION SUMMARY

Management Unit 11 - Swift River

Resource	Subunit	
	11a	11b
Agriculture	Low potential to unsuited	Low potential to unsuited
Energy	--	--
Fish	Swift & Babei: salmon, Tatiawiksuk: salmon & resident fish	None documented
Forestry	Most unsuited; small portion along Swift R. with high potential	Unsuited
Grazing	High potential	High potential
Historic/cultural	High potential for sites along Swift R.	Unknown
Materials	Low potential	Low potential
Minerals	Low to very low potential	Low to very low potential
Oil & gas	Northern block in Holitna sedimentary basin	Northern block in Holitna sedimentary basin
Public access	Boat along lower Swift, Gagaryah, & Chineetnuk rivers	None developed
Recreation	Low potential on Swift River	Unknown
Settlement suitability	Most unsuited; small portion with high potential along Swift R.	Unsuited
Wildlife	B-1; moose winter range in edge of S & W blocks; bear, caribou, ducks	B-2; moose, bear, caribou, ducks
Important trails	None identified	None identified

See glossary for definition of ratings.

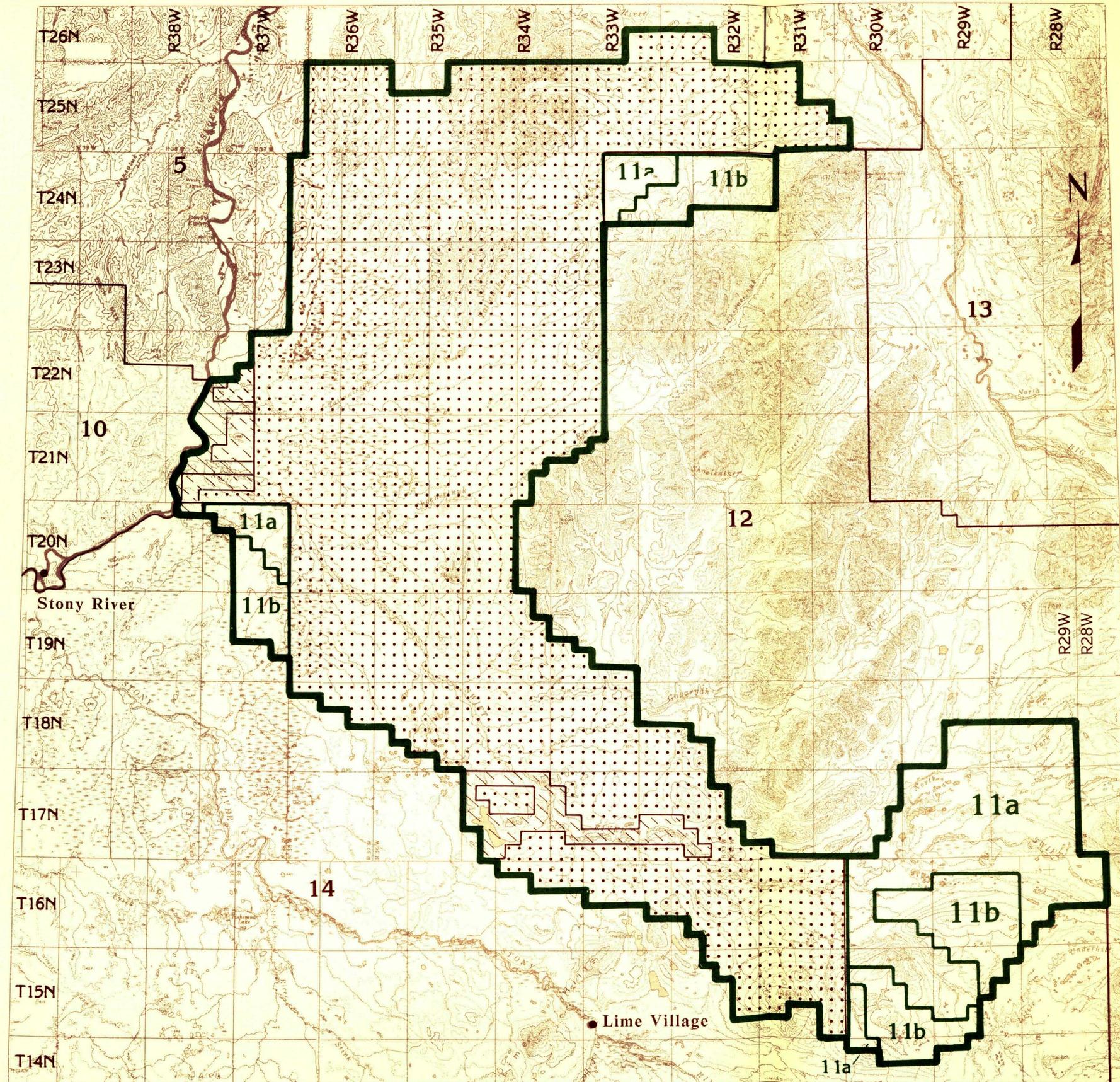
**LAND-USE DESIGNATION SUMMARY
MANAGEMENT UNIT 11 - SWIFT RIVER**

<u>SUBUNIT</u>	<u>LAND OWNERSHIP</u>	<u>LAND USE DESIGNATIONS</u>				<u>COMMENTS</u>
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
11a Swift-Babel-Tatlawiksuk	State	Wildlife habitat	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit Grazing in part of subunit	Open	
11b Hinterlands	State	General use: low resource	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-Intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

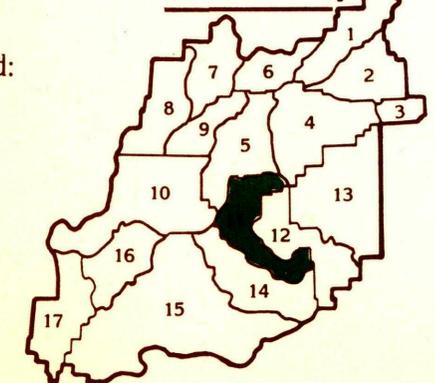
11: Swift River



— Management Unit Boundary
 — Subunit Boundary

-  State Owned
-  State Selected
-  Native Owned
-  Native Selected
-  Federal

Location Map



U.S.G.S. Quad:
 Iditarod
 McGrath
 Lime Hills
 Sleetmute

Map Scale:
 1:500,000

MANAGEMENT UNIT 12: SOUTH ALASKA RANGE

Background

Location and Land Ownership. The South Alaska Range comprises the upper watersheds of the rivers draining south and west from the Alaska Range and the Lyman Hills - the Cheeneetnuk, Gagaryah, Babel, Swift, and Stony rivers. Most of the unit is state owned; the western extension of the unit between the Cheeneetnuk and Swift rivers is in federal ownership. A Native allotment on the North Fork Swift River is the only known private parcel in the unit.

Resources and Land Use. Most of the unit is mountainous. The Revelation Mountains in the eastern half are some of the most rugged terrain in the Alaska Range. This part of the planning area is virtually all alpine tundra. The western half is open white spruce and hardwood forests in the valleys of the Cheeneetnuk and Gagaryah rivers, and shrub tundra on the upper slopes of the Lyman Hills. Suitability for settlement and forest management is low in most of the area, but the open forests of the upper Gagaryah valley have moderate suitability for settlement. A few hikers and climbers visit the Revelation Mountains, and the alpine scenery and the dramatic peaks of this area are likely to attract more in the future. There is one existing guide facility in this area and four more sites have been applied for. Mineral potential is moderate in upland areas, although there are presently no producing mines. A mercury mine was operated at White Mountain in the past and the White Mountain claims are actively maintained. The northern edge of the unit falls within the coal belt that follows the north edge of the Alaska Range. Coal is known to be present, but inaccessibility makes development unlikely in the near future.

There are no communities in this unit, and it receives relatively little local use. Residents of Sleetmute, Stony River, and Lime Village make some use of these lands for trapping and hunting for caribou, moose, bear, and sheep. The game resources have brought in many

commercial guides: portions of ten registered guiding areas are within this unit. It is also used for unguided sport hunting.

Access. Access to this area is limited. A number of lakes on the western and central portions of the unit provide fly-in access. There are some natural landing areas in the Gagaryah valley, an airstrip in the upper Stony River valley, and a trail along the Stony River.

Management Intent

State lands in this unit will be retained in state ownership and managed to support continued commercial, sport, and subsistence use of the game, and public recreation. One area in the upper Gagaryah Valley that has moderate settlement suitability will be reconsidered for possible sale when this plan is updated. Opportunities for private recreation use of state lands in this unit will be allowed under remote cabin permits.

State lands in this subunit will remain open to mineral entry. To protect important salmon populations, salmon spawning and rearing beds in known mineralized areas in the headwaters of the Babel, Stony, Cheeneetnuk, and Swift rivers will be closed.

Subunit 12a - Revelation Mountains-Swift Valleys

This subunit contains three blocks of state land in the rugged Revelation Mountains and the high valleys of the Swift River tributaries -- the Cheeneetnuk, Babel, and North Fork Swift rivers. These lands will be retained in state ownership and managed for multiple use with emphasis on wildlife habitat and harvest, guiding, and public recreation. A portion of the unit will be open for remote cabin permits. One permit for a guide site has been issued, and four others have been applied for in this unit. One trapping cabin permit has been issued in the southeastern portion of this sub-

unit. Nearly all the state land in this subunit is open to mineral entry. However, because of their importance for salmon spawning and rearing, the beds of several tributaries to the Babel River, Cheeneetnuk River, and Stony River will be closed. Uplands along the closed streams in the Stony and Cheeneetnuk drainages will be subject to leasehold location requirements to ensure compatibility of mining with salmon spawning and king salmon rearing areas. Part of this subunit will be open to remote cabin permits. The southern boundary of this subunit borders Lake Clark National Park. The present boundary between the park and the state land is crossed twice by the Stony River. The general management plan for the national park identifies some park lands in this area as suitable for exchange. Exchange of lands in the upper Stony River area to clarify the park boundary would be compatible with the management intent for this subunit.

Subunit 12b - Gagaryah

This state-owned subunit is in the rolling terrain of the upper Gagaryah valley. Open forests, game, the clearwater river, alpine scenery, and a fly-in lake make this area very attractive for private recreational use. The scenery and access also give this area potential for increased public or commercial recreational use in the long term. There is also some current use of this area for hunting. Therefore, this subunit will be retained in state ownership in the near term and managed for general use. When the plan is updated, this parcel will be reevaluated to determine whether it should be kept in public ownership for the long term or offered for sale. This subunit contains approximately 3,700 acres that are suitable for settlement.

Subunit 12c - Hinterlands

The hinterlands comprise three blocks of land in the Lyman Hills and the upper Gagaryah and Babel valleys. They are lands with little access and low surface values. One trapping cabin permit has been applied for in the Revelation Mountains in this subunit. These lands will be retained in state ownership and managed for general multiple use. Part of this

subunit will be open to remote cabin permits. Nearly all state lands in this subunit are open to mineral entry. However, because of their importance for salmon spawning and rearing, the beds of some of the tributaries of the Cheeneetnuk River will be closed. Uplands along these streams will be subject to leasehold location requirements to ensure compatibility of mining with salmon spawning and king salmon rearing areas.

Management Guidelines

The complete set of areawide guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Public and commercial recreation
- Remote cabins
- Settlement
- Lakeshore management
- Stream corridors

Guidelines specific to this management unit are listed by subunit in the following sections.

Subunit 12a and 12b- Revelation Mountains-Swift Valleys and Gagaryah

Grazing. Grazing leases or permits generally will not be allowed in the following areas because of their importance as moose winter range and Dall sheep habitat (Map 2.1). Temporary passage is not prohibited through these areas for travel between areas to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guideline in Chapter 2 ("Grazing on Important Habitat Lands"). All townships are in the Seward Meridian.

- T22N R33W sec. 22-23, 26-28, and 31-34
- T20N R28W and R29W
- T19N R26W through R29W; R30W sec. 36
- T18N R24W through R29W; R30W sec. 1, 12-13, 24-25, and 36
- T17N R24W through R28W

T16N R24W through R28W
T15N R24W through R27W; R28W sec. 1-12
T14N R25W and R26W; R27W sec. 1-3, 10-15, 22-27, and 34-36; R28W sec. 19-20 and 29-32
T13N R28W sec. 6-7, 17-23, and 27-31
T12N R28W sec. 6-9, 13-20, and 20-32.

Subunits 12a and 12c - Revelation Mountains-Swift River & Hinterlands

Mineral Closures and Leasehold Location Areas. Beds of the portions of the tributaries to the Babel, Cheeneetnuk, and Stony rivers shown on Map 2.4 will be closed to new mineral entry to protect important salmon spawning and rearing areas. Lands within 200 feet of the ordinary high water mark of the segments of these streams used for salmon spawning or king salmon rearing will be subject to leasehold location requirements. Streams closed or subject to leasehold location are listed in Appendix H. Lease stipulations for leasehold location areas are listed in the Mining section of Chapter 2.

Remote Cabin Permit Areas. Parts of these subunits are within the Little Underhill and Upper Cheeneetnuk blocks of the Alaska Range remote cabin permit area. Boundaries of the area open for remote cabin permits are

shown on Map 2.2. Parts of subunits 11a, 11b, 14c, and 14d are also within this block. A total of nineteen remote cabin permits will be allowed in the Little Underhill block and four in the Upper Cheeneetnuk block, with a maximum of one remote cabin permit allowed in any one township. Fifty-foot building setbacks will be required from the ordinary high water mark of Kristin Creek, Little Underhill Creek, the Cheeneetnuk River, and the unnamed tributary to the Cheeneetnuk River in T23N R31W S.M. identified as an anadromous stream in the ADF&G catalog of anadromous waters.

Subunit 12b - Gagaryah

Gagaryah River Instream Flow. The upper Gagaryah River flows through this subunit. Downstream segments of the river are important for coho spawning. When the plan is updated, this subunit will be reevaluated to determine whether it should be kept in public ownership in the long term or offered for sale. If the subunit is reclassified for settlement and the disposal design results in significant private developments dependent on river water (e.g., small-scale hydropower), an instream flow study should be done to determine the flow levels needed to protect the coho spawning areas.

RESOURCE INFORMATION SUMMARY

Management Unit 12 - South Alaska Range

Resource	12a	Subunit 12b	12c
Agriculture	Unsuited	Unsuited	Unsuited
Energy	Moderate to high coal potential in northern edge of subunit	Moderate to high coal potential in northern edge of subunit	—
Fish	Cheeneetuk & Gagaryah: salmon & resident fish; Little Underhill: resident fish	Gagaryah R.: salmon & resident fish; Babel R.: salmon	Cheeneetuk: salmon & resident fish; Shoeleather Cr.: resident fish
Forestry	Most unsuited; some low potential	Some high potential for personal use within disposal	Low potential to unsuited
Grazing	Most unsuited; high potential in northern block	High potential	High potential
Historic/cultural	Low potential	Low potential	Low potential
Materials	Unsuited	Unsuited	Unsuited
Minerals	East half moderate potential, west half low potential	Low potential	Low to moderate potential
Oil & gas	Unknown	Unknown	Unknown
Public access	Plane to natural landing areas & lakes	Plane to natural landing areas & lakes	None developed
Recreation	Moderate use and	Moderate use and	Moderate potential
Settlement suitability	Most unsuited, some low	Moderate to low	Low to unsuited
Wildlife	Mostly B-1, some A-2 & B-2; moose winter range & Dall sheep in E half;	B-1/B-2; bear, moose	B-2; bear, caribou, moose
Important trails	Stony River trail	None identified	None identified

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

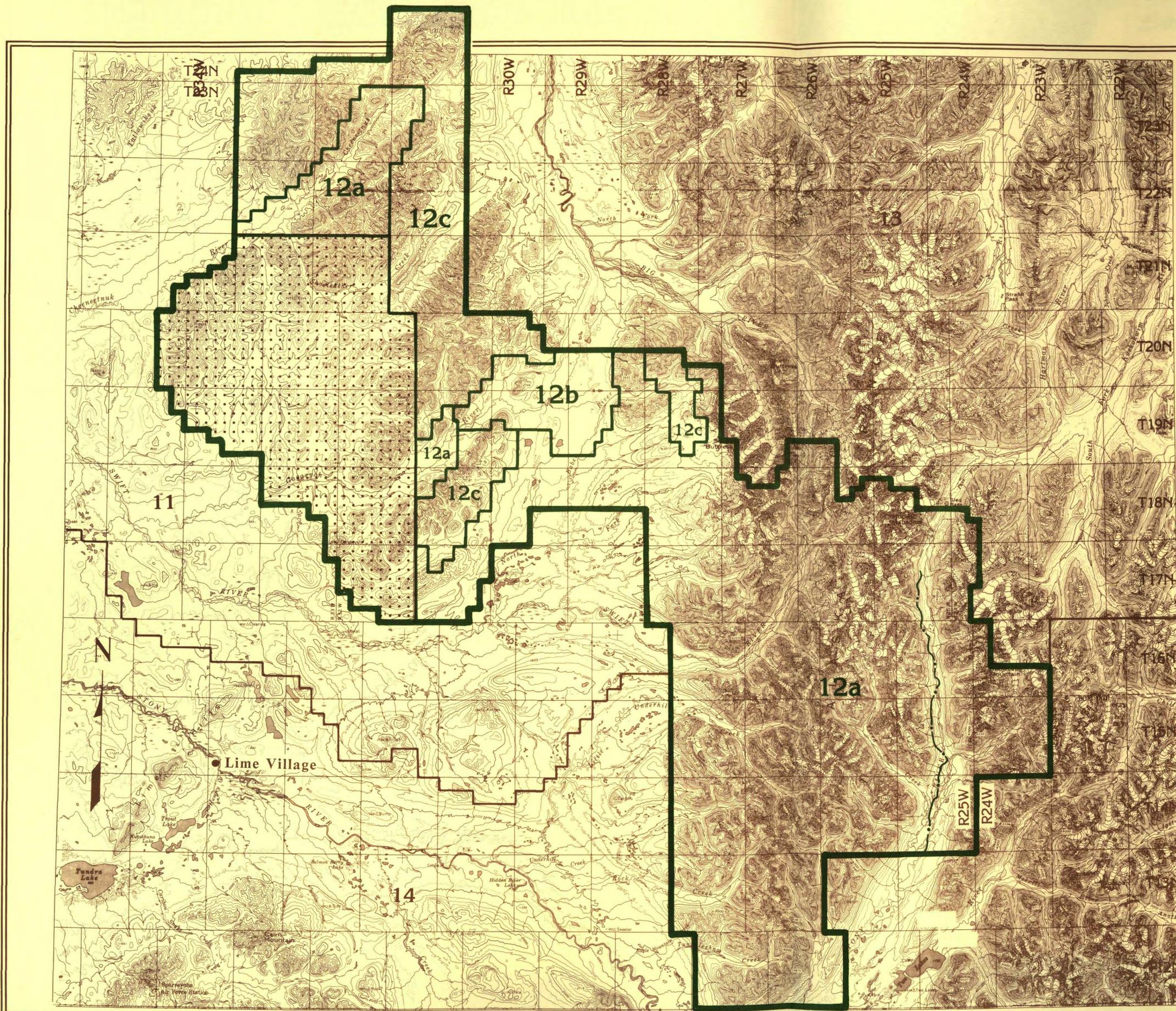
MANAGEMENT UNIT 12 - SOUTH ALASKA RANGE

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
12a Revelation Mts.-Swift River	State	Public recreation Wildlife habitat	Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open except along some streams	
12b Gagaryah	State	Resource mgmt.	Public recreation Wildlife habitat	Land disposals Remote cabins Grazing in part of subunit	Open	Reconsider for sales when plan is updated
12c Hinterlands	State	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open except along some streams	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

12: South Alaska Range



— Management Unit Boundary
 — Subunit Boundary

State Owned

State Selected

Native Owned

Native Selected

Federal

--- Trails on public lands

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Location Map



U.S.G.S. Quads:
 McGrath
 Lime Hills

Map Scale:
 1:500,000

MANAGEMENT UNIT 13: NORTH ALASKA RANGE

Background

Location and Land Ownership. This unit comprises the upper watersheds of the rivers that drain north from the Alaska Range -- the Big River, Middle Fork, Windy Fork, and South Fork rivers. It is state-owned land except for some selected land along the South Fork river, and Cook Inlet Region, Inc. land west of the South Fork and south of Farewell. There are numerous parcels of private lands within this subregion. Approximately 250 parcels were staked within three past state remote parcel offerings, and there are a dozen Native allotments and two federal trade and manufacturing sites.

Resources and Land Use. Most of this area is mountainous, with rugged peaks rising to over 9,000 feet. Splitting the mountain ranges are broad, high valleys along the Big, Windy Fork, Middle Fork, South Fork, Post, and Hartman rivers. These valleys are covered by short, open, white spruce and hardwood forests. The lower mountain slopes are in shrub tundra; the upper elevations in alpine tundra, snow, and ice. The footslopes of the range on the northern perimeter of the unit grade from shrub tundra into black spruce woodlands.

The wooded valleys have moderate potential for settlement, and are very scenic. The alpine scenery also brings in a small number of river runners, climbers, and hikers, and will probably attract more use in the future. Mineral potential is moderate to high throughout the mountains. This unit encompasses the Farewell mineral belt where concentrations of lead, silver, gold, zinc, rare earth elements, and other commodities exist. The mineral industry continued to be interested in mineral exploration in this area. A number of mining claims exist in this area, but none are actively mined at present. The Tonzona coal deposit stretches along the northern boundary of the unit but lack of access makes coal extraction unlikely in the near future.

There are no communities within this unit, and these state lands receive relatively little local use. Some residents of Stony River, McGrath, and Nikolai hunt bear, caribou, and moose in the upper valleys, and there is some trapping in portions of the area. More commercial guiding for big game takes place in this area than in any other unit in the planning area. Fifteen registered guiding areas are wholly or partially within this unit and there are pending applications for five guide sites.

Access. Access to this area is limited. The primary access is by small plane to gravel bars along the major rivers, tundra landings, or lakes. There are private airstrips at Farewell Lake, Rohn River, and White Mountain, and an unmaintained public strip at Farewell. The northern edge of the unit can be reached by boat along the Big River and South Fork in high water. The Iditarod Race Trail crosses the unit, and there are trails from Farewell to White Mountain, and along the Dillinger and Post rivers.

Management Intent

The intent for this unit is to support continued public use of game and recreation resources, and to provide opportunities for private and commercial recreation. The alpine scenery, game, and fly-in access make lands in this unit very attractive for private cabins, and for guided and individual hunting, floating, and climbing trips. Four areas are designated for settlement and may be offered for private ownership during the next twenty years. The settlement areas contain a total of about 7,000 acres that could be offered for private ownership. Two areas will be open for widely dispersed remote cabin permits. These offerings are designed to concentrate private lands and cabins in and adjacent to past sale areas, or on the periphery of the main public use areas to minimize impacts on guiding and public recreation. The great majority of the land area will be retained in public ownership and

managed for multiple use with the emphasis on wildlife habitat and harvest and public recreation. Retained lands will remain open for mineral entry; disposal areas will be closed prior to sale. The unstaked portions of past disposal areas not available for further staking will be reopened to mineral entry.

Subunit 13a - Post River

This subunit is nearly all state owned. The lower part of the South Fork valley is state selected. The Post River subunit includes most of the high mountains in the North Alaska Range, and the valleys of the Middle Fork, Post River, and Hartman River, and most of the South Fork and Windy Fork valleys. There are permits for three trapping cabins in this subunit and applications for five guide sites. Subunit 13a will be kept in public ownership for multiple use with emphasis on protecting wildlife habitat; supporting continued commercial, sport, and subsistence use of game resources; and public recreation. Lands in the Middle Fork drainage will be open for remote cabin permits at a very low density. These permits are intended to allow additional individual private recreation sites while avoiding the core areas for commercial guiding operations. The southeastern boundary of this subunit borders Lake Clark National Park. The present boundary between the park and state land is crossed twice by the Stony River. The general management plan for the national park identifies some park lands in this area as suitable for land exchange. Exchange of land in the upper Stony River area to clarify the park boundary would be compatible with the management intent for this subunit.

The past Windy Fork and Mount Rich remote parcel areas are within this subunit (see Map 2.3). Nineteen parcels were staked in Windy Fork, along the river and around the larger lakes. Sixty-four people staked in Mount Rich, along the Hartman and South Fork rivers and a large lake. Suitable land for settlement in these areas is limited to narrow strips near the rivers. Because there is little suitable land left unstaked, these areas will not be offered for additional staking. There were no entries on large, steep or inaccessible por-

tions of the past disposals. Unstaked areas will be reopened to mineral entry. The portion of 13a in T24N R30W S.M. sections 1-4 and 9-11 was included in the original Big River disposal, and closed to mineral entry. These lands have high mineral potential and will be reopened to new mineral entry.

Subunit 13b - Big River Disposal

This subunit was opened to staking of remote parcels in 1982. One hundred seventy parcels were staked during that opening. The stakings comprise less than 5 percent of the land within the disposal area, and few parcels have been developed. The Big River valley has extensive open white spruce cover, pretty mountain views, and relatively good fly-in access to river bars and lakes. Following the close of the ten-year lease period on the initial stakings, a limited amount of land will be made available for additional stakings. The total number of stakings from the past plus the future offering will be limited to 200 parcels. If all previously staked parcels are surveyed and patented, 30 additional stakings will be allowed, or a total of 1,200 acres if all entrants stake the allowed maximum of 40 acres. If some previous stakings are terminated or relinquished, additional new stakings equal to the number of those terminated or relinquished will be allowed. The portion of the original Big River disposal area in T24N R30W S.M. sections 1-4 and 9-11 is included in subunit 13a and will not be reoffered for settlement because of high mineral potential.

Subunit 13c - Big River South

This subunit is adjacent to the past Big River disposal. It is high rolling country covered by open white spruce forest. Lakes provide fly-in access. Approximately 1,400 acres will be made available for private ownership. Land offerings in this area may be held jointly with the Big River (13a) reoffering.

Subunit 13d - Mount Rich Addition

Subunit 13d is adjacent to the past Mount Rich remote parcel area. This is high, open forest country in the upper South Fork valley. Access is by plane to gravel bars in the Mount

Rich area or downriver. Approximately 2,100 acres will be made available for private ownership in this subunit. There is one existing trapping cabin permit in this subunit.

Subunit 13e - Dillinger River

This subunit is on the northern footslopes of the Alaska Range along the Dillinger, Jones, and South Fork rivers. There is fly-in access to gravel bars along the South Fork and possible tundra landing areas within the disposal boundaries. Open hardwood forests on some south-facing slopes and open white spruce forests along the South Fork River offer some good cabin sites. One trapping cabin permit on the South Fork has been issued in this subunit. Approximately 4,600 acres will be offered for private ownership.

Subunit 13f - Hinterlands

Three blocks of state land with low surface resource values and little public access make up the Hinterlands. Included are some of the upper elevations of the Big River drainage and glaciers in the southcentral part of the North Alaska Range. These lands will be kept in state ownership and available for general use.

Management Guidelines

The complete set of areawide guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Cultural resources
- Fish and wildlife habitat
- Lakeshore management
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Settlement
- Stream corridors
- Trail management
- Wetlands management

Guidelines specific to this management unit are listed by subunit in the following sections.

General

Grazing. Grazing leases or permits generally will not be allowed in some areas because of their importance as moose winter range, caribou calving areas, and Dall sheep habitat (Map 2.1). Temporary passage of livestock is not prohibited through these areas to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands").

Grazing is prohibited in the unit except in the following areas. All townships are in the Seward Meridian:

T24N R30W
T24N R29W
T23N R30W
T23N R29W
T22N R30W
T22N R29W
T21N R30W
T21N R29W
T21N R28W
T20N R30W
T20N R29W
T20N R28W
T29N R23W
T29N R22W sec. 1-11 and 15-20
T30N R21W sec. 1-3; 10, 11, 19-21, 29, 30
& 31

Subunit 13a - Post River

Remote Cabin Permit Areas. Parts of this subunit is within the Styx River, Middle Fork, and Tonzona-South Fork blocks of the Alaska Range remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunits 2c, 2d, 3a, 3b, 4a, and 4b are also within this block. A total of nine remote cabin permits will be allowed in the Styx River block, three in the Middle Fork block, and 19 in the Tonzona-South Fork block, with a maximum of one remote cabin permit allowed in any one township.

Subunit 13b - Big River Disposal

Net Sale Area in Reoffering. The lease period for past stakings in the Big River remote parcel area will elapse in 1992. Following the close of this period, the Big River area will be available for additional staking. The total number of parcels allowed from the past plus the future offering will be 200 parcels. The reoffering will include thirty new parcels plus additional stakings equal to the number of past stakings terminated or relinquished. The total acreage available in the reoffering will be 40 acres times the number of parcels available. If the minimum of thirty parcels are offered, the net acreage would be 1,200 acres.

Subunits 13b and 13c - Big River Disposal and Big River South

Disposal Design. Lake 1594' is on the boundary of the past Big River disposal and the future Big River South offering. Most of the lake is within the past disposal and its shoreline completely surrounded by stakings. The portion of the lakeshore within subunit 13c will be retained in public ownership to protect public access to the lake, and public recreation opportunities. In addition, if any of the past stakings on the lakeshore in subunit 13b are relinquished or terminated, public access sites and recreation sites on the lake will be identified and kept in public ownership prior to reoffering of the Big River disposal. Prior to the reoffering, the Big River area also will be reviewed to determine whether portions of the area are so densely staked that they should be closed to additional staking. A 100-foot corridor will be retained in public ownership on each side of the Big River to protect public access and opportunities for recreational use of the shoreline. Lakes on which floatplanes can land will be subject to Chapter 2 guidelines re-

quiring public retention of at least 50 percent of the lakeshore. These lakes are important for public access and public recreation.

Subunit 13d - Mount Rich Addition

Disposal Design. In order to protect public access, public recreation opportunities, and riparian habitat, a 200-foot corridor will be retained in public ownership on the east bank of the South Fork River; due to steeper terrain on the west side of the river, the publicly retained corridor on the west bank will be 100 feet.

Subunit 13e - Dillinger River

Instream Flow and Disposal Design. The Jones River flows through the southwestern portion of the proposed Dillinger River land disposal. The river supports a small and potentially sensitive run of king salmon. If the disposal results in significant private developments dependent on river water (e.g., small-scale hydropower), an instream flow study should be done to determine the flow levels needed to protect the king salmon population. A 200-foot staking setback will be required on the Jones and Dillinger rivers to protect the shores of the anadromous stream and guarantee the shoreline will be available for public use. A 100-foot staking setback will be required on the South Fork to protect public access and opportunities for public recreation along the river bank. Lakes on which floatplanes can land are important for public access and recreation. Lakes identified as floatplane lakes at the time of disposal design will be subject to Chapter 2 guidelines requiring public retention of at least 50 percent of the lakeshore.

RESOURCE INFORMATION SUMMARY

Management Unit 13 - North Alaska Range

Resource	Subunit			
	13a	13b	13c	13d
Agriculture	Unsuited	Unsuited	Unsuited	Unsuited
Energy	Moderate to high coal along NW perimeter	Moderate coal potential in T24N R30W	---	---
Fish	Windy Fork, Sheep Cr., South Fork, Post R.: resident fish	Big R.: salmon and resident fish	None documented	None documented
Forestry	Most unsuited, some low potential in valleys; personal use in Mt. Rich area	Open forests in disposal important for personal use	Open forests in disposal important for personal use	Open forests in disposal important for personal use
Grazing	High potential in perimeter of subunit & upper S. Fork valley	High potential	High potential	High potential
Historic/cultural	Unknown	Unknown	Unknown	Unknown
Materials	Low potential	Low potential	Low potential	Low potential
Minerals	Moderate to high potential, some claims	Variable potential, one claim mining	Low potential	Low potential
Oil & gas	Northern perimeter in Minchumina sedimentary basin	Unknown	Unknown	Unknown
Public access	Plane to gravel bars, lakes, unmaintained strips, & natural landing areas; boat on S. Fork in some seasons	Plane to gravel bars and lakes	Plane to lakes	Plane to gravel bars
Recreation	Moderate use and potential	Moderate use and potential	Moderate use and potential	Moderate use and potential
Settlement suitability	Most unsuited, some low to moderate in valleys	Moderate	Mostly moderate, some low	Mixed moderate and low
Wildlife	B-1; bear, caribou calving in parts, sheep; moose winter range at lower elevations	Mostly B-1; some A-1 & B-2; bear, caribou, moose, ducks	B-1/B-2; bear, caribou, moose, ducks	B-1; bear, caribou, moose; sheep at upper elevations
Important trails	Iditarod Race Trail, Farewell-White Mt. trail, Dillinger R. trail, Post R. trail	Farewell-White Mt. trail	None identified	Iditarod Race Trail

See glossary for definition of ratings.

RESOURCE INFORMATION SUMMARY

Management Unit 13 - North Alaska Range, cont.

Resource	13e	Subunit 13f
Agriculture	Unsuited	Unsuited
Energy	Low coal potential	Moderate coal potential in T24n R30W, rest very low
Fish	Jones R.: small salmon run	None documented
Forestry	Some open hardwood forest in disposal important for personal use	Most unsuited; some open forest in W block important for personal use in adjacent disposals
Grazing	High potential	East block unsuited, rest high potential
Historic/cultural	Unknown	Unknown
Materials	Low potential	Low potential
Minerals	Low potential	Very high potential in T24N R30W; rest very low to moderate
Oil & gas	In Minchumina sedimentary basin	Unknown
Public access	Plane to gravel bars near subunit	Plane to unmaintained airstrips in western block
Recreation	Moderate use and potential	Moderate potential
Settlement suitability	Some moderate; most unsuited	Most unsuited; low in W block
Wildlife	B-1/C; moose winter range, bear	B-2; bear, caribou
Important trails	Dillinger R. trail	
See glossary for definition of ratings.		

