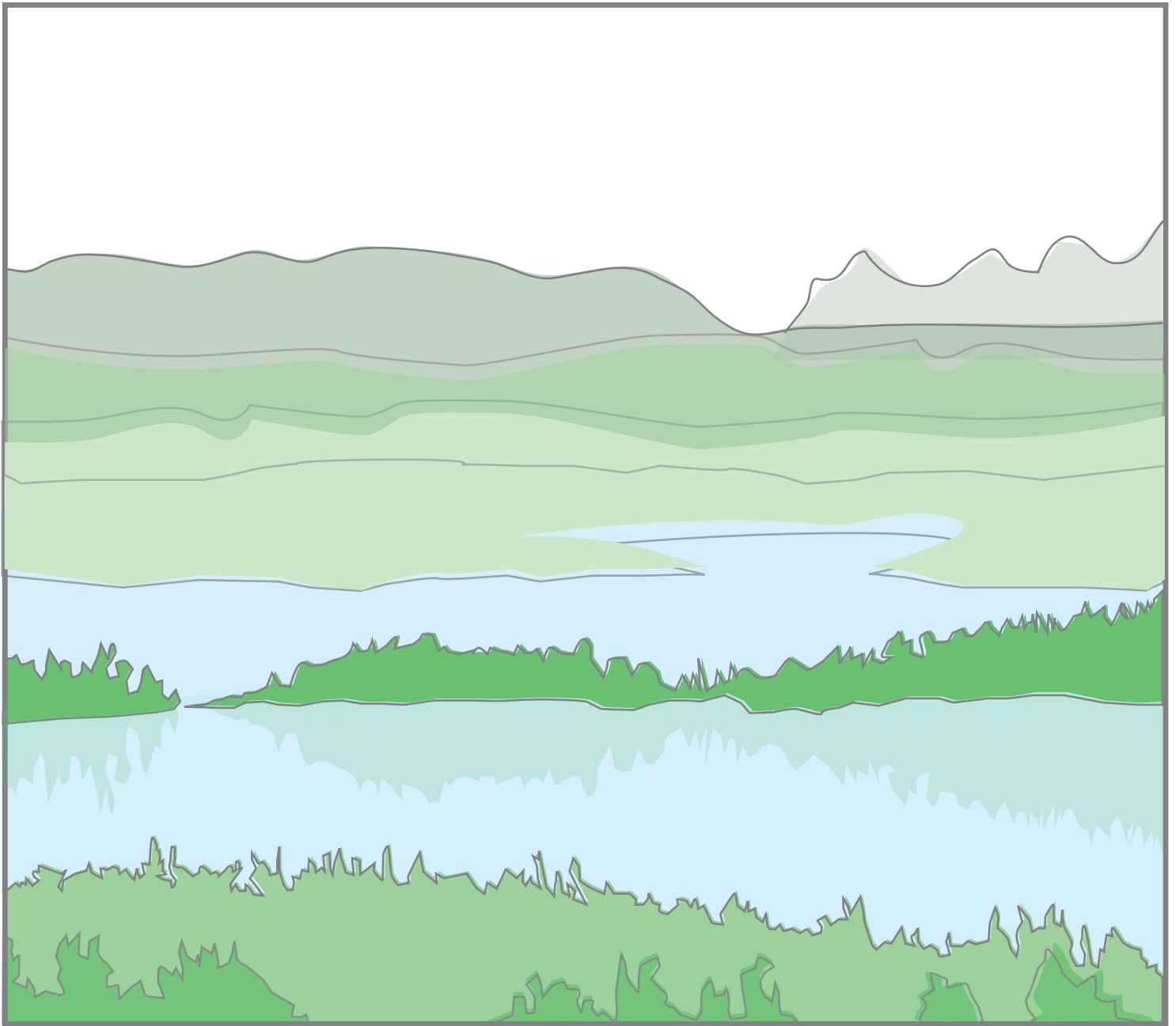


Fish Creek Management Plan

October 2010



Prepared by Agnew::Beck Consulting, LLC, JadeNorth Consulting.
Funded by the Matanuska-Susitna Borough.



NON-CODE ORDINANCE

By: Borough Manager
Introduced: 09/01/09
Public Hearing: 09/15/09
Adopted: 09/15/09

**MATANUSKA-SUSITNA BOROUGH
ORDINANCE SERIAL NO. 09-130**

AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY ADOPTING THE FISH CREEK MANAGEMENT PLAN FOR BOROUGH-OWNED LAND IN THE FISH CREEK AREA, AND TO CLASSIFY APPROXIMATELY 23,358 ACRES OF BOROUGH-OWNED LAND AS RECOMMENDED IN THE PLAN.

WHEREAS, there are approximately 43,300 acres of land in the Fish Creek area; and

WHEREAS, the Fish Creek Asset Management Plan is a joint effort of the Borough and Alaska State Department of Natural Resources (DNR), with land ownership in the Fish Creek area by both parties; and

WHEREAS, the Borough owns approximately 23,358 acres of land in the Fish Creek area; and

WHEREAS, the Community Development Department worked cooperatively with contractors, the Alaska State Department of Natural Resources (DNR), Divisions of Agriculture, Parks and Outdoor Recreation, Mining, Land and Water and the Department of Fish and Game to develop an asset management plan for public owned lands in the Fish Creek area; and

WHEREAS, once the state DNR Commissioner and the Borough Assembly adopt the plan, the plan will direct how DNR will

manage State land and how the Borough will manage borough-owned land; and

WHEREAS, all property owners in the Fish Creek area were notified by mail about the planning process and the availability of draft plan documents for their review, scoping meetings and public open houses; and

WHEREAS, public scoping meetings and open houses were held over a two-year period; and

WHEREAS, written comments were collected, made part of the record and incorporated into the plan where feasible; and

WHEREAS, the Borough's Parks, Recreation and Trails Advisory Board, the Real Property Asset Management Board, and the Planning Commission have recommended adoption of the plan and the recommended land use classifications.

BE IT ENACTED:

Section 1. Classification. This is a non-code ordinance.

Section 2. Adoption of the Fish Creek Management Plan for Borough-owned land in the Fish Creek area. The Matanuska-Susitna Borough Assembly hereby adopts the Fish Creek Management Plan for borough-owned Land in the Fish Creek area, dated 2009.

Section 3. Land use classifications. The following land as described in the Fish Creek Asset Management Plan for

Borough-owned Land in the Fish Creek area be classified according to the recommendations in the plan:

Unit 1, Moraine Ridge 4,413 acres - General Purpose
Unit 2, Lakes Unit 4,466 acres - Resource Management
Unit 3, Wetlands-East &
West 3,121 acres - Watershed
Unit 5, Lower Fish Creek 6,915 acres - Agriculture
Unit 6, Homestead Creek 2,978 acres - Resource
Management/Forest Management
Unit 7, Flathorn Lake 3,438 acres - General Purpose


Section 4. Effective date. This ordinance shall take effect upon adoption by the Matanuska-Susitna Borough Assembly.

ADOPTED by the Matanuska-Susitna Borough Assembly this 15 day of September, 2009.



TALIS J. COLBERG, Borough Mayor

ATTEST:



LONNIE R. MCKECHNIE, CMC, Borough Clerk
(SEAL)

YES: Woods, Houston, Church, Bettine, and Kluberton.

NO: Ewing and Wells.

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF MINING, LAND AND WATER


SEAN PARNELL, GOVERNOR

DIRECTOR'S OFFICE
550 W. 7th AVE., SUITE 1070
ANCHORAGE, ALASKA 99501-3579

PHONE (907) 269-8600

FAX (907) 269-8904

The Commissioner of the Department of Natural Resources finds that the Fish Creek Management Plan meets the requirements of AS 38.04.065 and 11 AAC 55.010 - .030 for land use plans and hereby adopts the plan. The Department of Natural Resources will manage state lands within the planning area consistent with this plan.



w Tom Irwin, Commissioner
DEPARTMENT OF NATURAL RESOURCES

June 29, 2010

Date

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND AND WATER

LAND CLASSIFICATION ORDER NO. SC-08-001A001

- I. Name: Fish Creek Management Plan (FCMP)
- II. The classifications in Part III are based on written justification contained in one of the following plans:

Area Plan:

Adopted () Revised () Dated _____

Management Plan: Fish Creek Management Plan

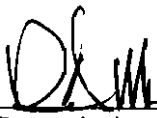
Adopted () Revised (x) Dated JUNE 29, 2010

Site Specific Plan:

Adopted () Revised () Dated _____

III.	Legal Description	Acreage	Acquisition Authority	Existing Classification	Classification by this action
	See FCMP 2009 maps	14,859	GS	See FCMP, 1984	See Chapter 3 FCMP, 2009

- IV. This order is issued under the authority granted by AS 38.04.065 and AS 38.05.300 to the Commissioner of the Department of Natural Resources. The above described lands are hereby designated and classified as indicated. Nothing shall prevent the reclassification of these lands if warranted in the public interest.

Classified: 
w Commissioner, Department of
Natural Resources

Date: JUNE 29, 2010

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Chapter I

Introduction

Background and Overview of the Purpose of the Plan

The Fish Creek Management Plan guides the use of 43,300 acres of land managed by the Matanuska-Susitna Borough and by the Alaska Department of Natural Resources (DNR). The plan was originally adopted in 1984 by both the State and Borough (MSB Action Memorandum 84-244; DNR August 1984). Under the original plan, primary uses in the area were agriculture, fish and wildlife, watershed, and recreation. In addition significant areas were designated for forestry uses in conjunction with agriculture and for residential land sales on Borough land. An amendment to the plan concerning forestry uses was adopted March 1987 but expired in January 1995.

This updated plan was prepared in 2007-2009, based on the conclusion that much had changed since the original plan was adopted more than 20 years ago. Particular objectives of this update include a reconsideration of access options, revisions to reflect current market conditions for agriculture and forestry, and current Borough and State policies and methods for land sales. The management plan further addresses the growing concerns regarding sprawl and the need for protection and set asides of land to meet future needs for agriculture, local food sources, recreation and forest products.

An overriding motivation for this updated plan is the fact that the Fish Creek area lies just west of the communities of the southern Matanuska-Susitna Borough, which is the fastest growing part of Alaska, and one of the fastest growing areas in the country. The Fish Creek plan addresses the last large block of undeveloped land with good physical suitability for development in the southern Borough.

This management plan reflects the intention of earlier regional plans identifying the Fish Creek area for possible development, while reserving large blocks on adjoining lands for recreation and habitat protection. These include Nancy Lakes, Little Susitna River, Susitna Flats Refuge.

Possible development in this area includes timber harvest, agriculture and settlement. These activities are restricted to certain management units, explained

in the following sections and chapters of this plan and subject to the guidelines established in this plan. Timber harvests will be managed, sustainable and not large scale clear cuts. Agricultural development will differ from the previous Fish Creek Management Plan, focused on small agricultural parcels and reserving the option for agricultural development in other areas. Protective measures include buffers on streams and trails which presents an extensive, integrated system of lands set aside to protect watershed, fish and wildlife and recreation values. Finally the timing of development is linked to several projects that are addressing access improvements (see *Access to Project Area* section, Chapter 1: page 5-7).

Description of the Planning Area

The land covered by this plan is located entirely within the Matanuska-Susitna Borough. The area is bordered on the north by the Nancy Lake State Recreation Area, on the south by the Susitna Flats State Game Refuge, on the east by the Little Susitna State Recreation River and on the west by the Flathorn Lake area. It encompasses two management units identified in the Willow Sub-basin Plan – the Fish Creek and Moraine Ridge units. The Fish Creek project area takes in approximately 43,302 acres. Approximately 40 percent of the study area is State-owned and 60 percent is owned by the Matanuska-Susitna Borough, 14,859 acres and 25,358 acres, respectively (See Map 1.2, Chapter 1: page 5).

How the Plan is Organized

The plan has four chapters. The first chapter includes a summary and purpose of the plan, description of the planning area, how and why the plan was developed, what the plan covers, and a summary of plan actions.

Chapter 2 includes goals of the plan and guidelines that apply throughout the planning area. Guidelines are listed by resource and land use category. Guidelines are specific directives that apply to land-management and water-management decisions as resource uses and development occur.

What This Plan Will Do

Chapter 3 presents specific land use policy for the plan's seven management units. For each unit, the chapter includes a summary describing location, land ownership pattern, acreage, physical features, access, resources and uses. This is followed by a statement of the management intent and management guidelines.

Chapter 4 discusses specific actions necessary to implement the plan and provides important background information.

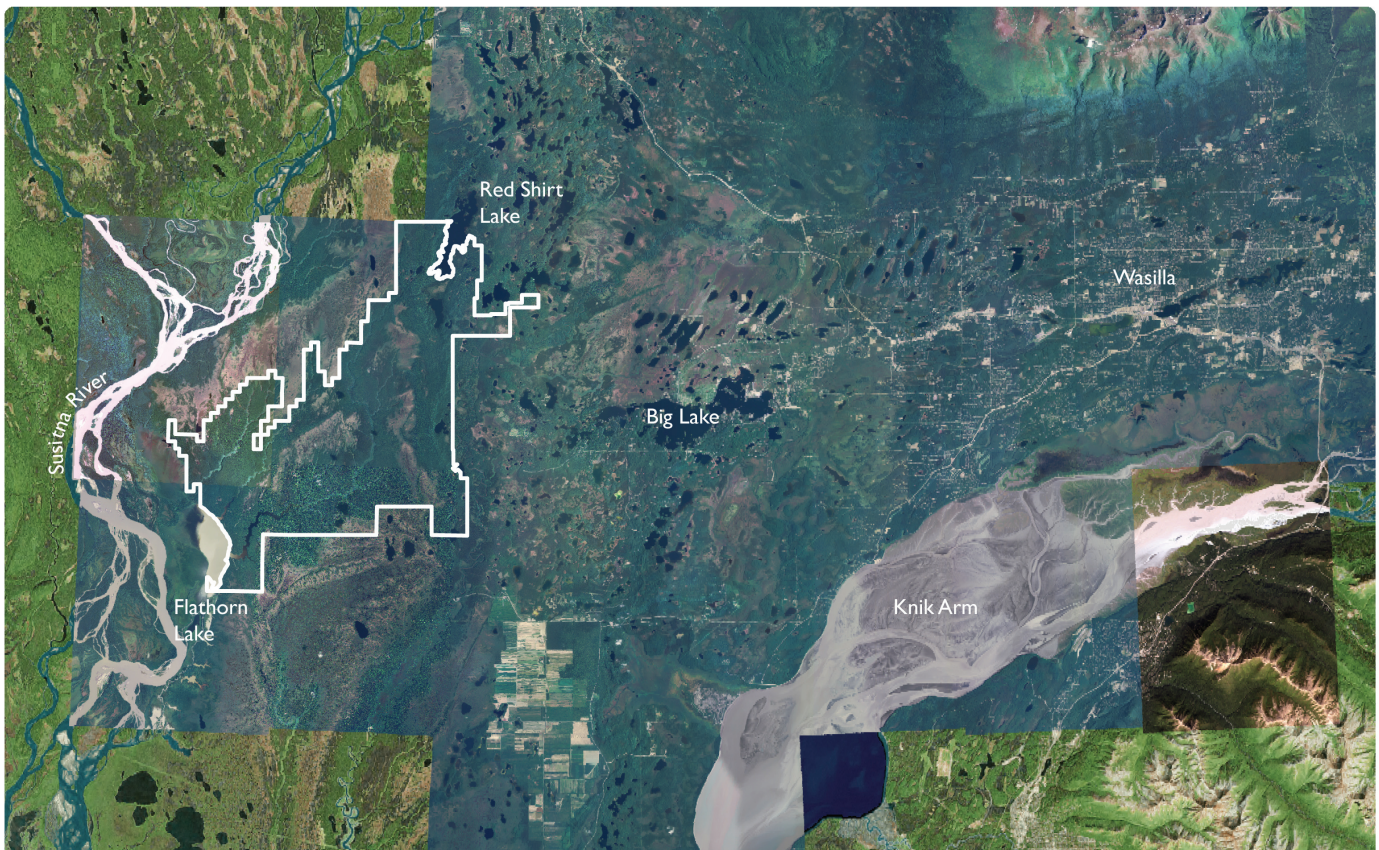
Appendix A, Glossary, is included.

During the course of the planning process a variety of ideas were explored on how best to use and protect the State-owned or Borough-owned land in the area. This plan takes those ideas and translates them into management objectives, guidelines and implementation actions. The plan will ensure that development of the Fish Creek area occurs in a responsible manner, reflecting interests of both present and future users.

The management plan is a joint effort of the Matanuska-Susitna Borough and the Alaska Department of Natural Resources. It becomes official policy for the management of State lands when approved by the director of the Division of Land and Water Management and concurred with by the Commissioner of the Department of Natural Resources, and for Borough lands, when approved by the Matanuska-Susitna Borough Assembly.

Map I.I. Project Location

Fish Creek Management Area



Alaska State Plane, Zone 4, NAD 1983
File: Fish_Creek_project_map.mxd, 2/22/08

I:293,372



This map was compiled by Agnew::Beck for the MSB.
Data courtesy of the Matanuska-Susitna Borough.



Once the DNR Commissioner and the Borough Assembly adopt the plan, it directs how DNR will manage state land and how the Borough will manage Borough-owned land. This plan is a land management document for State and Borough land; it has no direct effect on private lands. In addition, once land is sold from State or Borough ownership, activities on that land are no longer subject to the plan. The plan also ensures that development, use, and conservation of the area are consistent with the land's capabilities.

Relationship of Fish Creek Management Plan to Other Plans

The Borough reviewed this plan and found it to be conceptually consistent with the general intent and policies of the Matanuska-Susitna Borough Coastal Management Plan. However, specific consistency determinations can only be made as part of the agency review process based in turn on specific project proposals. The Fish Creek Management Plan update also builds from the general policies of the Willow Sub-Basin Plan. The Willow Sub-basin Plan – like the earlier Fish Creek Management Plan – is significantly out of date, and is currently being updated.

How the Plan was Developed

The Fish Creek Plan is the product of over three years of work by State and federal agencies, local governments, interest groups and the public. An initial public scoping meeting was held on May 9, 2007. The May meeting was designed to review information on the area's physical characteristics, natural habitat, current uses and access routes and obtain public comment on the direction for the plan. A second public meeting was held on March 29th, 2008. The meeting provided an introduction and overview of the draft plan. Meeting attendees provided feedback on specific elements of the draft plan. An additional public open houses was held on April 28, 2009.

The plan was presented to the Parks, Recreation and Trails Advisory Board and the Real Property Asset Management Board for introduction for review for early drafts as well as for the final draft review.

The Real Property Asset Management Board recommended adoption by the assembly by Resolution No. 08-03 on May 14, 2008. The Parks Recreation and Trails Advisory Board recommended adoption by the assembly by Resolution No. 08-06 on May 19, 2008.

The Matanuska-Susitna Borough Planning Commission held five meetings concerning the plan and recommended adoption by the assembly with Resolution No. 09-03 on January 5, 2009. The Matanuska-Susitna Borough Assembly adopted the Fish Creek Management Plan on September 15, 2009.

Concurrent with this approval process will be the State approval process.

In addition to the public meetings, numerous work group sessions were held with the project planning team. The Planning Team was composed of individuals from the Borough, DNR, and the Alaska Department of Fish & Game (ADF&G).

Who Developed the Plan

The plan was developed by Agnew::Beck and Jade North working under contract with the Borough. The consulting team worked closely with State and Borough land and resource management staff throughout the planning process.

Summary of Plan Actions

Management Guidelines (see Chapter 2)

According to the Alaska Constitution, State lands are intended to be managed for multiple uses. The same applies to Borough lands. When potentially conflicting uses are designated in a management unit, the plan uses guidelines to allow various uses to occur while minimizing conflicts.

Management Intent and Land Use Designations (see Chapter 3)

The plan presents management intent statements that define the overall resource management objectives for each of the plan's seven management units and provide resource and use information for land managers. The plan also establishes land use designations summarizing the uses and resources for which each unit will be managed.

Classifications

All State and Borough lands in the area will be classified consistent with the land use designations in this plan. Classifications made by the plan will be noted to State status plats and other land use records. A table that shows how designations convert to classifications is located in Chapter 4.

Note that the plan contains primary and secondary designations. Consistent with State regulation, classifications on the State status plats will reflect only the primary designation. The secondary designations are still important and a way to convey the management intent and, along with primary designation, are included on Borough maps. State and Borough personnel will use the primary and secondary designations, along with the management intent and guidelines when making decisions about uses of the land.