LAND-USE DESIGNATION SUMMARY

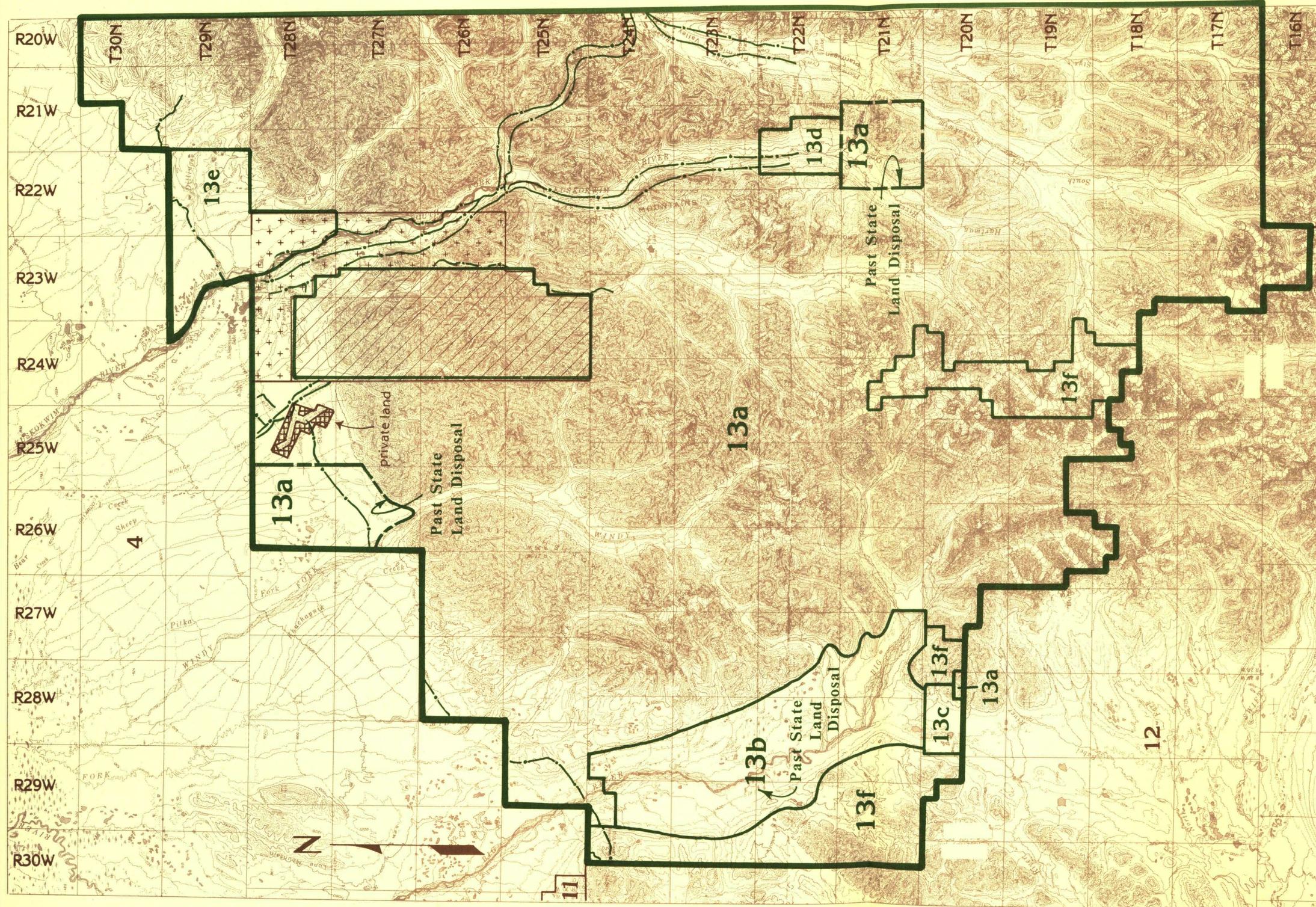
MANAGEMENT UNIT 13 - NORTH ALASKA RANGE

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
13a Post River	Most state, some state	Public recreation Wildlife habitat	Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open except along staked areas of past disposals	Includes past Windy Fork & Mt. Rich disposals
13b Big River Disposal	State/private	Settlement	Forestry Public recreation Wildlife habitat	Grazing in part of subunit Remote cabins Trapping cabins	Closed	Past disposal; see guidelines for additional sale area.
13c Big River South	State	Settlement	Forestry Public recreation Wildlife habitat	Grazing in part of subunit Remote cabins Trapping cabins after sale is scheduled	Closed prior to sale	Net sale area = 1,400 acres
13d Mt. Rich Addition	State	Settlement	Forestry Public recreation Wildlife habitat	Grazing in part of subunit Remote cabins Trapping cabins after sale is scheduled	Closed prior to sale	Net sale area = 2,100 acres
13e Dillinger River	State	Settlement	Forestry Public recreation Wildlife habitat	Grazing in part of subunit Remote cabins Trapping cabins after sale is scheduled	Closed prior to sale	Net sale area = 4,600 acres
13f Hinterlands	State	General use: low resource values		Land disposals Remote cabins	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

13: North Alaska Range



- Management Unit Boundary
- Subunit Boundary
- State Owned
- State Selected
- Native Owned
- Native Selected
- Federal
- Trails on public lands

Map shows approximate location of trails across state land. Portions of trails may cross private lands.

Location Map



U.S.G.S. Quads:
McGrath
Lime Hills

Map Scale:
1:500,000

MANAGEMENT UNIT 14: STONY RIVER

Background

Location and Land Ownership. This unit contains the land in the watershed of the Stony River from the western edge of the Alaska Range to the Kuskokwim River. Most of the eastern and western thirds of the unit are state owned, with small areas of state selections. The central region is Native-owned and Native-selected land along the Stony River and around Lime Village and Tundra Lake; the remainder is federal land. Lands on the Kuskokwim River and the lower reaches of the Stony River also are Native owned. There are about fifty parcels of private land, mostly Native allotments on the Stony River, at Lime Village, or on Tundra ("6-0") or Trout Lake. Four of the parcels are federal homesites or trade and manufacturing sites.

Resources and Land Use. The Lime Hills cut across the unit near Lime Village, and mountains up to 3,800 feet elevation ring the upper boundary. The remainder of the unit is low country. A narrow band of white spruce and hardwood forest lines the Stony and Stink rivers, but most of the unit is covered by shrublands and vast muskegs.

Stony River Village is on the northern edge of the unit, at the confluence of the Stony and Kuskokwim rivers. Lime Village is on the Stony River in the center of the unit. Residents of these communities, and to a lesser extent Sleetmute, Red Devil, Crooked Creek, Chuathbaluk, and Aniak residents, use the Stony River watershed for hunting, trapping, and fishing for salmon and whitefish. Sport hunting by individuals and guided parties has increased rapidly in recent years. Portions of six registered guiding areas are within the unit. There is some use of the upper Stony River for recreation, primarily float trips by hunting parties. Settlement suitability and forestry potential are very low on most state lands. Potential is limited to forested, riverfront lands along the Stony River downstream from Lime Village, and the lower Stink River. Mineral potential is low to very low

throughout the unit, and there are no mining claims. Materials have been extracted from state submerged lands at the confluence of the Stony and Kuskokwim rivers in the past.

Access. The Stony and Kuskokwim Rivers are navigable, and provide the main access to this unit. In addition, a number of large lakes on state and Native lands provide plane access, and a public airstrip is maintained at Lime Village.

Management Intent

State lands in this unit will be retained in public ownership and managed for multiple use with emphasis on fish and wildlife habitat and harvest, and, along the river, on timber harvesting for local use. Remote cabin permits will be allowed in a portion of the upper watershed to provide opportunities for private recreation. Although much of the land along the major waterways in this unit is Native owned or selected, the beds of the Kuskokwim River, the Stony River, and other navigable waters are state owned and are subject to the guidelines of this plan.

Subunit 14a - Stony River Corridor

This subunit consists of state-owned lands and state and overlapping state and Native selections along the Stony River downstream from Lime Village. Forests along the banks of the river provide houselogs and firewood, and are important moose winter range. This subunit will be retained in public ownership and managed for multiple use with emphasis on protection of fish, wildlife, and forest resources, and continued personal and commercial use of these resources. Approximately 4,480 acres of land adjacent to the northern edge of this subunit are proposed for selection because of habitat and timber resources, and in order to consolidate state land holdings in this area. If conveyed to the state, these lands will be managed as part of subunit 14a.

Subunit 14b - Tishimna Lake

Subunit 14b covers three blocks of high value habitat lands west of Lime Village that are not along the main river corridor. They include the Stink River drainage and land around Tishimna Lake. The lake is an important site for local harvest of whitefish. These lands will be retained in state ownership, and managed for multiple use, with emphasis on fish and wildlife habitat and personal and commercial harvesting of fish and wildlife resources. One section (640 acres) of land surrounded by the state lands in subunit 14b is proposed for selection for its habitat resources and in order to consolidate state land ownership in this area. If conveyed to the state, this section will be managed as part of subunit 14b.

Subunit 14c - Hinterlands

The Hinterlands subunit comprises five blocks of land with low surface and subsurface resource values and little access. These lands will be retained in public ownership and managed for general multiple use. Part of the subunit will be open to remote cabin permits. The southeastern boundary of this subunit borders Lake Clark National Park. The present boundary between the park and state land is crossed twice by the Stony River. The general management plan for the national park identifies some park lands in this area as suitable for land exchange. Exchange of land in the upper Stony River area to clarify the park boundary would be compatible with the management intent for this subunit.

Subunit 14d - Upper Stony

Three blocks of high value habitat -- including moose winter range -- between Lime Village and the front of the Alaska Range form subunit 14d. Included are lands along the Stony and lower Telaquana rivers, and Little Underhill, Underhill, Rock, and Tunkaleshna creeks. This portion of the river is also used for float trips from Lake Clark National Park. Applications are pending for two guide sites in subunit 14d. This subunit will be retained in public ownership and managed for multiple use, particularly fish and wildlife habitat, personal and commercial harvesting of fish and

wildlife resources, and public recreation. The northeastern portion of the subunit will be open for remote cabin permits. State land in this subunit is open to new mineral entry. The southeastern boundary of this subunit borders Lake Clark National Park. The present boundary between the park and state land is crossed twice by the Stony River. The general management plan for the national park identifies some park lands in this area as suitable for land exchange. Exchange of land in the upper Stony River area to clarify the park boundary would be compatible with the management intent for this subunit.

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Forestry
- Public and commercial recreation resources
- Remote cabins

Guidelines specific to this management unit are listed by subunit in the following sections.

General

Grazing. Grazing leases or permits generally will not be allowed in the following areas because of their importance as moose winter concentration zones (Map 2.1). Temporary passage of livestock is not prohibited through these areas to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guideline in Chapter 2 ("Grazing on Important Habitat Lands")

- Within 2 miles of the Stony River below Lime Village and above Salmonberry Lake.
- West of the Stony River and north of the north half of T15N S.M.
- T20N R39W S.M. sec. 15-17, 19-21, 29 & 30

T16N R29W S.M. sec. 25-28 & 34-36
T15N R29W S.M. sec. 1-3, 10-15, 21-28 &
32-36
T14N R29W S.M. sec. 1-5, 7-18, 20-28 &
34-36
T13N R29W S.M. sec. 1, 2, 12, 13, 24, 25
& 36
T12N R29W S.M. sec. 1-3, 5-9 & 11-36

Subunit 14a and 14c - Stony River Corridor and Hinterlands

Agriculture Potential. Preliminary ratings in the USDA Exploratory Soil Survey show portions of these subunits as having moderate potential for agriculture but detailed information to confirm these ratings is unavailable. In order to protect options for long-term use of these lands, the Division of Agriculture should be consulted prior to issuing permits or leases for any activities which would significantly diminish their capability to support agriculture.

Subunit 14b - Tishimna Lake

Commercial Recreation Leases. Tishimna Lake (known locally as Whitefish Lake) is an important whitefish harvesting site for Lime Village residents. There is an existing lodge near the lake. Commercial leases for lodges will not be granted within one mile of Tishim-

na Lake in order to protect the traditional fish harvesting in the lake.

Subunits 14c and 14d - Hinterlands and Upper Stony

Remote Cabin Permit Areas. Parts of these subunits are within the Little Underhill block of the Alaska Range remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. Parts of subunits 11a, 11b, and 12a are also within this block. A total of 19 remote cabin permits will be allowed in the Little Underhill block, with a maximum of one remote cabin permit allowed in any one township. A building setback of at least fifty feet will be required from the ordinary high water mark of Little Underhill and Rock creeks which are anadromous streams.

Navigable Waters

Peregrine Falcon Nest. There is a peregrine falcon nest along the Kuskokwim River northeast of Stony River village. The Habitat Division of the Department of Fish and Game should be consulted prior to issuing permits or leases on the state-owned beds of navigable waters in T20N R39W S.M. sections 4-8 and 18 and T20N R40W S.M. sections 12-14 and 23-24.

RESOURCE INFORMATION SUMMARY

Management Unit 14 - Stony River

Resource	Subunit			
	14a	14b	14c	14d
Agriculture	Portions with moderate potential; rest low	Low potential to unsuitable	Portions w/moderate potential; rest low	Low to very low potential
Energy	—		—	—
Fish	Stony R.: salmon & resident fish	Stink R.: salmon & resident fish; major tribs.: salmon	Telaquana R.: salmon & resident fish	Stony & Telaquana: salmon & resident fish; major tribs.: salmon
Forestry	High potential for local use	High potential for local use along Stink R.; rest unsuited	Unsuited	Unsuited
Grazing	High potential	Most high potential; some moderate	High potential	High potential
Historic/cultural	High potential	Unknown	Unknown Stony River	High potential along
Materials	Unknown	Low potential	Low potential	Unknown
Minerals	Low to very low potential	Low to very low potential	Low to very low potential	Low to very low potential
Oil & gas	Within Holitna sedimentary basin	Most within Holitna sedimentary basin	Blocks west of Lime Village within Holitna	Unknown
Public access	Boat along Stony R. poss. Stink R.; plane access to several lakes	Boat along Stony R. & plane access to narrow lakes in N block	Access limited; poss. some seasons; plane to one lake	Boat along Stony R. in
Recreation	Low potential	Unknown	Unknown potential along Stony R.	Moderate use and
Settlement suitability	High	High along Stink R.; rest low to unsuited	Unsuited	Most unsuited; pockets of low and high
Wildlife	A-2; moose winter range; bear, caribou, waterfowl	A-2/B-1; part moose winter range; bear, caribou, waterfowl	B-2; bear, caribou, moose	A-2/B-1; moose winter range; waterfowl along Stony R. and Little Underhill; bear, caribou
Important trails	None identified	None identified	None identified	None identified

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

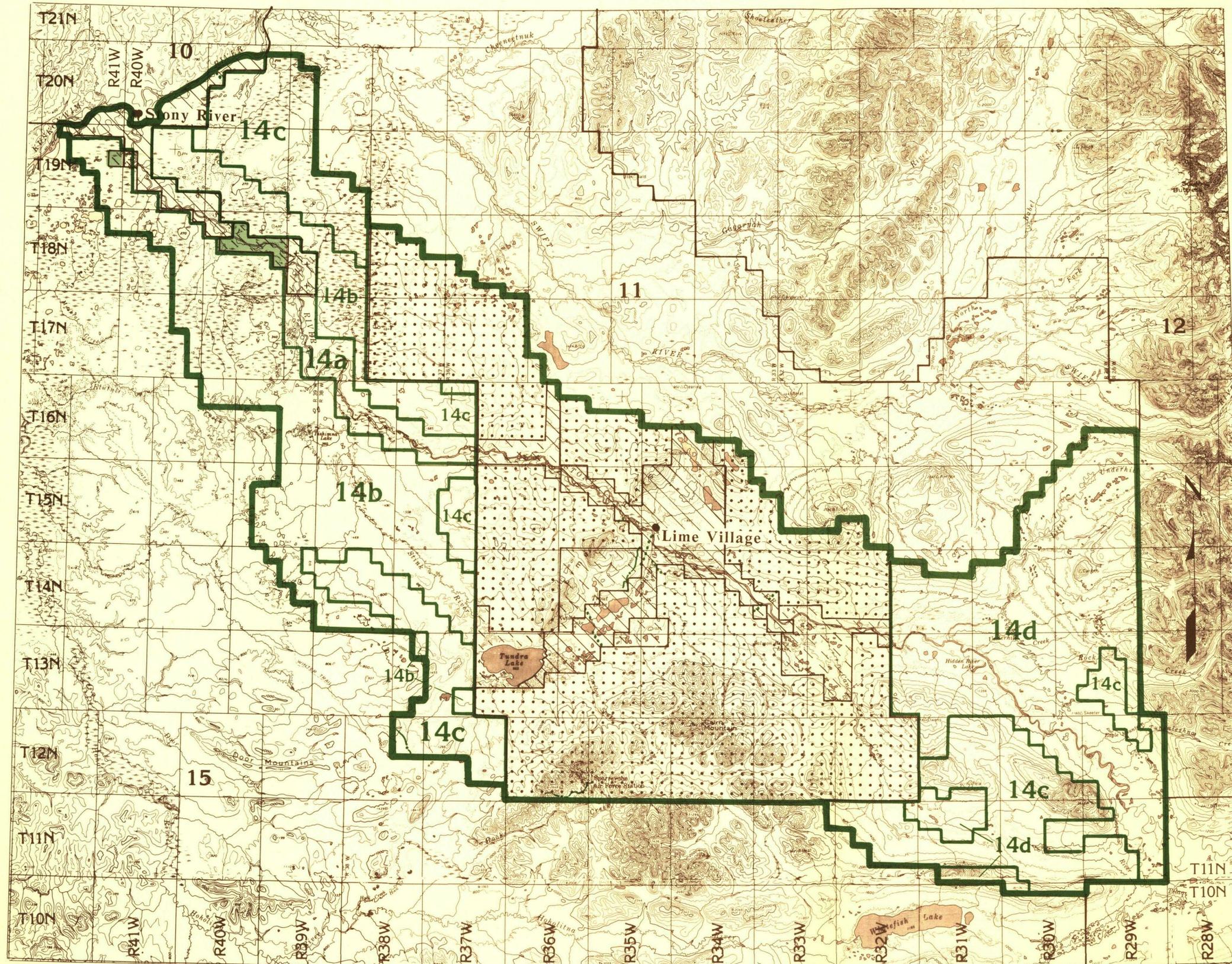
MANAGEMENT UNIT 14 - STONY RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
14a Stony River Corridor	Most state; some state selected/ Native selected	Forestry Wildlife habitat	Public recreation	Grazing Land disposals Remote cabins	Open	Includes proposed selections
14b Tishimna Lake	Most state; 1 section state select/ Native select.	Wildlife habitat	Forestry Public recreation	Grazing in part of subunit Land disposals Remote cabins Commercial lodges on Tishimna Lake	Open	Includes proposed selections
14c Hinterlands	State	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in most of subunit	Open	
14d Upper Stony	State	Public recreation Wildlife habitat	Forestry Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

14: Stony River



— Management Unit Boundary
 — Subunit Boundary

- State Owned
- State Selected
- Native Owned
- Native Selected
- Federal
- Proposed State Selections
- Trails on public lands
- Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Location Map



U.S.G.S. Quads:
 Sleetmute
 Lime Hills
 Lake Clark
 Taylor Mts.

Map Scale:
 1:500,000

MANAGEMENT UNIT 15: HOLITNA RIVER

Background

Location and Land Ownership. The Holitna River management unit encompasses the watersheds of Holitna and Hoholitna Rivers. This is the largest management unit in the planning area, and is nearly all state owned. The land along the Kuskokwim River near Sleetmute is Native owned, and there are three parcels of Native selections near Sleetmute, two of which overlap with state selections. Three small parcels of federal land complete the ownership pattern in the Sleetmute area. The remaining land -- over 90 percent of the total area -- is state owned. Sleetmute, located at the confluence of the Holitna and Kuskokwim, is the only village in the unit. However, there are approximately 165 parcels of private land in or adjacent to this unit. They are a mixture of Native allotments, and federal homesites, headquarters sites, and trade and manufacturing sites.

Resources and Land Use. The central and northern portions of the unit are broad lowlands; western, southern, and eastern boundaries are defined by the Chuilnuk and Kiokluk mountains, the highlands dividing the Kuskokwim basin from Bristol Bay, and the mountains surrounding Sparrevohn Air Force Station. The upper elevations of these ranges are approximately 4,000 feet. The Holitna and Hoholitna rivers, and the lower Chukowan, Kogrukuk, Shotgun, Taylor, and Titnuk waterways are lined by relatively broad bands of white spruce and hardwood forest that are one-half to two miles wide on each side of the river. Some south-facing hillslopes scattered throughout the unit also support hardwood forest that are one-half to two miles wide on each side of the river. The rest of the lowlands is dominated by black spruce woodlands, grading into shrublands on the upper slopes, and alpine tundra on the highest mountains.

The Holitna basin contains the greatest concentration of salmon spawning areas in the entire Kuskokwim drainage and the most

productive moose habitat. In addition, these lands support concentrations of bear and waterfowl, and provide winter range for caribou and extensive habitat for furbearers. The fish and wildlife resources of the Holitna basin attract residents of communities from McGrath to Bethel, and sportsmen and guides from throughout Alaska and the continental U.S. The greatest concentration of subsistence activities in the planning area occurs in the Holitna basin. It is used for hunting, trapping, fishing, berry picking, houselog harvest, and firewood collection. It is also the most intensively used part of the basin for sport hunting for moose. Twelve registered hunting guides, six fishing guides, and an unknown number of outfitters use this drainage, targeting moose, caribou, salmon, and sheefish. There are two lodges in the unit, and a third is planned for construction. Salmon from the Holitna drainage provide about 20 percent of the annual salmon harvest for Kuskokwim basin subsistence and commercial fishermen. The king salmon stocks from this and other Kuskokwim drainages are fully allocated at present.

The Holitna basin is rich in other resources as well. The riparian forestlands are among the most productive in the Kuskokwim basin. These forests are highly suitable for settlement and timber harvest for personal and commercial use. The Taylor Mountains and the Kuskokwim Mountains along the western boundary of the unit have moderate to very high mineral potential, a number of existing claims, and two mines that have been active in recent years. Gravel bars in the Kuskokwim River near Sleetmute also have provided materials for local construction projects.

Access. The main access to the unit is by boat on the Kuskokwim, Holitna, and Hoholitna rivers and their major tributaries. Small planes can also land on sections of the Holitna River, numerous lakes, and natural landing areas in the tundra. A public airstrip is maintained at Sleetmute, and there are

strips of mining claims at Forty-seven Creek and in the Taylor Mountains. A number of trails cross the unit along major rivers or over-land routes into the Kuskokwim Mountains.

Management Intent

The emphasis of state land management in the Holitna management unit is protection of the fish and wildlife habitat, and support for continued subsistence, commercial, and sport use of these resources. Forestlands will continue to be available for personal and commercial timber harvest. Most of the unit will remain in public ownership, but opportunities for private use of state lands may be made available through a land disposal near Sleetmute, and a land disposal and remote cabin sites along the southern perimeter of the unit and in the Door Mountains. The remote cabin sites and land disposals are located to offer sites that can support private recreation and settlement, while avoiding the main public use areas and most important habitat lands. Land disposal offerings total approximately 3,600 acres of land and there are 56 remote cabin sites.

Most state lands will remain open to mineral entry. However, to protect important salmon populations, spawning beds and rearing areas in known mineralized zones will be closed to new mineral entry. Closures include portions of Portage, Bakbuk, Mukslulik, Taylor, Kiknik, and Chuilnuk creeks, a portion of the Gemuk River, Gemuk Lake, part of an unnamed tributary to the Holitna between Bakbuk and Portage Creeks, and an unnamed tributary of the Hoholitna in the Door Mountains. Uplands along the Gemuk River, Gemuk Lake, Mukslulik Creek and unnamed tributaries of the Holitna and Hoholitna river drainages will be subject to leasehold location requirements to ensure compatibility of mining with salmon spawning and king salmon rearing areas.

In addition to state-owned uplands, the beds of the Kuskokwim, Holitna, Hoholitna, and other navigable waters are state owned and are subject to the guidelines of this plan.

Subunit 15a - Holitna-Hoholitna Corridors

Subunit 15a contains the main stems of the Holitna and Hoholitna rivers, the core of the Holitna basin. It receives more use for subsistence and sport hunting for moose than any other subunit in the planning area, and is important for salmon spawning, and harvest of salmon and resident fish. The Department of Fish and Game's only Kuskokwim weir for estimating the size of salmon runs is located at Kashegelok in the southern part of the subunit. The forests along the rivers are the most productive in the Holitna basin, and some of the best in the entire planning area. This subunit is state owned except for a number of Native allotments along the river. Three permits for trapping cabins have been issued within the subunit. Subunit 15a is accessible by boat and small plane.

The Holitna and Hoholitna Corridors will be kept in public ownership and managed to protect the fish and wildlife habitat and populations, and to support continued use of these resources. The forest lands will be managed to provide timber for personal and commercial and timber harvest. Other uses of this land are permitted when compatible with the primary intent of protecting the fish and wildlife resources. Most state lands in this subunit will remain open to new mineral entry; however, portions of Whitewater Creek, Kiknik Creek, and from unnamed tributaries to Kiknik Creek will be closed to protect salmon rearing areas.

In recognition of the outstanding habitat, forestry, and human use values of this area, it is also recommended that the legislature consider designating it as a state Public Use Area. The Public Use Area would contain subunit 15a and the adjacent portions of subunits 15b and 15c that are rated A-2 ("special value") habitat (see in Appendix A). This designation would be intended to keep these lands in permanent public ownership; protect the fish and wildlife habitat; promote forest management; and ensure that fish, wildlife, and forest resources continue to be available for personal and commercial use. Other uses will be allowed whenever compatible with the intent

to protect and manage habitat and forest resources. The Public Use Area would be managed by DNR under a management plan prepared with the concurrence of the Department of Fish and Game.

Three small parcels of land between Sleetmute and Beaverhouse Hill are proposed for state selection. These parcels total approximately 5,760 acres. They are currently under Native selection. These parcels are adjacent to other state lands, and are part of the Holitna corridor. If conveyed to the state, they will be managed as part of subunit 15a.

The historical location of Nagamut is on the Holitna River in subunit 15a. The Nagamut Group is entitled to select 6,080 acres of federal land, but lands around the historical location are all in state ownership. The Department of Natural Resources and the Kuskokwim Area Plan Advisory Board support the prompt resolution of the Nagamut Group's entitlement. DNR will participate in land exchange negotiations with other landowners for the purpose of making land previously identified for selection by Nagamut Group in the Nagamut area available to the group. A plan amendment will be required if the state conveys land in the Holitna basin to settle the Nagamut claim. Public review of proposed amendments may run concurrently with review of land exchange proposals.

Subunit 15b - Holitna Titnuk Lowlands

This subunit contains the low country in the Holitna, Titnuk, and Taylor Creek watersheds. They are high value habitat lands that are not on the main stem of the Holitna. Many of the Holitna's headwater streams that are prime salmon spawning areas are within this subunit, as are many trapping areas. Two trapping cabin permits are located within this subunit. In addition, there is a pending application for a guide site permit. Subunit 15b will be kept in public ownership and managed for multiple use, with the emphasis on fish and wildlife habitat and harvest. A portion of the land on the southern perimeter of subunit 15b will be open to remote cabin permits. Remote cabin sites will be dispersed, and kept at a very low density. Areas open to permits were

selected to offer opportunities for private recreation while minimizing impacts on public use areas and important habitat.

Most of the state land in this subunit will remain open to new mineral entry. However, because of their importance for salmon spawning, the beds of portions of the Portage Creek, Chuilnuk Creek, Kiknik Creek, Taylor Creek, Bakbuk Creek, the Gemuk River, and several unnamed tributaries to these creeks and the Holitna River will be closed. Uplands adjacent to the segments of these streams that are salmon spawning or king salmon rearing will be subject to leasehold location requirements.

Subunit 15c - Hoholitna Lowlands

Subunit 15c covers the low country in the Hoholitna, South Fork Hoholitna, Door Creek, and Hook Creek drainages, and a large expanse of wetlands around Big Lake, east of Sleetmute. These are high value habitat lands that are back from the main stem of the lower Hoholitna. They contain moose winter range in the northern part of the subunit, caribou winter range in the southern part, and trapping areas and tributaries used for salmon spawning throughout. There are four trapping cabin permits, one application for a guide site permit, and an airstrip within this subunit. These lands will be kept in public ownership and managed for multiple use, with the emphasis on fish and wildlife habitat and harvest. This subunit will remain open for new mineral entry except for the bed of one unnamed tributary to the Hoholitna on the southern edge of the Door Mountains. This stream will be closed to new mineral entry to protect salmon spawning and adjacent uplands will be subject to leasehold location requirements.

Subunit 15d - Hinterlands

Over a dozen parcels of land with low surface resource values and little access comprise the hinterlands. They include the mountains on the perimeter of the Holitna basin, the Taylor Mountains, the Door Mountains, and the muskegs north of the Door Mountains. This subunit will be kept in public ownership and managed for general use. Portions of the sub-

unit around the Door Mountains and along the southern boundary will be open for remote cabin permits. State lands will remain open to new mineral entry. The bed of portions of tributaries to Kiknik Creek, and Portage Creek will be closed to mineral entry. Parts of the subunit on its southern perimeter and in the Door Mountains will be open to remote cabin permits. Remote cabin sites will be dispersed, and kept at a very low density. Areas open to permits were selected to offer opportunities for private recreation while minimizing impacts on public use areas and important habitat.

Subunit 15e - Sleetmute North

This subunit is a block of overlapping state and Native selections on the north side of the Kuskokwim River near the village of Sleetmute. It is one of the few sites where the state owns lands that is suitable for settlement near a community. There are hardwood forests on south-facing slopes that offer good sites for residential use for present or future inhabitants of this region. If this land is conveyed to the state, and if there is a need for additional private land in this area in the future (in or after 1998), up to 2,200 acres will be offered for private ownership. In the interim, if the land is conveyed to state ownership, it will be managed for multiple use. (See also management guidelines.) Portions of the abandoned village of Nunachahamiut are within this subunit. If land is offered for private ownership, the disposal will be designed to avoid staking of the historic site.

Subunit 15f - Boundary Lakes

The Boundary Lakes subunit is state land on the border of the Kuskokwim and Bristol Bay watersheds. This area receives little use at present. It is not forested, but fly-in lake access and proximity to Wood-Tikchik State Park make it attractive for private recreation sites. Approximately 1,400 acres are proposed for offering for private ownership. Lands within this subunit could also serve as exchange lands for private inholdings in the Wood-Tikchik State Park. However, if at the time a disposal is designed, it is determined as a result of more detailed inspection that the

land quality is not sufficient to justify a disposal, this area and the remainder of townships T4N R52W and R53W S.M. will be open to remote cabin permits instead.

Subunit 15g - Taylor Mountains and Fortyseven Creek

These two blocks of state land have high value for both wildlife habitat and mining. They include large blocks of existing claims along Taylor Creek and Fortyseven Creek which are the only two sites in the Holitna basin that have been actively mined in recent years. One guide site permit has been applied for within this subunit. Subunit 15g will be kept in public ownership and managed for multiple use, including fish and wildlife habitat and harvest, and mining.

All state lands will remain open to new mineral entry except for salmon spawning beds and rearing areas in portions of Mukslulik Creek and two of its tributaries and Taylor Creek. Uplands adjacent to segments of Muksluliksuk Creek are salmon spawning or king salmon rearing habitat and will be subject to leasehold location requirements.

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Cultural resources
- Fish and wildlife habitat
- Forestry
- Lakeshore management
- Public and commercial recreation resources
- Remote cabins and trapping cabins
- Settlement
- Subsurface resources
- Lakeshore management
- Wetlands management.

Guidelines specific to this management unit are listed by subunit in the following sections.

General

Commercial Recreation Leases. In order to protect the resources that are the basis for commercial, subsistence, and sport harvest of fish and wildlife in the Holitna basin, and to minimize conflicts between uses of these resources, new leases for lodges and other commercial recreation facilities will be allowed only under the conditions described in the following sections. Private lands can supply sites for additional permanent facilities; temporary facilities to support guiding and other commercial activities are allowed under permit on state lands. There are existing lodges at the confluence of the Holitna and the Kuskokwim and on the upper Hoholitna. Construction of another lodge on the lower Holitna is planned.

Kogrukuk and Shotgun Drainages. Above the ADF&G weir at Kasheglok, one lease for a commercial recreation facility will be permitted in either the Kogrukuk or the Shotgun drainage. The effect of this facility on the Holitna salmon population and the availability of land for commercial leasing in the Holitna basin will be evaluated during the five years after construction of the facility. If after five years the facility does not significantly reduce the salmon population and if there are not feasible and prudent alternatives to leasing state land, a second lease will be allowed in this area on the undeveloped river (i.e., if the first lease was on the Kogrukuk, the second must be on the Shotgun and vice-versa). Two leases are the maximum that will be allowed above Kasheglok. This area was chosen for the first new lease in the Holitna basin because it receives relatively little public use, and because impacts on salmon populations can be monitored by the weir.

Chukowan River Drainage. The mouth of this river is below the ADF&G weir, and receives more public use than the Kogrukuk or Shotgun Rivers. Leases for commercial recreation facilities will not be permitted in the Chukowan drainage if the weir is kept in operation. However, there are desirable lodge sites on the Chukowan. Therefore, if the Kasheglok weir is not kept in operation, the initial lease, described above or the second

lease, if one is allowed, may be sited on the Kogrukuk, Shotgun, or Chukowan. Leases must still meet the other requirements of this guideline.

Holitna Drainage from Kasheglok to Beaverhouse Hill. Public use is more concentrated in this part of the Holitna than in the headwaters, and there are approximately sixty parcels of private land in this region that can supply sites for private facilities. Commercial leases for recreation facilities on state lands in this region will not be permitted for five years following initial authorization of a facility on the lands above Kasheglok. If after the five-year period it is determined that an additional commercial facility would not cause significant adverse impacts to the salmon populations, and if private land is not available for lease or purchase under reasonable terms, one lease for a commercial recreation facility will be permitted in this area.

Hoholitna Drainage. Public use of this area is similar to that on the Holitna downstream from Kasheglok. There is an existing lodge in this area and approximately twenty-five parcels of private land that could supply sites for new private facilities. Commercial leases for recreation facilities on state lands in this region will not be permitted for five years following construction of a facility on the lands above Kasheglok. If after the five-year period it is determined that an additional commercial facility would not adversely impact the salmon population, and if private land is not available for lease or purchase under reasonable terms, one new lease for a commercial recreation facility will be permitted in this area. If a new lease is allowed, it should be located downstream from T10N R33W S.M. to avoid conflicts with coho spawning and rearing areas, and should be located at least one mile from the existing lodge in T8N R38W S.M.

Subunits 15a, 15b, 15e - Holitna-Hoholitna Corridors, Holitna-Titnuk Lowlands and Sleetmute

Grazing. Grazing leases or permits generally will not be allowed in the following areas because of their importance as moose winter

concentration areas, and along the Kogrukluk and middle Holitna, because they are known brown bear concentration areas (Map 2.1). Temporary passage of livestock is not prohibited to reach areas where grazing is permitted. Grazing may be allowed in portions of these areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands"). The following townships are all in the Seward Meridian.

T19N R44W sec. 13, 24, 25 and 26
T19N R43W sec. 18-36
T19N R42W sec. 12-15 and 19-36
T19N R41W
T18N R44W sec. 1, 12, 13, 24, 25 and 26
T18N R43W - R40W
T17N R44W sec. 1, 12, 13, 24, 25 & 36
T16N R43W-39W
T16N R44W sec. 1-3, 10-15, 23-26, 35 & 36
T15N R44W sec. 1, 2, 11-14, 23-27 and 34-36
T15N R43W sec. 1-14, 23-26 and 31-35
T15N R42W sec. 1-29 and 32-36
T15N R41W sec. 1-6 and 8-15
T15N R40W sec. 1-24
T15N R39W sec. 4-9, 18-19

Within 2 miles of the Hoholitna River between Cotton Village and the junction of Hook Creek and the South Fork.

T10N R39W sec. 11-36
T10N R38W sec. 1-3 and 7-34
T10N R37W sec. 3-10, 13-28 and 34
T10N R36W sec. 18 and 30
T9N R40W sec. 1
T9N R39W sec. 1-17 and 21-23
T9N R38W sec. 5-7
T11N R38W sec. 13, 14, 23-26, 35 and 36

Within 3 miles of the Holitna River between Itolilik and Kashegelok

T12N R44W sec. 2-32
T12N R43W sec. 17-20
T11N R45W sec. 1-18, 23 and 24
T10N R48W sec. 1, 2, 11-15, 22-28 and 32-36
T10N R47W sec. 5-8, 17-20, and 29-33
T9N R50W sec. 20-29 and 32-36
T9N R49W sec. 19, 20, and 23-36

T9N R48W sec. 1-5, 8-24 and 27-34
T9N R47W sec. 2-11, 14-23, and 26-28
T8N R51W sec. 1
T8N R50W sec. 1-6, 12-14, 21-29 and 32-36
T8N R49W sec. 1-5 and 7-36
T7N R51W sec. 12-14, 22, 27, 28 and 33
T7N R50W sec. 1-5, 7-17, 21-28 and 34-36
T7N R49W
T6N R51W sec. 4, 8, 9, 16, 17, 19, 20, 30 and 31
T6N R50W sec. 1
T6N R49W sec. 1-6
T5N R52W sec. 12, 13, 23, 24 and 26
T5N R51W sec. 6, 7 and 18

Subunits 15a, 15b, 15c, 15d and 15g - Holitna-Hoholitna Corridors, Holitna-Titnuk Lowlands, Hoholitna Lowlands, Hinterlands, and Taylor Mountains-Fortyseven Creek

Mineral Closures and Leasehold Location. Beds of portions of the Chuilnuk River and its tributaries, Portage Creek, Bakbuk Creek and a tributary, Gemuk River, Gemuk Lake, Kiknik Creek and its tributaries, Taylor Creek, Fortyseven Creek, Muksluliksuk Creek and unnamed tributaries of the Holitna and Hoholitna rivers shown on Map 2.4 will be closed to new mineral entry to protect important salmon spawning and salmon rearing areas. Lands within 200 feet of the ordinary high water mark of the segments of these streams used for salmon spawning and king salmon rearing will be subject to leasehold location requirements. Streams closed or subject to leasehold location are listed in Appendix H. Lease stipulations for leasehold location areas are listed in the Mining section of Chapter 2.