Summary of Plan Implementation and Modification

Economic and social conditions in Alaska and the planning area are certain to change and the plan must be flexible enough to change with them. The plan will be reviewed periodically to monitor progress in implementing the plan and to identify issues that may require amendment or modification.

Specific modifications may be made whenever conditions warrant them, though a request for such changes must follow certain procedures. The plan may be amended after approval by the Commissioner of DNR following public review and consultation with appropriate agencies. Special exceptions and minor changes must also follow certain procedures.

See Chapter 4 for a more detailed description of the types of plan changes allowed under regulation including amendments, special exceptions, and minor changes.

Project Area Features & Use

Land Ownership and Land Use in the Surrounding Area

The Fish Creek area is largely surrounded by State-managed, legislatively-protected recreation and refuge areas. To the north lies the Nancy Lakes State Recreation Area; directly to the east lies the Little Susitna State Recreation River area and to the south the Susitna Flats State Game Refuge. The lands to the west are included in the Susitna Corridor Management Unit of the Willow Sub-Basin Plan. (See Map 1.2, Ownership below.)

The total acreage for the Fish Creek Management area is 43,302 acres. Of this 25,358 acres are owned by the Borough and 14,860 by the State. The remainder is either private, 2,475 acres, or Native-owned, 475 acres.

As a result of State and federal land disposals, most of the land around the larger lakes is in private ownership. Cabins have been built on some of these parcels at Flathorn, Redshirt, Cow, Delyndia and Hock Lakes.

Access to the Project Area

Streams and wetlands limit surface access to and within the Fish Creek area. The Little Susitna River forms a substantial barrier for any overland access coming into the area from the road system to the east. An old tractor trail leading to a homestead at Flathorn Lake is the only known attempt at developing a road within the project area. This route is now impassible due to vegetation growth.

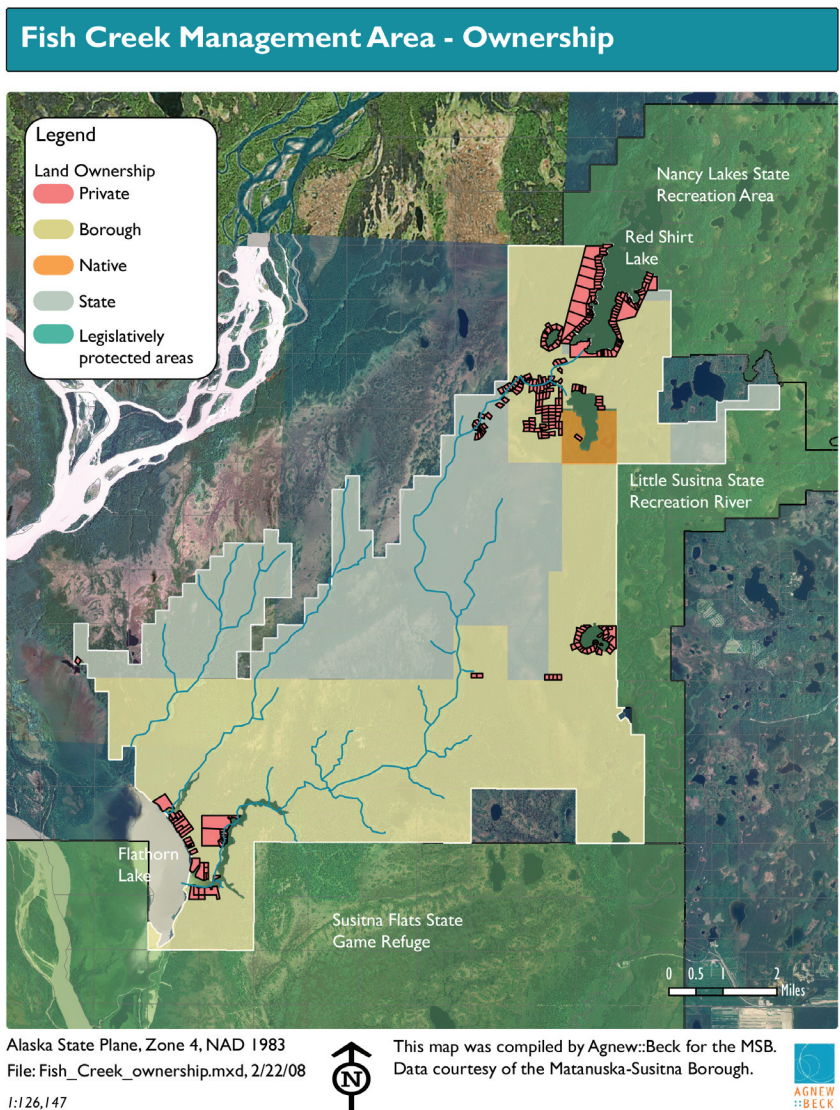
The only other known route cleared for transportation purposes is the historic Iditarod Trail. This route initially served as the mail route from Anchorage to points west and runs diagonally through the unit from the Little Susitna River to Susitna Station. This historic alignment, while reserved as formal trail route, is not currently used by the Iditarod sled dog

race, and is not visible on the ground through much of the plan area.

Seismic and survey lines crisscross the unit, including a cleared township line (between Townships 16 and 17 North). These arrow-straight, narrow, partially cleared routes often cross over wetlands, but in winter do provide snowmobile routes. Numerous formal and informal trails, primarily used in the winter, cut through the management area as well. These trails are largely undocumented and are discussed in more depth in individual management unit chapters.

Three informal private airstrips have been built in the unit to provide access to parcels along Flathorn and Redshirt lakes.

Map 1.2. Project Area and Ownership



A winter haul road has been constructed and used by Enstar Alaska, Inc. for work on its natural gas pipeline. This haul road runs south of the Fish Creek unit in the Susitna Flats State Game Refuge. Construction and use of this haul route requires authorization from both the Alaska Departments of Natural Resources and Fish and Game.

In addition to these routes, the Alaska Department of Transportation and Public Facilities (ADOT&PF) has reserved an easement for the Chuitna Right-of-Way (ADL 57588), identified on the potential access map (Map 1.3). This was reserved over 30 years ago, as part of a very broad, statewide, long range transportation plan.

The Borough’s Long Range Transportation Plan includes a rail corridor along the western side of the Fish Creek area. The route would connect Point MacKenzie with more northerly destinations. A specific location has not been platted.

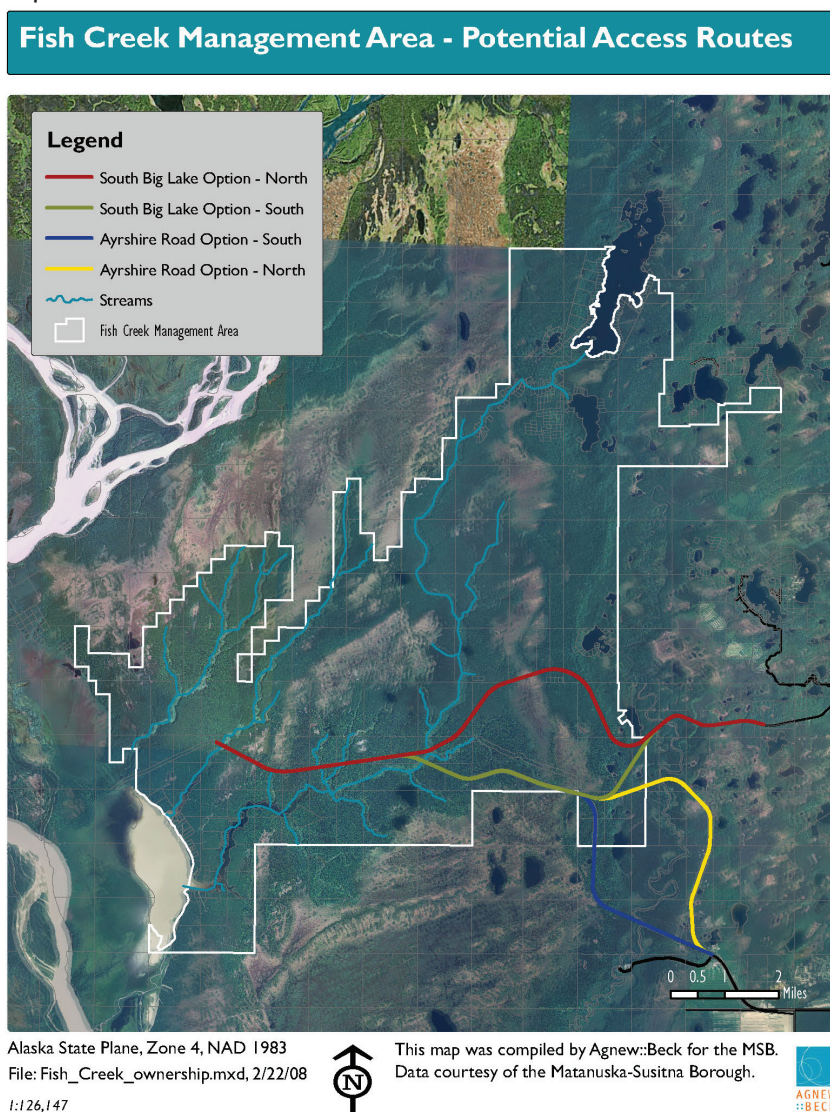
West Mat-Su Access Project

The Borough, working with ADOT&PF, has begun a project to provide transportation access to the Fish Creek Management Area – the West Mat-Su Access Project. This project is exploring options to cross the Little Susitna River from the Big Lake area to provide access into the Fish Creek Management area. The project is currently in the environmental analysis phase, under the requirements of the National Environmental Policy Act (NEPA) which involves identifying a range of design alternatives to be considered.

Several potential access routes have been identified and are illustrated in Map 1.3.

Access across the Little Susitna River is needed before the designations of this plan can be implemented. This plan set aside an area within the 4,700-acre Moraine Ridge Management Unit for residential land sales, and associated community uses such as schools, commercial areas, and parks. Land sales cannot occur until roads are built to the area, and this, in turn, requires a bridge across the Little Susitna River. Similarly, the plan allocates the 6,900-acre Lower Fish Creek Management Unit primarily for agricultural sales. Agricultural sales likewise require developed access and a bridge. Road access is needed for timber harvest, although timber sales could occur with a temporary bridge over the Little Susitna and seasonal roads. Finally, as access is developed for these purposes, it will allow the Borough and the State to discuss management of the Upper Fish Creek and Homestead Creek Units. The plan designates these units “Resource Management” for the State and “General Purpose” for the Borough with the expectation that by the time access is

Map 1.3. Potential Access



developed to them, there will be more information to decide whether agriculture or residential land sales are appropriate.

Physical Environment

The landscape of the Fish Creek area is typical of much of the Susitna valley, with forested uplands split by stream channels and muskegs of varying size. This type of terrain is best explored in winter, when the ground is frozen and much of the vegetation lies under a blanket of snow. In the summer, moving about the area on foot is difficult at best: distinctive landmarks are few, and walking tends to be slow and wet.

Topography

The large majority of the planning area is nearly flat. Exceptions include the small channels cutting 15-20 feet into the ground along area creeks and the Moraine ridge which rises over 150 feet above the surrounding landscape.

Hydrology

The Fish Creek management area contains an array of streams, lakes, and wetlands. Fish Creek, Homestead Creek and an unnamed tributary, Unnamed Creek, to Flat Horn Lake are the three main drainages within the Fish Creek management area. They flow diagonally from northeast to southwest into Flathorn Lake. These three major streams are fed by the wetlands and numerous tributaries throughout the project area. There are seven notable lakes that are at least partially in the project area; Flathorn Lake, Redshirt Lake, Cow Lake, Delyndia Lake, Butterfly Lake, Yohn Lake and Hock Lake. The lakes vary in size from approximately six square miles for Flathorn and Redshirt Lake, to one-half square mile for Hock Lake. The Fish Creek management area contains approximately 10-12,000 acres of wetlands. These wetlands occur in large areas in a branching pattern along the lateral drainages of Fish Creek.

Soils

The U.S. Department of Agriculture (USDA) has classified soils nationwide to evaluate agricultural potential. These classifications are based on soil characteristics including depth, composition and

drainage. The soil classes range from Class I (the best) to Class VIII. The Fish Creek unit contains approximately 16,000 acres identified as Class III soils. Class III soils have more severe limitations restricting plant choices and/or requiring special conservation practices. There are no Class I soils in Alaska. Soil depth reaches 30 inches in this area. A soils map can be seen in the figure on the following page (see Map 1.4, Fish Creek Soils) which classifies the area according to the system used by the USDA National Cooperative Soil Survey.

Large blocks of undeveloped Benka (blue and olive shadings on soils map) and Whitsol soils (darker green areas on soils map) occur in the Fish Creek Area. Small areas of Nancy soils occur interspersed between soils on short, steep slopes and in poorly drained areas. According to the 1998 Matanuska-Susitna Soil Survey, conducted by the USDA, each of these soils has favorable characteristics for agricultural development, including good drainage, thick silty surface layers, and coarse-textured substrata.

Vegetation

Vegetation in the area includes bands of willow, alder, spruce, birch, aspen and cottonwood, separated by bands of wetlands. At slightly higher elevations in the north, alders are more common. Wetland sites are primarily muskeg (peat bog) which provides a home for plants that thrive in the wet, acid soil, including different willow species, sedges and the occasional Venus fly trap.

Forest*

Stands of spruce, birch, and cottonwood cover more than 20,000 acres of Fish Creek, over half the project area. Of this total, approximately 18,000 acres are judged to have commercial forestry potential. The Borough portion of the plan area contains 14,772 acres of forested land, with 11,903 acres having commercial volumes of hardwood and spruce. Approximately 6,000 acres of State land have potential for commercial forestry.

*Information in the subsection has been taken from the Matanuska-Susitna Boroughs Forest Inventory Report 2006 and MSB Operable Forest Land Analysis Report 2007.

The forest is composed primarily of birch and white spruce intermixed with lesser volumes of cottonwood, aspen and black spruce. The average commercial forest acre contains approximately 190 trees greater than 6 inches in diameter (dbh).

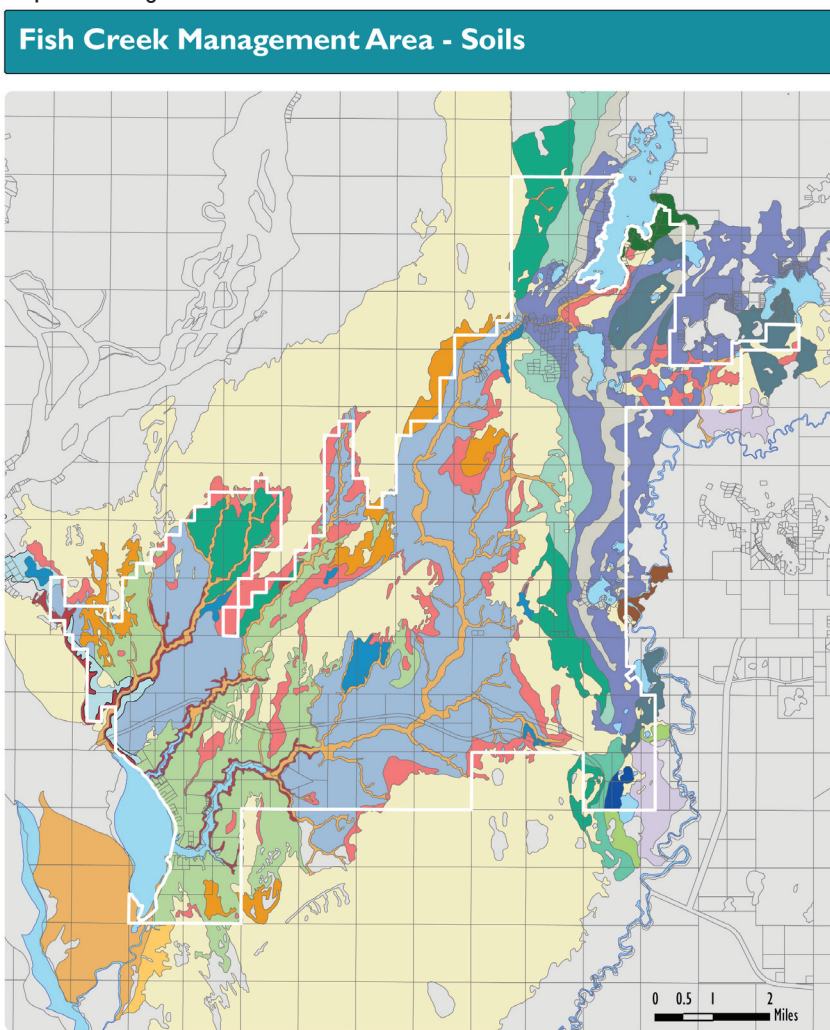
Borough lands have been typed into stratum (numbered 1 to 6). Stratum 1, 3 and 5 are the most prevalent. Stratum 1 stands are relatively younger-growth forest with high hardwood (birch) composition. These even-aged stands have relatively high timber volume/acre (1,727 cubic feet/acre). In contrast with much of the Borough, where aging birch trees are prone to heart rot, these stands have little damage. Only 18 percent are live trees with disease, the lowest incidence of disease surveyed in the Borough. Strata 1 (Pole Timber closed

strata) has the most with 332 trees per acre; strata 5 (Mixed forest saw timber closed) has 186 trees per acre.

On Borough land, there are an estimated 196,413 net ccf (100 cubic feet) of operable timber, 120,599 net ccf of birch, 51,447 net ccf of white spruce, 17,214 net ccf of cottonwood, 6,180 net ccf of aspen, and 973 net ccf of black spruce.

Also present are several large contiguous stands of closed hardwood (Sawtimber, Stratum 3). The acreage is composed of river bottom cottonwood and has the least volume of white spruce timber volume/acre (181 CUFT/acre). The cottonwood component is approximately 929 CUFT/acre. These are predominantly hardwood timber; old-growth stands with 29 percent of the area are estimated to be diseased live trees, including cull trees.

Map I.4. Management Area Soils



Alaska State Plane, Zone 4, NAD 1983
File: Fish_Creek_soils.mxd, 2/22/08



This map was compiled by Agnew::Beck for the MSB.
Data courtesy of the Matanuska-Susitna Borough.



I:119,028

Legend

- Fish Creek Management Area
- Parcels

Soils

- BENKA SILT LOAM, 0 TO 3 PERCENT SLOPES
- BENKA SILT LOAM, SLOPING AND MODERATELY STEEP
- BENKA SILT LOAM, UNDULATING
- BENKA-LITEN COMPLEX, NEARLY LEVEL AND MODERATELY STEEP
- CRYAQUEPTS, DEPRESSIONAL, 0 TO 7 PERCENT SLOPES
- CRYODS, LOW ELEVATION AND CRYOCHEPTS, 30 TO 70 PERCENT SLOPES
- DELYNDIA SILT LOAM, 0 TO 5 PERCENT SLOPES
- DELYNDIA-HISTOSOLS COMPLEX, 0 TO 3 PERCENT SLOPES
- ESTELLE SILT LOAM, STEEP AND SLOPING
- ESTELLE, HILLY-DISAPPOINT COMPLEX
- ESTELLE, UNDULATING-DISAPPOINT COMPLEX
- HISTOSOLS
- KASHWITNA SILT LOAM, SLOPING AND MODERATELY STEEP
- KICHATNA-DELYNDIA SILT LOAMS, 0 TO 4 PERCENT SLOPES
- NANCY SILT LOAM, 0 TO 3 PERCENT SLOPES
- SUSIVAR-MOOSE RIVER COMPLEX, 0 TO 2 PERCENT SLOPES
- TYPIC CRYAQUEPTS, 0 TO 2 PERCENT SLOPES
- WATER
- WHITSOL SILT LOAM, 0 TO 2 PERCENT SLOPES
- WHITSOL SILT LOAM, SILTY SUBSTRATUM, 0 TO 7 PERCENT SLOPES
- WHITSOL SILT LOAM, SILTY SUBSTRATUM, SLOPING AND MODERATELY STEEP
- WHITSOL SILT LOAM, TILL SUBSTRATUM, SLOPING AND MODERATELY STEEP

The predominant stratum that occupies the Borough owned sections of the Fish Creek area (75% of the Borough forest acreage) is Stratum 5, Closed Mixed Forest Sawtimber. These stands are most commonly large-sized and contiguous; this stratum is found on better drained growing sites and has the highest volume/acre of 1,775 CUFT/acre with white spruce component of 529 CUFT/acre. These stands are also predominantly old-growth stands, with 32% diseased live trees, including cull trees.

These last two comprise mostly stagnated or declining, high risk trees representing all age classes. Stands have moderate, but significant incidence of disease and for management purposes can be considered old-growth.