Subunit 15b - Holitna-Titnuk Lowlands

Trapping Cabins. There are char and whitefish in Gemuk Lake (T6N R55W S.M. section 32), and coho and sockeye salmon downstream. In order to avoid disturbance of the lakeshore and protect these fisheries, a 100-foot building setback from the lake will be required for all trapping cabins.

Subunits 15b, 15c, and 15d - Holitna-Titnuk Lowlands, Hoholitna Lowlands, and Hinterlands

Remote Cabin Permit Areas. Parts of these subunits are within the Door Mountains, Shotgun Hills, and Titnuk-Taylor blocks of the Holitna basin remote cabin permit area. Boundaries of the area open for remote cabin permits are shown on Map 2.2. A total of eighteen remote cabin permits will be allowed in the Door Mountains block, six in the Shotgun Hills block, and 32 in the Titnuk-Taylor block, with a maximum of two remote cabin permits allowed in any one township.

Shotgun Hills Block (6 permits total). A 100-foot building setback is required on the Kogrukluk River, Maka Creek, Shotgun Creek, and the anadromous tributaries to these streams identified in the ADF&G Anadromous Waters Catalog. These are salmon spawning streams and areas subject to flooding. The Kogrukluk River is also a known brown bear concentration area.

Titnuk Headwaters block (32 permits total). This area is the cabin permit area that follows the southern boundary of the Holitna basin from the Taylor Mountains to Halfway Mountain. A minimum of a 50-foot building setback is required on the anadromous streams in this area -- Titnuk Creek, Weasel Creek, Killae Creek, and McKinley Creek. A one-quarter-mile building setback is required from the shore of Lake September, which is an important public access site for hunting. A one-mile building setback is required from the existing lodge in T8N R38W S.M.

Door Mountains block (18 permits total). A 50-foot building setback will be required on Door Creek, an anadromous stream.

Boundary Lakes Area (4 permits total). Subunit 15f will not be offered for private ownership until at least 1992. If at the time a disposal is designed and DNR determines that the quality of the land is insufficient to merit a disposal, subunit 15f and the portions of 15b and 15d in T4N R52W and R53W S.M. will be open to remote cabin permits and subject to the guidelines and permit densities for the

Shotgun Hills remote cabin area. On lakes large enough for floatplane landings, public access and recreation sites will be identified prior to the remote cabin offering.

Subunits 15a and 15c - Holitna-Hoholitna Corridors and Hoholitna Lowlands

Commercial, Industrial, and Transportation Facilities. Commercial and industrial uses, transportation facilities (including pipelines), or other non-water-dependent uses that are inconsistent with the management intent of these subunits will not be authorized within one-quarter mile of the Holitna or Hoholitna rivers unless there is no feasible and prudent alternative. This does not prohibit necessary river crossings.

Subunit 15e - Sleetmute North

Timing of Disposal. The state will retain the land in subunit 15e in public ownership until 1998 and reevaluate the management intent for the land at that time. Until 1998, the state lands will be managed so as not to foreclose either the multiple use or settlement potential of the land. It is likely that some land in non-state ownerships will be made available for private use in the middle Kuskokwim area (from Aniak to Stony River) before 1998. If a sufficient amount of private land is available by that time, the state will not offer settlement lands in this area.

If by 1998 a sufficient number of private lots have not been made available to the general public at reasonable terms, the Sleetmute North subunit may be offered for private ownership. The number of lots offered for sale or lease on the private market will be judged sufficient if it is great enough to create a private market of a size appropriate to a rural area. If after 1998 subunit 15e is not needed for settlement, it will be managed for multiple use. The DNR finding of whether or not this subunit is needed for disposal will be subject to public notice and review by the agencies and organizations represented on the Kuskokwim Area Plan advisory board.

Local Lottery. If land is offered for disposal by lottery in the Sleetmute North subunit, the lottery for entry permits or parcels should be held in the nearest community with facilities to support a public lottery. Under existing regulations, applicants must be present at the lottery to win a parcel or entry permit.

Disposal Design. If land in the Sleetmute North subunit is offered for sale, a 100-foot staking setback will be required on the Kuskokwim River to keep the small amount of riverfront land available for public access. A 50-foot building setback will be required on other waterbodies and wetlands. Access to this subunit from the river is limited.

Access Needs. If land in this subunit is conveyed to state ownership and offered for disposal, additional access to the disposal may be needed from the south or east. If the land is conveyed to the Native corporation an easement should be established on the existing trail through the unit. See pages 4-13 through 4-14 for more detailed information on access routes.

Subunit 15f - Boundary Lakes

Timing of Disposal. Lands within this subunit could serve as exchange lands for private in-holdings in Wood-Tikchik State Park. To keep this option open, this disposal area will not be offered for private ownership until at least 1992. However, an earlier offering may occur if it is approved by the Division of Parks and Outdoor Recreation.

Disposal Design. If at the time a disposal is designed DNR determines that the quality of the land is insufficient to merit a disposal, subunit 15f and the portions of subunits 15b and 15d in T4N R52W and R53W will be open to remote cabin permits and subject to the guidelines for the Shotgun Hills remote cabin area. On lakes large enough for floatplane landings, public access and recreation sites to be retained in public ownership will be identified at the time the disposal is designed or prior to a remote cabin offering.

RESOURCE INFORMATION SUMMARY

Management Unit 15 - Holitna River

Resource	Subunit			
	15a	15b	15c	15d
Agriculture	Moderate potential	Low to very low potential	Most low potential; some moderate	Low to very low potential
Energy	—	—	—	—
Fish	Holitna, Hoholitna, & numerous tribs.: salmon & resident fish	Numerous tributaries to Holitna: salmon & resident fish	Numerous tributaries to Hoholitna: salmon & resident fish	Door Cr.: salmon & resident fish
Forestry	High potential	Most unsuited; pockets of low potential	Most unsuited; pockets of low potential	Unsuited
Grazing	Most high potential; some low	Most high potential; some low or moderate	Most high potential; some low	High potential;
Historic/cultural	High potential	Unknown	Unknown	Unknown
Materials	Unknown	Unsuited	Unsuited	Unsuited
Minerals	Low to very low potential	Mixed: most low to very low potential; some moderate to high	Most low to very low potential; small area moderate	Mixed: most low to very low potential; some moderate to high
Oil & gas	Part within Holitna sedimentary basin	Part within Holitna sedimentary basin	Part within Holitna sedimentary basin	Part within Holitna sedimentary basin
Public access	Boat on Holitna, Hoholitna, Titnuk, Taylor; plane to river landings and some lakes	Boat on Chukowan & tribs., Taylor Cr.; plane to tundra landings	Plane to lakes in N block, Whitefish L., L. September, tundra landings	Plane to tundra landings
Recreation	Moderate use and potential	Most unknown; some low potential	Unknown	Unknown
Settlement suitability	High	Most unsuited; pockets of low	Most unsuited; pockets of low	Unsuited
Wildlife	Mostly A-2, some B-1; Moose winter range; brown bear conc.; duck & goose conc.; caribou	Mostly B-1, some A-2; Brown bear conc.; caribou winter range; ducks	A-2/B-1; moose winter range; duck & goose conc.; bear, caribou	B-2; caribou winter range; bear, moose
Important trails	Holitna & Hoholitna R. trails, Nogamut-Taylor Cr. trail,	Holitna R. trail, Shotgun R. trail, Nogamut-Taylor C. trail	Sparrevohn-Hoholitna trail	Sparrevohn-Hoholitna trail, local trails

See glossary for definition of ratings.

RESOURCE INFORMATION SUMMARY

Management Unit 15 - Holitna River

Resource	15e	Subunit 15f	15g
Agriculture	Unsuited	Unsuited	Unsuited
Energy	---	---	---
Fish	Kuskokwim R.: salmon & resident fish	Kogrukluk tribs.: salmon & resident fish	Taylor Cr.: salmon & resident fish
Forestry	High potential	Unsuited	Low potential
Grazing	Moderate to high potential	High potential	High potential
Historic/ cultural	Contains part of old village site	Unknown	Unknown
Materials	Unsuited	Unsuited	Unsuited
Minerals	Low potential	Very low potential	Very high potential; some existing claims
Oil & gas	Part within Holitna sedimentary basin	Unknown	Unknown
Public access	Boat on Kuskokwim;	Plane to lake	Plane to gravel strip
Recreation	Low to moderate	Unknown	Unknown
Settlement suitability	Mixed high and low	Low	Mixed high and low
Wildlife	A-2/B-1/C; moose winter range; bear caribou	B-1/B-2; caribou winter range; bear moose	Mostly B-1, some B-2; caribou winter range; bear, moose
Important trails	South Fork George R. trail	None identified	Taylor Cr. trail, Fortyseven Cr. trail

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

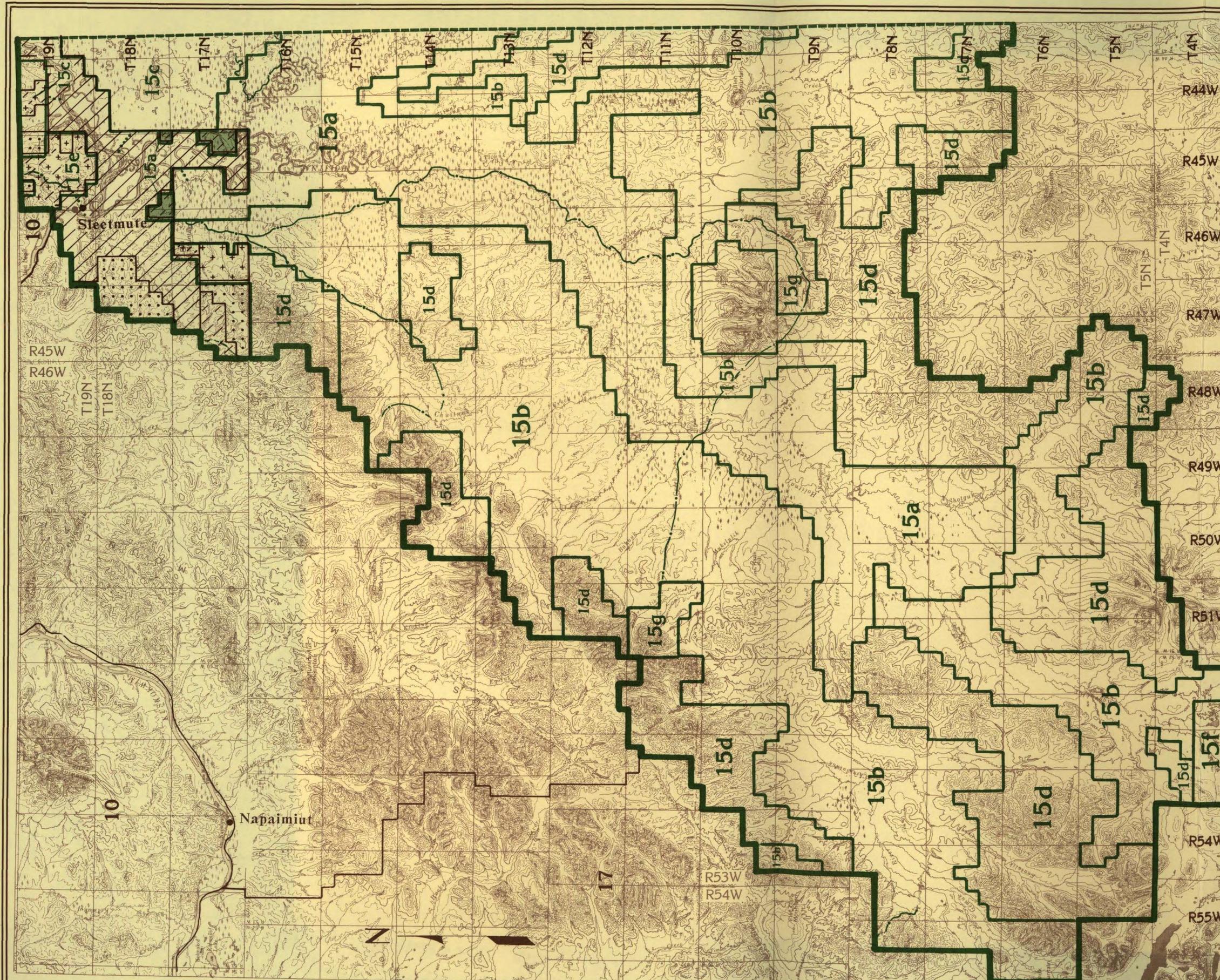
MANAGEMENT UNIT 15 - HOLITNA RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
15a Holitna-Hoholitna Corridors	State	Forestry Wildlife habitat	Public recreation	Grazing in part of subunit Land disposals Remote cabins	Open except along some	Proposed for Public Use Area
15b Holitna-Titnuk Lowlands	State	Wildlife habitat	Public recreation Remote cabins in part of subunit	Grazing in part of subunit Land disposals Remote cabins in part of subunit	Open except along some streams	Part proposed for Public Use Area
15c Hoholitna Lowlands	State	Water resources Wildlife habitat	Public recreation Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open except along one stream	Part proposed for Public Use Area
15d Hinterlands	Most state; one small state selected	General use: low resource values	Remote cabins in part of subunit	Land disposals Remote cabins in part of subunit	Open except along some streams	
15e Sleetmute	State/Native selected	Settlement	Forestry Public recreation Wildlife habitat	Grazing in part of subunit Remote cabins Trapping cabins after sale is scheduled	Closed prior to sale	Net sale area = 2,200 acres; sale delayed until after 1997
15f Boundary Lakes	State	Settlement	Public recreation Remote cabins if not offered for sale Wildlife habitat	Remote cabins if offered for sale Trapping cabins after sale is scheduled	Closed prior to sale	Net sale area = 1,400 acres; sale delayed until after 1997
15g Taylor Mts. & Forty seven Creek	State	Minerals Wildlife habitat		Land disposals Remote cabins	Open except along some streams	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

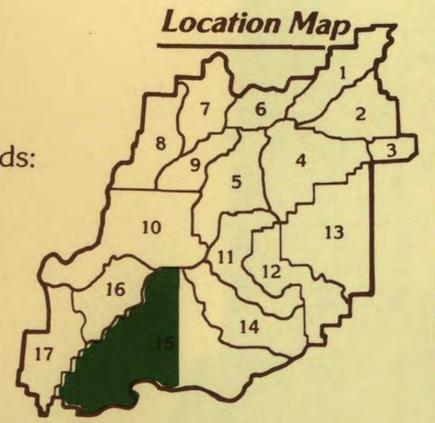
^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

15: Holitna River - West



- Management Unit Boundary
- Subunit Boundary
- State Owned
- State Selected
- Native Owned
- Native Selected
- Federal
- Proposed State Selections
- Trails on public lands
- Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.



U.S.G.S. Quads:
Sleetmute
Lime Hills
Lake Clark
Taylor Mts.

Map Scale:
1:500,000

15: Holitna River - East

Management Unit Boundary
 Subunit Boundary

State Owned

State Selected

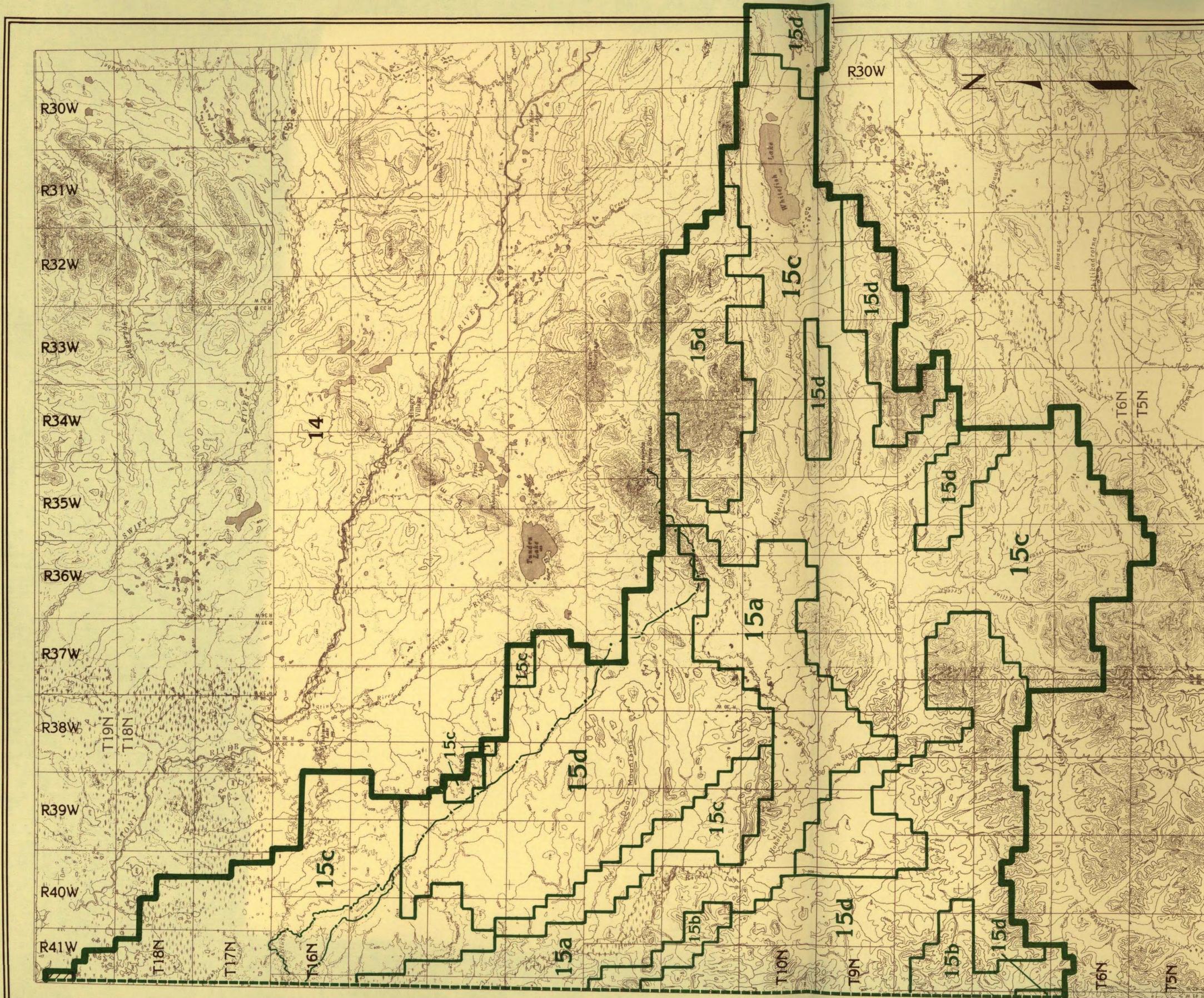
Native Owned

Native Selected

Federal

Trails on public lands

Map shows approximate location of trails across state land.
 Portions of trails may cross private lands.



Location Map



U.S.G.S. Quads:

Sleetmute
 Lime Hills
 Lake Clark
 Taylor Mts.

Map Scale:
 1:500,000

MANAGEMENT UNIT 16: HOLOKUK - OSKAWALIK

Background

Location and Land Ownership. Management unit 16 encompasses the drainages of the Holokuk and Oskawalik rivers, and of the smaller tributaries to the Kuskokwim between Napaimiut and Red Devil: Victoria, Aghaluk, Veahna, Downey, Eightmile, and Fuller creeks. The southern two-thirds of the unit are state owned or state selected. The lands fronting on the Kuskokwim River are Native owned. The remaining lands south of the river between Crooked Creek and Red Devil are in federal ownership. In addition to the Native corporation lands, there are at least 35 parcels of private lands in the subunit. These are primarily Native allotments on the Kuskokwim River.

Resources and Land Use. The unit is dominated by the Kuskokwim Mountains, including the Kiokluk Mountains and part of the Buckstock and Chuilnuk ranges. Elevations rise to 4000 feet above sea level. Most of the land is covered by black spruce woodlands in the valleys, and shrubs and alpine tundra on the mountain slopes. White spruce and hardwood forest cover is limited to small pockets along the major river and on south-facing slopes just west of Red Devil.

Red Devil is the only community within the unit, but the villages of Aniak, Crooked Creek, and Sleetmute and the seasonal community of Napaimiut are adjacent to the unit boundaries. Aniak, Chuathbaluk, Crooked Creek, and Tuluksak residents use state lands and waters in this unit for fishing; hunting for moose, bear, and caribou; trapping; and berry picking. One registered guide operates in this area. The area is generally unsuited for either forestry or settlement, although pockets with settlement suitability exist along major waterways. Mining potential is moderate to very high in the Kuskokwim Mountains, and there are numerous mining claims in the headwaters of the Holokuk, Chineekluk, and Oskawalik rivers. In past years, a mine at Red Devil was one of the nation's largest suppliers

of mercury. These same rivers also are important salmon spawning streams.

Access. The Kuskokwim River is the major transportation corridor through the unit. The lower portions of the Holokuk and Oskawalik rivers also are navigable. Natural landing areas in the Kuskokwim Mountains provide small plane access into portions of the unit, and there is a public airstrip at Red Devil. A number of trails also cross the unit, and provide access along the major rivers and into the Kuskokwim Mountains.

Management Intent

State lands in this unit will be retained in public ownership and managed for multiple use, including hunting, trapping, and mining. Most of the unit will remain open to mineral entry. However, to protect important salmon populations, the beds of salmon spawning and rearing areas in known mineralized areas will be closed. Uplands adjacent to salmon spawning and king salmon rearing areas in known mineralized areas will be subject to leasehold location requirements. Closures include portions of the main stem and tributaries of the Oskawalik, west fork of the Oskawalik, Holokuk, and Chineekluk, and south fork of the Chineekluk rivers; Egozuk Creek and a lake in the Kiokluk Mountains.

In order to provide opportunities for private land ownership near the community of Red Devil, one area is proposed for state selection. If it is conveyed to the state, it will be offered for sale.

Virtually all the lands along the Kuskokwim, and the lower reaches of the Oskawalik and Holokuk are in Native or federal ownership. However, the bed of the Kuskokwim and other navigable waters in the unit are state owned and are subject to the guidelines in this plan.

Subunit 16a - Kiokluk Mountains

This large subunit has high habitat values and mineral potential. The large lake at the head of the Oskawalik River in the Kiokluk Mountains is a sockeye salmon spawning site, and the Holokuk, Oskawalik, and Chineekluk rivers are important king salmon spawning rivers. There are numerous mining claims in the unit, but there has been no mining in recent years. This subunit will be retained in public ownership and managed for multiple use, including hunting and trapping.

Most of the subunit will remain open to new mineral entry. However, because of their importance for salmon spawning and rearing, beds of portions of the Holokuk River, Oskawalik River, Chineekluk Creek, Egozuk Creek, a lake in the Kiokluk Mountains, the west fork of the Oskawalik River, and a number of their tributaries will be closed. Adjacent uplands to some of these stream segments will be subject to leasehold location requirements.

Subunit 16b - Victoria and Veahna Creeks

Seven upland parcels with low resource values are included in this subunit. These parcels have little access and receive little use. They will be retained in state ownership, and managed for general use. Lands in this subunit will remain open to new mineral entry. However, the bed of a portion of Veahna Creek will be subject to leasehold location requirements to ensure compatibility between mining and salmon rearing areas.

Subunit 16c - Fuller Creek

This subunit is federal land southwest of Red Devil. Land along Fuller and McCally creeks has potential for settlement and is accessible from Red Devil. Mineral potential in this subunit also is high and there are a number of existing mining claims. Because there is little land available for private ownership near Red Devil, this subunit is recommended for state selection. If conveyed to the state, it will be managed for settlement and minerals. Approximately 600 acres would be offered for

private ownership. The sale will be designed to avoid conflicts with mining activities.

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Cultural resources
- Lakeshore management
- Fish and wildlife habitat
- Subsurface resources

Guidelines specific to this management unit are listed by subunit in the following sections.

Subunit 16a - Kiokluk Mountains

Leases and Permits. Leases or permits for development activities on the large lake at the headwaters of the Oskawalik River in T14N R49W S.M. sections 26, 27, 34, and 35 will be allowed only if consistent with protection of the sockeye salmon spawning in the lake, and king salmon spawning in the outlet to the lake.

Subunit 16a and 16c - Kiokluk Mountains and Fuller Creek.

Access Needs. If land along the Holokuk River is conveyed to the Native corporation, additional legal access to the Holokuk drainage may need to be established. If land along Fuller Creek and McCally creeks are conveyed to the state and offered for sale, and if adjacent Native-selected lands in T19N R44W S.M. are conveyed to the Native corporation, an easement will be needed on the existing trail through Native-selected land. See page 4-14 for a more detailed description of access options.

Subunits 16a and 16b - Kiokluk Mountains and Victoria-Veahna Creeks

Agricultural Potential. Portions of these subunits are identified on the USDA Exploratory Soil Survey as having moderate potential for

agriculture, but detailed soil and climatic information is not available. The Division of Agriculture should be consulted prior to issuing permits or leases for any activities that would significantly diminish the agricultural potential of these subunits.

Subunits 16a - Kiokluk Mountains

Mineral Closure and Leasehold Location Areas. Beds of portions of the main stem and tributaries of the Oskawalik, west fork of the Oskawalik, Holokuk, Chineekluk, and south fork of the Chineekluk rivers; Egozuk Creek; and a lake in the Kiokluk Mountains shown on Map 2.4 will be closed to new mineral entry to protect important salmon spawning and salmon rearing areas. Lands within 200 feet of the ordinary high water mark of the segments of these streams and lake used for salmon spawning and king salmon rearing will be subject to leasehold location requirements. Streams closed or subject to leasehold location are listed in Appendix H. Lease stipulations for leasehold location areas are listed in the Mining section of Chapter 2.

Subunit 16c - Fuller Creek

Mineral Lands in Land Offering Area. The Division of Mining (DOM) will be consulted when a disposal is designed in the Fuller Creek subunit. DOM will determine high mineral value areas that should be deleted from the disposal offering.

Navigable Waters

Peregrine Falcon Eyries. There are four known peregrine falcon eyries in along the Kuskokwim River in this management unit. The Habitat Division of the Department of Fish and Game should be consulted prior to issuing permits or leases on the state-owned beds of navigable waters near the eyries in the following locations:

T21N R47W S.M. sec. 19-36

T20N R46W S.M. sec. 1-18

T20N R49W S.M. sec. 1-3, 10-15, 22-27 & 34-36

T17N R51W S.M. sec. 4-9, 16-21 & 28-33.

RESOURCE INFORMATION SUMMARY

Management Unit 16 - Holokuk-Oskawalik

Resource	16a	Subunit 16b	16c
Agriculture	Part moderate, rest unsuited	Two northeastern blocks moderate, rest unsuited	Low to unsuited
Energy	Very low potential	Very low potential	Very low potential
Fish	Holokuk, Oskawalik, Chineekluk: salmon and resident fish	Salmon in headwaters of Holokuk, Oskawalik, & Chineekluk	None identified
Forestry	Most unsuited, scattered sites with low potential along rivers	Unsuited	Most unsuited; some high on south slopes of Barometer Mt.
Grazing	High potential	High potential	High potential
Historic/cultural	High potential along Kuskokwim R.	Unknown	High potential next to Red Devil
Materials	High potential along Kuskokwim R.	Unsuited	Unsuited
Minerals	Moderate to very high potential, many claims	Very low to moderate potential, few claims	High potential; several existing claims
Oil & gas	Unknown	Unknown	Unknown
Public access	Boat on Holokuk & Oskawalik; small plane to tundra landings	None developed	Trails from Red Devil
Recreation	Low potential along in Kiokluk Mts. & along Holokuk & Oskawalik; rest unknown	Unknown	Local use near Red Devil
Settlement suitability	Most unsuited, scattered sites with low potential along rivers	Unsuited	Low potential on south-facing slopes
Wildlife	Mostly B-1, some A-2 & B-2; moose, some caribou	B-2; furbearers; some caribou, moose, & bear	Most B-2; A-2 in NE corner; caribou, moose bear
Important trails	Chuilnuk Mts. trail		Local trail

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

MANAGEMENT UNIT 16 - HOLOKUK-OSKAWALIK

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
16a Kiokluk Mountains	Most state, some state selected, some state select/ Native selected	Wildlife habitat	Public recreation	Land disposals Remote cabins	Open except along some streams	
16b Victoria Veahna Creeks	Most state selected, some state select/ Native selected	General use: low resource		Land disposals Remote cabins	Open	
16c Fuller Creek	Federal	Settlement	Forestry Public recreation Wildlife habitat	Remote cabins Trapping cabins after sale is scheduled	Open	Proposed for state selection; Net sale area = 600 acres

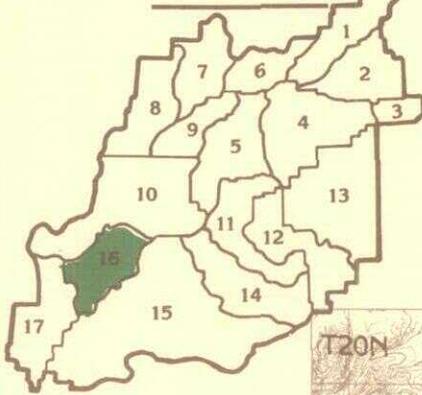
^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

Kuskokwim Area Plan

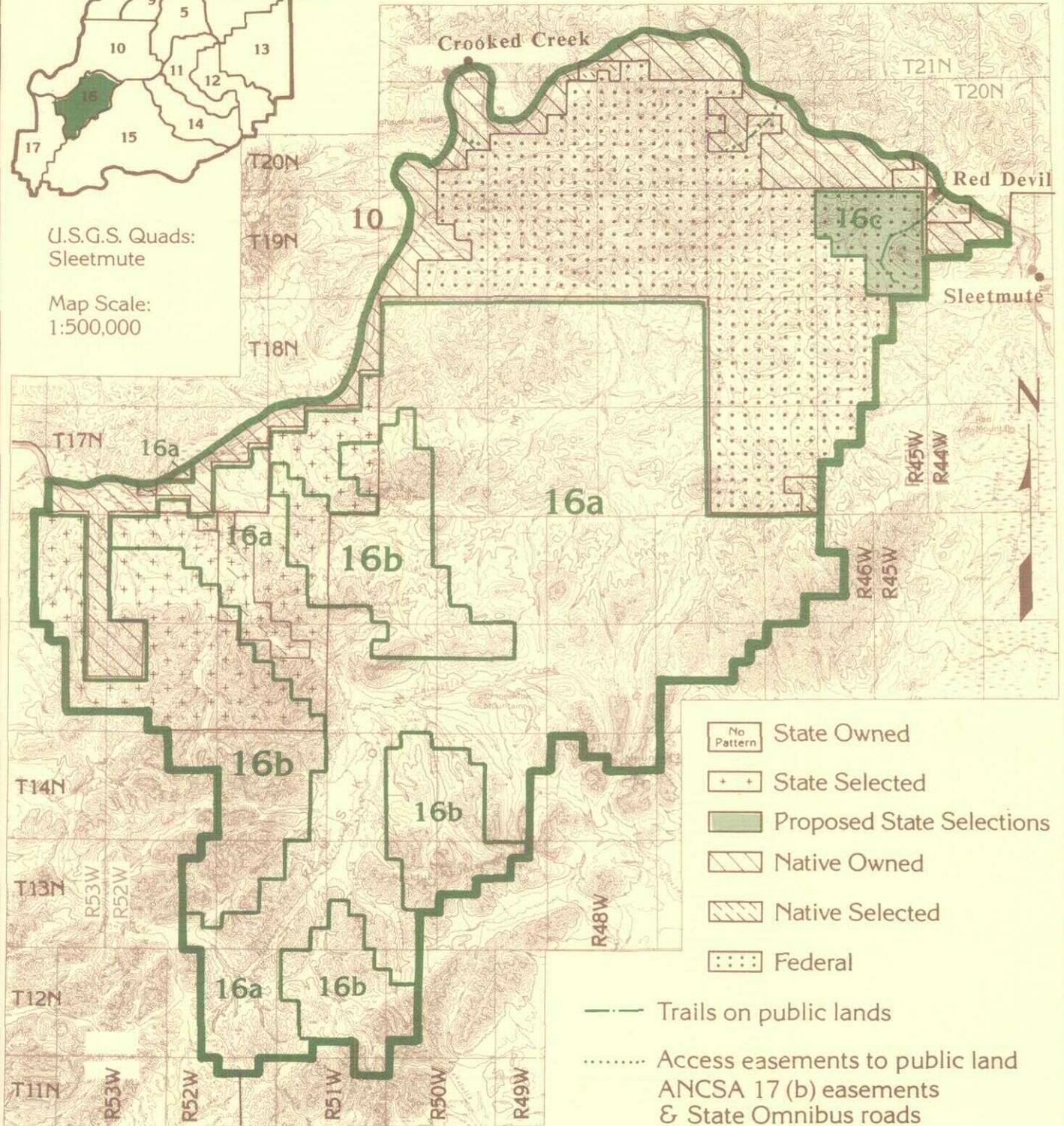
16: Holokuk - Oskawalik

Location Map



U.S.G.S. Quads:
Sleetmute

Map Scale:
1:500,000



- State Owned
- State Selected
- Proposed State Selections
- Native Owned
- Native Selected
- Federal

- Trails on public lands
- Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads

- Management Unit Boundary
- Subunit Boundary

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

MANAGEMENT UNIT 17: ANIAK RIVER

Background

Location and Land Ownership. The Aniak River management unit comprises the watershed of the Aniak River and land along the south bank of the Kuskokwim River surrounding Kolmakof Lake. The land bordering the Kuskokwim River is nearly all Native-owned. The northern part of the Aniak watershed, including the Doestock Creek drainage is state selected. The upper Aniak watershed -- the majority of the unit -- is state owned. In addition to the Native corporation land, there are approximately fifty parcels of private land within the unit. Most of these parcels are Native allotments along the Kuskokwim River between Chuathbaluk and Napaimiut, or along the Aniak River from the Buckstock River downstream.

Resources and Land Use. From the confluence of the Salmon River downstream, the Aniak valley is broad and rolling. Further upstream, the river cuts into the Kuskokwim Mountains, and at its head is bounded by rugged mountain walls. Elevations range up to 4000 feet in the mountains surrounding Aniak Lake. Shrub vegetation dominates the lowlands of the unit, with alpine tundra at higher elevations. Along the Aniak River below the Salmon River confluence there is a band of white spruce forest. Above the Salmon, the band narrows until disappears above Gemuk Mountain. In the lower stretches of the river, there are broad muskegs and recently burned black spruce woodlands inland from the white spruce forests. There is potential for timber harvesting along the lower Aniak River. Forestlands along the Aniak also have high suitability for settlement.