The majority of the timber is uneven-aged and mature or over-mature. Much of this is birch or white spruce. In the older stands there is a high incidence of disease, which reduces the commercial volumes. Compared to other areas of the Borough, timber in the Fish Creek area exists in relatively large contiguous stands.

Fish and Wildlife

The area is home to a wide variety of fish and wildlife and also provides migratory corridors for a number of species. Overall, the fish and wildlife resources of the area are similar to most forested areas in the Matanuska-Susitna Borough.

Small mammals that may be found in the area include fox, beaver, wolverine, land otter, mink, short tailed weasel and least weasel, marten, snowshoe hare, red and flying squirrels, porcupine, muskrat, marmot, pica, lynx (listed as a species of concern under the Endangered Species Act), and coyote.

Fish species include five species of pacific salmon and eight other important freshwater game fish. These include king, coho, sockeye, chum, and pink salmon, lake and rainbow trout, Dolly Varden, Arctic grayling, northern pike, whitefish, and burbot. Non-game fish species include blackfish, long-nose sucker, slimy sculpin, and Arctic lampreys (DNR 1980 data, Petersville Road Corridor Management Plan, pg. 28). Flathorn Lake, Redshirt Lake, Hock Lake, Cow Lake, Butterfly Lake, Delyndia Lake and Yohn Lake as well as the three major stream systems (Fish Creek, Homestead Creek and unnamed Flat Horn Lake tributary) in the area all support anadromous fish species such as pacific salmon. The full extent of fish use in these systems is unknown.

Brown and black bear are found throughout the area. Moose are abundant throughout the planning area and wolves are present in good numbers. These species use a wide range of habitats throughout the planning area.

The area attracts a range of migratory bird life, including swans, loons, raptors, golden eagles, bald eagles (mostly in summer) and sand hill cranes. Like

large areas of Southcentral Alaska, this area includes land that may be used by three species of concern under the Endangered Species Act – the northern goshawk, olive-sided flycatcher, and the American peregrine falcon. Non-migratory birds are also present, including ravens, magpies, downy woodpeckers, chickadees, spruce grouse, brown creeper, gyrfalcon, pine grosbeak, redpoll, willow and rock ptarmigans, and several species of owls. Waterfowl are numerous in the Susitna Game Refuge to the south, and occur in lesser numbers in this area. Species include migratory trumpeter swans, harlequin ducks, Canada geese and tule greater white-fronted geese, loons, grebes, long-tailed ducks, and scoters.

Historical Uses and Heritage Resources

A cooperative effort led by the Bureau of Land Management (BLM) to conduct a resource inventory along the Iditarod National Historic Trail identified two sites in the Fish Creek Management Area, the Little Susitna Roadhouse 1 and the Relief Cabin. These sites were evaluated and given significance levels of 3, making them sites likely not eligible for the National Register and therefore recommended minimum management. Effort should be made to protect these sites in accordance with established federal or State regulations. Additionally, a cooperative effort led by the Borough and Knik Tribal Council is underway to identify numerous archaeological sites along Fish Creek.

Chapter 2

Area-wide Goals & Guidelines

Introduction

This chapter presents land management policies for each major resource affected by the plan: fish and wildlife, forestry, public recreation, and settlement and agriculture. The chapter also presents management policies for several land management issues: heritage resources, stream corridors and wetlands, trails and access, and transportation. These policies are presented in alphabetical order in this chapter. These policies apply to State and Borough land throughout the planning area, regardless of land use designations.

The policies are presented in two categories for each subject: goals and guidelines. Goals are the general condition the State and Borough are trying to achieve. Goals for different resources may conflict. For example, it may not be possible to have significant land sales or timber harvests and maximum habitat protection at the same time. The goals, however, do describe the ideal intentions for management. Guidelines are more specific. They are specific directives that will be applied to land and water management decisions as resource use and development occur. Guidelines are rules that the State and Borough will apply to decisions involving each resource.

Definitions

For definitions of terms commonly used in this chapter, see Appendix A, *Glossary*.

Area-wide Goals

The following goals are for State and Borough lands in the planning area. Goals are general conditions that DNR and the Borough attempt to achieve through management actions. The goals are listed alphabetically without priority.

Economic Development. Provide opportunities for jobs and income by managing public land and resources to contribute to a vital, self-sustaining local economy.

Fiscal Costs. Consistent with other goals, minimize the need for and the fiscal cost of providing government services and facilities, such as roads. Locate settlement uses where there necessary services can be efficiently provided.

Public Health and Safety. Maintain or enhance public health and safety for users of public land and resources.

Public Use. Provide and enhance diverse opportunities for public use of public lands, by residents and visitors, including uses such as hunting, fishing, skiing, dog mushing, snowmachining, and other types of recreation.

Quality of Life and of the Natural Environment. Maintain or enhance the quality and diversity of the natural environment, including air, land and water, fish and wildlife habitat and harvest opportunities; and protect heritage resources and the character and lifestyle of the community.

Settlement and Agriculture. Provide opportunities for private ownership and leasing of land currently owned by the State and the Borough.

Sustained Yield. Maintain the long-term productivity and quality of renewable resources on a sustained-yield basis, including fish, wildlife, and forests.

Transportation. Maintain an appropriate land base and area-wide regional transportation system, including trails.

This plan implements the concept of green infrastructure as a way of conserving natural areas that function as community infrastructure. It does so by requiring an extensive system of buffers along streams to protect water quality, fish habitat, and human use of the streams; and by requiring protection for wetlands; and mandating protection for trails. To further implement the concept, the plan requires that quality public land within settlement areas and on lakes be retained for public use, and requires that settlement be clustered and separated by bands of open space, which will provide benefits for recreation, and habitat/migration benefit to wildlife.

General Planning Information

By law, public land held by the State and Borough will be managed for multiple uses. There are three exceptions to this multiple use policy: land that is sold, leased, or otherwise taken from public management; land legislatively designated for a particular use (such as a park or refuge); and parcels of 640 acres or less managed under a management agreement for a particular agency purpose (such as a Department of Transportation maintenance site).

This multiple use mandate does not mean that all uses are allowed in all locations. This plan emphasizes minimizing land use conflicts through plan guidelines rather than through prohibitions. However, if the State or Borough determines a proposed use is incompatible with the designated use, the proposed use shall not be authorized or it shall be modified so that the incompatibility no longer exists.

Public land will also be managed to protect access to public resources (except when it is determined that access may be detrimental to a resource).

This plan contains no guidelines specific to mineral development as the Fish Creek Planning Area is closed to new mineral entry, and there are no known existing mining claims in the area.

This plan designates State and Borough lands in categories that are generally consistent with current use patterns and reflect the significant resources in the planning area.

Guidelines by Resource Value or Activity

The State and the Borough will use these guidelines when issuing authorizations and conveyances or making management decisions on State and Borough Land. The guidelines apply to all State and Borough land covered by the Fish Creek Management Plan unless the plan explicitly exempts units or designations.

All authorizations for use of State and Borough land within the planning area will be consistent with the management intent in this plan.

In considering authorizations for use of public land, the State and Borough will adjudicate applications to:

1. Minimize damage to waterbodies, fish and wildlife habitat, vegetation, trails, anchorages, and other resources.
2. Minimize conflicts between resources and uses.
3. Protect the long-term value of the resource, public safety, and the environment.

If authorizations from other agencies are required, DNR and the Borough will consider issuing a permit or lease contingent upon issuance of these other authorizations.

Other State or Borough Land

It is possible that some parcels will be acquired by the Borough or the State after this plan is adopted. Those acquired for a specific use (i.e., an access site purchased for recreation, or private land acquired for a road right-of-way) will be managed for the uses for which they were acquired. Lands that come into public ownership through other means will be designated and classified consistent with the designation identified in the applicable management unit or, if not so identified, according to the standards of the *Applicability of Plan Designations and Classifications* section in Chapter 4. All of these actions may occur without a plan amendment.

Area-wide Guidelines

Fish and Wildlife Habitat and Harvest

Resource Goals

Maintain and Protect Publicly Owned Habitat

Base. Maintain in public ownership and protect sufficient suitable land and water habitats to provide for the sustained yield of fish and wildlife resources; maintain a diversity of species; support commercial, recreational, and traditional uses; protect a unique or rare assemblage of species of regional, state, or national significance.

Ensure Access to Public Lands and Waters. Ensure access to public lands and waters to maintain or enhance responsible public use and enjoyment of fish and wildlife resources.

Mitigate Habitat Loss. When land sale or resource development projects occur, avoid or minimize reduction in the quality and quantity of fish and wildlife habitat.

Provide Economic Opportunities and Employment.

Contribute to Alaska's economy by protecting the fish and wildlife resources that contribute directly or indirectly to local, regional, and state economies through the consumptive and non-consumptive use by commercial, sport, and personal user groups.

Avoid Introduction of and Reduce the Spread Of

Invasive Plant and Animal Species. Manage State and Borough lands to avoid or reduce the spread of non-native invasive plants and animal species. This management will be consistent with the applicable requirements of 11 AAC 34.

Management Guidelines

A. Mitigation. When issuing permits, leases or other authorizations, or otherwise authorizing the use or development of land. The State and the Borough will recognize the requirements of the activity or development and the effects to habitat to establish stipulations or measures needed to protect fish, 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, wildlife, or their habitats.

The State and Borough will enforce stipulations and measures, and will require the responsible party to remedy any significant damage to fish, 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 State and Borough 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, 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 or wildlife habitat occurs, the loss will be rectified by repairing, rehabilitating, or restoring the affected area to a useful condition.

The State (but not the Borough) will consider requiring replacement or enhancement of fish and wildlife habitat when steps 1 through 3 cannot avoid substantial and irreversible loss of habitat. The ADF&G will identify the species affected, the need for replacement or enhancement, and the suggested method for addressing the impact. Replacement with 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.

The Borough shall utilize the Wetlands Land Bank to mitigate adverse affects on wetland or riparian areas.

B. Riparian Zones. Authorizations for use of riparian zones of anadromous and high-value resident fish streams shall protect the habitat and water quality from significant adverse effects.

See the *Stream Corridors and Wetlands* section in this chapter for more information about stream corridors.

C. Alteration of the Hydrologic System. To the extent feasible and prudent, channelization, diversion, damming or placement of dikes that will have a significant adverse impact on anadromous and high-value resident fish streams and lakes will be avoided.

D. Water Intake Structures. When issuing authorization to remove water from a fish stream, DNR will require installation of practical water intake structures that do not result in entrainment or impingement of fish and will maintain instream flows needed to sustain existing fish populations. Where appropriate, the simplest and most cost effective technology may be used to implement this guideline.

Water intake structures should be screened, and intake velocities will be limited to prevent entrapment, entrainment, or injury to fish. The structures supporting intakes should be designed to prevent fish from being led into the intake. Other effective techniques may also be used to achieve the intent of this guideline.

Consistent with AS 46.15.133 and AS 46.15.155, DNR and ADF&G will be consulted at the time of the authorization to determine screen size, water velocity, and intake design if the intake structure is in fish habitat.

E. Habitat Manipulation. Habitat manipulation through water control, timber management practices, or other measures may be used to improve habitat for fish and wildlife species where ADF&G determines that it is beneficial to the species or habitat and the applicable State or Borough land manager determines that it is compatible with other primary uses and management intent.

F. Management of Invasive Plant and Animal Species. The management of invasive plant and animal species is a significant concern within the planning area. The State and Borough will manage its lands and waters to avoid the introduction of and reduce the spread of invasive non-native species, consistent the requirements of 5 AAC 41, 5 AAC 92 and 11 AAC 34.

Although the strategic management plan for noxious and invasive plant species recognizes this as a statewide issue, this problem is typically best handled at the local level.

The Alaska Committee for Noxious and Invasive Plant Management developed a statewide management plan (2001). The Mat-Su Cooperative Weed Management Area (CWMA) has a strategic plan written for the Fish Creek Management Area. The Wasilla Soil and Water Conservation District has a program in place that currently concentrates on surveying areas of infestation and providing landowners with treatment options and Best Management Practices in an effort to control these species. The ADF&G has management authority over invasive fish and wildlife species. The ADF&G, Division of Sport Fish, has developed the Alaska Aquatic Nuisance Species Management Plan (2002) and the Management Plan for Invasive Northern Pike in Alaska (2007) to provide management options for aquatic invasive species. Contact the AACD or ADF&G for more information.

G. Threatened and Endangered Species.

All land use activities will be conducted consistent with Endangered Species Acts to avoid jeopardizing threatened or endangered species of animals or plants; to provide

for their continued use of an area; and to avoid modifying or destroying their habitat. Specific mitigation recommendations shall be identified through interagency consultation for any and use activity that potentially affects threatened or endangered species. As of the date of adoption of this plan, there is no threatened or endangered species habitat within the Fish Creek Management Area.

The Ecological Services Anchorage Field Office of the U.S. Fish and Wildlife Service will be consulted on questions that involve federally listed threatened or endangered species.

H. Bald Eagles Activities that potentially affect bald or golden eagles will be consistent with the State and Federal Endangered Species Acts and the Eagle Protection Act of 1940 as amended. Consult with the U.S. Fish and Wildlife Service for locations of eagle nest, roost, and perch trees and for measures required to avoid disturbance.

Resource and Management Summary

Resources. Fish Creek and its tributaries are used for spawning, rearing, and as a migration corridor for rainbow trout, and coho, sockeye, and pink salmon during the various phases of their life cycles. Homestead Creek is also an anadromous stream and provides rainbow trout and coho salmon habitat. Large lakes within the planning area – Cow, Delyndia, Butterfly, Redshirt, Hock, Yohn and Flat Horn – also provide fish habitat for juvenile silver salmon and rainbow trout and other fish such as burbot, and northern pike in some of the lakes. Currently, fishing pressure in the area is light, and focuses on the lower reaches of the creeks and the lakes. Most use is by nearby residents. Use will increase once access is developed to the area. Moose and bear are also found throughout the planning area, and some hunting use of the area currently occurs.

Management. Protecting fish and wildlife habitat and the ability to view and harvest fish and wildlife is an important emphasis of this plan. Fish and Wildlife Habitat and Harvest is the primary designation in the management units that are primarily wetlands – Wetland East and Wetland West totaling 8,184 acres. In addition, it is a secondary designation in every other management unit, except those designated Resource Management, where a decision on the primary use has not been made. These secondary designations total 23,976 acres. Some of the most important management guidelines create publicly owned buffers to protect fish habitat, water quality, and recreation along the significant streams in the unit and their tributaries. These streams include Fish Creek, Homestead Creek, and the unnamed stream that flow into Flat Horn Lake. Similar buffers and guidelines protect water quality in the extensive wetlands that feeds these stream systems. Further information about resources and protection of fish and wildlife is given in the individual unit discussions in Chapter 3. See also the *Stream Corridors and Wetlands* section of this chapter.

Forestry

Resource Goals

Supply Timber. Provide wood for personal and commercial uses and to provide jobs tied to timber harvesting and processing.

Manage for Sustained Yield. Ensure that timber harvest adheres to sustained yield principles.

Support Public Recreation. Support and maintain diverse opportunities for public recreational activities in a variety of settings, and promote scenic quality.

Protect Fish and Wildlife. Protect and enhance fish and wildlife habitat.

Protect the Natural Environment. Protect air, land, and water quality.

Wildland Fire Suppression. The Alaska Division of Forestry shall continue to provide wildland fire suppression within the planning area consistent with the requirements of the Alaska Interagency Fire Management Plan.

Management Guidelines

In addition to the guidelines below, the Alaska Forest Resources and Practices Act (AS 41.17) and Regulations (11 AAC 95) provide Statewide guidance for managing forestry related activities. Commercial timber harvest must also obtain applicable permits from the Matanuska-Susitna Borough and comply with Borough timber harvest regulations. MSB 28.60 requires a Borough permit for a commercial harvest greater than 40 acres in size. These laws, regulations, and ordinances apply to timber harvest on all land: State, Borough, or private.

In addition to the requirements noted above, on State land timber harvest must also be consistent with the State's Susitna Forestry Guidelines, and DNR must develop a Forest Land Use Plan prior to any commercial timber sale greater than 10 acres (AS 38.05.112). The forest land use plan provides site-specific guidelines for that particular sale. On Borough land, harvest must comply with MSB 23.20, which also requires a site-specific timber management plan. Finally, timber harvest activities must be compatible with the guidelines in this

section and with the management intent statements and land use designations identified for each unit in Chapter 3 of this Fish Creek Management Plan.

A. Timber Harvest

1. Forest management of land designated resource management. The Resource Management designation is used in this plan where lands have a number of important resources but a specific near-term resource allocation decision is not practical, primarily because of lack of current access. As a result, the decision on a final allocation will be delayed until the future. The Upper Fish Creek and Homestead Creek Management Units have a primary designation of Resource Management and Forestry. The timber in these units is available for timber production and will be part of the timber base for calculating the Annual Allowable Cut, subject to applicable laws, regulations, and guidelines of this plan. However, timber within the Lakes Unit, which is also Resource Management, will not be included in the timber base because of the land-ownership pattern and the type of public use in the unit. Forestry is not a secondary use within the Lakes Unit.

2. Forest management of land under other designations. Units designated for Fish and Wildlife, Recreation, Agriculture, and Settlement will not be included in the long-term timber base. Timber harvest may occur in these units if it can be made compatible with the specific management intent and guidelines for these units in Chapter 3. Forestry is a secondary use for the Lower Fish Creek unit, but timber harvest must be consistent with future agricultural sales in the unit. Significant timber harvest is not expected within the Wetlands Units, Moraine Ridge, Lower Fish Creek, and Flat Horn Lake (except as noted below).

3. Timber salvaged from land cleared for non-forest use. There is no limit on the percent cover/volume that can be salvaged from clearing land for a non-forest use such as for roads, transmission lines, materials sites.

4. Cutting and gathering wood for personal use. Dead and down wood on State and Borough land may be gathered for personal use. This wood may not be used for barter, sale, or commercial purposes. Using dead and down firewood for a cooking or warming fire on State land is a Generally Allowed Use under 11 AAC 96.020, unless the area has been closed to all fires because of danger to wildfire. However, on State and Borough land harvesting of dead and down wood for personal use or for other uses still requires a permit. Live trees on public land may be available for personal use harvest, but may not be harvested without a DNR/Borough authorization.

B. Fire Hazard and Hazardous Trees.

Although the State and Borough are restricted from commercial timber harvests in specific sensitive areas (such as near eagle nests, in critical fish and wildlife habitat, and in riparian buffers), harvesting in these areas is allowed when necessary to prevent or control outbreaks of wildfire, or to remove dead and dying trees that are potential hazards to public facilities. Timber harvest, even in the restricted areas mentioned above, may be allowed if it is determined through an evaluation of risk factors, that harvest is necessary to create fire breaks and fire roads, or to remove potential hazard trees, especially near public facilities like schools, campgrounds, and near heavily settled areas. If harvesting is proposed to occur near eagle nest trees, the State and Borough should consult with the U.S. Fish and Wildlife Service during the planning process or before harvesting operations begin.

C. Transportation and access for forestry management activities.

1. General. The location, design, and development of roads shall consider multiple use values of public lands, and reflect the management intent and primary uses for the affected area. Specifically, within the Upper and Lower Fish Creek Units, design shall consider the utility of the roads for eventual residential and agricultural use, and shall be consistent with the transportation policies within this plan. The goal is to optimize long-term public use benefits from new access while minimizing adverse effects on existing public uses, including maintaining a range of recreation opportunities and wildlife habitat values.

2. Road Management and Access.

Decisions on road location should be coordinated with a Borough/State overall road plan for the area. If such a plan has not been created, road location and permanence decisions should be coordinated with the Borough and State to be consistent with likely future development plans and road location for the area. Descriptions of proposed access corridors, types of access, and proposals for road management after forest operations will be included in the State and Borough Five-Year Schedules of Timber Sales. The Forest Land Use Plan for each sale will include preliminary location of any proposed primary and secondary roads. The Forest Land Use Plan or transportation schedule shall state whether or not roads will be permanent or put-to-bed (closed and reclaimed consistent with Forest Practices Act requirements) and whether or not roads put-to-bed will be open to off-road vehicle use. Non-permanent secondary roads and spur roads will be put to bed in compliance with requirements of the Forest Resources and Practices Act.

D. Recreation Areas. Impacts on recreation and scenic values must be considered prior to harvesting. Within the Fish Creek Management Area, areas with importance to the tourism and recreation industry include the Nancy Lakes Recreation Area, Little Susitna Recreational River, and the Susitna Flats State Game Refuge. However, there is no management unit with a secondary designation of forestry adjacent to either Nancy Lakes or the Little Susitna River. Lower Fish Creek, designated agriculture with a secondary forestry designation of forestry, abuts the Susitna Flats Refuge.

AS 38.05.112 requires Forest Land Use Plans (FLUP) to contain appropriate guidelines for areas to be harvested, including road access, buffers, harvest method, etc. The FLUP will be the method for addressing site-specific recreation conflicts and opportunities. The FLUP will include identification of known trails, established open space corridors, and other public recreation sites. This plan will be consistent with the stream corridor and trail policies presented in this chapter. Most recreation activities will be concentrated along rivers, streams, and lakeshores. Waterbodies provide access routes and support recreation by boat, snowmachine, float plane, and ski plane. Water bodies are also key elements of the beauty and diversity of the landscape. On State or Borough land, the Alaska Forest Practices Act (AS 41.17.118 and .119) sets minimum standards for the harvest of timber along water bodies with anadromous or high value resident fish. Buffers vary depending on the characteristics of the water body. FRPA also requires that timber harvest on State land within 300 feet of water bodies with anadromous or high value resident fish must be consistent with the maintenance or enhancement of important wildlife habitat. Additional restrictions may be required in specific areas to protect trails and recreational use of the stream corridors. See *Stream Corridors and Wetlands* in this chapter, discussion of applicable management units in Chapter 3.

Resource and Management Summary

The planning area contains substantial acreage with high or moderate potential for commercial timber production, as a result of the presence of favorable soils, elevation and climate. While not currently road-accessible, this area is significantly closer to road access than the majority of forested State and Borough lands.

The Upper Fish Creek and Homestead Creek units, with 7,700 and 3,593 acres respectively, are designated Resource Management. These areas have soils with agriculture potential, but they cannot be developed until these areas have permanent road access. Permanent access is expected to be a decade or more away for Upper Fish Creek and likely much longer for Homestead Creek. By that time, the demand for timber, agriculture, or settlement land may change significantly from today's assessment. For that reason, the plan delays the decision about if and when to sell these areas for agriculture or settlement. In the interim, the timber will be included in the State and Borough timber base, and be available for timber harvest. To the extent practical, forestry roads will be located in a manner that may work to develop permanent access to the area, and enhance the eventual agricultural or settlement value of the areas.

The Lower Fish Creek Unit, 6,917 acres, is designated for agriculture with forestry as a secondary use. This unit, while currently inaccessible by road, is closer to developed access and likely to be the first agricultural unit to be road accessible. Timber harvest in this unit may occur but only in a manner consistent with the eventual sale of the area for agriculture. Areas to be sold for agriculture are not expected to be significantly harvested.

Significant commercial timber harvest is not expected in other units (Lakes, Flat Horn, or Moraine Ridge), except for salvage from road rights-of-way, for land use conversion, or fire protection. However, forestry is designated a secondary use in Moraine Ridge, 4,684 acres, to recognize areas reserved for community timber uses such as woodlots, as a part of the planned settlement in that unit. Forestry is also a secondary use in the Flat Horn Lake Unit, recognizing that possible future timber sales in adjoining units may partially extend into this area. See Chapter 3 for details.

An important part of the management objectives for timber harvest areas is to maintain and improve recreation opportunities in waterfront areas and the adjacent riparian and woodland areas, to protect (and even improve) habitat for species such as moose, and to maintain and enhance the scenic values of these lands. The plan protects waterbodies, fish and wildlife habitat, scenic resources, recreation, and water quality through guidelines in Chapters 2 and 3 and management intent statements for each unit. These resources also receive protection through the requirement that timber harvest be managed pursuant to Alaska Forest Resources and Practices Act (AS 41.17) and regulations (11 AAC 95), Susitna Forest Guidelines, and DNR's Forest Land Use Planning process, Borough Ordinances MSB 28.60, MSB 23.20, and other laws.

Heritage Resources

Resource Goals

The Alaska Historic Preservation Act establishes the State's and the Borough's basic goal: to preserve, protect, and interpret the historic, prehistoric, and archaeological resources of Alaska so that the scientific, historic, and cultural heritage embodied in these resources may pass undiminished to future generations.

Management Guidelines

A. Heritage Resources Identification.

Identify and determine the significance of all heritage resources on public land through the following actions:

1. Cooperative efforts for planned surveys and inventories between borough, state, federal, and local or native groups;
2. Heritage resources surveys conducted by the DNR personnel and Borough Cultural Resources Division (CRD);
3. Research heritage resources on State and Borough land by qualified individuals and organizations.

B. Heritage Resources Protection. Protect significant heritage resources through the following actions:

1. Review construction projects and land uses for potential conflict with heritage resources.
2. Cooperate with concerned government agencies, native corporations, statewide or local groups, and individuals to develop guidelines and recommendations on how to avoid or mitigate identified or potential conflict.

C. Cultural Surveys Prior to Land

Offerings. The State Office of History and Archaeology within the DNR's Alaska Division of Parks (OHA) will review plans for State land conveyance and notify DNR if there are known sites in the area being considered for conveyance. The Borough Cultural Resources

Division (CRD) will review plans for conveyance of any Borough property. Cultural surveys or inventories should be conducted prior to the design of land offerings in areas the State OHA or CRD determine have high potential to contain important heritage sites and for which information is inadequate to identify and protect these sites. The extent and type of cultural survey within the area of the proposed land disposal shall be determined by OHA or CRD in consultation with DNR and the Borough as appropriate.

D. Heritage Resources in Timber

Management Areas. The OHA and the Borough CRD will review proposals for timber management activities through the interagency review processes for the State Five-Year Schedule of Timber Sales, and Forest Land Use Plans; and the Borough Five-Year Schedule and Annual timber sale notices. These agencies will recommend archaeological surveys in timber sale areas with a high potential of heritage resources. Areas of known historic, archaeological, or paleontological sites should not be disturbed. Timber operations shall not occur within 300 feet from the boundaries of known sites unless the OHA and CRD determines, in consultation with the Division of Forestry (DOF) or the Borough, as appropriate, that certain activities can occur without significantly impacting the heritage resource. The OHA and CRD shall, within the limits of staffing and funding, assess the extent and significance of the heritage resource and work with the DOF or the Borough to develop site-specific mitigation measures to protect the heritage sites while allowing timber management.

E. Heritage Resources Adjacent to

Recreation Facilities. Recreation facilities that might subject heritage sites to vandalism because of the increased public use should not be placed adjacent to the heritage sites.

F. Heritage Sites Should Be Reported When Found. The Alaska Heritage Resources Survey (AHRS) is an inventory of all reported historic and prehistoric sites within the State of Alaska and is maintained by the OHA. The AHRS is used to protect heritage resource sites from unwanted destruction. By knowing of possible heritage remains prior to construction, efforts can be made to avoid project delays and prevent unnecessary destruction of heritage sites. While over 22,000 sites have been reported within Alaska, this is probably only a very small percentage of the sites that may actually exist but are as yet unreported. The AHRS is not complete or static, so heritage sites, when found, should be reported to the OHA.

Resource and Management Summary

See the final section of Chapter 1 for a short overview of *Historical and Heritage Resources*.

Public Recreation

Resource Goals

Land will be provided for a spectrum of public outdoor recreation opportunities. This includes accessible outdoor recreation sites with well-designed, maintained and conveniently located recreation facilities as well as less developed and natural areas for recreation pursuits that do not require developed facilities. Specific goals include:

Accessible Public Use Opportunities. Develop a system of recreation areas, trails, waysides, rivers and sites that provide a wide range of year-round outdoor recreation opportunities for all ages, abilities and use preferences in close proximity to population centers and major travel routes. These should include places for both developed and less developed recreation.

Remote & Undeveloped Public Use Opportunities. Provide recreation opportunities on less developed land and water areas both within the State and Borough park systems as well as areas outside the systems, which serve multiple purposes.

Commercial Development. Provide opportunities for commercial development of recreation facilities and services through land sales, leases, concessions and permits where public recreation needs can most effectively be provided by private enterprise, while minimizing environmental impacts and conflicts with existing users of an area.

Space for Future Needs. Reserve accessible public lands near communities sufficient to meet existing and expected future recreation needs. Assist communities through cooperative planning, conveyance of State lands, and grant-in-aid for parks and trails within population centers.

Resource Protection. Protect scenic beauty and environmental quality.

Management Guidelines

A. Roles of Different Public Land Owners in Providing Public Recreational Opportunities. Generally, the State's role is to retain and manage land supporting recreational opportunities of regional or statewide significance. Generally, the Borough's role is to retain and manage locations of more local, community or sub-regional significance. The State and Federal governments are most capable of providing recreational opportunities that require large land areas, while the Borough and cities are generally better able to provide and manage more localized recreation. To recognize municipalities' roles in providing community recreational needs, the State should consider transferring some State recreation sites near existing communities to the Borough. The selection of these sites shall be agreed to by the Borough and the State and shall be contingent on the Borough's commitment to develop and maintain the recreational values of the sites.

B. Commercial Recreation Leasing on Public Land. The Borough and the DNR may lease lands for commercial recreation within the planning area. There are two DNR processes for leasing State land for commercial recreational facilities – one process is described by AS 38.05.073, the other by AS 38.05.070 and .075. Unless Chapter 3 of this plan specifically requires the .073 commercial leasing process for a management unit, applications may be adjudicated under either process.

C. Authorizations Adjacent to Public Recreation Facilities. Authorizations may be allowed adjacent to public recreation facilities, including community recreation sites, public use cabins, fishing sites, or trails if DNR determines that the two uses can be made compatible by design, siting or operating guidelines; or if there is no feasible and prudent alternative for the activity. This guideline also applies to sites reserved for future recreation facilities. DNR's determination will be made after consultation with the public recreation facility manager.

D. Scenic Resources. Facilities on public-owned uplands should be located and designed to blend in with the natural surroundings. Stipulations to accomplish this guideline may be attached to a development plan to address location, size, color, materials, requirements for vegetative or topographic screening, or other measures as appropriate.

Resource Allocation Summary

Background. The Fish Creek Area is located adjacent some of the more popular recreation destinations in the Matanuska-Susitna Borough. Activities in those areas – Nancy Lakes State Recreation Area, the Little Susitna River and the Susitna Flats State Game Refuge – include sightseeing, fishing, camping, hunting, snow machining and all-terrain vehicle use, and cross-country skiing. The same categories of recreation occur in the Fish Creek area, but at a much lower level due to poor access. As access is developed these uses are expected to increase. Pass-through snow machining and fishing on fly-in lakes are the dominant recreation activities today. Within this chapter, the Stream Corridors and Wetlands section and the Trails and Access section describe how the plan will maintain the major areas of recreation use in public ownership. These include the corridors along streams, the wetlands used for winter transportation, and important trails. In many cases, the management intent also provides for habitat protection.

Park Systems. While the plan includes areas intended for recreation, it recommends no additions to the State Park or Borough Park systems. As the area develops, it is likely that specific parks for settlement areas or for use with trails and streams will be appropriate.

Highways and Trails. Trails into and through the Fish Creek Planning Area are important both to adjoining communities and people from outside the area. Activities on these trails include snowmachining, cross-country skiing, hiking, hunting, and dog sledding. The Iditarod National Historic Trail System passes through parts of the Management Area. To ensure continued opportunities for public use of trails, a system of trails will be protected through public ownership of trail corridors. A State-owned corridor protects the Iditarod National Historic Trail System. If the land over which the trail passes is conveyed an easement or other

reasonable means of public access will be reserved. See also the *Trails and Access* section later in this chapter.

Rivers and Lakes. Rivers and the few lakes within the Fish Creek Area offer recreation and tourism opportunities for fishing, floating, paddling and power-boating. In addition to providing recreation opportunities, these areas are important for fish and wildlife populations. The plan requires buffers and building setbacks along waterbodies within the Fish Creek Planning Area. For additional information, see the *Fish and Wildlife Habitat and Harvest*, and the *Stream Corridors and Wetlands* sections of this chapter.

Settlement and Agriculture

Resource Goals

Residential Land Sales. Provide a pool of land available for private ownership over the long term. Although this plan and subsequent land sale decisions can identify and offer lands that have characteristics which make them suitable for year-round residences, seasonal cabins, or self-sufficient remote residences, once the land is sold the owner will decide how to use the land. For example, the State and the Borough cannot guarantee that land sold to satisfy the demand for seasonal cabins will not be used for permanent residences or for commercial purposes if regulations for the programs under which the land was sold do not preclude such uses. There are, however, some exceptions such as covenants restricting uses to agricultural uses, easements, and building setback requirements.

Agriculture. Provide for the opportunity for Alaskans to pursue an agrarian lifestyle through sale of lots with agricultural covenants and through agricultural leases. As with residential settlement, once land is sold for agriculture – even with an agricultural covenant – there is no requirement that the owner put the land into production. Both State and Borough agricultural sales include a covenant that restricts non-agricultural uses, and restricts subsequent subdivision including not allowing subdivision into parcels smaller than 40 acres. In this manner the covenant ensures that the land cannot be used in a manner that significantly diminishes its agricultural potential and reserves at least the potential for eventual agriculture use. The Borough also has a program that creates tax advantages to users who engage in agricultural activities on their land.

Compact Settlement Areas. In general, the plan attempts to create a land use pattern characterized by settlement areas separated by continuous areas of open space remaining in public ownership. Public open space provides for uses such as recreation, habitat, hunting, forest management, public access, and watershed protection.

Fiscal Impacts. Land disposals should be sited and planned to minimize the costs of infrastructure and other services resulting from settlement. Road access to land sale areas should be provided for those areas where

roads will eventually be demanded prior to the sale of the land.

Management Guidelines

A. Coordination with Local Governments. Because the State and the Borough both have land appropriate for residential and agricultural land sales, the two governments' land offering programs should be coordinated to best achieve community objectives. To this end, the State and Borough should develop a joint disposal plan. This plan could consider the Borough's fiscal planning for road extension priorities and its plans for levels of services in different areas. The disposal plan should express the community objectives to be met and how the requested capital improvement funds would support Borough-wide priorities for roads and service extensions to benefit current and future residents.

B. Agricultural Land. Land sold for agricultural purposes consistent with the designations described in Chapter 3 of this plan will be sold with an agricultural covenant to preserve the agricultural potential of the land.

C. Commercial Use of Sold Lots. Lands where fee simple interest is sold or other disposal of State or Borough interest under exchange or conveyance programs occur may be used for commercial or noncommercial purposes, unless otherwise specifically stated in sale documents.

D. Public Land within Subdivisions. Open space, parks, community trails, or recreation areas should be identified on plats of a residential subdivision. Land dedicated for this use must include enough quality land in the right location to provide areas for active park and recreation uses for the subdivision's residents and future users from surrounding areas. Particular needs include reservation of public land for trails within and through the sale area, and for access to and enjoyable use of amenity areas such as streams and lakes. Use of public waters will be protected by easements or public

land consistent with AS 38.05.127. Factors used in evaluating the adequacy of the proposed open space, park, trail, or recreation area include size, shape, topography, geology, tree cover, access, and location.

E. Regional Trails near Subdivisions. Before a land is offered for sale, the State or the Borough, as appropriate, will review commonly used trails within or near the offering to ensure that trails are appropriately buffered, necessary access easements are in place and that they remain usable or are rerouted so that use of the trails for access and recreation may continue.

F. Borough Platting Ordinance;

Requirement to Build Roads. The Borough platting ordinance requires that there is “legal and physical road access provided to all subdivisions and to all lots within subdivisions.” The platting board may waive this requirement only if “no practical means of providing road access to a proposed subdivision exists and upon a showing that permanent public access by air, water or railroad is both practical and feasible” (MSB 16.20.100). To comply with this ordinance, neither the Borough nor the State may sell land within the Moraine Ridge, Upper and Lower Fish Creek, or Homestead Creek management units without providing legal and physical road access — that is, actually constructing roads to each parcel. In addition, no land within these areas is to be sold for residential subdivision use until such time as the Matanuska-Susitna Borough standard collector level road (or better) has been constructed to provide access between and among the subdivisions. Subject to platting board application and review, land sales within the Flat Horn Lake management unit may be sold without physical road access. Individuals who own land near Flat Horn Lake access their land by boat floatplane, snowmachine or ski plane consistent with Borough law.

G. Remote Cabin Site Sales; Remote Recreational Cabin Program. DNR will only sell pre-surveyed land within the Fish Creek Planning Area; remote recreational cabin program offerings (or similar stake-it-yourself programs) are prohibited within the planning area. In addition, land sales will be offered only on lands designated Settlement.

H. Erosion, Flood Control, and Pollution Prevention. All land disposals will comply with applicable Borough requirements for the mapping and protection of flood hazard areas.

Resource and Management Summary

The Fish Creek Planning Area is one of the largest undeveloped areas suitable for residential uses near the fastest growing area in Alaska – the populated area of the Matanuska-Susitna Valley. This plan ensures that areas suitable for settlement are reserved for that purpose to respond to future demand for farm land and residential development.

The plan designates land both for residential subdivisions and for agriculture. This plan designates the Moraine Ridge Management Unit for residential settlement. The management unit is 4,684 acres in size. Land sales will be designed in phases, following expansion of the road system. It is expected to be sold in road-accessible subdivisions. Green infrastructure concepts will be implemented by clustering and limiting the acreage for development; reserving community areas and green spaces nearby; and protecting trails, wetlands, streams, and wildlife corridors. The total amount of land to be sold from this unit will be decided during Borough design of the sales, but will not exceed 50 percent of the area. The plan also designates land within Flat Horn Lakes Management Unit as Settlement (4,191 acres). This unit already includes 40 private parcels. While the plan gives the Borough the ability to sell remote residential land within the unit, the management intent is to allow a limited number of additional lots with sales to maintain the remote residential use of this area as a fly-in recreational cabin designation.

The plan designates the Lower Fish Creek Management Unit (6,917 acres) for agriculture, with secondary designations of forestry, public recreation, settlement and wildlife habitat. This management intent directs this area to be developed for small-parcel agricultural lots once roads are constructed to the area. Some portions of the unit may also be sold for residential land sales as well.

The Upper Fish Creek and Homestead Creek units, with 7,700 and 3,593 acres respectively, are designated Resource Management. These areas have soils appropriate for agriculture, but they cannot be developed until these areas have permanent road access. Permanent access is expected to be a decade or more away for Upper Fish Creek and likely much longer for Homestead Creek. By that time, the demand for timber,

agriculture, or settlement land may change significantly from today's assessment. For that reason, the plan delays the decision about when and if to sell these areas. This plan expects that any eventual decision to sell land for agriculture or settlement will leave at least 35% of the productive forest lands in these units for long-term forestry; however, the eventual decisions on whether to sell land, and how much to retain for forestry will be made years into the future. In the interim, the timber will be included in the State and Borough timber base. To the extent practical, forestry roads will be located in a manner that may work to develop permanent access to the area. Also, to the extent practical, they will be located to enhance the eventual agricultural or settlement value of the areas.

None of this land is expected to be sold soon. The land cannot be developed until the road system reaches the settlement and agricultural areas (see guideline F). The requirement to build roads helps ensure that land is not sold in a manner that burdens local government with future road building cost.

Fortunately, revenue from selling residential land is expected to be greater than the cost of preparing the land for sale and constructing internal subdivision roads, especially if the sale is for small lot sizes: 2.5 acres or perhaps as large as 5-acre lots. Larger lots require more road building to get to each parcel. At larger sizes, the road costs are greater than the potential land sale revenue.

In addition to the internal road system, a major connecting road will be needed to link the land sale areas with the road coming in from the planned Little Susitna River Bridge. Expected revenue from selling residential land is not great enough to fund both internal subdivision roads and also a significant length of roadway required to reach the subdivision. Consequently, the State and Borough will likely need to build the backbone road system in this area before land sales can occur.

With respect to agricultural land, the rough estimate of road costs made for this plan indicates that the market value of smaller agricultural parcels 40-acres and less may, in some situations, be equal to the cost of internal roads to access the parcels. Smaller agricultural lots, such as 20-acre parcels, would be more likely to generate

revenue to pay for internal road costs. A mix of smaller residential lots and 20 to 40-acre agricultural lots would be even more likely to provide revenue equal to the cost of internal access roads. But like the conclusions for residential land sales, the value of the agricultural parcels is not great enough to equal the cost of building roads from a main trunk road to the agricultural units. Under existing law, the State may sell 20- and 40-acre lots for agriculture. However, the Borough requires a lot size of at least 40-acres for the land to be designated as agriculture. Therefore, when planning for a Borough agricultural sale, the Borough may consider whether a change in ordinance is beneficial to require smaller lots and to better allow the agriculture sales to pay for the required road improvements.