The villages of Aniak and Chuathbaluk, and the seasonal community of Napaimiut are adjacent to the northern boundary of this unit. Aniak is the largest community in the planning area. Although the Aniak River is more difficult to navigate, the Aniak watershed supports an intensity of subsistence and recreational use second only to the Holitna

basin. It is particularly well known for sport and subsistence fishing. Moose are taken along the lower and middle reaches of the river, while trapping is widespread throughout the drainage. Six fishing guides, four registered hunting guides, and several commercial outfitters currently operate in this watershed. The mountainous portions of the unit have moderate to very high potential for minerals, and there are existing claims in the Waterboot Creek drainage, but there is no active mining in this unit at present. Gravel bars in the Kuskokwim River have been used as a source of materials for local construction projects.

Access. The Kuskokwim River provides boat access to the northern edge of the unit. Access to the rest of the unit is by boat along the Aniak, Doestock, Kipchuk, and Salmon rivers. There is a large public airfield at Aniak, which serves as the transportation hub for the middle Kuskokwim. Small planes can land on gravel bars along the middle Aniak, on Aniak Lake, and at several natural landing sites and gravel airstrips in the upper Salmon and Kipchuk watersheds. Major trails follow the rivers and provide access into the mining areas in the southwestern part of the unit.

Management Intent

The Aniak watershed is of statewide importance for wildlife habitat and harvest and for public recreation. The moose, rainbow trout, and salmon populations are very important for sport and subsistence use and support numerous commercial guiding and outfitting operations. The moose population is limited by the extent of riparian habitat, and is considered fully used at present. The Aniak River is the northern extent of the range for rainbow trout, and attracts an international clientele for fishing. The alpine scenery of the upper watershed adds to the allure of float trips on the river, and is likely to attract increased recreational use in the future. Furbearers,

especially in the lower watershed, are targeted by trappers from Aniak, Chuathbaluk, and Tuluksak. Finally, wood and berries are harvested along the rivers for local use.

The management intent for this unit is to protect the fish, wildlife, and scenic resources that are the basis for sport, commercial, and subsistence activities; to allow for continued use of these resources and other public recreation activities; and to minimize conflicts between potential uses. Nearly all the state land in this unit will be kept in public ownership, and managed for multiple use. Lands throughout the unit will be managed with an emphasis on fish and wildlife habitat and harvest; on timberlands along the lower river forestry also will be a primary use. In order to provide opportunities for additional private ownership of land near the growing community of Aniak, a small area of land along the lower end of the Aniak River may be offered for disposal.

Most of this unit will remain open to mineral entry. However, to protect important salmon populations, spawning beds, and rearing habitat in known mineralized areas, some stream segments will be closed to new mineral entry. Closures include portions of the Buckstock River, Timber Creek, Atsakovluk Creek, and Salmon River. Uplands adjacent to identified salmon spawning or king salmon rearing areas will be subject to leasehold location requirements.

Most lands along the Kuskokwim River and Doestock Creek are Native owned, and portions of the lower Aniak, although state selected, may not be patented to the state. However, the beds of these and other navigable waters in the unit are state owned, and are subject to the guidelines of this plan.

Subunits 17a - Aniak Corridor

This land is in the heart of the hunting, fishing, and trapping areas in the Aniak watershed. In addition, the best timber resources in the watershed are along the river in this subunit. The river is also used for float trips. The upper two-thirds of the subunit are state owned, the lower third state selected. Subunit

17a will be kept in public ownership and managed for multiple use with an emphasis on fish and wildlife habitat and harvest, public recreation, and forestry. Leases for commercial recreation facilities are prohibited in this subunit to protect salmon stocks and the limited moose and rainbow trout populations, and to minimize conflicts between fish and wildlife uses. Nearly all the state land in this unit is open to mineral entry. However, because of their importance for salmon spawning and rearing, the beds of segments of the Buckstock River will be closed to mineral entry and uplands will be subject to leasehold location requirements to ensure compatibility with mining.

Subunit 17b - Upper Aniak

The majority of the lands in the Salmon, Kipchuk, Buckstock, and upper Aniak drainages are within this subunit. The subunit is entirely state owned. Guiding, trapping, subsistence harvesting, sport fishing and hunting, and floating along the Aniak River are concentrated in this subunit. There is an application for one guide site permit within the subunit. These lands will be retained in public ownership and managed for multiple use, primarily fish and wildlife habitat and harvest and public recreation. Leases for commercial recreation facilities are prohibited in this subunit to protect salmon stocks and the limited moose and rainbow trout populations, and to minimize conflicts between fish and wildlife uses.

Most of the state land in this subunit is open to mineral entry. However, because of their importance for salmon spawning and rearing, the beds of portions of the Buckstock River, Timber Creek, Atsakovluk Creek, and the Salmon River will be closed to new mineral entry. To ensure compatibility of mining and salmon spawning and king salmon rearing, uplands along some streams will be subject to leasehold location requirements where they overlap with known mineralized areas.

Subunit 17c - Hinterlands

Lands in this subunit are state-owned and state-selected lands with low surface resource

values and no river access. They will be retained in state ownership and available for general multiple use. However, leases for commercial recreation facilities are prohibited in this subunit to protect limited moose populations, and to minimize conflicts between wildlife uses. Most state land in this subunit will remain open to new mineral entry. However, because of their importance for salmon spawning and king salmon rearing, the beds of Sawpit, Robin, Loco, Eureka, and Dominion creeks will be closed to new mineral entry. Uplands along some of these streams will be subject to leasehold location requirements to ensure compatibility of mining with salmon spawning and king salmon rearing areas.

Subunit 17d - Aniak-Doestock

Subunit 17d is state-owned and state-selected land along the lower Aniak River and Doestock Creek. It is the state land closest to the growing village of Aniak. At present, there is little land available in this area for private use but it is likely that more land will be available in the future as Native corporation lands, Native allotments, or other lands are offered for sale or lease. Depending of the availability of such land, this subunit may be made available for disposal of approximately 1,400 acres after 1997.

Subunit 17e - Kolmakof Lake

This subunit consists of three small blocks of land near Kolmakof Lake. Most of the land has been selected by both the state and Native corporation. A portion of the southeastern block is selected only by the state. The northernmost block is on the south bank of the Kuskokwim River. This is one of the few state-selected sites on the Kuskokwim River in the southern half of the planning area. Kolmakof Lake also provides fly-in access to the subunit. There is a small amount of white spruce forest along the river. If conveyed to the state, this unit will be kept in state ownership and managed for multiple use, including fish and wildlife habitat and harvest, public recreation, and where timber is available, forestry. Portions of this subunit are identified in the USDA Exploratory Soil Survey as

having moderate potential for agriculture. However, there is no detailed information on soils and climate for these sites, and no current market for agricultural land.

Management Guidelines

The complete set of areawide management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Cultural resources
- Fish and wildlife habitat
- Forestry
- Materials
- Public and commercial recreation resources
- Settlement
- Subsurface resources
- Stream corridors
- Trail management
- Wetlands management

Guidelines specific to this management unit are listed by subunit in the following sections.

Subunits 17a, 17b, and 17d - Aniak Corridor, Upper Aniak, and Aniak-Doestock

Grazing. Grazing leases or permits will not be allowed in portions of these subunits because of their high habitat values (Map 2.1). Temporary passage of livestock through is not prohibited through these areas to reach areas where grazing is permitted. The riparian lands in subunit 17a, subunit 17d, and the northern half of subunit 17b are important moose winter range. In addition, lands along the middle Aniak River and a portion of the Kipchuk River are brown bear concentration areas. Land surrounding Aniak Lake in subunit 17b is a caribou calving area. Grazing may be allowed in portions of these areas if consistent with the guidelines in Chapter 2 ("Grazing on Important Habitat Lands"). The areas closed to grazing:

T14N R55W S.M.

T13N R55W S.M. sec. 2-20, 25-29, and 32-36
 T11N R55W S.M. through R57W
 T5N R56W S.M.: that portion south and east of the Aniak River
 T4N R57W S.M.: that portion south and east of the western most tributary to Aniak Lake
 Subunit 17d - T16N R56W S.M.: sec. 4, 9, 15, 22 and 27
 T17N R56W S.M. sec. 31
 T17N R57W S.M. sec. 24
 T15N R56W S.M. sec. 2, 11, and 13
 T15N R55W S.M. sec. 18, 19, 28-30, 32 and 33
 T14N R56W S.M. sec. 1, 12, 13, 24, 25, and 26
 T14N R55W S.M. sec. 3-11 & 14-36
 T12N R55W S.M. sec. 1-3, 10-15, 21-28 & 31-36
 T12N R54W S.M. sec. 4-6, 7, 8, 17-20, and 28-34
 T11N R57W S.M. sec. 11-14, 22-28 and 33-36
 T11N R54W S.M. sec. 7, 17-21, and 27-34
 T10N R58W S.M. sec. 12, 25, 35 and 36
 T10N R57W S.M. sec. 1-5, 8-27, 30 and 34-36
 T10N R56W-55W S.M.
 T10N R54W S.M. sec. 2-11, 14-23, and 27-32
 T9N R58W S.M. sec. 2, 3, 10 and 11
 T9N R57W S.M. sec. 1-3, 10-12, 13 and 14
 T9N R56W S.M. sec. 3-9 and 18

within one-half mile of the Aniak River in T9N R55W S.M.; T8N R56W S.M.; T8N R55W S.M.; T7N R56W S.M.; and T7N R55W S.M.

Subunit 17a - Aniak Corridor

Commercial, Industrial, and Transportation Facilities. Commercial and industrial uses, transportation facilities (including pipelines), or other non-water dependent uses that are inconsistent with the management intent of these subunits will not be authorized within one quarter mile of the Aniak River unless there is no feasible and prudent alternative. This does not prohibit necessary river crossings.

Subunits 17a, 17b, and 17c - Aniak Corridor, Upper Aniak, and Hinterlands

Commercial Recreation Leases. In order to protect the fish and wildlife resources that are the basis for sport, commercial, and subsistence activities in the Aniak drainage, and to minimize potential conflicts between uses of these resources, new leases for lodges and other commercial recreation facilities will not be allowed on state lands in these subunits. Temporary facilities to support guiding and other commercial activities are allowed under permit on state lands; private lands can supply sites for permanent facilities.

Subunits 17b - Upper Aniak

Trapping Cabins. In order to protect important spawning and rearing areas for sockeye, coho, king, and chum salmon in Aniak Lake and its outlet, trapping cabins will not be allowed within one-half mile of the shore of Aniak Lake.

Subunits 17a, 17b and 17c - Aniak Corridor, Upper Aniak, and Hinterlands

Mineral Closures and Leasehold Location. Beds of portions of the Buckstock R., Timber Creek, Atsaksovluk Creek, and Salmon River and their tributaries shown on Map 2.4 will be closed to new mineral entry to protect important salmon spawning and salmon rearing areas. Lands within 200 feet of the ordinary high water mark of some segments of these streams used for salmon spawning and king salmon rearing will be subject to leasehold location requirements. Streams closed or subject to leasehold location are listed in Appendix H. Lease stipulations for leasehold location areas are listed in the Mining section of Chapter 2.

Subunit 17d - Aniak-Doestock

Timing of Disposal. State lands in this subunit will be retained in public ownership until 1998. At that time, the management intent for the unit will be reevaluated. Until 1998, state lands in this subunit will be managed so as not to preclude either multiple use or settlement in this area. It is likely that some land in other

ownerships will be made available for private use in the middle Kuskokwim area (from Aniak to Stony River) before 1998. If a sufficient amount of private land is available by that time, the state will not offer settlement lands in this area.

If by 1998 a sufficient number of private lots have not been made available to the general public at reasonable terms, the Aniak-Doestock subunit should be offered for private ownership. The number of lots offered for sale or lease will be judged sufficient if it is great enough to create a private market of a size appropriate to a rural area. If after 1998 subunit 17a is not needed for settlement, it will be managed for multiple use. The DNR finding of whether or not this subunit is needed for disposal will be subject to public notice and review by the agencies and organizations represented on the Kuskokwim Area Plan Advisory Board.

Local Lottery. If land is offered for disposal in the Aniak-Doestock subunit, the lottery for entry permits or parcels should be held in the nearest community, Aniak. Under existing regulations, applicants must be present at the lottery to win a parcel or entry permit.

Disposal Design. If land in the Aniak-Doestock subunit is offered for disposal, a 200-foot staking setback will be required on the Aniak River, a 100-foot staking setback on Doestock

Creek, and a 50-foot building setback on other water bodies and wetlands.

Subunit 17e - Kolmakof Lake

Agricultural Potential. The two eastern blocks of subunit 17e are identified on the USDA Exploratory Soil Survey as having moderate potential for agriculture. In order to protect their long-term agricultural potential, the Division of Agriculture should be consulted prior to issuing permits or leases for any activities which would significantly diminish their capability to support agriculture.

Navigable Waters within Non-state Lands

Peregrine Falcon Nests. There are four known peregrine falcon nests along the Kuskokwim River on the northern boundary of this management unit. In order to protect nesting falcons, the Habitat Division of the Department of Fish and Game should be consulted prior to issuing permits on the state-owned waters and riverbeds in the following areas:

- T17N R53W S.M. sec. 1-3, 10-15, 22-27, and 34-36
- T17N R54W S.M. sec. 1-18
- T17N R56W S.M. sec. 1-18

RESOURCE INFORMATION SUMMARY

Management Unit 17 - Aniak River

Resource	Subunit			
	17a	17b	17c	17d
Agriculture	Low potential	Low potential to unsuited	Low potential to unsuited	Low potential
Energy	---	---	---	---
Fish	Aniak, Kipchuk, Salmon rivers: salmon, rainbow trout, resident fish	Aniak, Kipchuk, Salmon rivers: salmon, rainbow trout, resident fish	None documented	Aniak River: salmon, rainbow trout, other resident fish
Forestry	Moderate to high value	Most unsuited, some pockets of low value on rivers	Unsuited	High value
Grazing	High potential	High potential	High potential	High potential
Historic/cultural	High values along Aniak River	Unknown	Unknown	Unknown
Materials	Unknown	Unsuited	Unsuited	Unsuited
Minerals	Very low potential	Most low to very low potential, some moderate to very high in headwaters, esp. Atsoksovluk Creek; a few existing claims	Moderate to very low potential; a few existing claims	Very low potential
Oil & gas	Unknown	Unknown	Unknown	Unknown
Public access	Boat, plane, & trails on Aniak River	Boat on Aniak, Salmon, Kipchuk rivers; plane to Aniak L. & gravel airstrips	Local mining trails & gravel airstrips west Aniak River	Boat, trails on Aniak R.
Recreation	Statewide and national use for fishing & floating	statewide and national use for fishing & floating	Unknown	Moderate to high local use
Settlement suitability	High	Most unsuited, some pockets of low to high	Unsuited	High in north block, low in south block
Wildlife	A-2; moose rutting & winter range; brown bear conc.; caribou	A-2/B-1; moose rutting & winter range; brown bear conc.; caribou calving near Aniak L.	B-2; bear, caribou, moose	A-2; moose rutting & winter range; bear
Important trails	Aniak R. trail	Salmon R.-Marvel Dome, Timber Cr.-Cinnabar C.	Sawpit Cr. trail, Dominion Cr. trail	Chuathbaluk-Aniak R. trails

See glossary for definition of ratings.

RESOURCE INFORMATION SUMMARY

Management Unit 17 - Aniak River

Resource	Subunit 17e
Agriculture	Moderate potential
Energy	---
Fish	Kuskokwim River: salmon resident fish
Forestry	Most unsuited, pockets of high value timber on river
Grazing	High potential
Historic/ cultural	High values along Kuskokwim River
Materials	Potential sites along Kuskokwim River
Minerals	Very low potential
Oil & gas	Unknown
Public access	Boat on Kuskokwim R. in north block; plane to Kolmakof Lake
Recreation	Moderate use on Kuskokwim River
Settlement suitability	Most unsuited, pockets of high along river
Wildlife	A-2; bear, moose
Important trails	Kuskokwim R. winter trail

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY

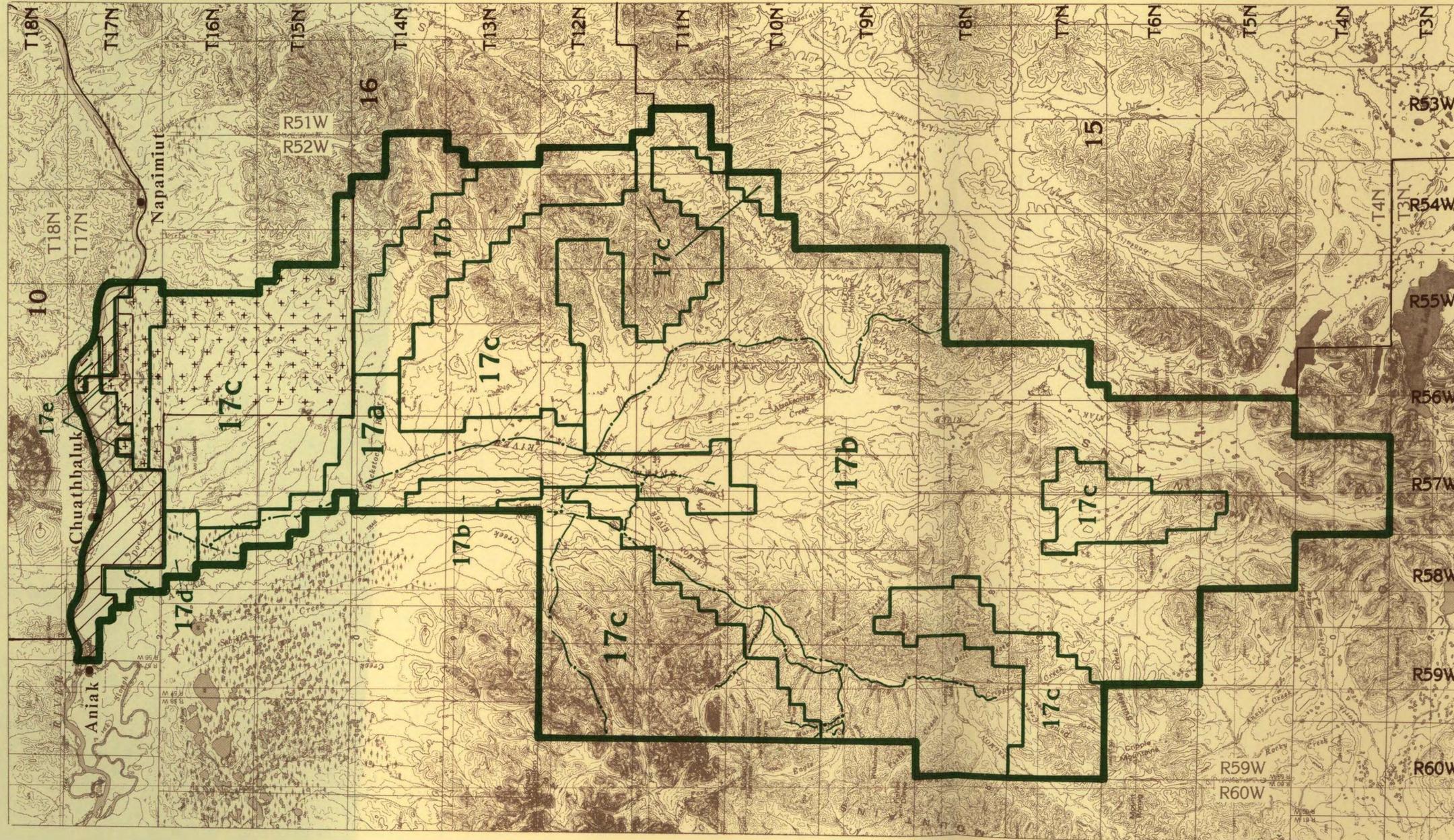
MANAGEMENT UNIT 17 - ANIAK RIVER

SUBUNIT	LAND OWNERSHIP	LAND USE DESIGNATIONS				COMMENTS
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
17a Aniak Corridor	Most state, some state selected	Forestry Public recreation Wildlife habitat		Commercial recreation leases Grazing in part of subunit Land disposals Remote cabins	Open except along some streams	
17b Upper Aniak	State	Public recreation Wildlife habitat		Commercial recreation leases Grazing in part of subunit Land disposals Remote cabins	Open except along some streams	
17c Hinterlands	Part state, part state selected	General use: low resource values		Land disposal Remote cabins	Open except along some streams	
17d Aniak- Doestock	Part state, part state selected	Settlement	Forestry Public recreation Wildlife habitat	Grazing in part of subunit Remote cabins Trapping cabins after sale is scheduled	Closed prior to sale	Net acreage = 1,400 1998 or later
17e Kolmakof Lake	State selected state select/ Native selected	Public recreation Wildlife habitat	Forestry	Land disposal Remote cabins	Open	

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2. Grazing may be allowed in portions of closed units when consistent with the guideline in Chapter 2 (Grazing on Important Habitat Lands).

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

17: Aniak River



- Management Unit Boundary
- Subunit Boundary

- State Owned
- State Selected
- Native Owned
- Native Selected
- Federal
- Trails on public lands
- Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Location Map



U.S.G.S. Quads:
Russian Mission
Sleetmute
Taylor Mts.
Bethel

Map Scale:
1:500,000

MANAGEMENT UNIT 18: BIRCH TREE CROSSING

Background

Location and Land Ownership. The Birch Tree management unit consists of the beds of the navigable portions of the Kuskokwim River between the Kuskokwim Area Plan boundary near Aniak and the Cenaliurrit Coastal District boundary just downstream from Lower Kalskag. Approximately 47 river miles are included in this unit (not including sloughs and river braids). The uplands adjacent to the riverbed in this unit are Native owned. A number of Native allotments are located along the river.

Resources. Materials found on river bars consist of washed, moderate-to-well sorted, rounded-to-subangular gravels. Bar accretion deposits which are unvegetated are found throughout this unit. Photo interpretive maps indicate that there are approximately 130 discrete materials sites in the riverbed within this unit. They are best exposed along the margins and the upstream end of channel bars, along channel margins, and most notably along the point bars. The deposits have little to no overburden or vegetation due to periodic flooding. Extractable materials are limited to a depth of several feet because of the water table. High water levels restrict periods when the material can be removed. These materials are desirable for fill and concrete. Materials from this area have been used for transportation, flood control, and building projects in Upper and Lower Kalskag, Bethel and other communities on the delta. Gravel from this unit is in demand because materials are in short supply on the lower Kuskokwim River and on the Yukon-Kuskokwim delta.

Resource Use. This section of the river has many uses. The Kuskokwim River is used year round for transportation. In summer fuel, supplies, and materials are transported along the river by barge and small power boats. Residents use the river as the principle access route in the region and for hunting, fishing, trapping, berry picking, wood cutting, etc. During the fall, large numbers of small

boats travel up the river to the tributaries within the planning area for moose hunting. During the winter an ice road connects Kalskag with Aniak and is used by automobiles, ATVs, snowmachines, and dog teams. There are also two state -owned, -operated, and -maintained airports adjacent to this unit in Kalskag and Aniak.

There are a number of materials sites that have been used in the past. Birch Tree Crossing is the largest and is located 12 river miles downriver Aniak. Between 1978 and 1986 the U.S. Army Corps of Engineers issued permits for over 750,000 cubic yards of materials for this site. The actual volume extracted is unknown, but is thought to be considerably less than the permitted amount.

A variety of fish species use this stretch of the river including rainbow trout, humpback and broad whitefish, sheefish, least cisco, northern pike, and five species of salmon. Rainbow trout, humpback and broad whitefish, and least cisco are known to spawn in the Kuskokwim and some species of salmon are suspected to spawn in the river as well. The fish in this unit, particularly salmon, are heavily utilized for commercial, subsistence, and sport fishing both in the Kuskokwim drainages and along the coast. The Birch Tree Crossing unit is in Commercial Fisheries District 2. Residents subsistence fishing use set nets, drift nets, and fish wheels. River bars are typically used for fish camps and net-drying sites.

Management Intent

The navigable riverbeds in this unit will be retained in public ownership and remain open for mineral entry and materials extraction consistent with Chapter 2 guidelines. This unit will be managed for materials, transportation, water resources, and wildlife habitat. When responding to a request for a material sale or identifying a source for materials on public lands, preference shall be given to

using upland material sources regardless of ownership to the extent feasible and prudent. Mining gravel from active channels should be avoided to reduce detrimental effects on water quality, aquatic habitat, and biota. However, if hydraulic changes can be minimized, in-channel sites will replenish more rapidly than other areas, and the effects on the terrestrial biota of the floodplain will be avoided or greatly minimized.

DNR will try to avoid permitting gravel extraction at sites that are in direct conflict with traditional activities such as fish camps, fish wheels, net drying sites, and set-net locations. The department will direct applicants to use alternate sites or stipulate that extraction occur at times that will not overlap with the conflicting use whenever feasible and prudent.

Management Guidelines

The complete set of management guidelines is presented in Chapter 2. Any of the guidelines could apply to uses within this management unit. Those most likely to apply are listed below:

- Fish and wildlife habitat
- Materials
- Public and commercial recreation resources
- Subsurface resources
- Trail management
- Wetlands management

The following guidelines are specific to this unit:

Birch Tree Crossing Cooperative Study. The river bar at Birch Tree Crossing has been heavily used for material extraction for over 30 years. Concerns have been raised that the rate of gravel extraction may exceed the rate of deposition causing erosion of upland properties, degrading fish and wildlife habitat, and deteriorating water quality. To provide agencies and landowners with needed information to address these concerns, a cooperative study of the Birch Tree Crossing site is recommended. In order to minimize conflicts between materials extraction and other surface activities and land uses, the formation of a study group to look at feasible and prudent sites for materials extraction in and along the Kuskokwim River also is recommended. See Chapter 4 for a complete description of these recommendations.

RESOURCE INFORMATION SUMMARY

Management Unit 18 - Birch Tree Crossing

Resource	Subunit 18a
Agriculture	N/A
Energy	N/A
Fish	Kuskokwim R.: salmon, whitefish, sheefish, least cisco, pike, and resident fish
Forestry	N/A
Grazing	N/A
Historic/ cultural	N/A
Materials	High value
Minerals	N/A
Oil & gas	Unknown
Public access	Boat along Kuskokwim R.; winter trail on river
Recreation	Moderate use and potential along Kuskokwim River
Settlement suitability	N/A
Wildlife	N/A
Important trails	Winter trail along Kuskokwim River

See glossary for definition of ratings.

LAND-USE DESIGNATION SUMMARY
MANAGEMENT UNIT 18 - BIRCH TREE CROSSING

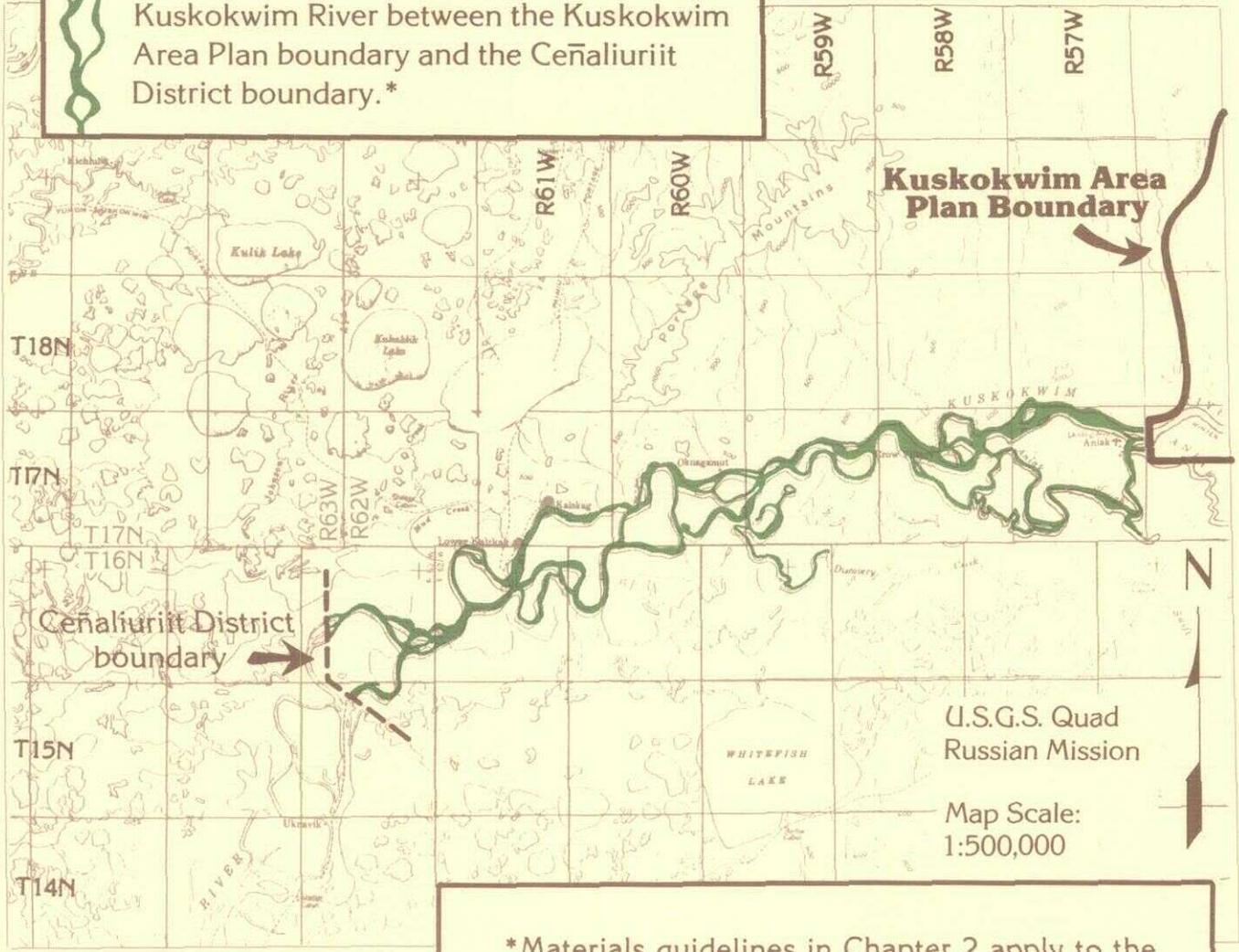
<u>SUBUNIT</u>	<u>LAND OWNERSHIP</u>	<u>LAND USE DESIGNATIONS</u>				<u>COMMENTS</u>
		Primary Surface Uses	Secondary Surface Uses	Prohibited Surface Uses ^a	Subsurface ^b	
18a Birch Tree Crossing	State	Materials Transportation Water resources Wildlife habitat			Open	Subunit contains river bed only

^aOther uses such as material sales, land leases, or permits that are not specifically prohibited may be allowed. Such uses will be allowed if consistent with the management-intent statement, the management guidelines of this unit, and the relevant management guidelines listed in Chapter 2.

^bAll areas are available for leasing for leasable minerals. Statements of whether or not the unit is open to mineral entry refer only to locatable minerals.

18: Birch Tree Crossing

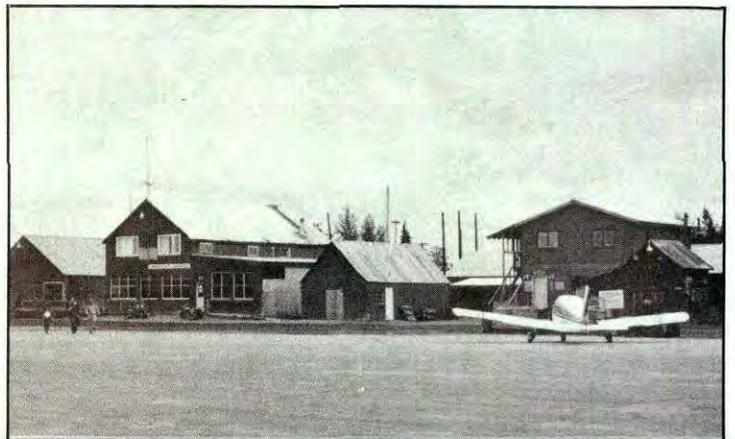
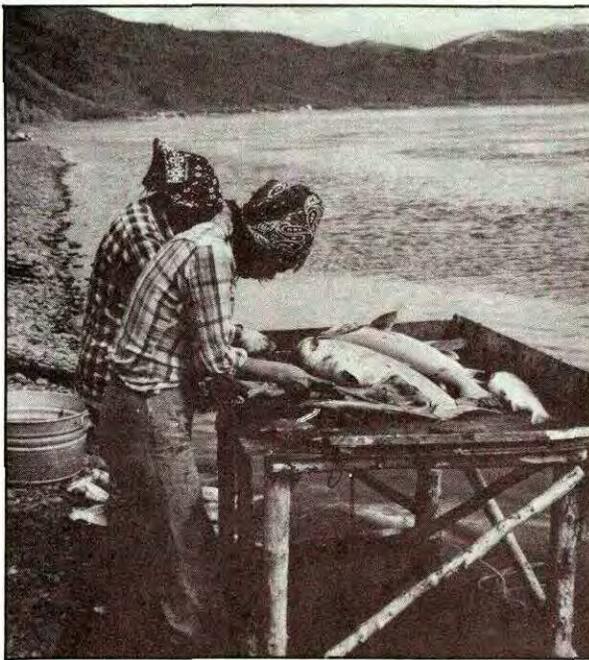
 State-owned beds of navigable waters in the Kuskokwim River between the Kuskokwim Area Plan boundary and the Ceñaliuriiit District boundary.*



* Materials guidelines in Chapter 2 apply to the beds of navigable waters in the Kuskokwim River and its tributaries which enter the Kuskokwim upstream from the coastal district boundary or beds of navigable waters in the Innoko River drainage that are located within KAP. Only the major state-owned beds below Aniak are shown on this map. Many of the Kuskokwim tributaries and lakes in this region are also navigable. Uplands adjacent to the Kuskokwim River in this unit are Native-owned.

Chapter 4 Implementation

Page 4-1	Introduction
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4-11	Municipal Entitlement
4-12	Procedures for Plan Modification and Amendments
4-14	Recommendations for Research
4-15	Recommendations for Field Staff and Enforcement
4-15	Recommendations for Legislative Designation
4-16	Recommendations for Additional Access



Chapter 4

IMPLEMENTATION

Introduction

This chapter describes the actions necessary to implement the land use policies proposed by this plan. Included are proposed land selections and relinquishments of selected lands; land use classifications; recommenda-

tions for legislative designations; recommendations for field staff and research; and procedures for plan modification and amendment.

Proposed Selections and Relinquishments

This plan identifies several areas for future state land selections and for relinquishment of existing state selected lands. These recommendations are described below, along with the reasons for proposing these changes in land status. In general, lands are proposed for selection either to consolidate state land ownership and improve the efficiency of state land management, or because the land has high resource values that merit state management. The selections and relinquishments are shown on the management unit maps in Chapter 3, and on Map 4.1.

New State Selections

The state is entitled to select additional lands for state ownership from vacant, unappropriated, and unreserved federal lands. In the Kuskokwim Area, there are over four million acres that the state could select. Most of this land is in the Kuskokwim Mountains--in the George River, Crooked Creek, and Owhat drainages--or in the lowlands of the middle Big River, Tatlawiksuk, Chineekluk, Swift, and Stony river drainages. Most of these lands have low surface and subsurface resource values and are not desirable for state

selection. However, there are some lands with high resource values or strategic locations that merit state selection. A total of approximately 448,580 acres in 14 parcels should be selected. Some of these parcels have already been selected by Native corporations. If the state top-files, that is, files a selection on Native-selected land, the state selection would attach if the Native selection were relinquished or rejected.