The intent for agriculture land sales in Fish Creek is not to establish a large scale, commercial agriculture project in the style of the Point MacKenzie agricultural project, as was the case with the earlier version of the Fish Creek Plan. Instead, the goal is to sell smaller parcels that can be used for diverse uses, ranging from small scale vegetable farms, to management of forest resources for value-added timber products. Agricultural parcels will be sold with covenants to ensure the land can not be converted into small lots or otherwise used in a way that would preclude future agricultural activities.

In summary: neither agriculture nor residential land sales (except limited sales near Flat Horn Lake) may occur before roads are built to the area. The revenue from sale of residential and agricultural land is in some situations expected to be greater than the cost of providing internal roads but not large enough to pay for the cost to build a road to the sale areas. However, a long-term timber harvest program could provide pioneer roads that would decrease the cost of all-season roads required for agriculture or residential land sales.

The plan also includes management guidelines that ensure that recreational uses and habitat values are protected during land sale design. The plans keeps streams and trails in public ownership, and requires land be kept for public uses as a part of the land sale design (see sections concerning *Public Recreation*; and *Stream corridors, and Wetlands* in this chapter).

Stream Corridors and Wetlands

Resource Goals

Water Quality. Maintain water quality to achieve and protect State water quality standards, and to protect streambeds and wetlands from degradation.

Habitat. Protect fish and wildlife habitat along lakeshores, stream corridors, and wetlands.

Recreation and Tourism. Protect and enhance a variety of public recreation, tourism opportunities and cultural resources on and along waterbodies.

Scenic Qualities. Protect the visual quality of waterbodies.

Access. Provide public access to and along State-owned waterbodies.

Resource and Economic Opportunities. Contribute positively to other uses of natural resources and economic opportunities.

Watersheds. Inventory, manage, and reserve water resources to ensure a balance between instream and out-of-stream uses.

Management Guidelines

Under State law, the bed and adjoining land up to the ordinary high water mark of all navigable lakes, rivers and streams are retained in State ownership.

A. Priority of Public Uses in Stream

Corridors. DNR and the Borough will place a higher priority on protecting public use values in stream corridors than on providing opportunities for private ownership or development of land. Land along the major stream systems in the Fish Creek area will

be maintained in public ownership. However the demand for property along streams and the practicality of protecting every tributary to the major stream systems within the Fish Creek area may mean that some land is sold along tributary systems. Land sale programs along those tributaries with important recreational values will be designed to protect access to and along the streams for public uses such as fishing, hiking, camping, and travel on trails. Similarly disposals near these tributaries with important fish or wildlife habitat will be designed to ensure the protection of the habitat.

B. Retention of Publicly Owned Buffers Adjacent to Streams and Adjacent Wetlands.

Except in the Flathorn Lake Management Unit where the intent is to provide private land along streams, land will be maintained along streams and certain wetlands to protect fish and wildlife habitat, water quality, and public access according to the guidelines below. However, a publicly owned buffer of at least 50 feet to protect the public’s right to access and travel along the water body, and the building setbacks outlined with Guideline D in this section still apply.

In addition to the minimums in the table, where the stream is incised, the public buffer will be sized to include the immediately adjoining bluff plus 50 feet for a trail. Within the Fish, Homestead and unnamed Flathorn Lake Creek systems, including their tributaries, there will be a riparian buffer that includes all land below the definable bluff along the stream plus a 50-foot-wide strip along the top of the bluff. The known stream reaches to which the table

Table 2.1 Stream Buffers

Minimum Width	Where it Applies
Minimum 200 feet, landward from ordinary high water (both sides).	Main stem of Fish Creek, Homestead Creek, and the unnamed creek into Flat Horn Lake.
Minimum 100 feet, landward from ordinary high water (both sides)	First order tributaries to the main stem of the streams noted above plus streams with anadromous fish or high value resident fish.

applies are outlined in Map 2.1. In addition, the guideline applies to any other anadromous fish or high value resident fish-bearing waterbodies that are present but not identified on the map. Finally, for waterbodies that are not anadromous and where the primary management intent is to protect the public's right to travel or provide access for utilities, a public use easement under AS 38.05.127 ("to and along") shall be applied. Access easements may be used in combination with public land to be retained for public use or for the protection of resources. In these situations, easements may be used to provide access to areas of state or borough retained sensitive land, or provide access corridors between lots or parcels within subdivisions.

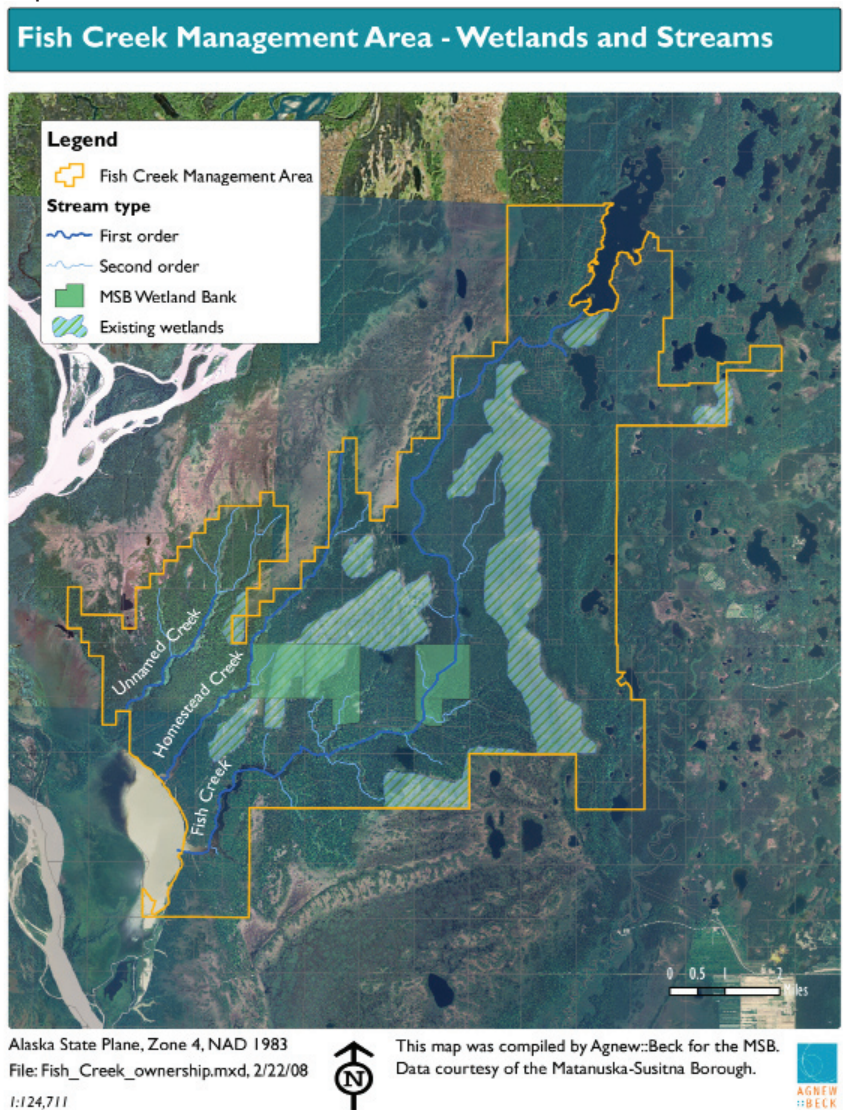
C. Buffer Width

Modifications. The minimum width of a publicly owned buffer along streams or wetlands may be increased on a case-by-case basis where it is determined that the minimum width specified in this plan is not adequate to protect water quality, fish and wildlife habitat, or public use. Widths may be narrowed on a case-by-case basis if it is determined that the harm intended to be avoided by the requirement is not likely to occur because of site-specific circumstances. However, the strip of land must be of adequate width to allow for public access as well as to screen the waterbody from development, where possible, with natural vegetation. In addition, stipulations such as requirements in farm conservation plans, or best management practices may be an

alternative or additionally required method of achieving the purposes for which the buffer is established. Where land sales are platted adjacent to the buffer, especially agricultural and settlement land sales, the buffer width should be reviewed in consultation with ADEC and

ADF&G and, if necessary, widened to ensure adequate vegetation for filtering for the protection of protect water quality and fish and wildlife habitat from expected development uses, fertilizers, road runoff, or other potentially harmful drainage and to accommodate areas where on-the-ground information indicates greater-than-typical tree blowdown is likely to occur.

Map 2.1. Wetlands and Streams



D. Building Setbacks. Borough ordinances require a minimum setback along lakes and streams of 75 feet for buildings and 100 feet for septic systems. In this Fish Creek area a more stringent setback will apply, as outlined below:

1. Building setbacks will be a minimum of 75 feet for non-anadromous lakes and streams and 100 feet adjacent to anadromous and high-value resident fish waters.
2. Within the development setback natural vegetation shall be retained. Actions such as removal of the majority of natural vegetation, paving, use of fertilizers, or storage and maintenance of vehicles, activities that develop ruts or flowpaths for sediment to reach the water body, or other activities that would adversely impact the waterbody are not permitted. Residential structures, fences, other non-water dependent structures that will obstruct passage of recreational users or wildlife are not permitted in the development setback. Residential structures include both primary residential structures and associated buildings such as detached garages or sheds.

E. Lakeshore Public Access. A portion of the lakefront on lakes greater than 10 acres that support or may be expected to support public recreation, and all inlets and outlets of lakes of this size and capable of sustaining year-round natural or stocked fish species, shall remain in public ownership for habitat protection and public recreation. Adequate public access to these lakes shall also remain in public ownership or be provided through section line or “to and along” easements. The amount of public ownership may vary on a site-specific basis, but, at a minimum, some portion of land adjacent to these lakes shall remain public. The size of the public reservation shall be appropriate to its expected long-range recreational use and relative to the size of the lake and allow for emergency access. A width of 100 feet or more measured from Ordinary High Water is to be retained or protected through an easement along inlet and

outlet streams. Public use sites on lakes of 10-20 acres shall have at least 4 contiguous acres reserved for public access. For lakes larger than 20 acres, a public use site of at least 6 acres shall be provided.

F. Retention of Wetlands in Public

Ownership. Large wetlands generally will be retained in public ownership. Two management units in the plan, Wetlands East and Wetlands West, are mostly composed of wetlands. The designation and management intent for these units requires the wetlands be retained in public ownership. In addition, the large wetlands outlined on Map 2.1 will also be retained in public ownership to protect their significant habitat and water quality functions. Other wetlands will be evaluated on a case-by-case basis to determine whether public retention or other methods are appropriate to protect their values. The Borough has established a Wetlands Mitigation Bank within the plan area to retain wetlands, owned by the Borough, in order to mitigate future development in other areas of the Matanuska-Susitna Borough.

G. Authorizations within Riparian Zones.

Authorizations for the use of stream, river, lake riparian zones or near wetlands shall minimize adverse impacts on fish habitat and water quality. Stream riparian zones will be managed to protect fish and wildlife and their habitats, and to provide for public access and recreational opportunities. This should be accomplished by maintaining functions of the riparian zone such as short- and long-term sources of large woody debris and vegetation cover, stream bank stability, channel morphology, water temperatures, stream flows, water quality, adequate nutrient cycling, food sources, clean spawning gravel, cover, feeding areas, and travel corridors.

H. Consolidation of Waterfront Facilities.

Waterfront facilities, uses, access points, or developments will be consolidated wherever practical.

I. Instream Flow. See discussion and guidelines under *Water Resources* section of this chapter.

Resource and Management Summary

See the *Fish and Wildlife* section of this chapter for a short overview of stream resources and stream buffer policy.

Trails and Access

Resource Goals

Public Use Opportunities. Ensure adequate opportunities for public use of important recreation, public access and historic trails of regional and statewide significance. Also provide for future trail and access needs.

Local Trails. Assist in establishing local trail systems that provide access to public land and water and community facilities.

Trail Corridors. Protect or establish trail corridors to meet projected future use requirements as well as protecting current use, both for residents, and for users from outside the Fish Creek area.

Environmental Protection. Locate trails so that their use will allow for recreation use while protecting water quality in streams, lakes, and wetlands.

Management Guidelines

A. Public Use of Trails. The State and the Borough will retain a system of trails available for public use. The governments should not authorize land uses that foreclose the ability of the public to use important trails. If a land use authorization is issued, an alternate route should be identified and established before activities under that authorization prevent use on the original trail. On occasion, there are trail routes, designs, or areas where a trail authorization is not appropriate because of potential resource damage, sensitive habitats, or public safety concerns. Trail relinquishments will not foreclose legal, practical access to public lands.

B. Trails near Wetlands. The State and the Borough may authorize trails across wetlands if it is determined that the proposed activity will not cause significant adverse impacts to important fish and wildlife habitat, important ecological processes, or scenic vistas, unless a feasible and prudent alternative does not exist, and it is determined to be in the State or Borough's best interest. A trail across a wetland

may be restricted to winter use if it is determined that use will cause significant adverse impacts to fish and wildlife habitat or use will result in damage to the wetlands. Easements and rights-of-way that are issued for motorized vehicle use in summer that will not use fill should follow well-drained routes and be located away from riparian zones and wetlands wherever possible. ADF&G will be consulted to provide recommendations on easement alignment to avoid wetlands and sensitive wildlife habitats. The intent of this guideline is to avoid motorized vehicle use across wetland areas during seasons in which such use could result in paralleling trails that eventually extend outside the easement and could result in damage to wetlands and the unauthorized use of State or Borough land.

C. Off-Road Transportation. Authorization for cross-country travel will be directed toward appropriate existing hardened trails and roads. Appropriate trails are defined as having a durable surface and similar widths to the proposed mode of transportation. If no hardened trails exist, the State or Borough should authorize transport only in winter when there is adequate ground frost, snow cover or both. This kind of authorization is usually for one-time use only, i.e., for moving machinery. If the authorization is for one-time use, additional clearing that will result in additional larger vehicle use on the trail will be discouraged. This guideline does not restrict snowmachine use of wetlands in winter once adequate snow cover exists to protect the vegetation. This is an expected and allowed use by both the State and the Borough.

D. Iditarod National Historic Trail (INHT). The U.S. Forest Service, working with the Bureau of Land Management, has reserved and surveyed an easement through the Fish Creek Management Unit for the Iditarod National Historic Trail (INHT). The corridor is 400 feet wide, 200 feet either side of the centerlines. When the State or the Borough conveys lands or issues authorizations along the INHT, the authorization or conveyance will be subject

to the route (or alternate route) and a buffer along the route that ensures continuous trail links along the INHT. To minimize potential land use conflicts or the impact of the trail's existence on adjacent land uses, the corridor width may be expanded or reduced. These width adjustments, as well as rerouting of the trail corridor, may be permitted in specific instances with the consultation of the Borough, State, and ADF&G.

E. Neighborhood and Community Trails.

The following criteria should be used to determine whether a local trail should be protected by easement or public ownership:

1. If the trail is of area-wide, regional or statewide importance, connects to a public open space system, provides access to publicly owned land or major waterways, connects or continues existing trail easements, or provides alternative transportation, it will be kept in public ownership. Agencies, organizations and individuals are encouraged to identify public trails to be considered for retention in public ownership. Trails of statewide importance are defined as those that are included in hiking guidebooks, and trails of regional importance are defined as being included in the Borough's Recreational Trails Plan.
2. If the trail is to be used almost entirely for local use or by residents of a subdivision, but it provides more than just pedestrian access, for example, if it provides a multiple-use greenbelt for uses such as hiking or biking, public access should be reserved through an easement, or public ownership, or other alternate reasonable legal access route. Trails of local significance will be identified when conveyance, leasing, or conveyance less than fee simple are considered.
3. If the objective is to provide local pedestrian access that is not part of an integrated neighborhood or community trail system, an easement may be used. This

would typically occur when the purpose is to establish access between two lots in order 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 other authorizations on State or Borough lands, either a publicly owned buffer or an easement will be used to protect designated trails. If a trail has the characteristics described in 1 or 2 above, it will be retained in public ownership. If the trail has the characteristics described in 3, an easement will be reserved.

F. Standard Trail Corridor of Area-wide, Regional or Statewide Significance.

This category includes the majority of trails on State and Borough land identified in this plan. These trails generally provide snowmachine, ski, foot, dogsled and/or horse access for a variety of purposes. Some have a history of public use and can be expected to see increased use as the State's population increases. The following guidelines are intended to ensure consistent management practices on trails on State and Borough lands in the planning area while allowing some flexibility to tailor management decisions on site specific conditions.

Trails of area-wide, regional or statewide significance on State or Borough land shall be protected by a publicly owned corridor or easement that has a minimum width of 100 feet (50 feet each side of centerline). This buffer should be designed to protect the quality of the experience of the user and to minimize negative effects to adjacent lands such as noise or dust. 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 adapt a trail to provide for specific public uses or to address 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, in no case should the width of the buffer be less than 100 feet. Timber management, land sales and other resource activities may be authorized within these buffers in order to maintain the trails and reduce trail maintenance costs, to salvage beetle-killed timber, and to reduce further death of trees along trails. Trail buffers should be designed in consultation with affected divisions of the State DNR and ADF&G, and the Borough Park, Recreation & Trails Advisory Board.

Local groups are encouraged to maintain existing trails.

G. Management of Expanded Trail Use. If timber management, land sales and other resource activity creates new access options, as is likely to be the case, the State and Borough shall develop access management strategies to ensure this new access does not lead to adverse impacts on resources, such as damage to wetlands or streams. Examples of such strategies include careful selection of the location of roads, and closing access to trail use, such as four-wheelers.

H. Identification of Trails. Prior to lease or disposal of State or Borough lands, trails that merit consideration for protection by one of the methods described above should be identified and reserved. When identifying trails, the Borough, and DNR land records information systems will be consulted. In addition, any agency, organization or individual may identify public trails to be considered for protection.

I. Land Use in Corridors. Land use activities within a trail corridor (for example, permits, leases, timber sales and material sales) should be managed so as to not adversely affect trail use over the long term or the aesthetic character of the trail. This does not preclude trail crossings

or rerouting of trails as described below.

J. Rerouting Trails. Rerouting of trails for a short distance may be permitted to minimize land use conflicts or to facilitate use of a trail only if alternate routes provide equal access and opportunities similar to the original, and there is no feasible and prudent alternative.

If trails are rerouted, provisions should be made for construction of new trail segments if warranted by type of use. Historic trails which follow well-established routes should not be rerouted unless necessary to maintain trail use. The sections of trails that have been rerouted and are no longer intended for use should be blocked off and rehabilitated to minimize erosion and promote regrowth of natural vegetation. In many areas, old survey lines have been used as all-season trails, even where the line traverses wetlands. Survey lines used as trails in the summer that cross wetlands may be closed and the trail may be hardened or diverted to other routes to minimize harm to wetlands.

K. Trailhead Reservations and Information Signs. Sufficient acreage for trailheads should be retained in public ownership to accommodate public access need, safety requirements, and provide for expected recreational use. The size and location of trailheads should be determined in consultation with DNR, ADF&G, and the Borough. These trailheads should be marked, especially the ones adjacent to or near private property to prevent trespass problems. Although the DNR does not have the means to maintain information signs at trail heads, the lack of information about land ownership is a problem. Other groups and agencies are encouraged to develop programs to identify the parts of the trails that cross public, private and Native land, and to describe allowable uses on these lands. All trails and trailheads should use standardized signage as adopted by the Borough.

L. Off Road Vehicle (ORV) Management.

There has been a rapid increase in ORV use in many locations around the Borough. Under current State regulations, ORVs may only be used on or off established road rights-of-way “if use off the road easement does not cause or contribute to water quality degradation, alteration of drainage systems, significant rutting, ground disturbance, or thermal erosion.” In addition, the regulation requires that ORV users use existing roads and trails whenever possible, and conduct their travel in a manner that minimizes any disturbance to vegetation, soil stability, drainage systems, or fish and wildlife. (See 11 AAC 90.020(a)(1)(E) and 11 AAC 90.025, however these regulations are widely violated). An authorization is required from ADF&G for any motorized travel in fish bearing streams. To prevent damage to wetlands, stream banks, and other areas with poorly drained soils, prevent erosion and wildlife disturbance or displacement, and provide access to public lands, DNR and the Borough should route frequently used ORV trails away from sensitive areas, harden them, otherwise block ORV travel in areas where damage is likely to occur, and provide alternative ORV routes around sensitive areas. Also, DNR will support Borough efforts to address this issue through local planning and ordinances provided that DNR has adequate opportunities for input into the process and proposed actions are consistent with State interests.

M. Section-line Easements. Regulation 11 AAC 96 sets out permit requirements for various uses on State land. These requirements also apply to State-owned easements along surveyed and un-surveyed section lines. Access-related activities that require a DNR permit include use or transportation of heavy equipment. However, many other access-related uses can take place without a permit. DNR offers a fact sheet called Generally Allowed Uses on State Land listing these permit-free uses under 11 AAC 96.020. The list includes travel by most types of motorized vehicle such as four-wheel-

drive vehicles, stock pickup trucks, snowmobiles, and all terrain vehicles. Also allowed without a permit is brushing or cutting a trail less than five feet wide using only hand tools such as a chainsaw and without disturbing the root system. Under these situations the requirements of 11 AAC 90.020(a)(1)(E) and 11 AAC 90.025 still apply. Above this limit, development of a section-line easement for access purposes requires authorization from DNR. Section-line easements should be surveyed before improvements are made in order to avoid trespass on adjacent lands. Through enactment of ordinances, the Borough also has the authority to regulate public uses on section-line easements so long as this does not conflict with an overriding State interest. No vacations (formal relinquishments or waivers) of section-line easements are recommended by the plan at this time. Any request for vacating section line easements must provide for alternative public access as required by existing State law and regulation.

Resource and Management Summary

See the *Access to the Project Area* section of Chapter 1 for a short overview of trail resources and trail management.

Transportation

Resource Goals

Support Plan Designations. Through coordination with other State agencies and local governments, develop a transportation system needed to implement this plan and integrate it with other area-wide transportation needs.

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

Minimize Adverse Effects. Design a transportation system and authorize vehicle uses in a manner that has minimal adverse impacts on local residents, the environment, fish and wildlife resources and movement corridors, 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

The management guidelines below apply, where applicable, to above-ground utilities as well as transportation.

A. Access Plans for Land Offerings or Resource Development Projects. Before a land offering or the start of a resource development project, DNR and the Borough will work with DOT/PF to identify appropriate locations for access and will also identify responsibilities for design, construction, and maintenance of any proposed transportation facilities.

B. Roads Required. Physical road access is required before the Borough or DNR subdivides land within the Moraine Ridge, Upper Fish Creek, Lower Fish Creek, or Homestead Creek Management Units.

C. Joint Use and Consolidation. Joint use and consolidation of surface access routes and facilities will be encouraged wherever it is feasible and prudent to do so. Surface access and facilities 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 and utility 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. Those in anadromous fish habitat require an ADF&G permit. When a stream must be crossed the crossing should be as close as possible to a 90-degree angle to the stream, consistent with good road alignment practices. Stream crossings should be made at stable sections of the stream channel.

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

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

E. Winter Stream, Lake and Wetland

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

F. Protection of Fish and Wildlife Resources.

Important fish and wildlife habitats such as riparian areas, wildlife movement corridors, important wintering or calving areas, or other important habitat areas should be avoided in siting transportation routes unless no other feasible and prudent alternatives exist. Location of important fish and wildlife resources, wildlife movement corridors, concentration areas or seasonal use patterns, timing of construction and design of fish and wildlife passage structures shall be determined in consultation with ADF&G.

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

H. Timber Salvage from Rights-of-Way. All timber on rights-of-way to be cleared for construction will be salvaged consistent with AS 41.17.083, and the Matanuska-Susitna Borough Revised Timber Salvage Policy.

I. Roads near Wetlands. To minimize impacts on riparian areas or wetlands, summer use roads shall be located away from riparian zones and wetlands to discourage the formation of parallel trails and very wide river crossings. Public ownership and easement requirements are defined in the Stream Corridors and Wetlands section in this chapter. The State and Borough may authorize trails or roads across wetlands if it is determined that the proposed activity will not cause significant adverse impacts to important fish and wildlife habitat, important ecological processes, or scenic vistas, a feasible and prudent alternative does not exist, and it is determined to be in the State and Borough's best interest.

J. Section-line Easements. See this guideline under the *Trails and Access* section in this chapter.

K. Railroad Corridor. The Alaska Railroad Corporation (ARRC) has proposed a new railroad route to connect Point MacKenzie with the Parks Highway railway north of Wasilla. The alternative routes proposed include one that goes north and south through the Moraine Unit of the Fish Creek area. The State and Borough shall work with ARRC to design and develop any railroad corridors through the Fish Creek area to ensure compatibility with this plan.

L. Fish and Wildlife Movement Corridors. Where road corridors intersect streams, important habitat, or movement corridors because no feasible and prudent alternative exists; fish and wildlife movement corridors will be maintained through the use of alternative designs.

Resource and Management Summary

See the *Access to the Project Area* section of Chapter 1 for a short overview of access issues and planned access improvements.

Water Resources

Resource Goals

Water quality. Manage State and Borough lands using mitigating measures to alleviate potential adverse effects on water quality

Watersheds. Make water available for the maximum use consistent with the public interest. Inventory and manage water resources to ensure a balance between instream and out-of-stream uses.

Instream Flow. Reserve adequate instream flow on a timely basis in rivers and lakes for resources and uses such as fish and wildlife, water quality, sanitation, recreational activities, navigation, and transportation before competition for competing water uses increases.

Cooperation With Other Agencies and the Public. DNR and the MSB will cooperate with the Alaska Departments of Environmental Conservation and Fish and Game, the public and other agencies and organizations on watershed plans and approaches.

Management Guidelines

A. Instream Flow Reservations and Stream Gauging

1. Flow Reservations. DNR should consider streams and other waterbodies for instream flow reservations and stream gauging when there is an anticipated or identified threat to the water supply needed to support significant public uses, when there is significant public use, or when the fish and wildlife or other resource values of the stream are important to the residents of the State. Individuals, political subdivisions of the State, and federal agencies, as well as State agencies may apply for instream flow reservations. Under DNR's statutes, reservation of instream flow is possible for four types of purposes:

- a. protection of fish and wildlife habitat, migration, and propagation,

- b. recreation and park purposes,
- c. navigation and transportation purposes, or
- d. sanitary and water quality purposes.

DNR should consider streams and other waterbodies for instream flow reservations when the waterbody's value to a significant identified present or future public benefit is not protected by the ownership or classification of the surrounding and underlying land. DNR should consider protecting significant public instream flow uses by placing conditions in water rights and use authorizations adequate to protect these uses.

2. Process for Determining

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

- a. Identify the management objectives.
- b. Estimate the quantity of water seasonally available by direct measurement (hydrograph), predictive methods (regional hydrographic models), or other appropriate methods.
- c. Determine the quantities of water already appropriated.
- d. In consultation with appropriate agencies and landowners, 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 ADF&G to

identify necessary conditions for rearing, staging, reproduction, spawning, overwintering, and migration of fish and wildlife resources.

B. Specific Instream Flow Reservations.

When significant residential or agricultural land sales are planned near the three major streams in the planning area, expected water needs should be analyzed to determine potential effect on stream flow. If there appears to be a threat to stream flow, an instream flow reservations under AS 46.15.145 should be established for the affected stream. Of the three major streams in the planning area, Fish Creek and its tributaries are the first priority for this work.

Resource and Management Summary

See the *Hydrology* section of the *Physical Environment* section in Chapter 1 for a short overview of water resources.

Chapter 3

Unit Designations & Guidelines

Unit I. Moraine Ridge

Summary of Resource and Uses in the Area

The Moraine Ridge Management Unit includes land along the eastern edge of the project area, paralleling the Little Susitna River. The Management Unit includes approximately 4,700 acres and is the closest unit to the road-served communities of Big Lake (7 miles to the east) and Willow (12 miles to the north).

Any road access to the Fish Creek Management Area would almost certainly cross first into this management unit. The Borough is currently evaluating the feasibility of a bridge over the Little Susitna River that would provide road access. To date, three potential bridge locations have been identified in the southern part of the unit. (see Map 1.3).

With the exception of limited private inholdings, this management unit is owned entirely by the Borough. The area includes approximately 100 acres of private land in approximately 35 private parcels. These parcels are mostly recreational residential, generally 5 acres in size, and all but five of these have waterfront access on Hock Lake in the middle of the unit. A single non-waterfront parcel is directly behind a Hock Lake waterfront parcel; four others are located in the middle of the unit, unrelated to water. Access to the private land is typically by boat and trail from the Little Susitna River, by floatplane to Hock Lake, or by snowmobile.

The management unit adjoins State recreation and refuge areas to the east and south – the Little Susitna State Recreation River Area and the Susitna Flats State Game Refuge, respectively.

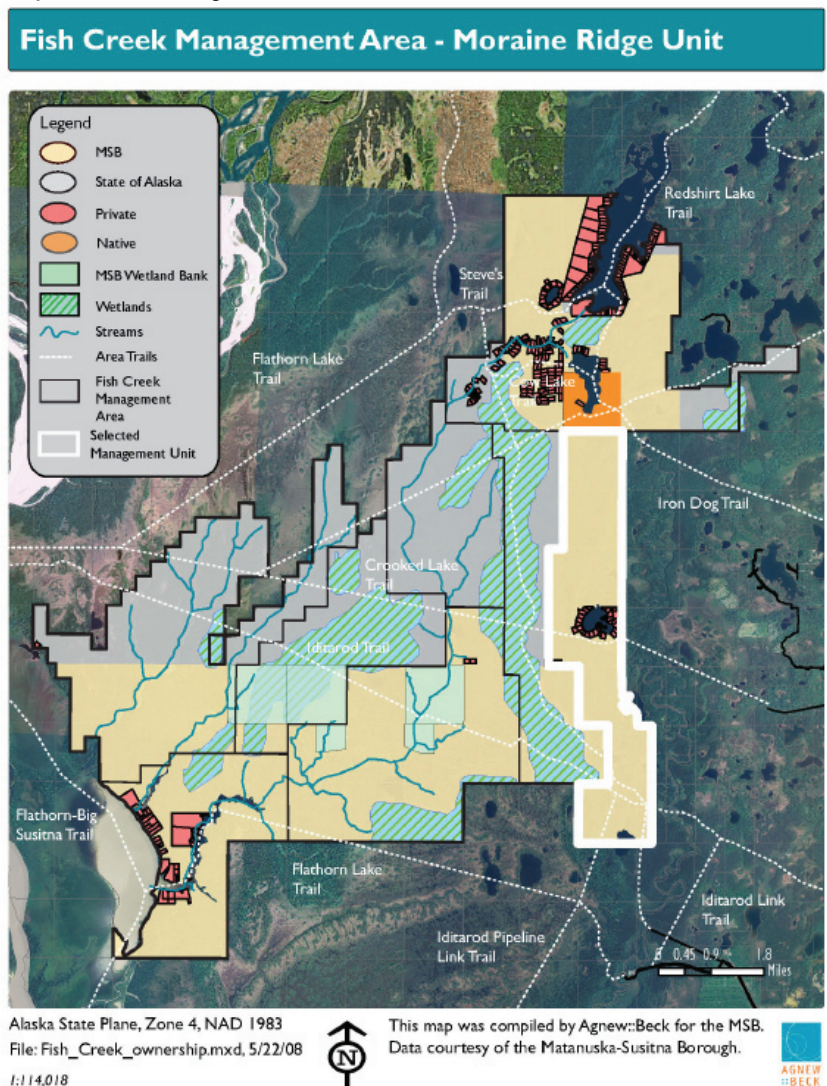
As the name suggests, this unit follows a low moraine, running north to south. This ridge extends the length of this management unit and gives the unit the most elevated acreage in the Fish Creek plan area. This characteristic coupled with the unit's relatively good access and contiguous sections of developable settlement land make the area an

obvious candidate for settlement-related uses.

This area has limited potential for agriculture. Patches of Class III soils are generally small and discontinuous. This limitation is compounded by the irregular terrain. The Borough has not planned timber sales for the management area in the past. According to the Borough's recent timber inventory, portions of this area has relatively high volume of timber per acre, and operable acreages. Hilly terrain would increase timber-related road building and operations costs.

Road easements through the management unit include the Chuitna Road Right-of-Way (ADL 57588). The Borough's Long Range Transportation Plan includes a rail corridor along the western boundary of this area connecting Point MacKenzie with more northerly destinations, though a specific location has not been platted.

Map 3.1. Moraine Ridge Unit



Trail easements also cross this management unit. These trails include the Iron Dog Trail, Iditarod Trail, Winter Tractor Trail and the Crooked Lake Trail. These trails are winter trails used by snowmachines and dog teams.

Management Intent

Land within the Moraine Ridge Unit will be used for a series of road-accessible residential settlement areas, and intervening areas of public open space. Consistent with Borough code and the policies of this plan, residential land sales will not occur until roads are built to the sale area. When planning and locating the sales, the Borough will ensure that physically suitable portions of this area remain in public ownership to provide for public uses such as schools and sites for future commercial uses. In addition, land sale design will locate and trails and related buffers to support current and future recreational use. Limited timber harvests may occur consistent with the land-sale needs, such as for local house logs or firewood.

While the primary management intent for this unit is to provide residential settlement opportunities, this intent also takes in the goal of maintaining the area’s natural character, which will add value to settlement and for recreation use. Development should be planned to retain this character. Locations for roads, trails, subdivisions and other uses require a more site-specific review of physical constraints and opportunities.

Management Guidelines

Chapter 2 guidelines establish the framework of management guidelines for this unit including development setbacks along the roadways and buffers along the Iditarod trail and other identified trails that cross the area (in *Transportation* section) and, along water bodies in the area, the requirement for building setbacks and reservation of public access areas (in *Water and Recreation* sections).

The remainder of this section presents management unit-specific guidelines.

Designations*

Designation		
Primary		Notes
Settlement		Small parcel, road-accessed subdivision with rural character
Secondary		
Forestry		Limited, personal use timber harvests
Public Recreation		Corridors for trails and open space buffers between settlement areas
Wildlife Habitat		Corridors wildlife between settlement areas
Agriculture		Class III soils are intended for uses such as community gardens, gardens as part of settlement areas, or small-parcel agriculture disposals within the overall residential settlement design.
Public & Community Service Uses		Space reserved for possible future uses

* Note that these tables and the plan in general contain primary and secondary designations. Consistent with state regulation, classifications on the status plats will reflect only the primary designation. The secondary designations are still important and a way to convey the management intent. DNR and Borough personnel will use the primary and secondary designations, along with the management intent and guidelines when making decisions about uses of the land.

Settlement

Specific sites for land sales will be identified through a more detailed review of this unit's physical characteristics, and final decisions on the locations of roads and the system of open spaces outlined above. General guidelines for land sale design include the following:

- Land sales will be designed in phases, following the expansion of the road system.
- Sales should be grouped into a series of clusters, separated by east west-trending bands of open space. This design will provide open space benefits for recreation, and habitat/migration benefits to wildlife. It will also decrease road costs. The total amount of land to be sold from this unit will be decided during Borough design of the sales but will not exceed 60 percent.
- Priority sites should offer low gradient, good drainage, and where possible, locations with views
- Road access that passes near Hock Lake may change the character of the private parcels that surround the lake. For that reason, owners will be notified of any access planned to be constructed within a mile of the parcels. Final design will be decided upon only after considering the needs and wishes of Hock Lake property owners.
- Land sales will be buffered from immediate views of boating, fishing, and camping on the Little Susitna Recreational River so as to maintain the natural character and use of the Recreational River.
- Land sales in the vicinity of Yohn Lake, Hock Lake and the unnamed lake in SE¹/₄, NE¹/₄, T17N, R5W S.M. should be sited and buffered to protect the fish and wildlife habitat and water quality of the Little Susitna River.

Forestry

Timber harvest will be allowed along rights-of-way prior to development. Several parcels will be retained in public ownership (approximately 40 acres each) near settlement locations to provide for personal use firewood harvests. Personal use harvests will be designed to support and be compatible with settlement, with protection of habitat and recreation values including buffers surrounding frequently used trails, wetlands, waterbodies and settlement areas.

Public Recreation

As part of the more detailed planning for land sales, specific areas will be identified and retained for trails, public recreation, open space and wildlife.

Areas to be retained in public ownership include:

- A site for a large multi-purpose park. This park would be an area to meet recreation needs of the area as they develop. Initially this area would provide general open space. Over time, when surrounding lands are more developed, this parcel would also provide an opportunity for more developed comparable recreation uses. Such a park might eventually include extensive trails, including groomed cross country ski trails, ballfields, multi-use space available for events (such as outdoor music), and a recreation center building, with road access and parking.
- A primary north-south trail connection. Possible routes include a ridgeline route, a route along the Little Susitna River, or a combination of the two.
- Trail connections to Nancy Lakes State Recreation Area, Little Susitna State Recreation River, Susitna Flats State Game Refuge and west into the Fish Creek trail system.
- East-west trending open space greenbelts separating developed areas. These areas should incorporate a mix of well-drained forested areas, and areas with development constraints such as forested wetlands and steep terrain. One consideration in the location of these greenbelts should be their value as wildlife movement corridors.

Fish and Wildlife Habitat

Management guidelines for fish and wildlife include the requirement for clustering development (see Settlement guideline, this section), stream buffers, and other guidelines in Chapter 2. The requirement for clustering development will result in several trail corridors and east west corridors to allow the passage of wildlife between this unit, the Little Susitna State Recreation River, and other public open space lands to the north, west and southwest.

Public & Community Uses

- Land will be reserved near the junction of the primary north south and east west roads for eventual town center development. This area should be approximately 160 acres or more, including space for community services that ultimately may be needed in the area, such as a police and fire station, library, post office, small park and school. Remaining land in this set aside would be planned and then sold to private users for a centralized, commercial district.
- Three parcels of approximately 40 acres each will be reserved north of the town center site, to accommodate future public uses, such as schools or police and fire stations.

Unit 2. Lakes

Summary of Resource and Uses in the Area

The Lakes Management Unit is located in the north-east corner of the management area, surrounding Red Shirt Lake and the north end of the Moraine Ridge (Unit 1) and Wetlands – East units (Unit 3).

The 7,990 acres management unit includes a mix of land ownerships: approximately 4,000 acres of Borough land, 1,500 acres of State land, 500 acres of land held by Knikatnu, Inc. surrounding Cow Lake, and 800 acres of other private lands, in approximately 200 small parcels. These individual parcels are mostly used for recreational cabins; most are about 5 acres in size. These parcels surround Red Shirt Lake, Cow Lake and Delyndia Lake and extend down Fish Creek. There are several non-waterfront parcels clustered west of Cow Lake and approximately 10 larger parcels behind existing waterfront ones. Access to these private parcels is typically by snowmachine, four-wheeler, and for those on lakes, by floatplane. In addition, parcels on or near Red Shirt Lake may also use boat access from trailheads in Nancy Lake State Recreation Area.

The management unit adjoins legislatively designated State recreation areas to the north and east – the Nancy Lakes State Recreation Area and the Little Susitna State Recreation River Area. The lakes and streams in this unit, particularly Red Shirt Lake, Cow Lake, Delyndia Lake and Butterfly Lake, support a variety of fish species, and many people use area lakes for fishing. The lakes and streams connected to Delyndia and Butterfly Lakes provide habitat for Little Susitna River coho salmon.