The total amount of additional land the state may select is limited. Therefore, final determination of whether more lands will be selected in the Kuskokwim Area will be made through a statewide process in which the lands recommended for selection in this plan are evaluated relative to opportunities for additional selections in other parts of the state. Each parcel is rated as either high, moderate, or low priority for selection within the Kuskokwim Area.

Parcels proposed for selection are listed below along with their acreage, the reason for selection, a reference to the subunit they are located in, and their priority for selection. The subunit descriptions in Chapter 3 state the

management intent for these lands if they are conveyed to state ownership.

Medfra - Big River-South Fork subunit 4a - T28S R21E K.R.M. sections 1, 12-15, 22-23, and 26-27 -- approximately 5,860 acres - high priority. This parcel is Native-selected land on the North Fork of the Kuskokwim River downstream from Medfra. It is surrounded by state-owned land and is readily accessible by boat and trail along the North Fork. The plan recommends that the state top-file on this parcel because of the high forestry, habitat, and public recreation values of these lands, and in order to consolidate state ownership in this area in the event that the land is not conveyed to the Native corporation.

South Fork Uplands - Big River-South Fork subunit 4a -- T33N R26W S.M. sections 19-21 and 28-33 -- approximately 5,760 acres - low priority. This parcel is federal land in the lower south Fork Valley. There is no established access. It adjoins state land on two sides. This parcel is recommended for state selection because of high habitat value and to consolidate state ownership.

Big River-Nikolai - Big River-South Fork subunits 4a and 4c -- T34N R27W S.M.; T33N R28W S.M.; T33N R30W S.M. sections 19-36; T32N R29W S.M.; T32N R30W S.M. sections 1-4, 10-15, 22-27, and 34-36 -- approximately 74,880 acres - high priority in west half; low priority in east half. These parcels are federal lands along Big River and the South Fork west of Nikolai. They are accessible along the rivers and the Iditarod Trail. The west half or this area (subunit 4c) is recommended for selection by the state because of its high forestry, habitat, and recreation values. The east half (subunit 4a) is recommended for selection because of potential for long-term gas development for local use and recreation values along the Iditarod Trail.

Tatlawiksuk - Kuskokwim River subunit 5a - T22N R38W S.M. sections 1-3, 9-15, -- approximately 6,400 acres - high priority. This a parcel of Native selected land along the Kuskokwim River near the confluence of the Tatlawiksuk and Kuskokwim rivers. It is adjacent to state-owned land. The plan recommends

the state top-file on this parcel because of its high forestry, habitat, and public recreation values, and to consolidate state land ownership in this area in the event that it is not conveyed to the Native corporation.

George River - George River subunit 10b -- T27N R41W S.M., T27N R42W S.M., T26N R40W S.M., T26N R41W S.M., T26N R42W S.M., T25N R40W S.M., T25N R41W S.M., T25N R42W S.M., T25N R43W S.M., and T25N R44W S.M. sections 1-3, 10-15, 22-27, and 34-36 -- approximately 241,920 acres - high priority. These parcels are federal lands in the headwaters of the George and Takotna rivers. They are recommended for selection by the state because of their high mineral potential.

Horn Mountains - George River subunit 10b -- T20N R50W S.M., T20N R51W S.M., T19N R50W S.M. sections 1-21 and 28-33; T19N R51W S.M. sections 4-9, 16-21, and 31-33; T18N R51W S.M. -- approximately 96,000 acres - high priority. These federal lands are recommended for selection by the state because of their high mineral potential.

Flat - George River subunit 10b -- T27N R48W that portion east of the Iditarod River, and T26N R48W that portion east of the Iditarod River -- approximately 30,400 acres - moderate priority. These are federal lands recommended for state selection because of their high mineral potential.

Stony River - Stony River subunits 14a and b -- T19N R41W S.M. section 13 and T18N R39W S.M. sections 9, 13-17, and 24 -- approximately 5,120 acres - high priority. These two parcels are Native-selected lands on or near the Stony River. They are surrounded by state-owned lands and are accessible by boat from the Stony River. The plan recommends that the state top-file on these lands because of their high forestry and habitat values, and in order to consolidate state land ownership in this area in the event that these lands are not conveyed to state ownership.

Holitna River - Holitna River subunit 15a -- T18N R43W S.M. sections 31 and 36; T18N R44W S.M. sections 25 and 36; and T17N

4-2 Proposed Selections & Relinquishments

R43W S.M. sections 13 and 23-26 -- approximately 5,760 acres - high priority. These three parcels are Native-selected lands near the Holitna River and adjacent to state-owned lands. The plan recommends that the state top-file on these lands because of their high forestry and habitat values, and in order to consolidate state land ownership in this area in the event that these lands are not conveyed to Native ownership.

Fuller Creek - Holokuk-Oskawalik subunit 16c -- T19N R34W S.M. sections 1-18, 20-27, and 34-36 -- approximately 18,560 acres - high priority. This parcel is federal land near the community of Red Devil and is accessible from Red Devil by trail. The plan recommends selection of this area because of its value for settlement and mining. If conveyed to the state, a portion of the land will be offered for sale to provide opportunities for private land ownership near Red Devil.

In addition to these proposed selections, there are several parcels of land in the northern half that are currently unavailable for selection because they are within townships that must be conveyed to Doyon under current laws or because they are within a federal withdrawal for military purposes. If lands within these areas become available for state selection, they are recommended for selection. They include small parcels of Native selections with high surface values in the following townships:

T23S R29E K.R.M.
T24S R28E K.R.M.
T26S R24E K.R.M.
T27S R23E K.R.M.
T28S R22E K.R.M.
T28S R26E K.R.M.
T29S R13E K.R.M.
T31N R35W S.M.
T32N R34W S.M.
T33N R29W S.M.
T34N R28W S.M.
T34N R38W S.M.

Road-accessible lands near Tatalina currently withdrawn from selection include parcels in T33N R35W and T33N R36W S.M.

Lastly, if additional lands are needed for selection, federal riverfront parcels in the following townships should be reconsidered for selection. Resource values are lower than in many parts of the region, but they are on the main river in areas where the state has little riverfront land. The townships are:

T17N R52W S.M.
T17N R53W S.M.
T17N R54W S.M.
T19N R44W S.M.
T20N R44W S.M.
T20N R45W S.M.
T21N R47W S.M.

Proposed Relinquishments

Some tracts of previously selected state lands are isolated from larger blocks of state lands, making them difficult and expensive to manage. Resource assessment work done to prepare the Kuskokwim Area Plan also indicates that some tracts lack resource values that merit state management. Because the state has selected more land than it is entitled to receive from the federal government, state selections on inaccessible, isolated tracts of land with low resource values should be relinquished. A total of 51,840 acres in three tracts are proposed for relinquishment. There are additional state-selected lands that meet the criteria for relinquishment, but due to restrictions in Sections 906(f) and (g) of the Alaska National Interest Lands Conservation Act, most of the selections in the Kuskokwim Area may not be relinquished.

Tracts proposed for relinquishment are:

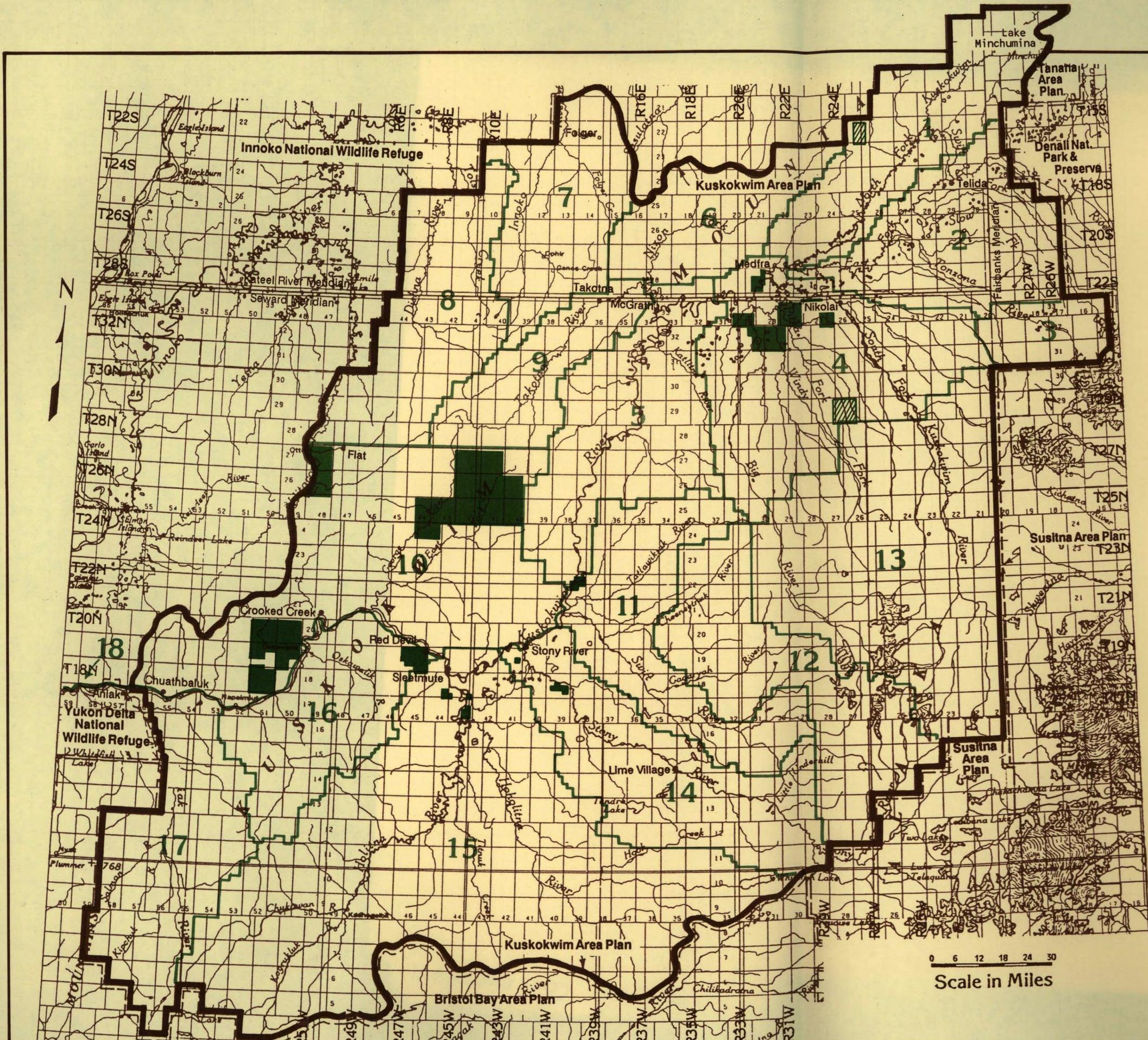
North Fork - North Fork subunit 1c - T22S R25E K.R.M. sections 1-3, 10-15, 22-27, and 34-36 - approximately 11,520 acres.

Windy Fork - Big River-South Fork subunit 4b - T29N R26W S.M. - approximately 23,040 acres.

Summary of New Selections and Relinquishments

MAP 4.1

-  Areas Recommended for State Selection
-  State-Selected Lands Recommended for Relinquishments



Land Use Classifications

This plan establishes primary and secondary land use designations for state land in the Kuskokwim Area. For the plan to be implemented on state land, DNR must classify land into the classification categories in 11 AAC 55 in a way that reflects the plan intent. Land classifications are recorded on the state status plats, and are the formal record of the primary uses for which each parcel of state land will be managed. The plan serves as the final finding by the Commissioner of DNR on land-use classifications. The primary surface land use

designations in Chapter 3 will be converted to classifications as shown in Table 4.1, Table 4.2, and Appendix I. Land with a dual classification for settlement and a retention category, e.g., settlement and public recreation, cannot be offered for sale unless the land is reclassified. Therefore, settlement is the sole classification category for these lands. However, these lands will be managed for both uses as described by the management intent and primary designations.

Table 4.1 Conversion of Primary Use Designations to Classifications

<u>PRIMARY USE DESIGNATIONS</u>	<u>CLASSIFICATIONS</u>
Forestry, Public Recreation, Wildlife Habitat	Forest Land, Public Recreation Land, Wildlife Habitat Land
Forestry, Transportation, Wildlife Habitat	Forest Land, Transportation Corridor Land, Wildlife Habitat Land
Forestry, Wildlife Habitat	Forest Land, Wildlife Habitat Land
General Use	Resource Management Land
Materials, Transportation, Water Resources, Wildlife Habitat	Material Land, Water Resource Land, Wildlife Habitat Land
Minerals	Mineral Land
Minerals, Public Recreation, Wildlife Habitat	Mineral Land, Public Recreation Land, Wildlife Habitat Land
Minerals, Settlement	Settlement Land
Minerals, Transportation, Wildlife Habitat	Mineral Land, Transportation Corridor Land, Wildlife Habitat Land
Minerals, Wildlife Habitat	Mineral Land, Wildlife Habitat Land
Public Recreation, Settlement	Public Recreation Land, Settlement Land
Public Recreation, Wildlife Habitat	Public Recreation Land, Wildlife Habitat Land
Resource Management	Resource Management
Settlement	Settlement Land
Water Resources, Wildlife Habitat	Water Resources Land, Wildlife Habitat Land
Wildlife Habitat	Wildlife Habitat Land

Table 4.2 Management Unit Classifications¹

<u>Management Unit</u>	<u>Subunit</u>	<u>Classifications</u>
Unit 1 - North Fork	1a	Settlement Land
	1b	Wildlife Habitat Land
	1c	Resource Management Land
	1d	Forest Land, Wildlife Habitat Land
Unit 2 - East Fork	2a	Forest Land, Wildlife Habitat Land
	2b	Resource Management Land
	2c	Resource Management Land
	2d	Wildlife Habitat Land
Unit 3 - Tonzona	3a	Public Recreation Land, Wildlife Habitat Land
	3b	Resource Management Land
Unit 4 - Big R. - South Fork	4a	Wildlife Habitat Land
	4b	Resource Management Land
	4c	Forest Land, Wildlife Habitat Land
Unit 5 - Kuskokwim River	5a	Forest Land, Public Recreation Land, Wildlife Habitat Land
	5b	Settlement Land
	5c	Public Recreation Land, Settlement Land
	5d	Resource Management Land
	5e	Settlement Land
	5f	Settlement Land
	5g	Settlement Land
	5h	Resource Management Land
	5i	Resource Management Land
	5j	Wildlife Habitat Land
Unit 6 - Nixon Fork	6a	Forest Land, Public Recreation Land, Wildlife Habitat Land
	6b	Mineral Land, Wildlife Habitat Land
	6c	Resource Management Land
	6d	Wildlife Habitat Land
Unit 7 - Innoko River	7a	Mineral Land, Transportation Corridor Land, Wildlife Habitat Land
	7b	Forest Land, Transportation Corridor Land, Wildlife Habitat Land
	7c	Resource Management Land
	7d	Wildlife Habitat Land

¹KAP Classification Order No. SC-88-001 went into effect on March 22, 1988. See Appendix I for acreage and primary designations for individual subunits.

Table 4.2 Management Unit Classifications (cont.)

<u>Management Unit</u>	<u>Subunit</u>	<u>Classifications</u>
Unit 8 - Dishna River	8a	Resource Management Land
	8b	Resource Management Land
	8c	Mineral Land, Wildlife Habitat Land
	8d	Forest Land, Wildlife Habitat Land
	8e	Resource Management Land
	8f	Mineral Land, Public Recreation Land Land, Wildlife Habitat Land
	8g	Wildlife Habitat Land
Unit 9 - Takotna River	9a	Resource Management Land
	9b	Wildlife Habitat Land
	9c	Mineral Land
	9d	Forest Land, Public Recreation Land, Wildlife Habitat Land
Unit 10 - George River	10a	Public Recreation Land, Wildlife Habitat Land
	10b	Mineral Land, Wildlife Habitat Land
Unit 11 - Swift River	11a	Wildlife Habitat Land
	11b	Resource Management Land
Unit 12 - South Alaska Range	12a	Public Recreation Land, Wildlife Habitat Land
	12b	Resource Management Land
	12c	Resource Management Land
Unit 13 - North Alaska Range	13a	Public Recreation Land, Wildlife Habitat Land
	13b	Settlement Land
	13c	Settlement Land
	13d	Settlement Land
	13e	Settlement
	13f	Resource Management Land
Unit 14 - Stony River	14a	Forest Land, Wildlife Habitat Land
	14b	Wildlife Habitat Land
	14c	Resource Management Land
	14d	Public Recreation Land, Wildlife Habitat Land

Table 4.2 Management Unit Classifications (cont.)

<u>Management Unit</u>	<u>Subunit</u>	<u>Classifications</u>
Unit 15 - Holitna River	15a	Forest Land, Wildlife Habitat Land
	15b	Wildlife Habitat Land
	15c	Water Resources Land, Wildlife Habitat Land
	15d	Resource Mangement Land
	15e	Settlement Land
	15f	Settlement Land
	15g	Mineral Land, Wildlife Habitat Land
Unit 16 - Holokuk - Oskawalik	16a	Wildlife Habitat Land
	16b	Resource Mangement Land
	16c	Settlement Land
Unit 17 - Aniak River	17a	Forest Land, Public Recreation Land Land, Wildlife Habitat Land
	17b	Public Recreation Land, Wildlife Habitat Land
	17c	Resource Mangement Land
	17d	Settlement Land
	17e	Public Recreation Land, Wildlife Habitat Land
Unit 18 - Birch Tree Crossing	18a	Material Land, Water Resources Land, Wildlife Habitat Land

Mineral Orders

This plan identifies areas where mineral entry status will change, including:

1. Areas currently closed to new mineral entry that will be reopened,
2. Areas that will be closed to new mineral entry, and
3. Areas where leasehold location will be required.

These areas are shown on Map 2.4. To implement these decisions, mineral opening orders, and mineral closing orders were prepared by DNR and were signed by the commissioner when the plan was adopted. The final finding for these orders are in Appendix H. A list of streams subject to mineral closure or leasehold location is in Appendix H.

Municipal Entitlement

The municipal entitlement act (AS 29.65) establishes the state land classification categories that may determine a municipality's general grant land entitlement and that are available for transfer to a municipality. Under existing laws, the size of a municipality's entitlement is 10 percent of the vacant, unappropriated, unreserved (VUU) land in the municipal boundaries, not to exceed 20 acres per capita. In the Kuskokwim Area, there is abundant land in the VUU categories. Entitlement will probably be limited by population rather than land classification.

The Kuskokwim Area Plan has classified the state land within the planning area boundaries (see Land Use Classifications in this chapter). Classifications have been made on the best information available during the planning process at the scale appropriate to the planning effort, generally 1:250,000. These classifications are broad and have not considered whether the lands should be available for transfer to municipalities incorporated in the future. Many of the lands are classified in categories that would not be available for transfer, including Wildlife Habitat Land and Mineral Land. However, settlement of municipal entitlements is a high priority of the department and the current classifications will not preclude consideration of parcels of land for reclassification and transfer to a municipality.

When an area incorporates under state law, it may select state land within its boundaries that, except for classification, otherwise meets the definition of vacant, unappropriated, unreserved land under AS 29.65. When such lands are selected, the Departments of Natural Resources and Fish and Game will do a more detailed, site-specific analysis of the resource values of the selected lands. This analysis may result in a change in the designation and classification of all or part of the parcel under consideration to a classification that is available for transfer. Changes in designations and classifications will require plan amendment and reclassification before the selection may be approved.

For example, river corridor lands that are classified Wildlife Habitat/Public Recreation are not available for transfer. A more detailed review of habitat values may show that parts of the corridor are suitable for local management either because the resource values do not merit state retention or because the land is not essential to the overall management intent for the area. Where this is the case, reclassification of part of the land may be recommended to allow for land transfer. Transfer to a municipality will not be approved until the recommended changes have been publicly reviewed through the amendment and reclassification processes.

Procedures for Plan Modification and Amendment

The land use designations, policies, implementation actions, and management guidelines of this plan may be changed if conditions warrant. The plan will be updated periodically as new data and new technologies become available and as changing social or economic conditions place different demands on state land.

Periodic Review. The plan will be reviewed at least once every five years to determine if revisions are necessary. An interagency planning team will coordinate this review at the request of the Commissioner of DNR. The plan review will include meetings with all interested groups and the general public. A meeting of the Kuskokwim Area Plan advisory board also will be held annually to review plan implementation.

Amendments. The plan may be amended. An amendment adds to or modifies the basic intent of the plan. Changes to allowed or prohibited uses, policies, guidelines, and some implementation actions constitute amendments. Amendments must be approved by the Commissioner of DNR. Amendments require public notice and consultation with affected agencies. Amendments may require public meetings if the Commissioner decides the level of controversy warrants it. Amendments may be proposed by DNR, other agencies, or the public. Requests for amendments are submitted to the Southcentral Regional Office of the DNR Division of Land and Water Management (DLWM) in Anchorage.

The following actions are examples of changes that would require an amendment:

- A proposal to close an area to new mineral entry
- Allowing a use in a subunit where it is currently prohibited, unless provisions for exceptions are contained in the plan

- Offering land for sale in an area designated for retention or reclassifying to allow selections by a municipality.

The Director of the Division of Land and Water Management determines whether a proposed revision constitutes an amendment or just a minor change.

Minor Changes. A minor change is one that does not modify or change the basic intent of the plan. Minor changes may be necessary for clarification, accuracy, consistency, or to facilitate implementation of the plan. Minor changes are made at the discretion of the Director of DLWM and do not require public review. Minor changes may be proposed by agencies or the public. Requests for minor changes are submitted to the Southcentral Regional Office of DLWM. The director will notify other agencies when minor changes are made. Affected agencies will have the opportunity to comment on minor changes following notification; the comment period may be provided through existing interagency review processes for associated actions. If the agencies disagree with the regional manager's decision, the decision may be appealed to the Director of DLWM, and the director's decision may be appealed to the Commissioner of DNR.

Special Exceptions. Exceptions to the provisions of the plan may be made without modification of the plan. Special exceptions shall occur only when complying with the plan is excessively difficult or impractical and an alternative procedure can be implemented that adheres to the purposes and spirit of the plan. An example of a special exception is a preference right granted under AS 18.05.035 where the Director determines such an action is necessary to correct an injustice and will not significantly affect the intent of the plan.

DNR may make a special exception in the implementation of the plan through the following procedures:

1. The Southcentral Regional Manager of DLWM shall prepare a finding that specifies the following:

- The extenuating conditions that require a special exception.
- The alternative course of action to be followed.
- How the intent of the plan will be met by the alternative. This may incorporate into a finding under AS 38.05.035.

2. Agencies that have responsibility for land uses with primary or secondary designations in the affected area will be given an opportunity to review the findings. If the agencies disagree with the regional manager's decision, the decision may be appealed to the Director of DLWM, and the director's decision may be appealed to the Commissioner of DNR. If warranted by the degree of controversy, the commissioner may hold a public meeting before making a decision.

Recommendations for Research

Birch Tree Crossing Material Site. The river bar at Birch Tree Crossing has been heavily used for material extraction for over 30 years. Concerns have been raised that the rate of gravel extraction may exceed the rate of redeposition, causing erosion of upland properties, degrading fish and wildlife habitat, and deteriorating water quality. In order for DNR, ADF&G, the U.S. Army Corps of Engineers, and other affected agencies and landowners to address these concerns when reviewing permit applications and proposed material sales, they should conduct a cooperative study that provides necessary background information on rates of deposition, erosion patterns, and the effects of material extraction on fisheries and drinking water.

Preferred Material Sites. In order to minimize conflicts between material extraction activities and other surface resources and land uses, preferred material extraction sites should be identified in and along the Kuskokwim River. Preferred sites should be identified by a study group consisting of representative from DNR, ADF&G, the Department of Transportation and Public Facilities, Calista Corporation, and the Kuskokwim Corporation. Identified sites should include sites feasible and prudent for community use. Results of this study would be used by state agencies when reviewing permit applications and requests for material sales.

Fisheries. The middle and upper Kuskokwim basin provides spawning and rearing habitat for a large percentage of the salmon that support the commercial fishery in Commercial Fisheries Districts 1 and 2. Data on anadromous fish habitat, stock assessment, and spawning studies are insufficient to manage this fishery optimally. The plan recommends allocation of funds for the following research:

- Stock assessment of salmon particularly related to escapement and enumeration.

- Surveys to identify spawning and rearing habitat for anadromous fish in the planning area.
- Spawning studies principally in the Kuskokwim, Holitna, and Hoholitna drainages.
- Continued funding of the Kogrukluq weir and Aniak sonar site.

Aniak River Survey. The Aniak drainage attracts fishermen from around the world for its sport fishing. The Aniak supports the farthest north rainbow fishery in Alaska. Fishermen are also catching char, grayling, king, and silver salmon. Other wildlife and recreation resources along the Aniak include scenery, diversity of plant life and wildflowers, photography, and opportunities to see lynx, bear, wolves, and moose, as well as to experience a wilderness setting.

Local residents also use several techniques for fishing including drift and set nets, fishwheels, rod and reel, and hooking through the ice in winter. The drainage is also used by local residents and communities along the Kuskokwim for hunting, trapping, berry picking, and personal-use timber. Because of the importance of the Aniak for all these uses as well as its rainbow fishery, which is at the northern limits of the species range and more susceptible to overharvest, leases for commercial recreation facilities are prohibited along the Aniak. In addition, permit applications for guide sites or tent camps and campsites will be considered on a case-by-case basis.

In order to prevent overuse of the rainbow fishery, and so that the rainbow trout population can be managed for optimal use by subsistence and recreation users, the ADF&G Sport Fish Division should conduct annual surveys to determine rainbow population and harvest levels.

Recommendations for Field Staff and Enforcement

The emphasis of this plan is on multiple use. The plan relies on existing laws and regulations as well as new guidelines to make as many uses compatible as possible. To ensure that these measures are effective, and to develop public confidence in the state's ability to manage for multiple use, they must be enforced. Examples of actions where fieldwork, monitoring and enforcement are likely to be needed include land sales, remote cabin permits, leases for commercial recreation facilities, materials sales, timber harvests, and mining permits and leases.

DNR will take appropriate action against unauthorized uses of state land. Priorities for such action will be determined by the availability of funding and the severity of the impact of the unauthorized use on significant settlement activities, public recreation, or other public uses of state land or on public access.

DNR puts a high priority on monitoring and enforcing compliance with stipulations on leases, permits, and sales and taking action against unauthorized activities in those situations where activities have a high probability of creating significant negative impacts to other important resources or uses. Field staffing and funding are currently inadequate to enforce the laws and guidelines on all 16 million acres of state land in the planning area. The department's ability to enforce will depend on its budget. The Department will continue to reflect these priorities for monitoring and enforcement of its budget requests. The plan recommends that additional funds be dedicated to enforcement activities to support implementation of the new and continuing land management programs in the Kuskokwim area.

Recommendations for Legislative Designation.

One area in the planning region is proposed for special legislative designation. The plan recommends that the legislature consider designating lands along the Holitna and Hoholitna rivers as a state Public Use Area. The Public Use Area would comprise approximately 850,000 acres. It would include the lands in subunit 15a and some adjacent portions of 15b and 15c that are rated A-2 ("special value habitat") in the Fish and Wildlife Element (Kuskokwim Area Plan - Fish and Wildlife Element, ADNR, May, 1987).

These lands contain the most productive moose habitat and salmon spawning streams in the Kuskokwim basin. They also support concentrations of brown bear, waterfowl, and furbearers. This area is nationally known for sport hunting and fishing, and is one of the most intensively used areas in southwest Alas-

ka for subsistence harvests. The timberlands along the Holitna and Hoholitna rivers are some of the most productive in the Kuskokwim basin. They are presently used for fuel, lumber, and logs for personal use, and have the potential for commercial harvesting.

Legislative designation would officially recognize the outstanding habitat and forestry values of this area, and grant much more certainty that these lands will be kept in public ownership and available for public use in perpetuity. Legislative designation can also serve as a basis for requesting funds for more active management of the lands and fish and wildlife populations in this area. The plan can only recommend that this area be established; the decision to establish a Public Use Area must be made by the legislature.

The intent for the Public Use Area is to manage the lands for multiple use, with emphasis on protecting fish and wildlife habitat, providing for human use of fish and wildlife resources, and promoting forest management and use. Other activities will be allowed whenever consistent with these purposes. These lands would not be available for sale or exchange, except for an exchange to resolve

land claims at Nogamut. (see description in subunit 15a management intent). The public use area will be managed by ADNR under a management plan prepared jointly with the Department of Fish and Game. Lands within the Public Use area will remain open to new mineral entry except for those streambeds identified for closures in subunits 15a, 15b, and 15c.

Recommendations for Additional Access

Maps of existing legal access were reviewed to determine where additional access is needed to ensure future use of valuable resources on state lands. Of particular concern are areas with moderate to high surface and subsurface values on state-owned and state-selected lands, and proposed disposals. In addition, protection of existing transportation routes between population centers is a goal of the plan. In general, no additional access is needed where there are existing or previously proposed 17(b) easements, state omnibus roads, navigable rivers, or trails across public lands. Additional access routes, are not listed if they would not meet BLM's requirements for 17(b) easements. Areas needing additional legal access are listed below.

There are a variety of ways additional legal access can be established. Techniques include proposing 17(b) easements, acquiring access, or relocating existing 17(b) easements. The best technique will vary from site to site and can be identified only through more detailed examination of individual sites. The list below identifies only the need for additional access, not the technique for providing it or the description of detailed routes.

1c. Munsatli Ridge - Sischu Mountains-

General Use - Low Resource Values - Legal access may be needed across T21S R26E K.R.M. just south of Stone Mountain if this overlapping Native and state selection is not conveyed to the state. The existing trail connects Telida to the Sulukna River drainage

which has moderate to high fish and wildlife values.

5b. Appel II - Primary use Settlement - If the southern portion of this subunit is conveyed to the state and is offered for settlement, the slough immediately south of the subunit may be the only form of legal access to the southern four sections. If the slough is not navigable, an alternate form of access may be necessary to the Kuskokwim River.

5d. Candle Hills - Primary use Resource Management - Road access to the northern edge of this subunit is uncertain without a survey of the Takotna - Sterling Landing Road. If this subunit is conveyed to the state, if a decision is made to offer this area for settlement, and if the surveyed road does not provide legal access to the subunit, access from the road will be needed. Access may also be necessary if minerals are to be developed. Winter access across the sloughs to the southeast of this subunit which access the navigable portion of the Kuskokwim River also is desirable.

5f. Selatna - Primary use Settlement - Access is available to this subunit along the navigable portions of the Selatna River even if the northern half of this subunit, which is an overlapping selection, is not conveyed to the state. However, in order to provide improved access to the southwestern portion of this proposed disposal, access may also be needed along the unnamed stream with its mouth near

the east end of Nunivak Bar (T28N R35W S.M. section 19).

10b. George River/ Horn Mountains - Primary uses Minerals and Wildlife Habitat - The Horn Mountains have been proposed as a state selection. If this land is conveyed to the state, access to the Kuskokwim River may be needed. Until the townships are surveyed, it is unclear whether the state land in T18N R50W S.M. section 31 is state owned and provides access to the river. If the corner of this township does not provide access, other potential routes to the Kuskokwim River are across Native-selected land in T19N R50W S.M. section 36 and T17N R51W S.M. sections 19 and 20.

15e. Sleetmute North - Primary use Settlement - This subunit is an overlapping state and Native selection. If the lands within this subunit are conveyed to the state, and if a disposal is scheduled, additional access may be necessary. This proposed disposal has a 17(b) easement which connects with the village of Sleetmute, but there is no legal access from the south or east. The corner of T19n R43W S.M. section 25 in this subunit is an overlapping state and Native selection and may be on the navigable portion of the Kuskokwim River. However, bluffs along the river may make it an impractical point of access if this section is conveyed to the state. Another potential access point is the corner of T19N

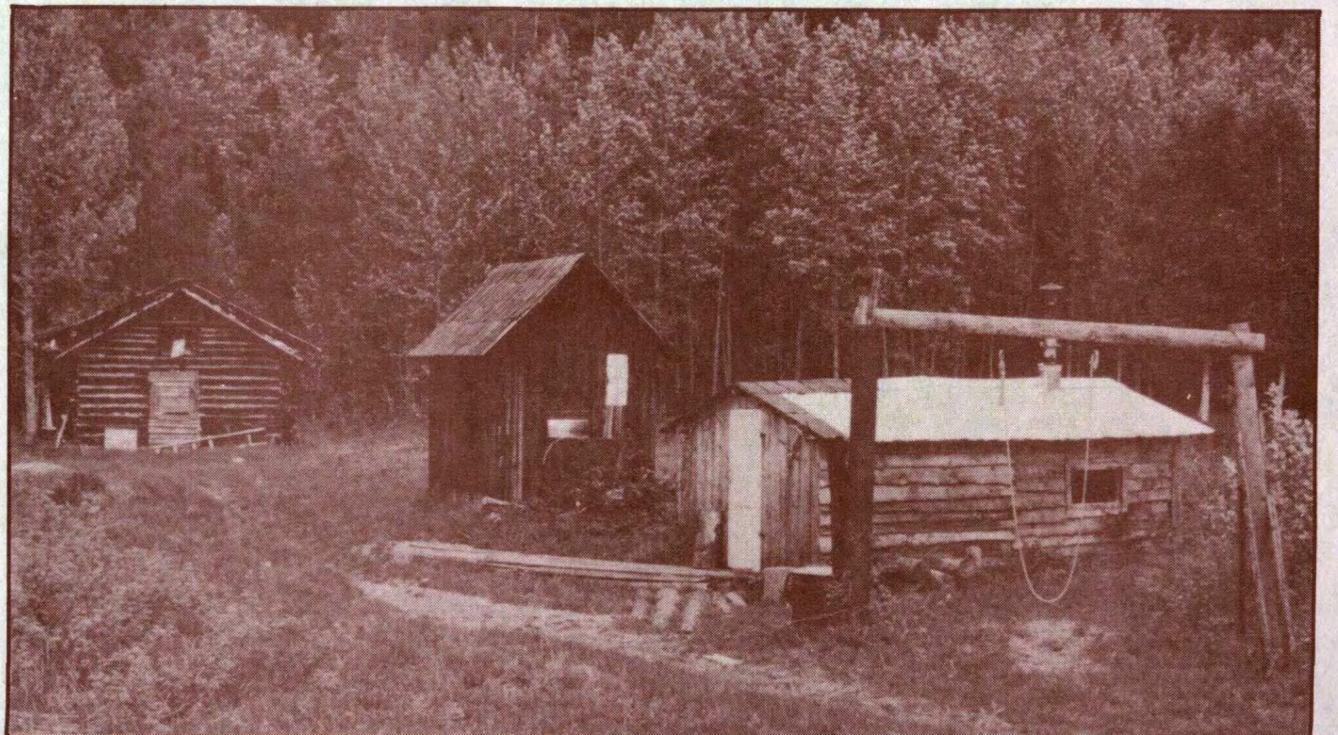
R43W S.M. section 13 in this subunit which is an overlapping state and Native selection and may include an old oxbow of the Kuskokwim River near the mouth of Inowak Creek. If the oxbow is in this section and if it is navigable, no other access may be needed. If subunit 15e is conveyed to the Native corporation, legal access may be needed along the cat trail that is used to reach mining claims on the south and east forks of the George River. There are also moderate wildlife habitat resource values along the George River.

16a. Kiokluk Mountains - Primary use Wildlife Habitat - Access may be needed through the Holokuk Canyon in T16N R51W S.M. and T15N R51W S.M. The upper Holokuk and Chineekluk rivers, and the Kiokluk, Chuilnuk, and Buckstock Mountains contain numerous mining claims and moderate to high wildlife habitat values. Additional legal access may not be necessary if the section of the Holokuk passing through the canyon is determined navigable at the time it is conveyed.