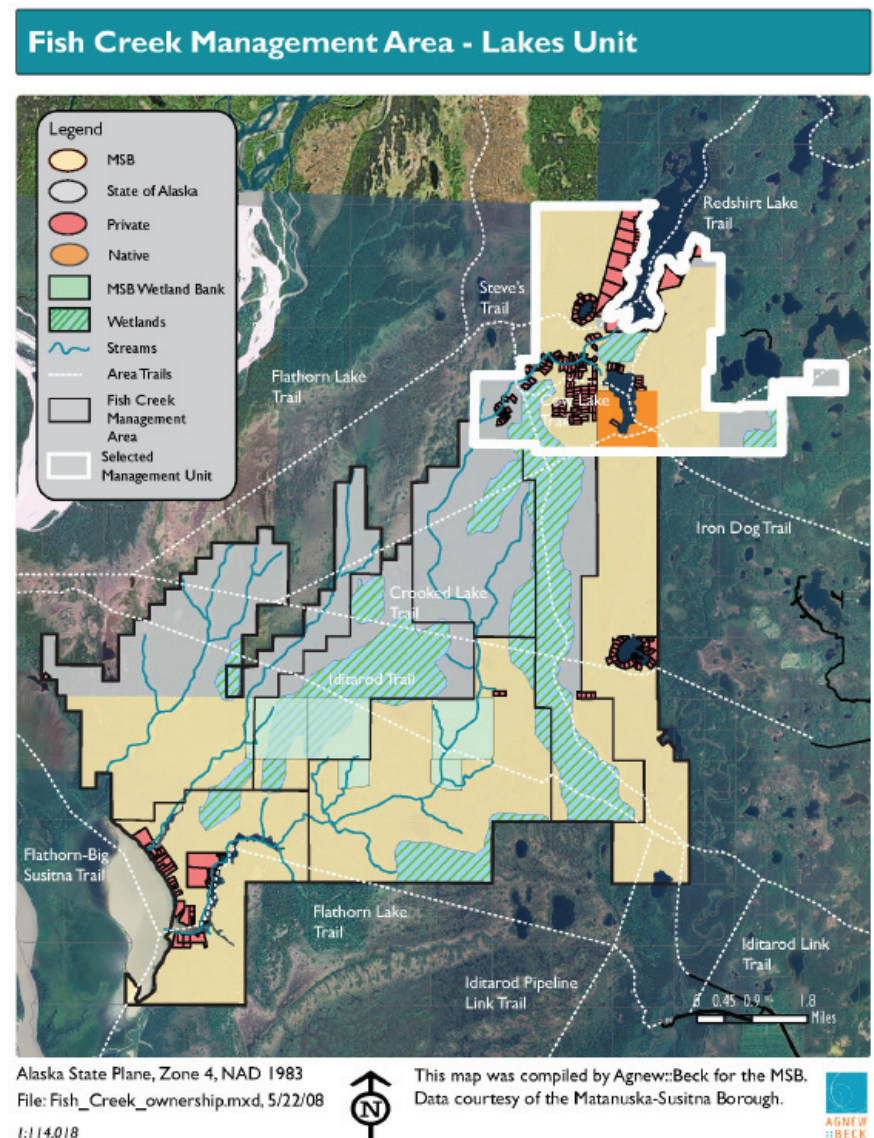
There is no current nor planned road access to the management unit. However, the Matanuska Susitna Borough Long Range Transportation Plan proposes a rail corridor that abuts the unit along its western boundary and may provide rail access at some future date. The

actual alignment of a potential railroad has not been specifically identified or platted. In addition, the management intent for the adjacent unit, Moraine Ridge, includes permanent roads. It is possible that private owners or the Native Corporation may wish to extend roads to private land in the unit.

The management area has limited agricultural or forestry potential. The agricultural soils that do exist are on the far-western side of the management area, with no planned road access in the foreseeable future.

A collection of trails traverse the management unit. The Red Shirt Lake Trail, Cow Lake Trail, Butterfly Lake Trail, Winter Tractor Trail, Iron Dog Trail, Trail 6 and Steve's Trail are all identified as winter trails travelling through the area.

Map 3.2. Lakes Unit



Management Intent

Public land within the Lakes Unit is designated resource management, due to the uncertainty of future access to the area, and the resulting variability in possible future uses. For the near term, the primary management intent for the Lakes area is to continue to offer this area as an attractive location for rural residential users, both today and into the future. Related objectives are to maintain access to the area for landowners and the ability of recreational users to traverse the area on trails. Land sales are not planned within the unit at this time.

Access changes that are outside the control of this plan may require revisiting this management intent. If a railroad is built along the western edge of the unit in the future, some railroad-related uses or land sales related to the railroad use may be appropriate at that time.

Similarly, development of roads in the Moraine Ridge Unit to the south, or coming in from the east or north, may change the accessibility of this area, for private landowners and those who use it for recreation. Finally, much of the ground access to this area is through winter trails. As the vacant private land in the area develops, the winter trail system may prove inadequate. At some point the number of residences may require a system of hardened trails usable in the summer to avoid resource damage. For these reasons, this management intent should be revisited if a railroad is actually constructed, if road access changes the way people get to their land or recreate in the unit, or if significant resource damage caused by over-use of inadequate trails requires access changes. At that time some road-related uses and

additional land sales may be appropriate. Either change would require a plan amendment.

Because of the importance of trails to the way people get to private land in this unit, and use the unit for recreation, the State and Borough should work to identify and reserve a trail system. The objective of the system is to continue and enhance public recreational use, and maintain trail links within and through the area for legal access to private land.

Because of the extensive private ownership and recreation, significant timber harvest is inappropriate. Timber harvest affecting small areas are permitted for house logs or firewood to satisfy the needs of local landowners.

Designations

Designation	
<i>Primary</i>	<i>Notes</i>
Resource Management	<p>Maintain rural-residential character, access for private landowners and opportunities for public recreation use, including summer and winter trails, and public lake access.</p> <p>Changing access may change or add to management goals.</p>

Management Guidelines

Public Recreation and Fish and Wildlife Habitat

The portion of the unit south of Delyndia and Butterfly Lakes should be retained in public ownership and managed for fish and wildlife habitat and public recreation. In addition to the trails that traverse the area, AWC stream 247-41-10100-2129 a tributary to the Little Susitna River provides connection to Delyndia Lake. This area also provides for a habitat and public recreation corridor between the Nancy Lakes Recreation Area and the Little Susitna Recreational River corridor.

Trail System

Trail connections needed include winter routes linking the area to the north and east (towards Willow and Big Lake), and trails to recreation destinations including routes heading south and west. To the extent feasible, summer trails should be identified and reserved. Such trails require locations where continued use will not cause damage to wetlands.

Other Uses

No additional unit-specific guidelines are required for this unit. See Chapter 2 for area-wide guidelines that apply in this area.

Unit 3. Wetlands — East & West

Summary of Resource and Uses in the Area

This unit covers lands in two sections of the management area. The Wetlands-East Unit takes in land between the Moraine Ridge area (Unit 1) and the Upper and Lower Fish Creek Units. The Wetlands-West Unit lies between the two Fish Creek Units and the Homestead (Unit 6) and Flathorn Lake Units (Unit 7).

Together the two wetlands units account for over 8,200 acres. Wetlands-East has approximately 4,000 acres and Wetland-West, the remaining 4,200 acres. These two units make up over two thirds of the approximately 12,000 total acres of wetlands in the planning area.

Over half of the land in these two management units is managed by the State, approximately 5,200 acres. The large majority of the remainder, 3,000 acres, is managed by the Borough. The exception is the four private parcels in the Wetlands-East unit in the area of Hock Lake. These continuous parcels are not located near a substantial water body.

These two units are located in a large branching pattern along the lateral drainages of Fish Creek. The wetlands provide important hydrologic functions and fish and wildlife habitat for the management area.

The Borough has identified wetlands for their Su-Knik Wetlands Mitigation Bank that are within the Fish Creek plan area. These lands are owned by the Borough and will be used to mitigate wetland development in other areas of the Borough. The specific requirements of the land bank require that the wetlands remain undeveloped. Other wetlands in this unit, though not part of the land bank, are also unlikely to be developed, consistent with the management intent for this unit.

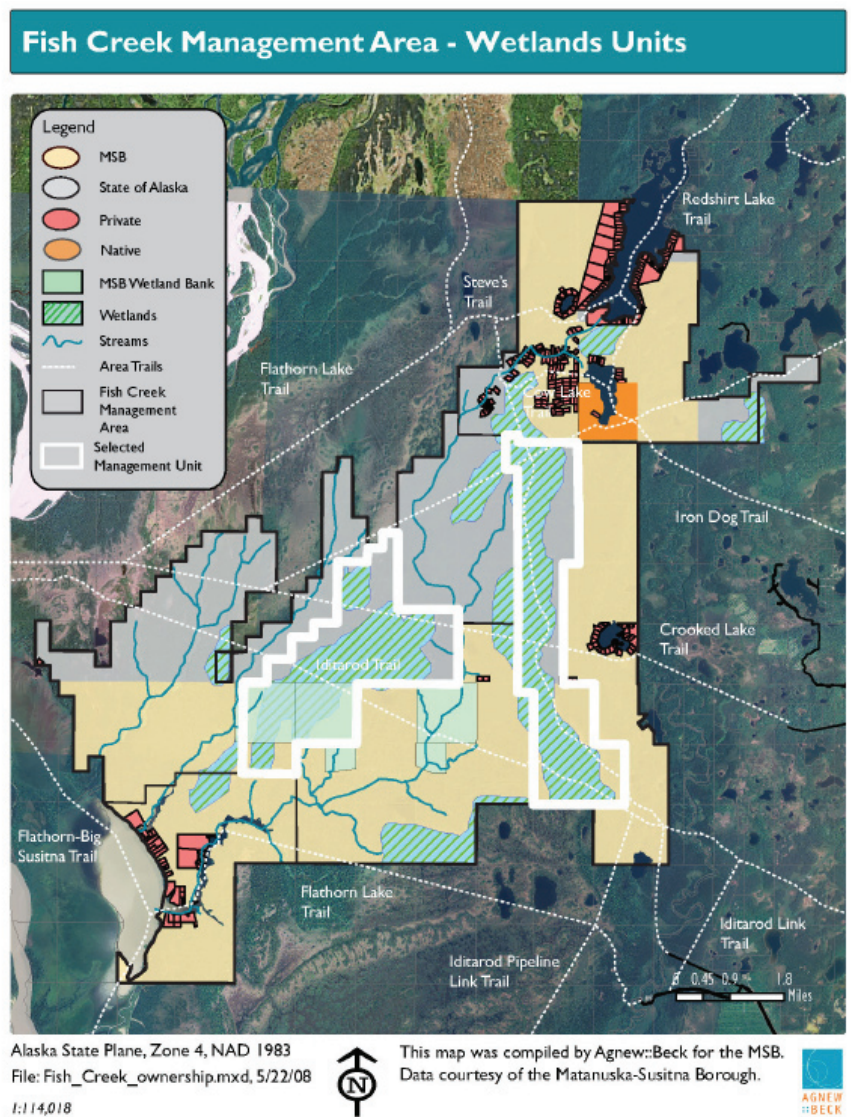
Several trails and easements cross these management units. The historic Iditarod trail crosses both areas and the Chuitna right-of-way (ADL 57588) crosses the

southern section of Wetlands-East. Additional trails crossing the units include the Crooked Lake Trail and the Iron Dog race trail, which has an existing easement. The Winter Tractor trail, crossing the Wetlands-East unit, traverses the area in a north-south direction. These trails are used largely as winter trails.

Management Intent

The primary management intent for these wetland areas is to retain these lands in public ownership to preserve their functions for fish and wildlife habitat, to protect water quality and allow for recreational use, primarily winter activities. Activities within this unit must occur in a manner consistent with the protection of these values.

Map 3.3. Wetlands — East & West Unit



Providing for recreational use of these parcels primarily focuses on maintaining winter trail links to and across this unit. In the future, if and when the surrounding areas are developed, recreation uses in these units can be expanded to include other forms of passive recreation use (e.g., wildlife viewing, walking trails) as well as limited, supporting recreation facilities.

Public access will be maintained to and within the Iditarod Historic Trail corridor and the Iron Dog Trail. Work is needed to reserve other important regional trails, e.g. the Crooked Lake trail.

Management Guidelines

See Chapter 2 for area-wide guidelines, addressing issues including use and establishment of trails, transportation routes, buffers and utility corridors in these wetland areas. The remainder of this section presents site-specific guidelines.

Forestry

Timber sales are expected on land adjacent to this unit, especially within the Homestead Creek, Lower Fish Creek, and Upper Fish Creek units. Where timber resources exist on the edge of this unit, adjacent commercial timber harvest may extend into this unit as long as the harvest is designed consistent with the goals for protecting the hydrologic, wildlife, and recreation resources of the unit.

Other Uses

No additional unit-specific guidelines are required for this unit. See Chapter 2 for area-wide guidelines that apply in this area.

Designations

Designation		
<i>Primary</i>		<i>Notes</i>
Watershed Protection		Protect wetlands forming headwaters to area streams
Wildlife Habitat		
<i>Secondary</i>		
Public Recreation		Largely limited to winter use.

Unit 4. Upper Fish Creek

Summary of Resource and Uses in the Area

This unit is in the north-central section of the management area, between the two wetland areas (Unit 3) and north of the Lower Fish Creek (Unit 5). The area covers approximately 3,600 acres.

The management unit is entirely owned by the State. The centrally located management unit has no current road or rail access, and is at the far outer reaches of the possible incremental expansion of road access into the broader Fish Creek area from the east. The area has potential for the typical suite of forested, Susitna Valley public lands: forestry, settlement, agriculture, public recreation and fish and wildlife habitat.

The management unit has one existing winter trail crossing the unit, the Iron Dog Trail.

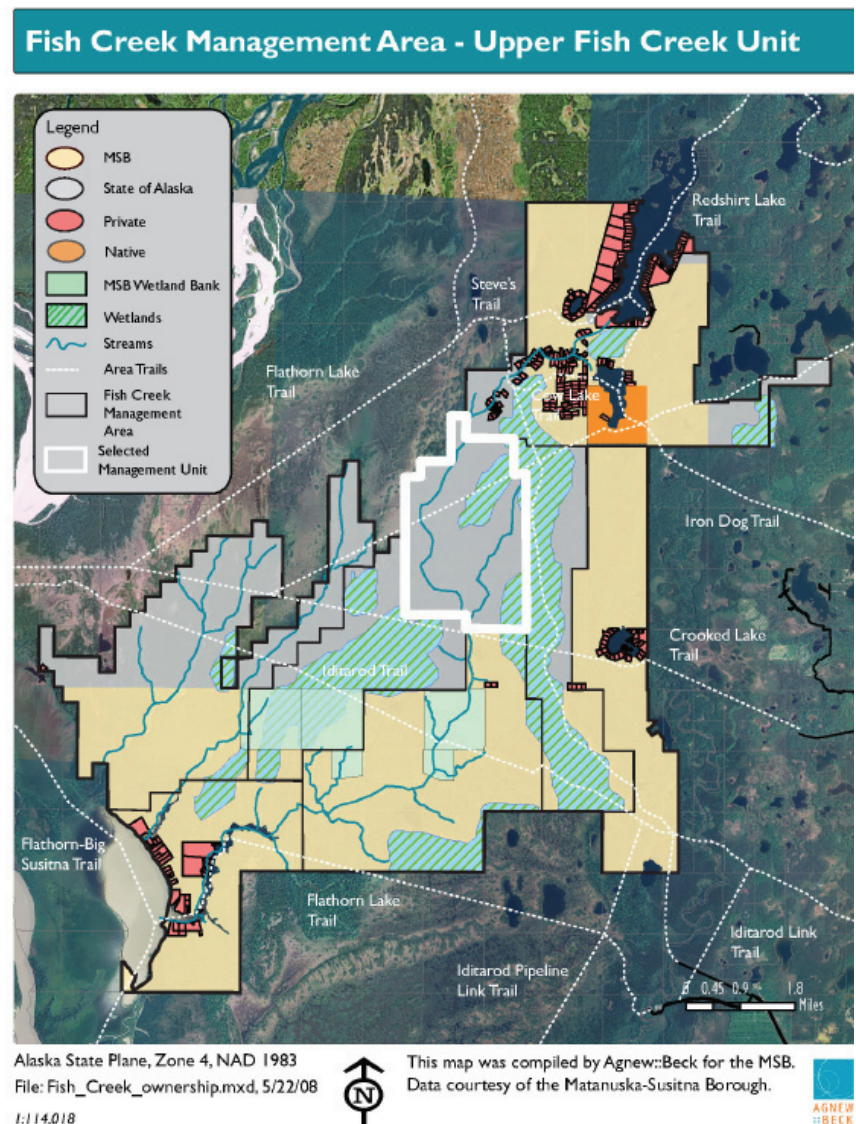
Management Intent

Land within the Upper Fish Creek Unit is designated resource management. While the soils have potential for agriculture or settlement, the unit cannot be developed until the area has permanent road access. Permanent access must await a road that first crosses the Little Susitna River, and then makes significant additional stream and wetland crossings to reach this area. Permanent access is expected to be at least a decade away and probably significantly longer. By the time access is developed, the demand for timber, agriculture, or residential settlement land may change significantly from today's assessment. For that reason, the plan delays the decision about whether to sell these areas, and if sold, for what purposes – residential settlement, agriculture, or a combination. In the interim, the timber in this unit will be included in the State timber base. In this way, the future potential of the area for potential agriculture or settlement will be protected, but interim timber development will provide jobs and timber products and may help develop forestry

roads that may bring access to the area and facilitate eventual permanent access. Therefore, to the extent practical, forestry roads will be located in a manner that may enhance the eventual agricultural or residential settlement value of the areas.

This plan intends that at least 35 percent of the productive forest lands in this unit will be permanently retained for long-term forestry. The plan delays the decision about whether to sell remaining acreage in this unit, and, if sold, for what purposes – residential settlement, agriculture, or a combination; or whether to retain this remaining acreage in the unit in public ownership for uses such as forestry.

Map 3.4. Upper Fish Creek Unit



Designations

Designation		
Primary		Notes
Resource Management		Available for timber management & timber harvest at least until such time as permanent access is developed to the unit, likely a decade or further into the future. Area will be included in State and Borough timber base. Option for future agriculture or settlement will be retained.
Forestry		The plan intends that at least 35 percent of the productive forest lands in this unit will be permanently retained for long-term forestry.

Management Guidelines

Forestry and Trails

The Forest Land Use Plan on State land will address protection of public trails within the unit. The objective of this system will be maintain trail links within and through the area, for legal access to possible future land sales, and to allow for future public recreational use. Destinations to be linked by trail include Flathorn Lake public access sites, the Iditarod Trail, Iron Dog Trail and the Crooked Creek Trail.

The Forest Land Use Plan on State land will also address protection of wetlands within the unit consistent with the management guidelines in Chapter 2.

Other Uses

No additional unit-specific guidelines are required for this unit. See Chapter 2 for area-wide guidelines that apply in this area.

Unit 5. Lower Fish Creek

Summary of Resource and Uses in the Area

The Lower Fish Creek Management Unit includes land on the south-central edge of the management area, bordering the Susitna Flats State Game Refuge to the south. Neighboring management units include: Wetlands-East (Unit 3) to the east, Upper Fish Creek (Unit 4) to the north, Wetlands-West (Unit 3) to the northwest and Flathorn Lake (Unit 7) also to the west. The management unit adjoins Susitna Flats State Game Refuge to the south. The management unit is approximately 6,900 acres in size.

This management unit includes approximately 6,880 acres of land owned by the Borough and approximately 20 acres of privately held land in 2 parcels located in the upper section of the management unit along one of the tributaries of Fish Creek. Access to these parcels is winter-only. These parcels are not currently developed.

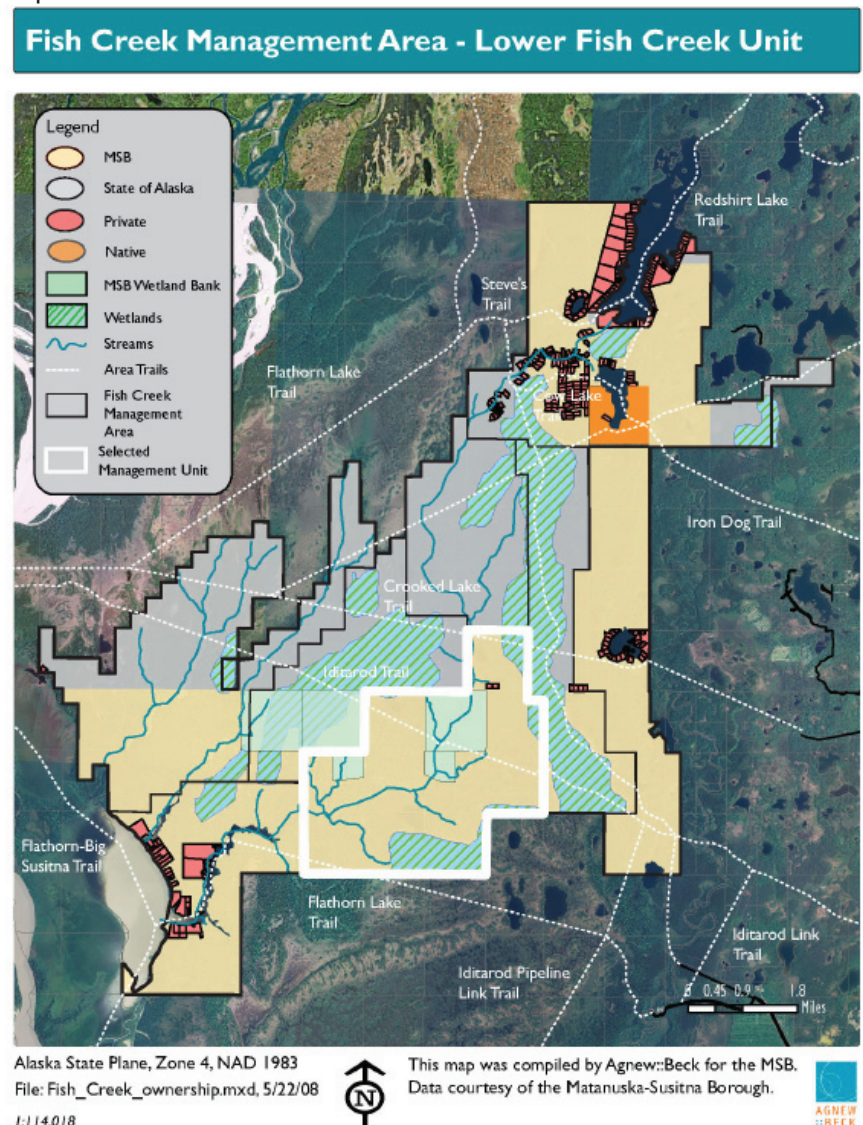
There is currently no road access to this unit. Several seismic lines running through the area are used for ATV access in the summer. Informal winter trails, including the seismic lines, cross through the area and are used by snowmachines, dog-sledders and skiers. There are several trail easements that pass through the management unit. One is the Iditarod National Historic Trail route, which is no longer used for the race itself. The current route – the Iditarod Race Trail – crosses the management unit north of the Iditarod Historic Trail. Other trails include the Crooked Lake Winter Trail traveling east-west through the northern part of this area continuing from the Moraine Ridge and Wetlands-East units.