16c. Fuller Creek - Primary uses Settlement and Minerals - If this land is conveyed to the state and offered for sale, and if adjacent Native-selected lands in T19N R44W S.M. are conveyed to the Native corporation, an easement will be needed on the existing trail through the Native-selected land.

Appendices

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Appendix A

GLOSSARY

AAC: Alaska Administrative Code.

ADF&G: Alaska Department of Fish and Game.

AHRS: Alaska Heritage Resource Survey.

AS: Alaska Statute.

BLM: Bureau of Land Management, U.S. Department of the Interior.

Closed to Mineral Entry: Areas where the staking of new mineral claims is prohibited because mining has been determined to be in conflict with significant surface uses in the area. Valid existing mineral claims at the time of plan adoption are not affected by mineral closures.

Consultation: Under existing statutes, regulations, and procedures, the Department of Natural Resources (DNR) informs other groups of its intention to take a specific action and seek their advice or assistance. Consultation is not intended to be binding on a decision; it is a means of informing affected organizations and individuals about forthcoming decisions and getting the benefit of their expertise. DNR replies to parties offering advice or assistance by sending them the decision and the reasons for which the decision was made, or by notifying them that the decision and findings are available for request.

DEC: Alaska Department of Environmental Conservation.

DLWM: Division of Land and Water Management, Alaska Department of Natural Resources.

DNR: Alaska Department of Natural Resources.

DOA: Division of Agriculture, Alaska Department of Natural Resources.

DO&G: Division of Oil and Gas, Alaska Department of Natural Resources.

DOF: Division of Forestry, Alaska Department of Natural Resources.

DOPOR: Division of Parks and Outdoor Recreation, Alaska Department of Natural Resources.

DOT/PF: Department of Transportation and Public Facilities.

Easement: The right to use privately owned land for a particular purpose.

17(b) Easements: Easements across Native corporation land reserved through the Alaska Native Claims Settlement Act (ANCSA). Uses of the easements are limited to transportation purposes and other uses specified in the act and in conveyance documents.

Feasible: Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, technical, and safety factors.

Feasible and Prudent: Consistent with sound engineering practice and not causing environmental, social, or economic problems that outweigh the public benefit to be derived from compliance with the guideline.

Fish and Wildlife Habitat: The fish and wildlife habitat designations used in the Kus-

kokwim Area Plan resource inventory are described below. These were developed by the Alaska Department of Fish and Game (ADF&G) for the Fish and Wildlife Element.

A-1 Habitat lands. A discrete habitat needed to sustain a species within a region. These are highly sensitive fish and wildlife habitat and human use areas. A-1 Habitat lands include the only two areas in the Kuskokwim drainage (High-power Creek and Big River) where sheefish are known to spawn. ADF&G recommends wildlife be the primary use of these areas with possible limited seasonal entry of some uses.

A-2 Habitat lands. These are habitats with fish and wildlife and related human use values of regional or statewide significance. The potential for reducing these values due to impacts from other uses is considered high and, in most instances, unavoidable. These areas include the most intensive or highest quality public-use areas or the most productive fish and wildlife habitats. ADF&G recommends that wildlife be the primary use with only compatible (secondary use) activities allowed.

B-1 Habitat lands. These are habitats with fish and wildlife and related human-use values that are less sensitive to disturbance. Compatibility of the habitat with other public resources is reasonably high. ADF&G recommends wildlife be a co-primary use and the area be subject to relatively restrictive management.

B-2 Habitat lands. These are moderate value habitat or harvest areas. In this designation, ADF&G recommends that habitat be a co-primary use with some secondary uses allowed if compatible. Allowable secondary uses would include disposals of interest in state land if the disposal would not preclude fish and wildlife or that no feasible alternatives to

disposal or long term commitment to development of these valuable public lands are available to meet established economic, social, or environmental resource needs of the state.

C Habitat lands. ADF&G has determined that fish and wildlife habitat values are low and can be protected primarily through development of guidelines.

FM: Fairbanks Meridian.

Goal: A statement of basic intent or a general condition desired in the long term. Goals usually are not quantifiable and do not have specified dates for achievement.

Guideline: A specific course of action that must be followed when a resource manager permits, leases, or otherwise authorizes use of state lands. Some guidelines state the intent that must be followed and allow flexibility in achieving it. Guidelines also range from giving general guidance for decision making or identifying factors that need to be considered, to setting detailed standards for on-the-ground decisions.

High: A rating given a geographical unit within the study area that indicates the relative value of a resource is high compared with other units in the study area.

INHTS: Iditarod National Historic Trail System.

KAP: Kuskokwim Area Plan.

KRM: Kateel River Meridian.

LADS: Land Availability Determination System; a three year process that precedes a land disposal.

Land Offerings: Transfer of state land to private ownership as authorized by AS 38.04.010, including fee-simple sale, homesteading and sale of agricultural rights; they do not include leases, land-use permits, water rights, rights-of-way, material sales, or other disposals of interest in lands or waters.

Land Sales: Used with same meaning as 'Land Offerings' as defined above.

Leasable Mineral: leasable minerals include deposits of coal, sulfur phosphates, oil shale, sodium, potassium, oil and gas.

Leasehold Location: See "mineral lease".

Legislative Designation: An action by the state that sets aside a specific area for special management actions and ensures the area is kept in public ownership.

Locatable Mineral: Locatable minerals include both metallic (gold, silver, lead, etc.) and nonmetallic (fluorspar, asbestos, mica, etc.) minerals.

Low: A rating given a geographical unit within the study area that indicates the relative value of a resource is low compared with other units in the study area.

Management Intent Statement: The statements that define the department's near- and long-term management objectives and the methods to achieve those objectives.

Mineral Lease: An exclusive property right to develop and mine deposits of "locatable minerals" (see definition for locatable minerals). Rights to locatable minerals on uplands owned by the State of Alaska are obtained by making a mineral discovery, staking the boundaries of the location, and recording a certificate of location. In most areas, such a location is a "mining claim," which gives the owner an immediate property right to mine deposits. However, in areas of the plan that have been restricted to leasing, the location is a "leasehold location," not a mine claim. The leasehold location must be converted to an upland mining lease before mining begins. In unrestricted areas, locators may convert their mining claims to leases if they wish.

Mining Location, Mining Claim, and Leasehold Location: The property right to possess and extract all locatable minerals within the boundaries of the location. This right is required by discovery, location and filing in accordance with the legal require-

ments of the Alaska Statutes and the Alaska Administration Code which apply to locatable minerals. The term "mining location" also applies to a prospecting site which does not require a discovery, is acquired by location and filing, and remains in effect for one year (also see "leasehold location").

MLUP: Miscellaneous land use permit issued by the Alaska Department of Natural Resources.

Moderate: A rating given a geographical unit within the study area that indicates the relative value of a resource is moderate compared with other units in the study area.

Native Owned: Land that is patented or will be patented to a Native corporation.

Native Selected: Land that is selected from the Federal government by a Native corporation but not yet patented.

Navigable: Used in its legal context, this refers to lakes and rivers that meet federal and state criteria for navigability. Under the Equal Footing Doctrine, the Alaska Statehood Act, and the Submerged Lands Act, the state owns land under navigable waterbodies.

NHTS: Abbreviation for Iditarod National Historic Trail System.

NPS: National Park Service, U.S. Department of the Interior.

Policy: An intended course of action or a principle for guiding actions. In this plan, DNR policies for land and resource management given in this plan include goals, management intent statements, management guidelines, land use designations, implementation plans and procedures, and various other statements of DNR's intentions.

Primary Use: A designated, allowed use of major importance in a particular management unit. Resources in the unit will be managed to encourage, develop, or protect this use. Where a management unit has two or more designated primary uses, the management in-

tent statement and guidelines for the unit, together with existing regulations and procedures, will direct how resources are managed to avoid or minimize conflict between these primary uses.

Prohibited Use: A use not allowed in a management unit because of conflicts with management intent, designated primary or secondary uses, or management guidelines. Uses not specifically prohibited nor designated as primary or secondary uses in a management unit are allowed if compatible with primary and secondary uses, the management intent statements for the unit, and the plan's guidelines.

PUA: Public Use Area - legislatively designated area.

Remote Cabin: A cabin constructed under a permit issued through the Remote Cabin Permit program authorized in AS 38.04.079 and further described in 11 AAC 67.700-.790.

RMP: Range Management Plan.

RS 2477: An historic federal statute, repealed in 1976, that granted transportation rights-of-way on unappropriated and unreserved federal land. These rights-of-way are established by public use or construction.

SCS: Soil Conservation Service, U.S. Department of Agriculture.

Secondary Use: A designated, allowed use considered important, but intended to receive less emphasis than a primary use because it has less potential than a primary use or contributes less to achieving the management intent of the unit than a primary use, or occurs only on limited sites. In those site-specific situations where a secondary use has a higher value than a primary use, the secondary use may take precedence over the primary use. Management for a secondary use will recognize and protect primary uses through application of guidelines, regulations, and procedures. However, if a secondary use cannot occur without detrimentally affecting a primary use in the management unit as a whole, the secondary use will not be allowed.

Settlement: Used with same meaning as "land offering" as defined earlier.

Shall: Requires a course of action or a set of conditions to be achieved. A guideline modified by the word 'shall' must be followed by resource managers or users. If such a guideline is not complied with, a written decision justifying the noncompliance is required.

Should: States intent for a course of action or set of conditions to be achieved. A guideline modified by the word 'should' states the plan's intent and allows a resource manager to use discretion in deciding the specific means for best achieving the intent or whether particular circumstances justify deviation from the intended action or set of conditions. A guideline may include criteria for deciding if such a deviation is justified.

SM: Seward Meridian.

State Omnibus Road: Road conveyed to the state by the Secretary of Commerce under the 1959 Alaska Omnibus Act. Six state omnibus roads are located in the Kuskokwim planning area; they have 100-foot or 200-foot easements.

State-Owned Land: Land that is patented or will be patented to the state.

State Selected Land: Federal-owned land that is selected by the State of Alaska, but not yet patented.

Trapping (or Trapper) Cabin: A cabin constructed under a Trapping Cabin Construction Permit as authorized and described in AS 38.95.080 and 11 AAC 94.

Unknown: Resource data does not exist; therefore, resource values are unknown.

Unsuitable: When the land is physically incapable of supporting a particular type of resource development (usually because that resource doesn't exist), it is rated unsuitable.

Use Having or Causing Significant Impact, Effect, Conflict or Loss: A use, or activity as-

sociated with that use, which proximately contributes to a material change or alteration in the natural or social characteristics of a part of state lands and in which;

- a) the use, or activity associated with it, would have a net adverse effect on the quality of the resources on state lands;
- b) the use, or activity associated with it, would limit the range of alternative uses of the resource on state lands; or
- c) the use would, of itself, constitute a tolerable change or alteration of the resources on state lands but which, cumulatively, would have an adverse effect.

Traditional Use: A use that has occurred and continues to occur either regularly or periodically.

USDA: U.S. Department of Agriculture.

USF&WS: Fish and Wildlife Service, U.S. Department of the Interior.

Wetlands: For purposes of inventory and regulation of wetlands, DNR will use the definition adopted by the State of Alaska under the regulations of the Coastal Management Program (6 AAC 80.900(19)).

Will: Same as 'shall' (above).

Appendix B

CONTACT LIST FOR PUBLIC NOTICES

Official notices for the types of pending actions on state lands listed in Fish and Wildlife Guideline I, "Public Notice to Help Avoid Conflicts with Traditional Uses of Fish and Game", p. 2-11 will be sent to communities likely to be affected by the proposed action. Listed below are the names and addresses of community governments or regional organizations that will receive official notices. Included are village and city councils, regional

Native corporations, regional non-profit Native corporations, and Native village corporations. The Department of Fish and Game will notify the appropriate Fish and Game Advisory Committees through the Division of Boards. There are several others that are not covered by guideline I that can provide additional local information on pending actions. These organizations are listed in brackets [] in the appropriate management units.

Management Unit

Organization and Address

1 -- North Fork

Doyon Ltd., 202 1st Avenue, Fairbanks, 99701

MTNT, Ltd., McGrath, AK 99627

Tanana Chiefs Conference, McGrath, AK 99627

[Lake Minchumina Homeowners' Assn., Lake Minchumina, AK 99757]

[Lake Minchumina Traditional Council, Lake Minchumina, AK 99757]

2 -- East Fork

Nikolai City Council, Nikolai, AK 99691

Doyon Ltd., 202 1st Avenue, Fairbanks, 99701

MTNT, Ltd., McGrath, AK 99627

Tanana Chiefs Conference, McGrath, AK 99627

[Lake Minchumina Homeowners' Assn., Lake Minchumina, AK 99757]

[Lake Minchumina Traditional Council, Lake Minchumina, AK 99757]

3 -- Tonzona

No communities

- 4 -- Big R.-South Fork** McGrath City Council, P.O. Box 57, McGrath, AK 99627
 Nikolai City Council, Nikolai, AK 99691
 Doyon Ltd., 202 1st Avenue, Fairbanks, 99701
 MTNT, Ltd., McGrath, AK 99627
 Tanana Chiefs Conference, McGrath, AK 99627
- 5 -- Kuskokwim River** McGrath City Council, P.O. Box 57, McGrath, AK 99627
 Doyon Ltd., 202 1st Avenue, Fairbanks, 99701
 MTNT, Ltd., McGrath, AK 99627
 Tanana Chiefs Conference, McGrath, AK 99627
 Kuskokwim Native Association, Natural Resources Program,
 P.O. Box 106, Aniak, AK 99557
 Cook Inlet Region, Inc., P.O. Box 93330, Anchorage, AK
 99509
- 6 -- Nixon Fork** McGrath City Council, P.O. Box 57, McGrath, AK 99627
 Doyon Ltd., 202 1st Avenue, Fairbanks, 99701
 MTNT, Ltd., McGrath, AK 99627
 Tanana Chiefs Conference, McGrath, AK 99627
- 7 -- Innoko River** Doyon Ltd., 202 1st Avenue, Fairbanks, 99701
 MTNT, Ltd., McGrath, AK 99627
 McGrath City Council, P.O. Box 57, McGrath, AK 99627
 Tanana Chiefs Conference, McGrath, AK 99627
 Holy Cross City Council, Holy Cross, AK 99602
 Shageluk City Council, Shageluk, AK 99665
 [Takotna Community Assn., Takotna, AK 99675]

8 -- Dishna-Iditarod

McGrath City Council, P.O. Box 57, McGrath, AK 99627

Doyon Ltd., 202 1st Avenue, Fairbanks, 99701

MTNT, Ltd., McGrath, AK 99627

Tanana Chiefs Conference, McGrath, AK 99627

Shageluk City Council, Shageluk, AK 99665

Holy Cross City Council, Holy Cross, AK 99602

[Takotna Community Assn., Takotna, AK 99675]

[Postmaster, Flat, AK 99584]

9 -- Takotna River

McGrath City Council, P.O. Box 57, McGrath, AK 99627

Doyon Ltd., 202 1st Avenue, Fairbanks, 99701

MTNT, Ltd., McGrath, AK 99627

Tanana Chiefs Conference, McGrath, AK 99627

[Takotna Community Assn., Takotna, AK 99675]

10 -- George River

Aniak City Council, Mayor, P.O. Box 43, Aniak, AK 99557

Chuathbaluk City Council, Mayor, Chuathbaluk, AK 99557

Crooked Creek Village Council, President, Crooked Creek,
AK 99575

Red Devil City Council, Mayor, Red Devil, AK 99656

Kuskokwim Native Assn., Natural Resources Program, P.O.
Box 106, Aniak, AK 99557

Kuskokwim Corporation, Land Department, 409 D Street,
Anchorage, AK 99501

Calista Corporation, Land Manager, 516 Denali Street,
Anchorage, AK 99501

Holy Cross City Council, Holy Cross, AK 99602

[Postmaster, Flat, AK 99584]

- 11 -- **Swift River** Lime Village Council, President, Lime Village, AK 99627
 Stony River Village Council, President, Stony River, AK 99557
 Kuskokwim Native Assn., Natural Resources Program, P.O. Box 106, Aniak, AK 99557
 Kuskokwim Corporation, Land Department, 409 D Street, Anchorage, AK 99501
 Calista Corporation, Land Manager, 516 Denali Street, Anchorage, AK 99501
- 12 -- **South Alaska Range** No Communities
- 13 -- **North Alaska Range** No Communities
- Cook Inlet Region, Inc., P.O. Box 93330, Anchorage, AK 99509
- 14 -- **Stony River** Stony River Village Council, President, Stony River, AK 99557
 Kuskokwim Native Assn., Natural Resources Program, P.O. Box 106, Aniak, AK 99557
 Kuskokwim Corporation, Land Department, 409 D Street, Anchorage, AK 99501
 Calista Corporation, Land Manager, 516 Denali Street, Anchorage, AK 99501
- 15 -- **Holitna River** Sleetmute Village Council, President, Sleetmute, AK 99668
 Red Devil City Council, President, Red Devil, AK 99656
 Crooked Creek Village Council, Mayor, Crooked Creek, AK 99575
 Kuskokwim Native Assn., Natural Resources Program, P.O. Box 106, Aniak, AK 99557
 Kuskokwim Corporation, Land Department, 409 D Street, Anchorage, AK 99501
 Calista Corporation, Land Manager, 516 Denali Street, Anchorage, AK 99501

- 16 -- Holokuk-Oskawalik** Red Devil City Council, President, Red Devil, AK 99656
 Crooked Creek Village Council, Mayor, Crooked Creek, AK 99575
 Chuathbaluk City Council, Mayor, Chuathbaluk, AK 99557
 Aniak City Council, Mayor, P.O. Box 43, Aniak, AK 99557
 Kuskokwim Native Assn., Natural Resources Program, P.O. Box 106, Aniak, AK 99557
 Kuskokwim Corporation, Land Department, 409 D Street, Anchorage, AK 99501
 Calista Corporation, Land Manager, 516 Denali Street, Anchorage, AK 99501
- 17 -- Aniak River** Aniak City Council, Mayor, P.O. Box 43, Aniak, AK 99557
 Chuathbaluk City Council, Mayor, Chuathbaluk, AK 99557
 Kuskokwim Native Assn., Natural Resources Program, P.O. Box 106, Aniak, AK 99557
 Kuskokwim Corporation, Land Department, 409 D Street, Anchorage, AK 99501
 Calista Corporation, Land Manager, 516 Denali Street, Anchorage, AK 99501
- 18 -- Birch Tree Crossing** Aniak City Council, Mayor, P.O. Box 43, Aniak, AK 99557
 City of Lower Kalskag, Mayor, General Delivery, Lower Kalskag, AK 99626
 Upper Kalskag, Mayor, General Delivery, Upper Kalskag, 99607
 Kuskokwim Native Assn., Natural Resources Program, P.O. Box 106, Aniak, AK 99557
 Kuskokwim Corporation, Land Department, 409 D Street, Anchorage, AK 99501
 Calista Corporation, Land Manager, 516 Denali Street, Anchorage, AK 99501

Appendix C

TRAILS AND TRANSPORTATION

The four trail maps in this appendix show the general location of the most important trails in the planning area, including 17(b) easements and state Omnibus roads. These four maps differ from those in Chapter 3 in that they include the Iditarod National Historic Trail System (INHTS) and Iditarod Race trail. These trail systems are only located on the Ophir, Medfra, McGrath, and Iditarod quadrangles. For trail locations in other parts of the planning area, see the management unit maps in Chapter 3. The trails depicted on these maps are used primarily for access to hunting, fishing, mining, and recreation areas or transportation between villages. They vary from winter overland routes for sled dogs and snow machines to more established motor vehicle routes such as the Ophir - Sterling Landing Road. Maps in this appendix do not include less heavily-used local trails such as traplines and seismic lines which traverse the planning area. Unless there is a 17(b) easement or state Omnibus road, trails on private lands are not shown.

Public easements shown on these maps which cross Native corporation lands were reserved under Section 17(b) of the Alaska Native Claims Settlement Act (ANCSA). These easements were set aside to ensure access to public land. State Omnibus roads are routes that were conveyed to the state by the Secretary of Commerce under the 1959 Alaska Omnibus Act.

In Chapter 4, "Recommendations for Additional Access," additional access needs are identified. At some time in the future the state may identify additional access needs over private lands including, but not limited

to, acquiring easements, relocating existing easements, or asserting RS 2477 rights. Publicly used trails across state, private, and federal lands are subject to valid existing rights, including rights-of-way established under Revised Statute (RS) 2477. RS 2477 (formally codified as 43 USC 932; enacted in 1866) provides that, "The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted." The statute was repealed by Public Law 94-579, the Federal Land Policy and Management Act, as of October 21, 1976, subject to valid existing claims. The validity of these trails must be determined on a case-by-case basis.

Most off road activity on state land does not need a permit. By statute and regulation, off-road use of vehicles such as jeeps, snow machines, and small all-terrain vehicles may require a permit to cross anadromous fish streams. Four-wheel drive vehicles and all-terrain vehicles do not require permits. Use of larger vehicles will require a permit on state land.

In some cases the trails depicted in this appendix may cross parcels of private land that are too small to show at this scale. These maps are not appropriate for locating and using trails on the ground. Reliance on them for travel could result in trespass on private property. Additional material regarding potential rights-of-way and easements may be obtained through the Alaska Department of Transportation and Public Facilities, the Alaska Department of Natural Resources, or BLM.

The following additional sources of trails information in this area can be consulted:

1. Alaska Department of Natural Resources, Division of Land & Water Management, Resource Allocation Section: Kuskokwim Area Plan Trails and Transportation Element, 1988.

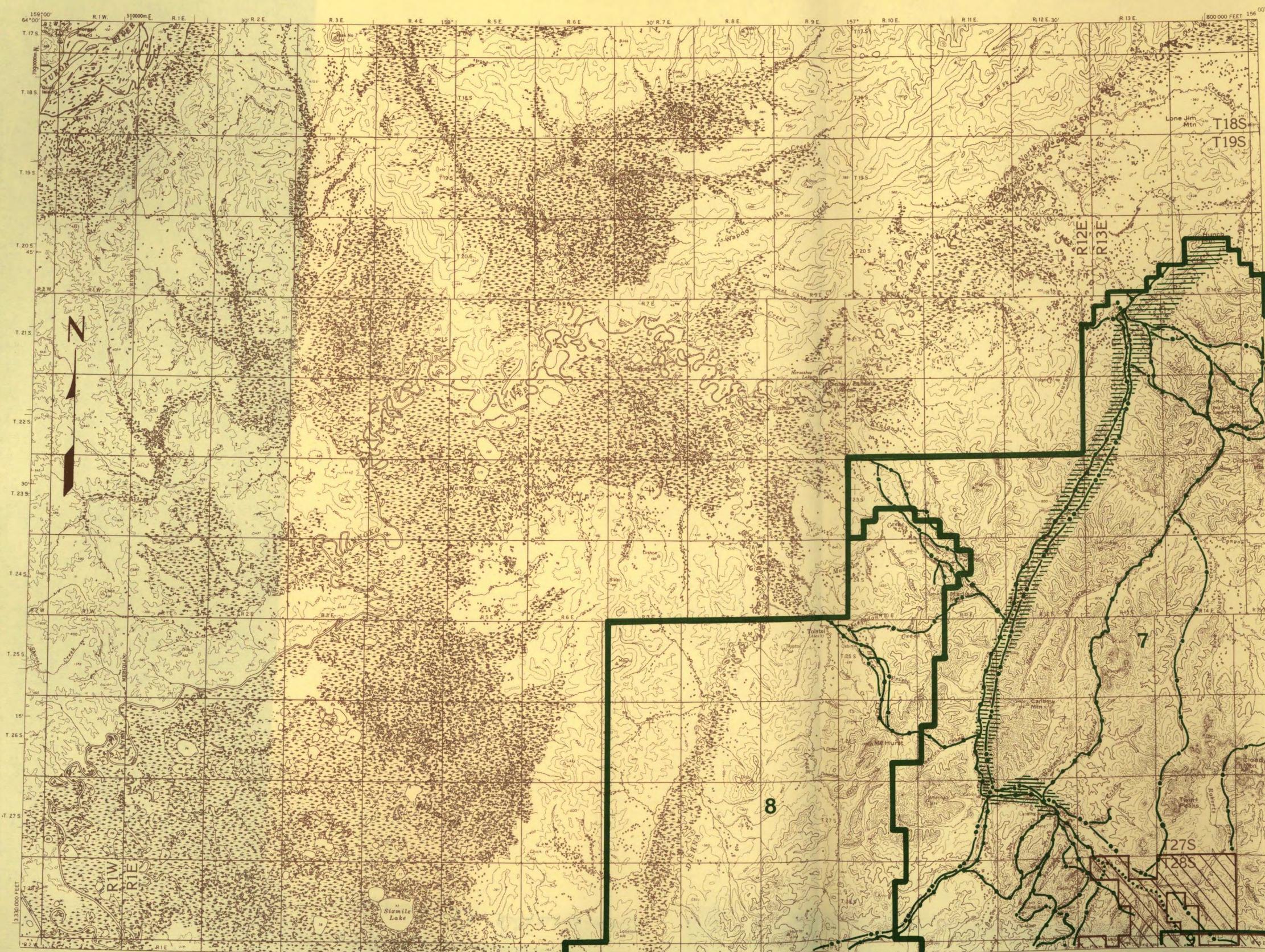
2. Alaska Department of Natural Resources, Division of Land and Water Management, Resource Allocation Section: Kuskokwim Area Plan - Trails and Transportation Working Maps, 1988.

3. Alaska Department of Transportation and Public Facilities: Inventory of Trails, 1974.

4. Bureau of Land Management. The Iditarod National Historic Trail, Seward to Nome Route -- A Comprehensive Management Plan, 1986.

Trails & Transportation

U.S.G.S. Quad: Ophir



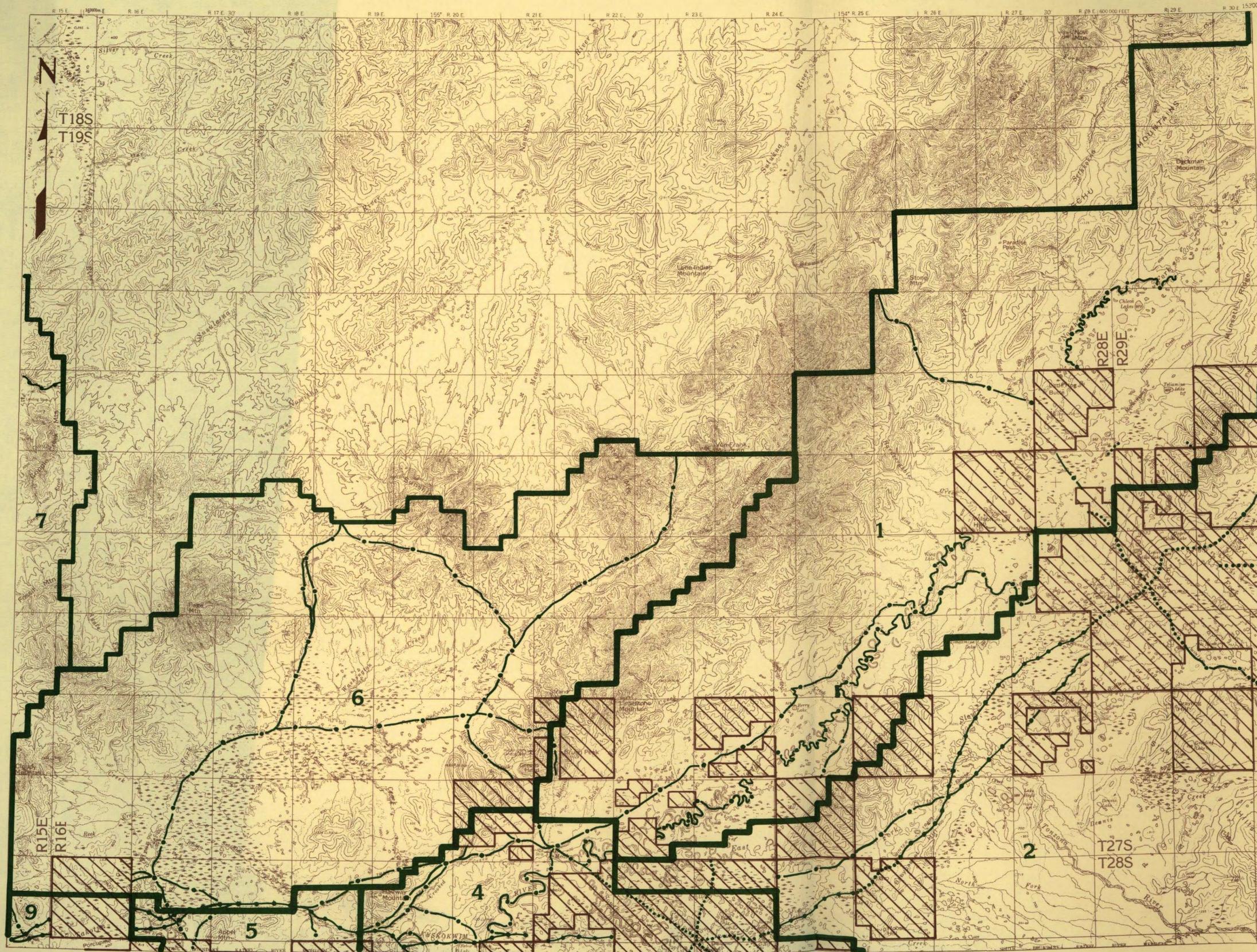
-  Public Owned Land
-  Native Owned Land
-  Management Unit Boundary
-  Trails on public lands
-  Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads
-  Iditarod Race Trail
-  Iditarod National Historic
Trail System
-  Possible road corridor
between Ophir & Poorman

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Map Scale:
1:500,000

Trails & Transportation

U.S.G.S. Quad: Medfra



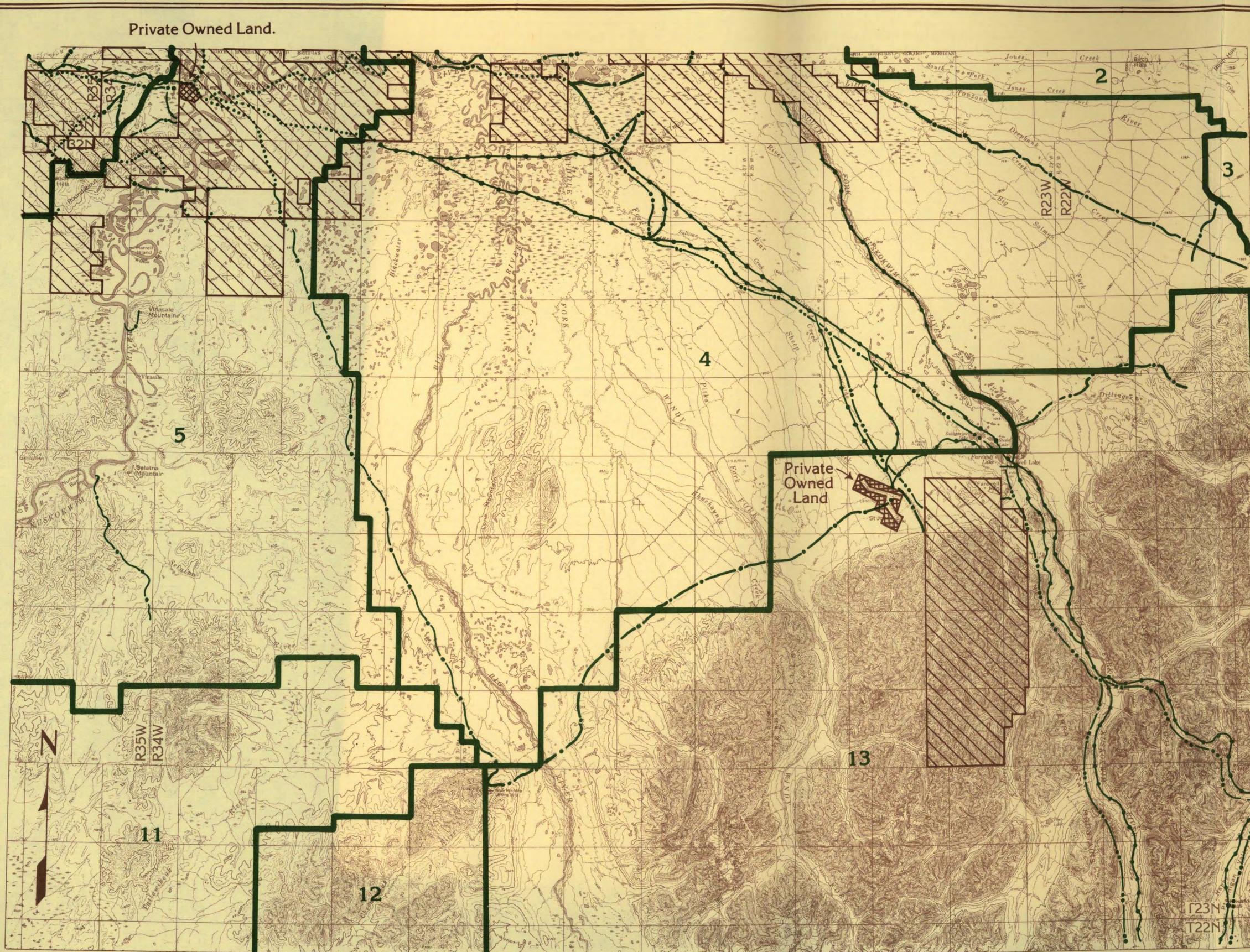
-  Public Owned Land
-  Native Owned Land
-  Management Unit Boundary
-  Trails on public lands
-  Access easements to public land
ANCSA 17 (b) easements
& State Omnibus roads
-  Iditarod Race Trail
-  Iditarod National Historic
Trail System

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Map Scale:
1:500,000

Trails & Transportation

U.S.G.S. Quad: McGrath



-  Public Owned Land
-  Native Owned Land
-  Management Unit Boundary
-  Trails on public lands
-  Access easements to public land, ANCSA 17 (b) easements & State Omnibus roads
-  Iditarod Race Trail
-  Iditarod National Historic Trail System

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Map Scale:
1:500,000

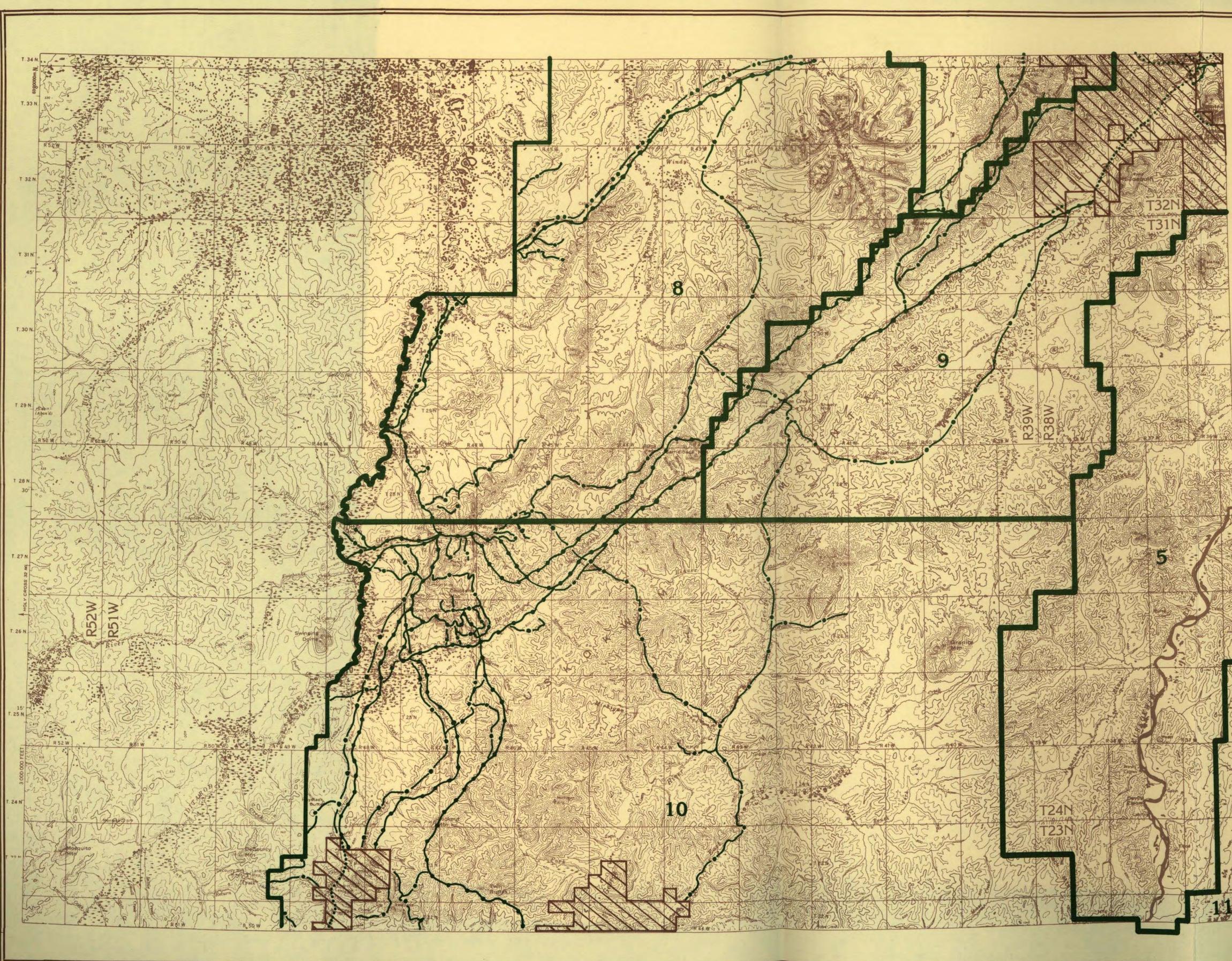
Trails & Transportation

U.S.G.S. Quad: Iditarod

-  Public Owned Land
-  Native Owned Land
-  Management Unit Boundary
-  Trails on public lands
-  Access easements to public land, ANCSA 17 (b) easements & State Omnibus roads
-  Iditarod Race Trail
-  Iditarod National Historic Trail System

Map shows approximate location of easements to state land and trails across state land. Portions of trails may cross private lands.

Map Scale:
1:500,000



Appendix D

PUBLICATIONS RELATED TO THE AREA PLAN

Planning Reports and Brochures

Kuskokwim Area Plan (introductory brochure with map). Alaska Department of Natural Resources. September, 1985.

Kuskokwim Area Plan - Summary of Public Comments on Issues (includes Appendix C, List of Public Comments, under separate cover). Alaska Department of Natural Resources. December, 1985.

Kuskokwim Area Plan - Draft List of Issues. Alaska Department of Natural Resources. December, 1985.

Kuskokwim Area Plan - Land Use Alternatives for State Lands. Alaska Department of Natural Resources. March, 1987

Kuskokwim Area Plan - Summary of Public Comments on Alternatives. Alaska Department of Natural Resources. May, 1987.

Kuskokwim Area Plan - List of Public Comments on Alternatives. Alaska Department of Natural Resources. May, 1987

Kuskokwim Area Plan - Responses to Public Comments on the Draft Plan. ADNR. February 1988

Kuskokwim Area Plan - List of Changes to Draft Plan. February 1988.

Background Data and Element Reports

A History of Selected Trails and Access Routes on State Lands in the Kuskokwim Region. Alaska Department of Natural Resources. June, 1986.

Coal, Peat, and Geothermal Potential of the Kuskokwim Area Plan. Alaska Department of Natural Resources. Public data file 86-88. June, 1986.

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Kuskokwim Area Plan - Trails and Transportation Element. Alaska Department of Natural Resources. May, 1988.

Kuskokwim Area Plan - Water Resources Element. Alaska Department of Natural Resources. September, 1986.

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Narrative to Accompany Preliminary Surficial Materials Map of the McGrath D-6 quadrangle. Alaska Department of Natural Resources. June, 1986.

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Appendix E

CRITERIA FOR RESOURCE INFORMATION SUMMARY RATINGS

Fourteen resource reports called "elements" were developed in preparation for developing Kuskokwim Area Plan alternatives (see Appendix D - Background Data and Element Reports). Elements evaluated the distribution, quantity, and quality of each of the 14 major resources in the planning area. Areas were then given suitability ratings for the resources they contained.

Suitability ratings were developed to identify areas with the physical ability to support a particular use (e.g., land that has certain slopes, vegetation, etc., that would be suitable for settlement). These suitability ratings are outlined by subunit in the resource information summary charts in Chapter 3.

A list of the major criteria for suitability ratings for each resource follows.

AGRICULTURE

The lack of detailed soil information makes it impossible to predict potential agricultural sites with precision. The agriculture potential map that was produced for this plan only provides a guide to areas that merit further research on agricultural potential, and areas where agricultural potential should be considered when land use decisions are made. Soils information was based on the 1:1,000,000 USDA Exploratory Soil Survey. The information in this survey is quite general. USDA conducted fieldwork in 1985 in some parts of the planning area under 1,000 feet elevation in order to verify the information in the initial exploratory soil survey and to identify areas with farmland potential. This potential was based on slope, soil depth, soil texture, and drainage. Though climate was

not taken into account in the ratings because weather information for the region is sparse, it should be noted that the recent inclusion of climatic data into soil survey interpretations has resulted in lowering the agricultural ratings of many soils in southcentral Alaska. Overall suitability ratings for access are based on the soils ratings and proximity to access. Lands within 2 miles of an airstrip, a road, or barge traffic on the Kuskokwim river are considered to have high potential for agricultural development. Lands within 2 miles of a river routinely navigable in summer by smaller boats, OR lands 2-6 miles from an airstrip, a road or Kuskokwim barge traffic are rated moderate. Lands further from access are rated low.

Soil Suitability Ratings			Overall Ratings for Agriculture Suitability		
Rating	Soils	Access	Rating	Soils	Access
High	>40% of area suitable for crops	≤ 2 mi. from road, airstrip, or barge route	High	Moderate	or Low
			Moderate	High or	Moderate
Moderate	>40% of area suitable for crops	≤ 6 mi. from road, airstrip, or barge route	Low	Moderate	Low
				Low	High, Moderate, or Low
Low	20-39% of area suitable for crops	≤ 6 mi. from road, airstrip, or barge route			
	<20% of area suitable for crops	> 6 mi. from road, airstrip, or barge route			
		all areas			

CULTURAL AND HISTORIC

The staff in the State Office of History and Archeology in the Division of Parks and Outdoor Recreation reviewed the 1:250,000 Alaska Heritage Resources Survey (AHRS) maps to determine concentrations of known sites within the planning area. They also produced a cultural resources report for the region which was used to identify areas with potential for containing suspected but undocumented sites. Areas were ranked using the following criteria:

- Areas with high concentrations of known cultural values.
- Areas with some known cultural values and high potential to contain cultural values.
- Areas with unknown potential for cultural values.

ENERGY

Coal. resources were assessed by compiling a comprehensive data stack which included the following categories of information:

- Presence or absence of nonmarine rocks of Cretaceous or Tertiary age and their aerial extent.
- Coal occurrences and prospects including density, size, thickness, etc.
- Reserves/resources (incremental scoring based on the basis of volume, tonnage, etc)
- Production (if any)
- Coal quality
- Potential for mine extraction; i.e., overburden, coal ration, open cast vs. underground
- Industry interest nominations

Scores for these seven criteria were added to obtain a score for each township in the planning area. Five distinct populations of rankings appeared which can be summarized as follows:

Very Low - Geologic environment considered unfavorable; nonmarine sedimentary rocks of Cretaceous or Tertiary age are not known or are deeply buried by younger sedimentary strata. No coal occurrences are known.

Low - Geologic environment may be favorable but existence of significant coal prospects unknown. Cretaceous-Tertiary nonmarine rocks do exist within township and define a portion of a known coal bearing province. Some thin coal seams may exist but physical characteristics may be unknown or unfavorable.

Moderate - Coal bearing nonmarine sedimentary strata underlie major parts of

the township and significant coal occurrences or prospects may be present. Published coal analyses may be available which classify and rank coal according to standard ASTM/Btu classifications. However, not enough known to classify occurrences or prospects as resources or reserves.

High - Geologic environment always favorable; i.e., most if not all of township is underlain by significant coal bearing basin. Significant coal deposits recognized and measured physical characteristics show favorable Btu/ASTM classifications. In study area, they are mainly subbituminous to bituminous rank. Some resources are known and coal thicknesses are significant.

Very High - Contains virtually all favorable characteristics of coal potential including significant coal basin, significant occurrences and deposits, favorable physical characteristics, and significant resources. Subsurface and surface data allow for some reserve estimates.

Peat. A reconnaissance peat study was undertaken by DGGs in an initial attempt to identify potential peat resources immediately adjacent to McGrath. More systematic sampling as well as engineering, and feasibility studies will be required to determine whether or not such a resource can be economically utilized. Portions of subunits 5j and 9b west of McGrath were sampled and mapped by DGGs for peat and show some potential for the production and use of this resource for energy.

Geothermal. Only two known and one suspected hot springs are located in the planning area. Because the potential for development of these springs is low, they are not listed in the Chapter 3 resource information summary charts.

FISH AND WILDLIFE HABITAT

The Habitat Division in ADF&G determined the suitability of the land as wildlife habitat using assigned values (A1, A2, B1, B2, and C) based on the estimates of habitat quality and human use. The species distribution and life history of key species (e.g. moose, anadromous fish, caribou, bear) were first mapped using important life functions (e.g. spawning, winter concentrations, calving).

The factors were then aggregated putting the highest values on biological criticality and species diversity. Subsistence information from the villages within the planning area were then added to habitat values to raise rankings of areas that receive a high level of use (Also see Appendix A: "Fish and Wildlife Habitat"). The definitions of these criteria are as follows:

<u>Suitability Category</u>	<u>Definition</u>
A-1	A discrete habitat area needed to sustain a species within a region
A-2	Special value habitat and/or harvest area
B-1	High value habitat and/or harvest area
B-2	Moderate value habitat and/or harvest area
C	Low value habitat and/or harvest area

FORESTRY

The overall ratings for suitability for timber management are a combination of vegetation ratings with ratings for access and proximity to communities.

<u>Vegetation Type</u>	<u>Rating</u>
Closed White Spruce	High
Closed Deciduous Forest	High
Open White Spruce	Moderate
Open Deciduous Forest	Moderate
Black Spruce	Low
Nonforest Types	Incapable

The criteria for the overall forestry ratings are as follows:

<u>Vegetation Type</u>	<u><6 Mi. of Pop. Center</u>	<u><6 Mi. from Road or River</u>	<u><2 Mi. from Road or River</u>	<u>2-6 Mi. from Road or River</u>
Dense White Spruce	High	High	Moderate	Low
Dense Deciduous Forest	High	High	Moderate	Low
Open White Spruce	High	Moderate	Low	Low
Open Deciduous Forest	High	Moderate	Low	Low
Black Spruce	Very Low	Very Low	Unsuited	Unsuited
Nonforest Types	Unsuited	Unsuited	Unsuited	Unsuited

GRAZING

A map of areas with potential for grazing potential was developed to provide a rough idea of areas that could be used for grazing. This map was based on interpretations of soil characteristics and vegetation types in the USDA Exploratory Soil Survey of Alaska. Associations in which more than 60 percent of the area was judged to have good or fair

suitability for reindeer grazing were rated high potential. Areas with more than 31-60 percent good or fair suitability were rated moderate, and areas with 1-30 percent good or fair suitability were rated low. Rocky, mountainous terrain with little or no vegetative cover were rated unsuited for grazing.

MATERIALS

Criteria for rating materials were based on two factors: sources of suitable gravel or riprap had been identified by DGGs and DOT/PF, and materials were located on or near the Kuskokwim River where villages use this resource or it can be barged to population centers on the delta. Ratings of high suitability were restricted to areas where the presence and quality of the resource had been

documented: along the Kuskokwim River between Stony River and Lower Kalskag and in the vicinity of McGrath. The types of gravel sources that were given high ratings included active alluvium that is found on river bars, stream beds and alluvial fans; placer wastes; and some types of bedrock. Sources of riprap that were given high ratings were five sites near McGrath that had been identified by preliminary DGGs studies.

MINERALS

Scores for nine major criteria were added to obtain a raw score for each township in the region. The raw scores were statistically analyzed and a histogram showing percentile rankings for all the townships was developed. Much of the scoring method was dependent on the quality of the data used. The Kuskokwim River region is one of the most remote regions in the state and large areas, particularly in the southern portion of the planning area, lack good geologic data bases necessary for accurate mineral potential determinations. Hence some townships ranked low may simply reflect a basic lack of information and could still yield minerals in the future. An area receiving a high mineral rank does not necessarily predict mineral development. Other factors to be considered include access, low commodity prices, availability of energy and labor, and climatic and terrain factors. The nine major criteria used include:

- Geology
- Mineral terranes
- Mineral indicators
- Mineral occurrences
- Reserves
- Production
- Claim density
- Industry interest
- Exploration expenditures

Five distinct populations of rankings appeared which can be summarized as follows:

Very Low - Geologic environment generally unfavorable; little or no bedrock is exposed. Low potential for geologic units to host either lode or placer mineral deposits. Generally little or no mining activity, poor metallogenic production or reserves. Rank in the 42nd percentile or lower of total township population.

Low - Geologic environment may be favorable, but generally poor or moderate;

few or no known mineral occurrences or geochemical anomalies. Geophysical anomalies may exist, but bedrock indicators for such anomalies generally unfavorable. Seldom occurs in mineral terrane. No production or reserves of minerals. Rank in 43-72 percentile or lower of total township population.

Moderate - Geochemical environment generally favorable; low claim density, geochemical or geophysical anomalies can exist and generally contain one or more mineral occurrences. Townships may be on trend with group of townships defining mining district or mineral belt. Can obtain modest mineral production or reserves. Rank in 73-92 percentile of total township population.

High - Geologic environment very favorable and usually includes mineral terranes that contains some or all of the following: geochemical anomalies, geophysical target areas, significant mineral occurrences or deposits, and mining claim activity. About 10 percent of the townships with this ranking have had past metal production or contain proven reserves or minerals. Ranks in the 92-97.5 percentile bracket of total township population.

Very High - Geologic environment very favorable and always part of significant mineral terranes. Contains significant geophysical and geochemical anomalies, mineral occurrences, and deposits, high claim density, and have been nominated by the mineral industry for activity or selection interests. About 90 percent of townships with this rank have sustained past or present metal production and contain significant reserves of mineral resources. Rank comprises top 2.5 percentile of total township population.

OIL AND GAS

Because so little is known about the oil and gas potential in the planning area, each resource information summary chart in Chapter 3 only notes whether a subunit is within the

currently mapped estimated Holitna or Lake Minchumina sedimentary basin boundaries. These are the areas with the greatest likelihood of containing oil and gas.

RECREATION

Three criteria were used to rate sites for non-consumptive recreation value. A checklist for each of the three criteria was completed for each location. The final rating for the site or area was based on the highest ranking of the three criteria. For example, if a river was rated moderate because of its existing uses for recreation but low because it was distant from

the villages, its final ranking was moderate. Ratings for recreation were based on statewide comparisons and for this reason only a small portion of the planning area was rated high for recreation.

The criteria for the overall recreation ratings are as follows:

<u>Criteria</u>	<u>High</u>	<u>Moderate</u>	<u>Low</u>
Existing and potential use for recreation.	Area currently receives intensive use; or moderate use that is likely to become intensive in the long term (by 2007).	Area receives moderate use which is likely to stay the same over the short term (by 1997); or low use that is likely to become moderate use over the long term (by 2007).	Area receives low level of use which is not likely to change over the long term (by 2007).
Location in relation to villages (provides for recreational experiences close to residences).	Easily accessible and within 1 hour travel of communities on foot, skis, boat, snowmachine, ORV, or automobile [not airplane] with population over 1,000.	Easily access. village with pop. over 500 and under 1,000 and within one hour travel. of village.	Easily accessible to village with population under 500 and within one hour travel
Economic value of site for commercial recreation.	High potential for commercial recreation.	Moderate potential for commercial recreation.	Low potential for commercial recreation.

SETTLEMENT

Two groups of criteria were used to determine whether lands are appropriate for settlement. These include: the physical features of the land and resources that affect building a house or cabin and using it without detriment to the surrounding land or water, and the social and economic constraints that affect the safety and cost of settlement. Lands were evaluated for their suitability to provide sites for remote residences for private recreation cabins. Many physical land characteristics such as slope, elevation, and permafrost generally coincide with the vegetation patterns in the region. The overall ratings use vegetation

types as a proxy for more detailed information on physical characteristics. Vegetative types are combined with access data in the overall ratings.

These ratings do not systematically consider amenity values such as good views or proximity to fishing streams. However, amenity values can strongly affect desirability of a particular site. Therefore, amenities were considered when specific sites were selected for presentation in the alternatives and the draft plan.

Overall Rating

Characteristics

High

Closed white spruce, hardwood, or mixed hardwood-white spruce forests within 2 miles of boat, plane, or road access or trail from existing community.

Moderate

Open white spruce forests within 2 miles of boat, plane, or road access or trail from adjacent community.

Low

Closed white spruce, hardwood, or mixed forests more than 2 miles from access.

Or

Shrublands within two miles of access

Very low

Shrublands more than 2 miles from access.

Or

Black spruce lands within 2 miles of access.

Unsuited

Black spruce lands more than 2 miles from access and all unvegetated lands (glaciers, barrens, recent burns, etc.)

IMPORTANT TRAILS AND PUBLIC ACCESS

Several sources of information were used to determine important trails and public access. Anchorage DGGs staff compiled information from USGS maps, DOT/PF trails and airport maps, and contacts with individuals within the region. DGGs staff in Fairbanks contacted miners to determine major cat trails used by

the mining community. Finally, BLM provided information on the Iditarod National Historic Trail System and the race trail. This information was compiled in the trails and transportation element as well as on working maps. Some of these trails are shown in Chapter 3 unit maps and in Appendix C.

Appendix F

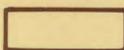
FISH AND WILDLIFE HABITAT

The Habitat Division in ADF&G rated the wildlife habitat suitability of Kuskokwim lands based on estimates of habitat quality for key species. The distribution and life history of these species (i.e. moose, anadromous fish, caribou, bear, and sheep) were mapped using important life functions (i.e. spawning, winter concentrations, calving). Lands were then assigned to one of the categories listed in the map legend on the following page. Land use permits and approved plans of operations for mineral developments will specify the measures required of operators to reclaim

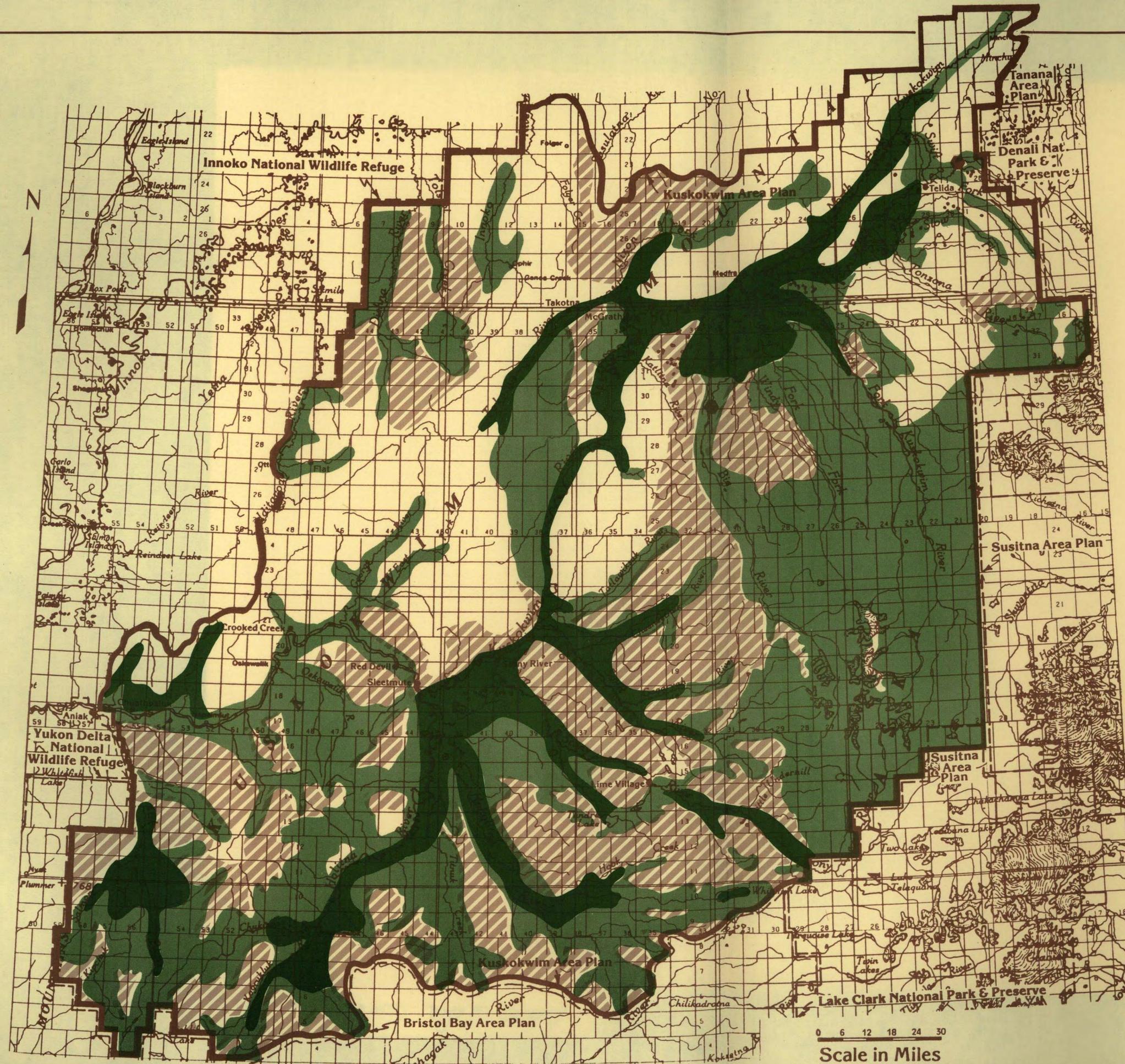
land to a useful condition for fish and wildlife habitat. The degree of reclamation stipulated is correlated with the habitat categories portrayed on this map and guideline D under the subsurface resources section in Chapter 2. **The following map does not incorporate the higher suitability ratings some areas received because of their high level of public use.** A map showing the combined human use and habitat suitability ratings (on which land designations and classifications are based) is included in the Fish and Wildlife Element (ADF&G and DNR, 1987).

Fish and Wildlife Habitat Suitability Categories

Suitability Category	Definition
----------------------	------------

- | | | |
|---|-----|---|
|  | A-1 | A discrete habitat area needed to sustain a species within a region |
|  | A-2 | Special value habitat area |
|  | B-1 | High value habitat area |
|  | B-2 | Moderate value habitat area |
|  | C | Low value habitat and/or harvest area |

Both habitat and harvest values were used for determining suitability categories in the resource information summary charts and primary surface uses in Chapter 3 and described in Appendix E in the fish and wildlife habitat section. However, this map portrays fish and wildlife habitat values only. For combined habitat and harvest values see the Kuskokwim Area Plan Fish and Wildlife Element, Alaska Department of Natural Resources, May 1987.



Appendix G

SUMMARY OF LEASES AND PERMITS BY MANAGEMENT UNIT

Leases and permits on state lands in the Kuskokwim planning area are listed below by subunit. This list includes leases and permits entered on the state's computerized Land Administration System (LAS) as of August, 1987. Not all leases or permits are covered by this list. The types of actions included are:

- trapping cabin construction permits
- guide site permits
- mine tailings disposal permits
- airstrip leases
- negotiated leases
- leases to non-profit organizations
- leases to government agencies
- competitive leases
- public utility leases
- material lease sales.

MGMT. UNIT	SUBUNIT	TYPE OF PERMIT OR LEASE	STATUS	TOWNSHIP & SECTION	LOCATION	ACRE-AGE	ADL # ¹
North Fork (1)	1c	trapping cabin permit	issued	T14S R27W 10 FM	near Fish Creek Lake	---	223556
	1c	trapping cabin permit	issued	T14S R28W 23 FM	Spirit Lake	---	223556
	1d	trapping cabin permit	issued	T13S R28W 3 FM	along North Fork	---	223556
	1b	trapping cabin permit	applied	T11S R26W 33 FM	along North Fork	---	224085
East Fork (2)	2b	trapping cabin permit	issued	T22S R27W 7 FM	Haynes Lake	---	220957
	2c	trapping cabin permit	issued	T20S R26W 26 FM	on Swift Fork	---	220957
Tonzona (3)	3a	guide site	applied	T31N R18W 13 SM	upper Red Paint Creek	1	220900
	3a	airstrip	applied	T32N R18W 15 SM	Amos Lake	0.7	220546
	3a	trapping cabin permit	issued	T32N R17W 22 SM	upper Tonzona River	---	220000
	3a	trapping cabin permit	applied	T32N R17W 19 & 30	upper Tonzona River	---	215557
	3a	trapping cabin permit	issued	T32N R18W 17 SM	Red Paint Creek	---	215557
	3a	trapping cabin permit	issued	T32N R18W 28 SM	Red Paint Creek	---	220000
	3a	trapping cabin permit	issued	T31N R18W 10 SM	upper Red Paint Creek	---	220000

¹DNR Division of Land and Water Management case file number.

MGMT. UNIT	SUBUNIT	TYPE OF PERMIT OR LEASE	STATUS	TOWNSHIP & SECTION	LOCATION	ACRE- AGE	ADL #
Big River- S. Fork	4a	trapping cabin permit	issued	T32N R23W 30 SM	Big Salmon Fork	---	216914
	4c	trapping cabin permit	issued	T29N R23W 30 SM	Submarine or Steele Lake	---	222819
Kuskokwim River (5)	5f	trapping cabin permit	issued	T27N R35W 1 SM	upper Selatna River	---	217015 or 217017
	5j	trapping cabin permit	issued	T23N R38W 23 SM	Kuskokwim R. south of Devils Elbow	---	215415
	5c	mine tailings disposal	issued	T33N R33W 7,8,18	McGrath	300	201117
	<u>2</u>	neg. lease to non-profit organization	applied	T32N R34W 16 SM	Sterling Landing; Takotna fuel storage	0.2	210011
Nixon Fork (6)	NONE						
Innoko River (7)	7b	trapping cabin permit	issued	T22S R13E 21 KRM	lower Innoko River	---	223318
	7b	trapping cabin permit	issued	T24S R12E 20 KRM	middle Innoko River	---	223318
	7c	trapping cabin permit	applied	T24S R14E 22 KRM	S. Fork Folger Creek	---	223519
Dishna- Iditarod (8)	8g	trapping cabin permit	applied	T31N R44W 1 SM	upper Dishna River	---	220703
	8g	trapping cabin permit	applied	T32N R44W 3 SM	upper Dishna River	---	220703
	8g	trapping cabin permit	applied	T30N R44W 10 SM	upper Dishna River	---	220703
Takotna River (9)	NONE						
George River (10)	NONE						
Swift River (11)	11a	trapping cabin permit	issued	T24N R33W 7 SM	upper Tatlawiksuk River	---	217015

²isolated parcel of state land containing the lease only. Not in a subunit.

MGMT. UNIT	SUBUNIT	TYPE OF PERMIT OR LEASE	STATUS	TOWNSHIP & SECTION	LOCATION	ACRE- AGE	ADL #
South	12a	guide site	applied	T16N R28W 16 SM	upper Swift Fork River	5	221799
Alaska	12a	guide site	applied	T16N R25W 15 SM	upper Stony River	0.5	220625A
Range	12a	trapping cabin permit	issued	T14N R25W 21 SM	upper Stony River	—	207018
(12)	12c	guide site permit	applied	T19N R28W 23 SM	Revelation Mts.	—	SCR 88015
	12a	guide site	issued	T14N R25W 14 SM	upper Stony River	12	213145
	12a	guide site	applied	T17N R28W 8 SM	lake between Swift River & South Fork	5	221799
North	13d	trapping cabin permit	issued	T22N R22W 33 SM	conflu. Hartman R./South Fork	—	207018
Alaska	13a	trapping cabin permit	issued	T23N R22W 16 SM	upper South Fork	—	207018
Range	13a	trapping cabin permit	issued	T27N R26W 3 SM	upper Windy Fork	—	222819
(13)	13a	trapping cabin permit	issued	T27N R26W 27 SM	upper Windy Fork	—	222819
	13e	trapping cabin permit	issued	T29N R23W 8 SM	on South Fork	—	216914
	13a	guide site	applied	T20N R22W 21 & 28	upper South Fork	160	223331
	13a	guide site	applied	T28N R21W 5 SM	Dillinger River	2	220904
	13a	guide site	applied	T29N R21W 10 SM	upper Dillinger River	1	220907
	13a	guide site	applied	T30N R20W 30 SM	upper Dillinger River	1	220905
	13a	guide site	applied	T20N R22W 21 & 22	upper South Fork	40	224087
Stony	subm.	material sale	applied	T20N R40W 31 SM	confluence of Stony R. & Kusko	7	218687
(14)	14d	guide site	applied	T14N R29W 9 SM	trib. to Little Underhill	—	SCR-88-061
	14d	guide site	applied	T12N R29w 15 SM	Turkaleshna Creek	0.5	220625B
Holitna	15c	guide site	applied	T8N R38W 2 SM	S. Fork Hoholitna River	5	217452
River	15b	guide site	applied	T6N R55W 32 SM	Gemuk Lake	1	221126
(15)	15g	guide site	applied	T9N R46W 13 SM	Taylor Mountain	20	220525
	15c	airstrip lease	applied	T8N R38W 2 SM	S. Fork Hoholitna River	1.2	221136
	15a	lease to govt. org.	applied	T9N R48W 29 SM	Kashegelok	15	223775
	subm. ³	material sale	issued	T19N R43W 19 SM T19N R44W 13,14,25	Kuskokwim River near Sleetmute	35	204065
	15a	trapping cabin permit	issued	T12N R41W 7 SM	middle Hoholitna River	—	223206
	15a	trapping cabin permit	issued	T12N R43W 21 SM	Titnuk Creek	—	223206
	15a	trapping cabin permit	issued	T14N R44W 2 SM	Kulukbuk Mts.	—	219098
	15b	trapping cabin permit	issued	T14N R47W 35 SM	Chuilnuk River	—	219098
	15b	trapping cabin permit	issued	T15N R45W 28 SM	Itulilik Creek	—	209775
	15c	trapping cabin permit	issued	T13N R41W 10 SM	middle Hoholitna River	—	206546
	15c	trapping cabin permit	issued	T6N R36W 20 SM	Lake September	—	217027
	15c	trapping cabin permit	issued	T15N R40W 17 & 20	upper Elutuli Creek	—	206546

³subm. = submerged lands in state ownership, not in subunit

MGMT. UNIT	SUBUNIT	TYPE OF PERMIT OR LEASE	STATUS	TOWNSHIP & SECTION	LOCATION	ACRE-AGE	ADL #
Holokuk-Oskawalik (16)	16a	preference right	applied	T18N R49W 6 SM	Kuskokwim River	160	67065
	16b	public utility corridor	issued	T16N R50W 1 SM	SE of Ahgaluk M.; Alascom site	3.7	221172
	subm.	material sale	applied	T18N R49W 5, 6	W of Oskawalik on Kuskokwim R.	25	217578
	subm.	mine tailing disposal	applied	T20N R45W 25 SM	W of Red Devil on Kuskokwim R.	7	212301
Aniak River (17)	17b	guide site	applied	T6N R57W 28 & 29	upper Kuskokwim	5	217035
	subm. ⁴	material sale	applied	T17N R54W 3 SM	E of Chuathbaluk on Kusko. R.	40	223560
	subm.	material sale	applied	T17N R55W 9 SM	Chuathbaluk	10	218149
	subm.	material sale	applied	T17N R55W 9 SM	Chuathbaluk	5	218686
Birch Tree Crossing (18)	subm.	material sale	applied	T17N R57W 3,4,5	W of Aniak on Kuskokwim River	4	218649
	subm.	material sale	applied	T17N R57W 24,25,26	Aniak Slough	100	214788
	subm.	material sale	applied	T17N R57W 3,4,5	W of Aniak on Kuskokwim River	180	218148
	subm.	material sale	applied	T17N R58W 7, 8	Kuskokwim R. near Crow Village	15	218121
	subm.	material sale	applied	T17N R59W 11 SM	Kuskokwim R. near Crow Village	2	222338
	subm.	mine tailings disposal	Issued	T17N R58W 5 - 8	Kuskokwim R. near Crow Village	42	201606

TOTALS	trapping cabin permits:	31 issued,	5 applications	no land interest conveyed
	guide sites:	1 issued,	16 applications	256 acres
	airstrip leases:		2 applications	1.9 acres
	negotiated leases:		2 applications	15.2 acres
	public utility corridor:	1 issued		3.7 acres
	material sales:	1 issued,	10 applications	423 acres
	mine tailings disposal:	2 issued,	1 application	349 acres
	preference right:		1 application	160 acres

SUMMARY: 73 actions; 36 issued, 37 applications not yet adjudicated; 1,208.8 acres affected

⁴subm. = submerged lands in state ownership, not in subunit.

Appendix H

LEASEHOLD LOCATION AREAS AND MINERAL CLOSURES

State lands closed to mineral entry or subject to leasehold location requirements are shown on Map 2.4 and described in the land allocation summary for Subsurface Resources, p. 2-55. Closures are established under Mineral Closing Order #562 and leasehold location areas under Leasehold Location Order #6. The portions of each stream and estimated acreage closed to mineral entry or subject to

leasehold location requirements are listed below. These charts also list the stream numbers from the ADF&G Anadromous Waters Catalog and the USGS topographic quadrangles on which the streams are located. The first part of the appendix lists leasehold location areas, the second part lists areas closed to mineral entry.

2 PART 1: ACREAGE OF LEASEHOLD LOCATION AREAS

Appendix H

Township & Range	USGS Quad	Kuskokwim Area Plan Mgmt. Unit	Name	River Basin	ADF&G Anadromous Inventory ID#	Corridor Width	Acreage	Approx. Length (Miles)	Salmon Values
T8N R58W SM T8N R59W SM T9N R58W SM T10N R57W SM T10N R58W SM	Bethel D-1 Bethel D-2	17b	Salmon R.	Aniak	335-20-16600-2400-3244	400'	1,139	23.5	COs, CHs, Ks, Kr
T7N 59W SM T8N 59W SM	Bethel C-2 Bethel D-2	17b & 17c	Cripple Creek	Aniak	335-20-16600-2400-3244-4131	400'	315	6.5	COs & r, Ks
T8N R58W SM	Bethel D-2	17b	Bell Creek	Aniak	335-20-16600-2400-3244-4121	400'	112	2.3	Kr
T8N R58W SM	Bethel D-2	17b	unnamed	Aniak	335-20-16600-2400-3244-4121-5011	400'	39	0.8	Kr
T8N R59W SM T9N R58W SM	Bethel D-2	17b	Fisher Creek	Aniak	335-20-16600-2400-3244-4110	400'	112	2.3	Kr
T9N R58W SM	Bethel D-2	17b	Wilhelmina Cr.	Aniak	335-20-16600-2400-3244-4084	400'	150	3.1	Kr
T9N R57W SM T10N R57W SM T10N R58W SM	Bethel D-2	17b	Pass Creek	Aniak	335-20-16600-2400-3244-4071	400'	155	3.2	Kr
T10N R57W SM T10N R58W SM T11N R58W SM	Bethel D-2 Russ. Miss. A-2	17b & 17c	Dominion Cr.	Aniak	335-20-16600-2400-3244-4050	400'	339	7.0	COs & r
T10N R53W SM T10N R54W SM T10N R55W SM T11N R52W SM T11N R53W SM	Sleetmute A-7 Taylor Mts D-8	17b	Atsakovluk Cr	Aniak	335-20-16600-2400-3291	400'	863	17.8	COs & r, Ks & r, CHs
T10N R54W SM	Taylor Mts D-8	17b	unnamed	Aniak	335-20-16600-2400-3291-4058	400'	63	1.3	Kr
T10N R54W SM	Taylor Mts D-8	17b	unnamed	Aniak	335-20-16600-2400-3291-4050	400'	112	2.3	Kr
T9N R54W SM	Taylor Mts D-8	17b	unnamed	Aniak	335-20-16600-2400-3291-4050-5012	400'	10	0.2	Kr
T12N R52W SM T13N R52W SM T13N R53W SM T14N R53W SM T14N R54W SM	Sleetmute A-7 Sleetmute A-8	17b	Buckstock R.	Aniak	335-20-16600-2400-3101	400'	1,105	22.8	Ks, Ps, COs, Kr, CHs
T13N R52W SM	Sleetmute A-7	17b	unnamed	Aniak	335-20-16600-2400-3101-4135	400'	15	0.3	Kr
T13N R52W SM	Sleetmute A-7	17b	unnamed	Aniak	335-20-16600-2400-3101-4125	400'	78	1.6	Kr

PART 1, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Corridor Width</u>	<u>Acreage</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T10N R54W SM T11N R54W SM	Sleetmute A-8 Taylor Mts D-8	17b	Timber Creek	Aniak	335-20-16600-2400-3211	400'	325	6.7	COs, Ks, CHs
T11N R54W SM	Sleetmute A-8	17b & 17c	unnamed	Aniak	335-20-16600-2400-3211-4085	400'	102	2.1	Kr
T11N R54W SM	Sleetmute A-8	17b	unnamed	Aniak	335-20-16600-2400-3211-4095	400'	131	2.7	Kr
T14N R53W SM T14N R54W SM	Sleetmute B-8	17b	unnamed	Aniak	335-20-16600-2400-3130-4070	400'	112	2.3	Kr
T14N R54W SM	Sleetmute B-8	17b	unnamed	Aniak	335-20-16600-2400-3101-4060	400'	78	1.6	Kr
T14N R54W SM	Sleetmute B-8	17b	unnamed	Aniak	335-20-16600-2400-3101-4050	400'	160	3.3	Kr
T12N R52W SM T13N R50W SM T13N R51W SM T14N R50W SM T15N R50W SM T15N R51W SM T16N R51W SM	Sleetmute A-7 Sleetmute B-7	16a	Holokuk River	Holokuk	335-20-16600-2540	400'	1,542	30.0	Ks, CHs
T13N R51W SM	Sleetmute A-7 Sleetmute B-7	16a	Egozuk Creek	Holokuk	335-20-16600-2540-3119	400'	170	3.5	Ks
T13N R50W SM T13N R51W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3130	400'	68	1.4	Kr
T12N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3145	400'	170	3.5	Ks, Kr
T12N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3145-4007	400'	29	0.6	Kr
T12N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3145-4020	400'	15	0.3	Kr
T12N R52W SM T13N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3150	400'	223	4.6	Kr
T13N R51W SM	Sleetmute A-7	16a & 16b	Boss Creek	Holokuk	335-20-16600-2540-3151	400'	150	3.1	Kr
T14N R50W SM T14N R51W SM	Sleetmute B-7	16a & 16b	Girl Creek	Holokuk	335-20-16600-2540-3124	400'	160	3.3	Kr
T14N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3124-4019	400'	29	0.6	Kr
T14N R50W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3116	400'	63	1.3	Kr
T14N R50W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3112	400'	29	0.6	Kr

PART 1, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Corridor Width</u>	<u>Acreage</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T14N R50W SM T14N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3108	400'	218	4.5	Kr
T15N R50W SM	Sleetmute B-6 Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3105	400'	141	2.9	Kr
T15N R50W SM	Sleetmute B-7	16a	Camp Creek	Holokuk	335-20-16600-2540-3094	400'	82	1.7	Kr
T15N R51W SM									
T15N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3094-4008	400'	73	1.5	Kr
T15N R50W SM	Sleetmute B-7	16a	Beemguiga Cr.	Holokuk	335-20-16600-2540-3081	400'	121	2.5	Kr
T15N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3070	400'	87	1.8	Kr
T15N R51W SM T16N R51W SM	Sleetmute B-7	16a & 16b	Gold Run	Holokuk	335-20-16600-2540-3050	400'	116	2.4	Kr
T15N R48W SM T15N R49W SM T15N R50W SM	Sleetmute B-5 Sleetmute B-6	16a	Chineekluk Cr.	Holokuk	335-20-16600-2540-3101	400'	621	12.8	Ks, Ss, CHs
T15N R48W SM T15N R49W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4050	400'	126	2.6	Kr
T15N R49W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4040	400'	121	2.5	Kr
T13N R49W SM T14N R49W SM T15N R49W SM T15N R50W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4020-5021	400' + 200' along Lakeshore	572	9.8 + 4.0 on lake- shore	Ss, Ks, CHs
T14N R50W SM T15N R50W SM	Sleetmute B-6	16a & 16b	unnamed	Holokuk	335-20-16600-2540-3101-4020	400'	141	2.9	Kr
T14N R49W SM T15N R49W SM T15N R50W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4020-5029	400'	73	1.5	Kr
T15N R48W SM T16N R47W SM T16N R48W SM T17N R47W SM T17N R48W SM T18N R47W SM	Sleetmute B-5 Sleetmute C-5 Sleetmute C-6	16a	Oskawalik	Oskawalik	335-20-16600-2630	400'	1,455	30.0	Ks, CHs, COR

PART 1, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Corridor Width</u>	<u>Acreage</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T16N R49W SM T17N R47W SM T17N R48W SM	Sleetmute B-6 Sleetmute C-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070	400'	872	18.0	COs & r
T16N R48W SM	Sleetmute B-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070-4071-5010-6020	400'	136	2.8	COs & r
T6N R55W SM T8N R53W SM T8N R54W SM	Taylor Mts C-8	15b	Gemuk River	Holitna	335-20-16600-2830-3430-4171	400'	606	12.5	COs & r, Ss, Ks, CHs
T8N R53W SM T8N R54W SM	Taylor Mts C-8 Taylor Mts D-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5035-6010	400'	145	3.0	Kr
T8N R53W SM T8N R54W SM	Taylor Mts C-8 Taylor Mts D-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5035	400'	208	4.3	Kr
T8N R54W SM	Taylor Mts D-8	15b	Cinnabar Creek	Holitna	335-20-16600-2830-3430-4171-5040	400'	150	3.1	Kr
T8N R54W SM	Taylor Mts D-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5040-6019	400'	48	1.0	Kr
T11N R40W SM T11N R41W SM	Sleetmute A-2	15a & 15c	unnamed	Holitna	335-20-16600-2830-3041-4263	400'	136	2.8	Kr
T13N R48W SM	Sleetmute A-5	15b	Portage Creek	Holitna	335-20-16600-2830-3280	400'	48	1.0	COs
T13N R49W SM	Sleetmute A-6	15b	unnamed	Holitna	335-20-16600-2830-3294	400'	82	1.7	COs
T11N R50W SM	Sleetmute A-6 Taylor Mts D-6	15g	Mukslulik Cr.	Holitna	335-20-16600-2830-3390	400'	107	2.2	COs
T14N R25W SM	Lime Hills B-2 Lime Hills B-3	12a	Stony River	Stony	335-30-16600-2040	400'	204	4.2	COs & r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4209	400'	44	0.9	Kr
T23N R31W SM T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4200	400'	102	2.1	Kr
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191	400'	112	2.3	Kr
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191-5009	400'	29	0.6	Kr
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191-5016	400'	44	0.9	Kr
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191-5016-6010	400'	15	0.3	Kr
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4180	400'	107	2.2	Kr

ART 1, cont.

Township & Range	USGS Quad	Kuskokwim Area Plan Mgmt. Unit	Name	River Basin	ADF&G Anadromous Inventory ID#	Corridor Width	Acreage	Approx. Length (Miles)	Salmon Values	
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4180-5011	400'	48	1.0	Kr	
T22N R32W SM T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4170	400'	97	2.0	Kr	
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4160	400'	97	2.0	Kr	
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4150	400'	102	2.1	Kr	
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4155	400'	73	1.5	Kr	
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4121-5010	400'	60	1.1	Kr	
T22N R33W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4121	400'	82	1.7	Kr	
T22N R33W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4115	400'	48	1.0	Kr	
T23N R45W SM T24N R44W SM T25N R43W SM T25N R44W SM	Iditarod A-3 Iditarod A-4 Iditarod B-3	10b**	George River	George	335-20-16600-2741	400'	936	19.3	COs, Ks, CHs	
T24N R44W SM T25N R44W SM	Iditarod A-3	10b**	Julian Creek	George	335-20-16600-2741-3165	400'	107	2.2	Kr	
T24N R44W SM	Iditarod A-3	10b**	unnamed	George	335-20-16600-2741-3157	400'	58	1.2	Kr	
T24N R44W SM	Iditarod A-3	10b**	unnamed	George	335-20-16600-2741-3146	400'	107	2.2	Kr	
T24N R44W SM	Iditarod A-3	10b**	unnamed	George	335-20-16600-2741-3136	400'	39	0.8	Kr	
TOTAL	Segments of 79 streams + 1 lakeshore							17,568	355.7	

KEY: K = king salmon, CO = coho salmon, CH = chum salmon, S = sockeye salmon, P = pink salmon; s = spawning area, r = rearing area

**Uplands adjacent to these stream segments are not presently in state ownership. Leasehold location requirements would apply to these lands only if they are selected by the state and conveyed to state ownership.

PART 2: ACREAGE OF MINERAL CLOSURES

Township & Range	USGS Quad	Kuskokwim Area Plan Mgmt. Unit	Name	River Basin	ADF&G Anadromous Inventory ID#	Estimated Corridor Width*	Acreage*	Approx. Length (Miles)	Salmon Values
T7N R59W SM T7N R60W SM T8N R58W SM T8N R59W SM T9N R58W SM T10N R57W SM T10N R58W SM	Bethel C-2 Bethel D-1 Bethel D-2	17b	Salmon R.	Aniak	335-20-16600-250-3244	50'	184	30.3	CO _r , Kr, CO _s , K _s , CH _s
T8N R59W SM	Bethel C-2 Bethel D-2	17b	unnamed	Aniak	335-20-16600-250-3244-4148-5011	50'	16	2.7	CO _r
T7N R59W SM	Bethel C-2	17c	Loco Creek	Aniak	335-20-16600-250-3244-4131-5018	50'	13	2.1	CO _r
T7N R59W SM T8N R59W SM	Bethel C-2	17b & 17c	Dome Creek	Aniak	335-20-16600-250-3244-4131-5010	50'	16	2.7	CO _r
T8N 559W SM	Bethel C-2 Bethel D-2	17b	Porcupine Cr.	Aniak	335-20-16600-250-3244-4131-5006	50'	9	1.5	CO _r
T7N 59W SM T8N 59W SM	Bethel C-2 Bethel D-2	17b & 17c	Cripple Creek	Aniak	335-20-16600-250-3244-4131	50'	39	6.5	CO _s & r, K _s
T8N R59W SM	Bethel D-2	17b	unnamed	Aniak	335-20-16600-250-3244-4148	50'	25	4.2	CO _r
T8N R58W SM	Bethel D-2	17b	Bell Creek	Aniak	335-20-16600-250-3244-4121	50'	14	2.3	Kr
T8N R58W SM	Bethel D-2	17b	unnamed	Aniak	335-20-16600-250-3244-4121-5011	50'	5	0.8	Kr
T8N R59W SM T9N R58W SM	Bethel D-2	17b	Fisher Creek	Aniak	335-20-16600-250-3244-4110	50'	14	2.3	Kr
T9N R58W SM	Bethel D-2	17b	Wilhelmina Cr.	Aniak	335-20-16600-250-3244-4084	50'	19	3.1	Kr
T9N R57W SM T10N R57W SM T10N R58W SM	Bethel D-2	17b	Pass Creek	Aniak	335-20-16600-250-3244-4071	50'	19	3.2	Kr
T10N R58W SM	Bethel D-2	17c	Eureka Creek	Aniak	335-20-16600-250-3244-4050-5021	50'	7	1.1	CO _r
T11N 558W SM	Bethel D-2 Russ. Miss. A-2	17c	Robin Creek	Aniak	335-20-16600-250-3244-4050-5033	50'	7	1.2	CO _r
T10N R57W SM T10N R58W SM T11N R58W SM	Bethel D-2 Russ. Miss. A-2	17b & 17c	Dominion Cr.	Aniak	335-20-16600-250-3244-4050	50'	42	7.0	CO _s & r
T12N R58W SM	Russ. Miss. A-2	17c	Sawpit Creek	Aniak	335-20-16600-250-3080	50'	28	3.0	CO _r

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Estimated Corridor Width*</u>	<u>Acreage*</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T9N R54W SM	Taylor Mts D-8	17b	Waterboot Cr.	Aniak	335-20-16600-250-3291-4020	50'	40	6.6	COr
T10N R53W SM	Sleetmute A-7	17b	Atsaksovluk Cr	Aniak	335-20-16600-250-3291	50'	118	19.5	COs & r, Ks & r, CHs
T10N R54W SM	Taylor Mts D-8								
T10N R55W SM									
T11N R52W SM									
T11N R53W SM									
T10N R54W SM	Taylor Mts D-8	17b	unnamed	Aniak	335-20-16600-250-3291-4058	50'	8	1.3	Kr
T10N R54W SM	Taylor Mts D-8	17b	unnamed	Aniak	335-20-16600-250-3291-4050	50'	14	2.3	Kr
T9N R54W SM	Taylor Mts D-8	17b	unnamed	Aniak	335-20-16600-250-3291-4050-5012	50'	1	0.2	Kr
T11N R52W SM	Sleetmute A-7	17b	unnamed	Aniak	335-20-16600-250-3291-4123	50'	9	1.5	COr
T12N R52W SM	Sleetmute A-7	17b	Buckstock R.	Aniak	335-20-16600-250-3101	50'	138	22.8	Ks, Ps, COs, Kr, CHs
T13N R52W SM	Sleetmute A-8								
T13N R52W SM	Sleetmute A-8								
T13N R53W SM									
T14N R53W SM									
T14N R54W SM									
T13N R52W SM	Sleetmute A-7	17b	unnamed	Aniak	335-20-16600-250-3101-4135	50'	2	0.3	Kr
T13N R52W SM	Sleetmute A-7	17b	unnamed	Aniak	335-20-16600-250-3101-4125	50'	10	1.6	Kr
T10N R54W SM	Sleetmute A-8	17b	Timber Creek	Aniak	335-20-16600-250-3211	50'	41	6.7	COs, Kr, Ks, CHs
T11N R54W SM	Taylor Mts D-8								
T11N R54W SM	Sleetmute A-8	17b & 17c	unnamed	Aniak	335-20-16600-250-3211-4085	50'	13	2.1	Kr
T11N R54W SM	Sleetmute A-8	17b	unnamed	Aniak	335-20-16600-250-3211-4095	50'	16	2.7	Kr
T14N R53W SM	Sleetmute B-8	17b	unnamed	Aniak	335-20-16600-250-3130-4070	50'	14	2.3	Kr
T14N R54W SM									
T14N R54W SM	Sleetmute B-8	17b	unnamed	Aniak	335-20-16600-250-3101-4060	50'	10	1.6	Kr
T14N R54W SM	Sleetmute B-8	17b	unnamed	Aniak	335-20-16600-250-3101-4050	50'	20	3.3	Kr

PART 2, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Estimated Corridor Width*</u>	<u>Acreage*</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T12N R52W SM T13N R50W SM T13N R51W SM T14N R50W SM T15N R50W SM T15N R51W SM T16N R51W SM	Sleetmute A-7 Sleetmute B-7	16a	Holokuk River	Holokuk	335-20-16600-2540	50'	193	31.8	Ks, Kr, CHs
T13N R51W SM	Sleetmute A-7 Sleetmute B-7	16a	Egozuk Creek	Holokuk	335-20-16600-2540-3119	50'	21	3.5	Ks
T13N R50W SM T23N R51W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3130	50'	8	1.4	Kr
T12N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3145	50'	21	3.5	Ks, Kr
T12N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3145-507	50'	4	0.6	Kr
T12N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3145-4020	50'	2	0.3	Kr
T12N R52W SM T13N R52W SM	Sleetmute A-7	16a	unnamed	Holokuk	335-20-16600-2540-3150	50'	28	4.6	Kr
T13N R51W SM	Sleetmute A-7	16a & 16b	Boss Creek	Holokuk	335-20-16600-2540-3151	50'	18	3.1	Kr
T14N R50W SM T14N R51W SM	Sleetmute B-7	16a & 16b	Girl Creek	Holokuk	335-20-16600-2540-3124	50'	20	3.3	Kr
T14N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3124-4019	50'	4	0.6	Kr
T14N R50W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3116	50'	8	1.3	Kr
T14N R50W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3112	50'	4	0.6	Kr
T14N R50W SM T14N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3108	50'	27	4.5	Kr
T15N R50W SM	Sleetmute B-6 Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3105	50'	18	2.9	Kr
T15N R50W SM T15N R51W SM	Sleetmute B-7	16a	Camp Creek	Holokuk	335-20-16600-2540-3094	50'	10	1.7	Kr
T15N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3094-508	50'	9	1.5	Kr
T15N R50W SM	Sleetmute B-7	16a	Beemguiga Cr.	Holokuk	335-20-16600-2540-3081	50'	15	2.5	Kr
T15N R51W SM	Sleetmute B-7	16a	unnamed	Holokuk	335-20-16600-2540-3070	50'	11	1.8	Kr

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Estimated Corridor Width*</u>	<u>Acreage*</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T15N R51W SM T16N R51W SM	Sleetmute B-7	16a & 16b	Gold Run	Holokuk	335-20-16600-2540-3050	50'	15	2.4	Kr
T15N R48W SM T15N R49W SM T15N R50W SM	Sleetmute B-5 Sleetmute B-6	16a	Chineekluk Cr.	Holokuk	335-20-16600-2540-3101	50'	76	12.8	Ks, Ss, CHs
T15N R48W SM T15N R49W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4050	50'	16	2.6	Kr
T15N R49W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4040	50'	15	2.5	Kr
T13N R49W SM T14N R49W SM T15N R49W SM T15N R50W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4020-5021	50' + Lake	339	9.8 + lake	Ss, Ks, CHs
T14N R50W SM T15N R50W SM	Sleetmute B-6	16a & 16b	unnamed	Holokuk	335-20-16600-2540-3101-4020	50'	18	2.9	Kr
T14N R49W SM T15N R49W SM T15N R50W SM	Sleetmute B-6	16a	unnamed	Holokuk	335-20-16600-2540-3101-4020-5029	50'	9	1.5	Kr
T15N R48W SM T16N R47W SM T16N R48W SM T16N R49W SM T17N R47W SM T17N R48W SM T18N R47W SM	Sleetmute B-5 Sleetmute C-5 Sleetmute C-6	16a	Oskawalik	Oskawalik	335-20-16600-2630	50'	225	37.1	CO _r , Ks, CHs
T16N R49W SM T17N R48W SM	Sleetmute B-6 Sleetmute C-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070	50'	109	18.0	CO _s & r
T16N R48W SM	Sleetmute B-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070-4071-5010-6020	50'	17	2.8	CO _s & r
T15N R48W SM T16N R48W SM T17N R47W SM T17N R48W SM	Sleetmute B-5 Sleetmute B-6 Sleetmute C-5 Sleetmute C-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070-4071-5010	50'	56	9.3	CO _r
T16N R49W SM T17N R48W SM	Sleetmute C-6	16a	unnamed	Oskawalik	335-20-26600-2630-3070-4098	50'	23	3.8	CO _r
T16N R49W SM T17N R48W SM	Sleetmute C-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070-4087	50'	15	2.5	CO _r

PART 2, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Estimated Corridor Width*</u>	<u>Acreage*</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T17N R47W SM	Sleetmute C-5 Sleetmute C-6	16a	unnamed	Oskawalik	335-20-16600-2630-3070-4071	50'	27	4.4	COr
T16N R47W SM T17N R46W SM	Sleetmute B-5 Sleetmute C-5	16a	unnamed	Oskawalik	335-20-16600-2630-3135	50'	58	9.5	COr
T16N R47W SM T17N R48W SM	Sleetmute B-5	16a	unnamed	Oskawalik	335-20-16600-2630-3135-4021	50'	3	0.5	COr
T6N R55W SM T8N R53W SM T8N R54W SM	Taylor Mts C-8	15b	Gemuk River	Holitna	335-20-16600-2830-3430-4171	50'	76	12.5	COs & r, Ss, Ks, CHs
T6N R55W SM	Taylor Mts C-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5131	50'	5	0.9	COr
T8N R53W SM T8N R54W SM	Taylor Mts C-8 Taylor Mts D-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5035-6010	50'	18	3.0	Kr
T8N R53W SM T8N R54W SM	Taylor Mts C-8 Taylor Mts D-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5035	50'	26	4.3	Kr
T8N R54W SM	Taylor Mts D-8	15b	Cinnabar Creek	Holitna	335-20-16600-2830-3430-4171-5040	50'	19	3.1	Kr
T8N R54W SM	Taylor Mts D-8	15b	unnamed	Holitna	335-20-16600-2830-3430-4171-5040-6019	50'	6	1.0	Kr
T9N R46W SM T9N R47W SM	Taylor Mts D-4 Taylor Mts D-5	15a, b, & d	Kiknik Creek	Holitna	335-20-16600-2830-3351	50'	80	13.2	COr
T9N R47W SM	Taylor Mts D-5	15a & 15b	unnamed	Holitna	335-20-16600-2830-3351-4048(a)	50'	19	3.1	COr
T9N R46W SM	Taylor Mts D-4 Taylor Mts D-5	15b	unnamed	Holitna	335-20-16600-2830-3351-4061	50'	4	0.7	COr
T9N R47W SM	Taylor Mts D-5	15a	Whitewater Cr.	Holitna	335-20-16600-2830-3351-4041	50'	3	0.5	COr
T9N R47W SM	Taylor Mts D-5	15a	unnamed	Holitna	335-20-16600-2830-3351-4037	50'	5	0.8	COr
T9N R47W SM	Taylor Mts D-5	15a	unnamed	Holitna	335-20-16600-2830-3351-4031	50'	4	0.7	COr
T9N R47W SM	Taylor Mts D-5	15a	unnamed	Holitna	335-20-16600-2830-3351-4021	50'	3	0.5	COr
T9N R46W SM	Taylor Mts D-4	15d	unnamed	Holitna	335-20-16600-2830-3351-4048(b)	50'	3	0.5	COr
T9N R46W SM T9M R45W SM T10N R45W SM	Taylor Mts D-4	15b & 15g	Taylor Creek	Holitna	335-20-16600-2830-3211	50'	76	12.5	COr
T11N R40W SM	Sleetmute A-2	15a & 15c	unnamed	Holitna	335-20-16600-2830-3041-4263	50'	17	2.8	Kr

PART 2, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Estimated Corridor Width*</u>	<u>Acreage*</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>
T11N R41W SM									
T13N R48W SM T14N R48W SM	Sleetmute A-5 Sleetmute B-5	15b	Portage Creek	Holitna	335-20-16600-2830-3280	50'	10	2.7	CO _r , CO _s
T13N R49W SM	Sleetmute A-6	15b	unnamed	Holitna	335-20-16600-2830-3294	50'	15	2.5	CO _r , CO _s
T12N R50W SM	Sleetmute A-6	15b	Bakbuk Creek	Holitna	335-20-16600-2830-3300-4047	50'	9	1.5	CO _r
T11N R50W SM T12N R50W SM	Sleetmute A-6	15b	unnamed	Holitna	335-20-16600-2830-3300-4047-5013	50'	10	1.6	CO _r
T11N R50W SM	Sleetmute A-6 Taylor Mts D-6	15g	Mukslulik Cr.	Holitna	335-20-16600-2830-3390	50'	22	3.6	CO _s , CO _r
T14N R46W SM T15N R46W SM T15N R47W SM	Sleetmute B-5	15b	Chuilnuk R.	Holitna	335-20-16600-2830-3230	50'	39	6.5	CO _r
T14N R46W SM T14N R47W SM	Sleetmute B-5	15b	unnamed	Holitna	335-20-16600-2830-3230-4079	50'	7	1.2	CO _r
T14N R46W SM	Sleetmute B-5	15b	unnamed	Holitna	335-20-16600-2830-3230-4076	50'	14	2.3	CO _r
T11N R50W SM	Sleetmute A-6	15g	Fortyseven Cr.	Holitna	335-20-16600-2830-3390-4045	50'	6	1.0	CO _r
T14N R25W SM	Lime Hills B-2 Lime Hills B-3	12a	Stony River	Stony	335-30-16600-2040	50'	25	4.2	CO _s & CO _r
T19N R28W SM	Lime Hills C-4	12a	unnamed	Swift	335-30-16600-2070-3101-4055-5036	50'	9	1.5	CO _r
T19N R28W SM	Lime Hills C-4	12a	unnamed	Swift	335-30-16600-2070-3101-4055-5036-6020	50'	6	1.0	CO _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4209	50'	5	0.9	K _r
T23N R31W SM T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4200	50'	13	2.1	K _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191	50'	14	2.3	K _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191-5009	50'	4	0.6	K _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191-5016	50'	5	0.9	K _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4191-5016-6010	50'	2	0.3	K _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4180	50'	13	2.2	K _r
T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4180-5011	50'	6	1.0	K _r

PART 2, cont.

Township & Range	USGS Quad	Kuskokwim Area Plan Mgmt. Unit	Name	River Basin	ADF&G Anadromous Inventory ID#	Estimated Corridor Width*	Acreage*	Approx. Length (Miles)	Salmon Values
T22N R32W SM T23N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4170	50'	12	2.0	Kr
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4160	50'	12	2.0	Kr
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4150	50'	13	2.1	Kr
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4155	50'	9	1.5	Kr
T22N R32W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4121-5010	50'	7	1.1	Kr
T22N R33W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4121	50'	10	1.7	Kr
T22N R33W SM	McGrath A-5	12a	unnamed	Swift	335-30-16600-2070-3029-4115	50'	6	1.0	Kr
T24N R44W SM	Iditarod A-3	Non-state	E. Fk. George	George	335-20-16600-2741-3050	50'	15	2.5	Kr
T23N R45W SM T24N R44W SM T24N R45W SM T25N R43W SM T25N R44W SM	Iditarod A-3 Iditarod A-4 Iditarod B-3	10b & Non-state	George River	George	335-20-16600-2741	50'	165	27.3	COs, Ks, CHs
T24N R44W SM T25N R44W SM	Iditarod A-3	10b***	Julian Creek	George	335-20-16600-2741-3165	50'	13	2.2	Kr
T24N R44W SM	Iditarod A-3	10b***	unnamed	George	335-20-16600-2741-3157	50'	7	1.2	Kr
T24N R44W SM	Iditarod A-3	10b***	unnamed	George	335-20-16600-2741-3146	50'	13	2.2	Kr
T24N R44W SM T24N R45W SM	Iditarod A-3	10b***	unnamed	George	335-20-16600-2741-3136	50'	5	0.8	Kr
T26N R42W SM	Iditarod B-3	10b***	Willow Creek	George	335-20-16600-2741-3212	50'	27	4.5	COr
T26N R42W SM	Iditarod B-2 Iditarod B-3	10b***	Granite Creek	George	335-20-16600-2741-3212-4031	50'	12	1.9	COr
T26N R42W SM	Iditarod B-2	10b***	unnamed	George	335-20-16600-2741-3212-4031-5024	50'	1	0.2	COr

***These streams are not navigable and are surrounded by federal land. This area (subunit 10b) has been proposed for selection by the state. These streambeds will be closed to new mineral entry only if these lands are conveyed to state ownership.

PART 2, cont.

<u>Township & Range</u>	<u>USGS Quad</u>	<u>Kuskokwim Area Plan Mgmt. Unit</u>	<u>Name</u>	<u>River Basin</u>	<u>ADF&G Anadromous Inventory ID#</u>	<u>Estimated Corridor Width*</u>	<u>Acreage*</u>	<u>Approx. Length (Miles)</u>	<u>Salmon Values</u>	
T30N R30W SM T31N R30W SM	McGrath C-4	4: Non-state	Big River	Big		1320'	640	4.0	Sheefish	
T24S R30E FM	Medfra B-1	2: Non-state	Highpower Cr.	Swift Fork Kuskokwim		50'	3	0.5	Sheefish	
TOTAL								3,917	499.4	

KEY: K = king salmon, CO = coho salmon, CH = chum salmon, S = sockeye salmon, P = pink salmon; s = spawning area, r = rearing area

*Corridor widths and acreage summaries are estimates based on the assumption that the average width of the stream below ordinary high water is 50 feet.

Appendix I

DESIGNATIONS AND APPROXIMATE ACREAGE BY SUBUNIT

Estimated acreage of each subunit is listed below. Subunit boundaries include all the lands affected by the plan: state patented or tentatively-approved (TA'd) land, state selections, and overlapping state and Native selections. Land proposed for new state selections and current selections proposed for relinquishment are identified in the footnotes.

<u>Management Unit</u>	<u>Subunit</u>	<u>Approximate Acreage</u>	<u>Primary Designations</u>
Unit 1 - North Fork	1a	39,000	Settlement
	1b	143,400	Wildlife Habitat
	1c	543,400 ¹	General Use
	<u>1d</u>	<u>144,000</u>	Forestry/Wildlife Habitat
		869,000	
Unit 2 - East Fork	2a	103,000	Forestry/Wildlife Habitat
	2b	324,500	General Use
	2c	46,100	General Use
	<u>2d</u>	<u>296,300</u>	Wildlife Habitat
		769,900	
Unit 3 - Tonzona	3a	211,800	Public Rec./Wildlife Hab.
	<u>3b</u>	<u>84,500</u>	General Use
		296,300	
Unit 4 - Big R. - South Fork	4a	293,100 ²	Wildlife Habitat
	4b	209,900	General Use
	<u>4c</u>	<u>101,800³</u>	Forestry/Wildlife Habitat
		604,800	
Unit 5 - Kuskokwim River	5a	105,000 ⁴	For./Pub. Rec./Wildl. Hab.
	5b	17,600	Settlement
	5c	55	Public Rec./Settlement
	5d	10,900	Resource Management
	5e	26,900	Settlement

¹Includes approximately 28,800 acres proposed for relinquishment.

²Includes approximately 44,160 acres proposed for new state selection.

³Includes approximately 29,440 acres proposed for new state selection.

⁴Includes approximately 6,400 acres proposed for new state selection.

<u>Management Unit</u>	<u>Subunit</u>	<u>Approximate Acreage</u>	<u>Primary Designations</u>
	5f	33,300	Settlement
	5g	23,000	Settlement
	5h	6,200	Resource Management
	5i	211,200	General Use
	<u>5j</u>	<u>330,800</u>	Wildlife Habitat
		765,555	
Unit 6 - Nixon Fork	6a	83,200	For./Pub. Rec./Wildl. Hab.
	6b	23,000	Minerals/Wildlife Habitat
	6c	439,000	General Use
	<u>6d</u>	<u>157,400</u>	Wildlife Habitat
		702,600	
Unit 7 - Innoko River	7a	169,000	Min./Trans./Wildl. Hab.
	7b	131,800	For./Trans./Wildl. Hab.
	7c	838,400	General Use
	<u>7d</u>	<u>53,800</u>	Wildlife Habitat
		1,193,000	
Unit 8 - Dishna River	8a	30,700	Resource Management
	8b	14,700	Resource Management
	8c	50,600	Minerals/Wildlife Habitat
	8d	36,800	Forestry/Wildlife Habitat
	8e	524,400	General Use
	8f	239,400	Min./Pub. Rec./Wildl. Hab.
	<u>8g</u>	<u>195,200</u>	Wildlife Habitat
		1,092,800	
Unit 9 - Takotna River	9a	249,000	General Use
	9b	145,300	Wildlife Habitat
	9c	46,000	Minerals
	<u>9d</u>	<u>48,000</u>	For./Pub. Rec./Wildl. Hab.
		488,300	
Unit 10 - George River	10a	16,600	Public Rec./Wildlife Hab.
	<u>10b</u>	<u>368,300⁵</u>	Minerals/Wildlife Habitat
		387,500	
Unit 11 - Swift River	11a	142,700	Wildlife Habitat
	<u>11b</u>	<u>90,200</u>	General Use
Unit 12 - South Alaska Range	12a	725,800	Public Rec./Wildlife hab.
	12b	45,400	Resource Management
	<u>12c</u>	<u>220,200</u>	General Use
		991,400	

⁵Proposed for new state selection.

<u>Management Unit</u>	<u>Subunit</u>	<u>Approximate Acreage</u>	<u>Primary Designations</u>
Unit 13 - North Alaska Range	13a	1,831,000	Public Rec./Wildl. hab.
	13b	104,800	Settlement
	13c	9,000	Settlement
	13d	14,000	Settlement
	13e	46,100	Settlement
	<u>13f</u>	<u>117,100</u>	<u>General Use</u>
		2,122,000	
Unit 14 - Stony River	14a	28,800 ⁶	Forestry/Wildlife Habitat
	14b	245,800 ⁷	Wildlife Habitat
	14c	213,100	General Use
	<u>14d</u>	<u>207,400</u>	Public Rec./ Wildlife hab.
		695,100	
Unit 15 - Holitna River	15a	674,600 ⁸	Forestry/Wildlife Habitat
	15b	1,160,300	Wildlife Habitat
	15c	784,000	Water Res./Wildl. Hab.
	15d	256,000	General Use
	15e	16,000	Settlement
	15f	15,400	Settlement
	<u>15g</u>	<u>39,700</u>	Minerals/Wildlife Habitat
	2,946,000		
Unit 16 - Holokuk - Oskawalik	16a	424,300	Wildlife Habitat
	16b	212,500	General Use
	<u>16c</u>	<u>18,600⁹</u>	Settlement
		655,400	
Unit 17 - Aniak River	17a	83,800	For./Pub. Rec./Wildl. Hab.
	17b	689,300	Public Rec./Wildlife Hab.
	17c	441,200	General Use
	17d	9,000	Settlement
	<u>17e</u>	<u>17,900</u>	Public Rec./Wildlife Hab.
		1,241,200	
Unit 18 - Birch Tree Crossing	18a	27,600	Materials/Transportation/ Water Res./Wildl. Hab.
TOTAL		<u>16,078,755 acres¹⁰</u>	

⁶Includes approximately 4,480 acres proposed for new state selection.

⁷Includes approximately 640 acres proposed for new state selection.

⁸Includes approximately 5,760 acres proposed for new state selection.

⁹Entire subunit is proposed for state selection.

¹⁰Includes 448,340 acres proposed for new state selection and 28,800 acres proposed for relinquishment.

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