In addition to these trails, the Alaska Department of Transportation (ADOT) has reserved an easement for the Chuitna Right-of-Way (ADL 57588). This was reserved over 30 years ago as part of a Statewide, long-range transportation

planning effort. There are no plans to develop this right-of-way. This unit, is however, on the route of the proposed West Mat-Su Access Project. This route is proposed to cross the Little Susitna River from the Big Lake area to provide access into the Fish Creek Management area. (See more detailed description regarding possible road routes in Chapter 1).

This management unit has agricultural, settlement and forestry potential. According to the previous Fish Creek Management Plan (1984), of the approximately 7,000 acres in this unit, there are over 3,500 acres of Class III soils in large contiguous areas. These large well-drained areas support large blocks of contiguous spruce and birch forest. The timber stand volumes in the unit are not among the highest in Interior and Southcentral

Map 3.5. Lower Fish Creek Unit



Designations

Designation		Notes
<i>Primary</i>		<i>Notes</i>
Agriculture		Small parcel, rural lifestyle, protect agricultural potential
<i>Secondary</i>		
Settlement		Small scale fee-simple sales, planned to complement and support agricultural sales
Forestry		Harvested in a manner that is compatible with eventual agricultural use
Public Recreation		
Wildlife Habitat		

areas of Alaska but are better in volume than many other areas within the Borough. The Borough has not proposed timber sales within the unit.

Management Intent

The primary designation for land within the Lower Fish Creek Unit is agriculture. The land will be managed to develop small-parcel agricultural lots with interspersed higher-density residential development. Residential land sales should be located in the unit in a manner that is compatible with the agricultural sales and where the residential sale revenue can help with road costs.

If access is developed to the Fish Creek Planning area across the Little Susitna River, this unit provides the closest area with soils appropriate for potential agricultural development. Consistent with MSB Code, no land sales will occur until permanent access to the area is developed. Until that time, the area will be managed for forestry, public recreation, and wildlife habitat.

Timber harvest is allowed within this unit. However, because of the nearer-term potential for agricultural or residential land sales, the harvest must be designed consistent with the eventual agricultural or residential sale. Because the intended eventual use of this area is for small, rural lifestyle farms which benefit from starting with forest cover, large scale timber harvests are not expected. For these reasons, timber volume in this unit

will not be added to the sustainable timber base for the Borough.

A large wetland area in the southeast corner of the unit, abutting the Susitna Flats Game Refuge, should be retained in public ownership and managed for its wildlife habitat and water resources values.

Management Guidelines

Agriculture

Agricultural land sales will emphasize small-parcel lots in a manner that allows for a rural lifestyle and flexibility in the form of agricultural activities. The large majority of parcels will be generally be 20-40 acres in size. An agricultural lot layout plan should be developed prior to sales of these parcels to ensure an efficient lot and access plan, as well as protection of fish and wildlife and water resources and public access. In the case of significant agricultural sales, this study should analyze expected water needs to determine whether an instream flow reservation should be established under AS 46.15.145 consistent with the guidelines in Chapter 2.

Public Recreation

Land sale design will maintain trail links to Susitna Flats State Game Refuge, along the Iditarod Historic Trail corridor and other regional trails that may be developed crossing through the area, and to allow access to the stream buffers required by the guidelines in Chapter 2.

Fish & Wildlife Habitat

Retain large wetland area in the southeast corner of the unit, abutting the Susitna Flats Game Refuge, in public ownership and manage for wildlife habitat and water resources values. Complete instream flow studies and recommendations prior to agricultural disposals.

Other Uses

No additional unit-specific guidelines are required for this unit. See Chapter 2 for area-wide guidelines that apply in this area.

Unit 6. Homestead Creek

Summary of Resource and Uses in the Area

This unit covers land along the north-western edge of the Fish Creek area, just east of the Big Susitna River, north of Flathorn Lake (Unit 7) and west of Wetlands-West (Unit 3). The area covers approximately 7,700 acres and is the most remote unit in the management area.

The land in this management unit is managed by the State and the Borough. Approximately 2,880 acres in the south of the unit are Borough-owned; the remainder is held by the State. There are no private holdings in this management unit.

One road easement crosses through the management unit include the Chuitna Road Right-of-Way (ADL 57588). Trail easements also cross this management unit. These trails include the Iron Dog Trail, Iditarod Trail and the Crooked Lake Trail. These trails are winter trails used by snowmachines, dog teams and skiers.

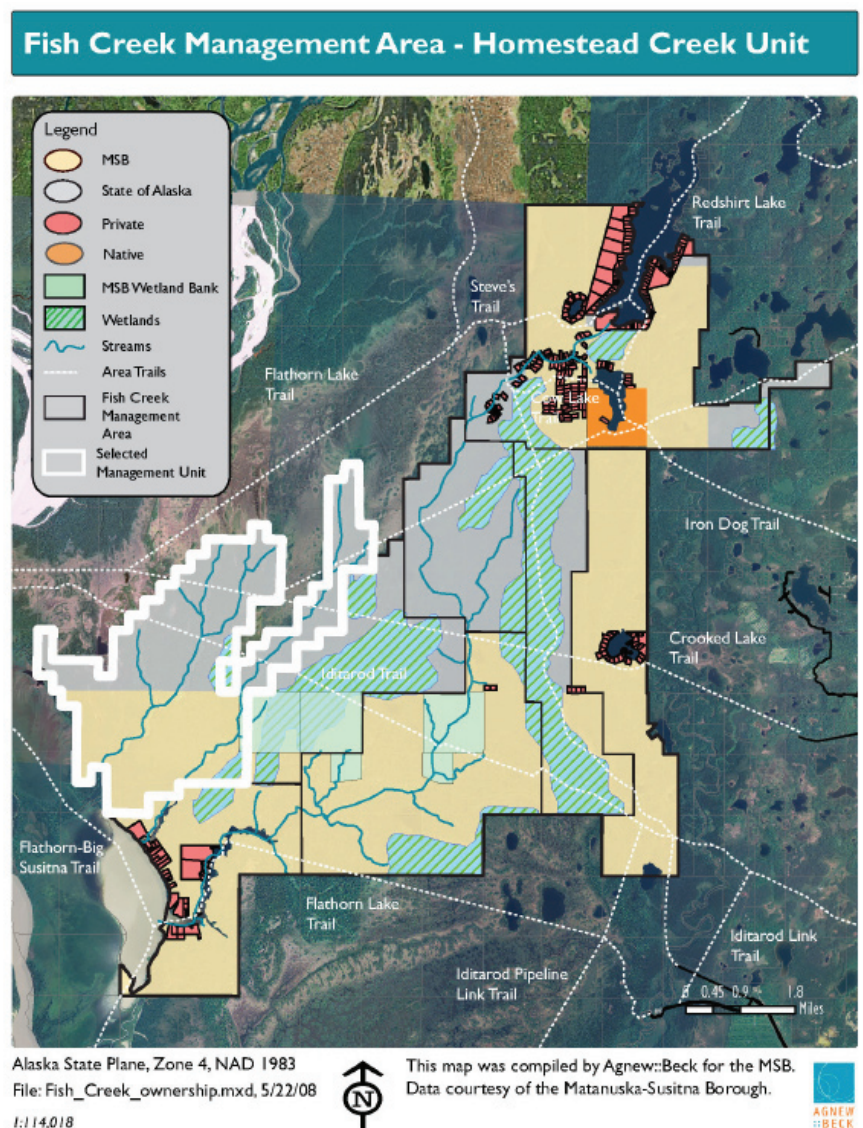
Homestead Creek flows south through this largely level, forested area into the northern end of Flathorn Lake. Large wetlands surrounding this unit are the sources of Homestead creek and Unnamed Creek and their smaller tributaries.

Management Intent

Land within the Homestead Creek Unit is designated resource management. While the soils are appropriate for agriculture or settlement, the unit cannot be developed until the area has permanent road access. This unit is the furthest from the developed area of the Borough and is expected to be the last unit with permanent developed access. Access to the Upper Fish Creek Unit is likely decades away; access to Homestead Creek is likely to be longer still. By the time access to Homestead Creek is constructed, the demand for timber, agriculture, or residential settlement land may change

significantly from today's assessment. For that reason, the plan delays the decision about if and when to sell these areas, and if sold, for what purposes – residential settlement, agriculture, or a combination. In the interim, the timber in this unit will be included in the State and Borough timber base. In this way, the future potential of the area for potential agriculture or settlement will be protected, but interim timber development will provide jobs and timber products and may help develop forestry roads that may bring access to the area and facilitate the eventual permanent access. Therefore, to the extent practical, forestry roads will be located in a manner that may enhance the eventual agricultural or residential settlement value of the areas.

Map 3.6. Homestead Creek Unit



Designations

Designation		
Primary		Notes
Resource Management		Available for timber management & timber harvest at least until such time as permanent access is developed to the unit. This is expected to be decades in the future. Area will be included in State and Borough timber base. Option for future agriculture or settlement will be retained.
Forestry		The plan intends that at least 35 percent of the productive forest lands in this unit will be permanently retained for long-term forestry.

This plan intends that at least 35 percent of the productive forest lands in this unit will be permanently retained for long-term forestry. The plan delays the decision about whether to sell remaining acreage in this unit, and, if sold, for what purposes – residential settlement, agriculture, or a combination; or whether to retain this remaining acreage in the unit in public ownership for uses such as forestry.

Management Guidelines

Forestry and Trails

The Forest Land Use Plan on State land or Borough timber planning will address protection of public trails within the unit. The objective of this system will be maintain trail links within and through the area, for legal access to possible future land sales, and to allow for future public recreational use. Destinations to be linked by trail include Flathorn Lake public access sites, the Iditarod Trail, Iron Dog Trail and the Crooked Creek Trail.

The Forest Land Use Plan on State land or Borough timber planning will also address protection of wetlands within the unit consistent with the management guidelines in Chapter 2.

Other Uses

No additional unit-specific guidelines are required for this unit. See Chapter 2 for area-wide guidelines that apply in this area.

Unit 7. Flathorn Lake

Summary of Resource and Uses in the Area

The Flathorn Lake Management Unit is located in the southwest corner of the Fish Creek area. This unit is bounded on the west almost exclusively by Flathorn Lake and continues north and east until meeting the Homestead Creek Unit (Unit 6) and the Lower Fish Creek Unit (Unit 5), respectively.

There are approximately 4,200 acres covered in this management unit. The majority of 4,200 acres in this unit is held by the Borough. The exception to this public ownership are privately held tracts surrounding Flathorn Lake amounting to 300 acres in approximately 40 private parcels. These lots, around the eastern shore of Flathorn Lake and along the shallow mouth of Fish Creek, which flows into the lake, are all on or immediately adjacent to the waterfront. Several of these parcels have private cabins or homes, primarily used on a seasonal basis.

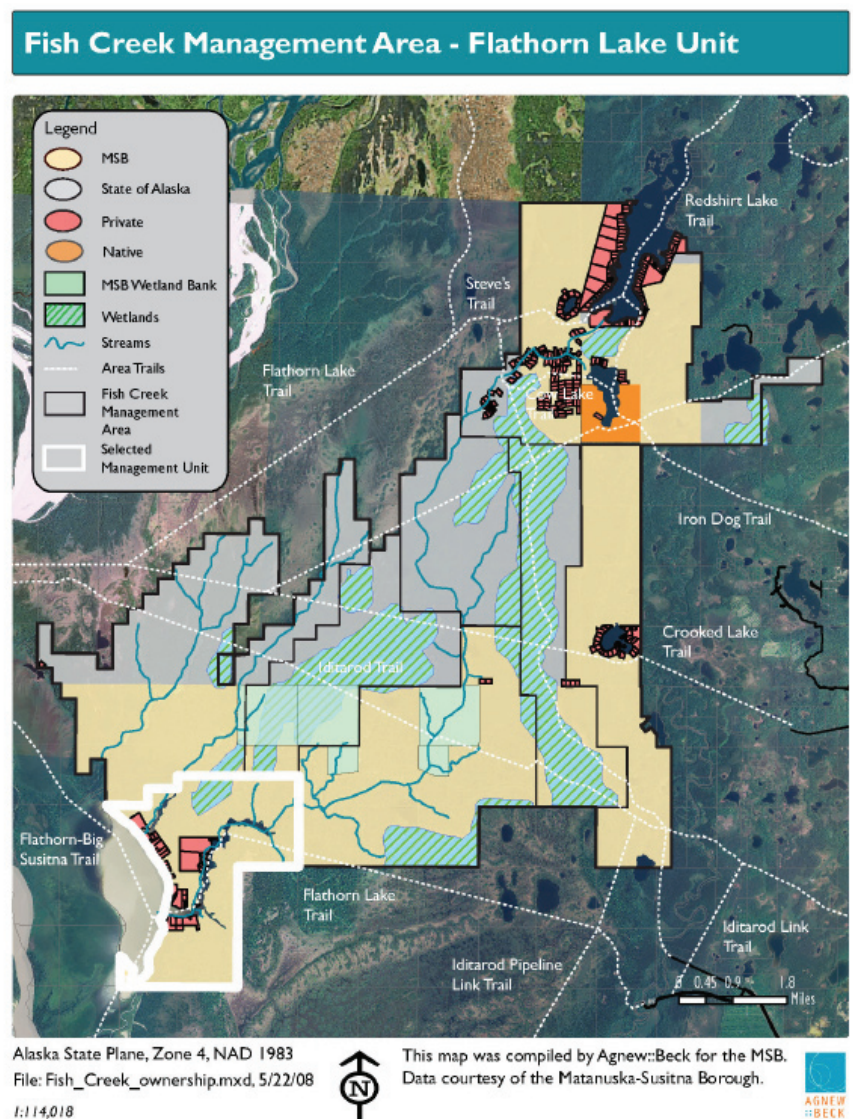
Access is limited to float plane in summer months, snowmachine or ski-plane access in the winter. Boat travel is possible from the Big Susitna into Flathorn Lake and lower reaches of Fish Creek. There is a road easement across this unit, the Chuitna Road Right-of-Way (ADL 57588).

This unit is nearly flat. Large wetlands on the west side lead to the Susitna River; on south side are the low-lying wetlands and tidal flats of the Susitna Flat State Game Refuge. The eastern and northern sections are forested, however the amount of timber is too limited to warrant consideration of large-scale commercial harvest. Additionally the unit lies on the western-most edge of the management unit. As such, the potential for road development is limited.

Management Intent

The primary management intent for Flathorn Lake is to continue the use of this area as a fly-in, recreational cabin destination. A limited number of approximately 25 additional lots may be offered for sale, in waterfront locations, and some backlot areas with access easements to the water. Roads are not required prior to sales, as the area is expected to remain roadless for many years. However, easements for roads should be retained in case roads are constructed at some future date. Other lands within the management unit will be retained in public ownership for trails, sites for future public uses such as schools and recreation including lake access, and sites for possible future local-serving commercial uses. Because of the site's distant location, agricultural sales

Map 3.7. Flathorn Lake Unit



(which require road access) are not appropriate for this management unit. Should road access be extended to the area, further land sales will be considered at that time.

Management Guidelines

Settlement

Specific sites for land sales will be identified through a more detailed review of this unit’s physical characteristics. Land sale design will be consistent with the following:

- Prior to land sales a system of open spaces and trail corridors will be identified (see recreation guidelines below).
- Sales should be grouped into a limited series of clusters. The total amount of land to be sold over the next 10-15 years will be decided during Borough design of the sales, but will not exceed 10 percent of the public land in the unit.
- Priority sites should offer level terrain, good drainage, and where possible, locations with waterfront access or easy trail access to the water.
- Sales should be laid out with reservations for rights of way for possible, eventual road access.
- Wetland areas along the south and west edge of Flathorn Lake should be retained in public ownership and managed for fish and wildlife habitat and water resources.

- Adequate lake front public access and recreation sites on Flat Horn Lake should be retained in public ownership during land sale design to provide for public use of the lake and adjacent lands.

Public Recreation

A system of public trails, recreation access sites and open spaces will be identified in this area prior to land sales. The objective of this system will be maintain trail links within and through the area, for legal access to private land as well as continue and enhance public recreational use. Destinations to be linked by trail include Flathorn Lake public access sites, the Iditarod Trail and Susitna Flats State Game Refuge. Specific trail management guidelines are covered in detail under Chapter 2 guidelines.

Other Uses

No additional unit-specific guidelines are required for this unit. See Chapter 2 for area-wide guidelines that apply in this area.

Designations

Designation		
<i>Primary</i>		<i>Notes</i>
Settlement		Provide for small, non-roaded parcels with rural character, designed to minimize potential impacts on surrounding current developed areas.
<i>Secondary</i>		
Public Recreation		
Wildlife Habitat		

Chapter 4

Implementation & Recommendations

Introduction

This chapter includes information and recommendations necessary to implement plan goals, management intent, and guidelines. Included is information about:

- State and Borough Land Classifications
- Coordination With State and Borough Plans And Procedures
- Procedures For Plan Review, Modification, and Amendment
- Recommendations

State and Borough Land Classification

To implement the plan, DNR must classify State lands in the categories of land classification set out in State regulations: 11 AAC 55. State law requires that classification precede disposal of many types of State interests in land, such as leases, timber sales, or agriculture or residential land sales. These land classifications are the formal record of uses and resources for which State lands will be managed. The classification for each of the plan's management units are recorded on State land status plats, with a reference to the final plan. Many units have more than one classification. All classifications are intended to allow for multiple uses.

While the classifications are the formal record on the status plats and are required by regulation, they contain no specific land management directives; those directives are expressed through the use of the land use designations in the plan, described in detail for individual management units in Chapter 3. These are both primary and secondary designations. Consistent with State regulation, classifications on the status plats will reflect only the primary designation. The secondary designations are still important and a way to convey the management intent. State and Borough personnel will use the primary and secondary designations, along with the management intent and guidelines when making decisions about uses of the land.

For the purposes of the State land status records, the land use designations in Chapter 3 are converted to classifications shown in Table 4.1.

The Borough classifies, manages, and disposes land per MSB Code Title 23 and the Land and Resource Management Division Policy and Procedure Manual adopted by Ordinance Serial # OR 94-069 identifies steps to carry out those actions. All lands must be classified prior to disposal; however, some Borough lands are not yet classified due to their remote location. Borough land classifications are based on a public process that includes a best interested finding, Planning Commission recommendation and finally Assembly approval. Classifications are defined in MSB 23.05.100 which depicts potential suitable uses of those lands.

The State uses the designation Resource Management for lands that will be held in public ownership in the near term, with a final decision on the preferred use to be made in the future. The Borough uses a different term – General Purpose for the same designation. In the previous chapters of this plan, references to Resource Management were used to refer to both State and Borough land. The table below clarifies that for classification purposes, the term General Purpose will be used on Borough lands.

Applicability of Plan Designations/ Classifications to State or Borough Lands Not Identified in the Plan Text or Plan Maps

This section deals with those lands that are not designated in this plan or classified in the State Land Classification Order. Such lands include those State or Borough lands inadvertently omitted from the plan and those lands that may be acquired by the State or Borough in the future but not designated or classified in the Management Plan. The State or Borough has acquired and will continue to acquire isolated parcels of land through foreclosure, escheat, and other methods. The purpose of this section is to give direction to the designation of these lands when future issues of parcel classification and management arise.

Table 4.1. Conversion of Upland Designations to Classifications

State Lands

Designation in the Fish Creek Management Plan	Classification
Agriculture	Agricultural land
Forestry	Forest land
Wildlife Habitat	Wildlife habitat land
Resource Management	Resource management land
Public Recreation	Public recreation land
Settlement	Settlement land
Water Resources	Water resources land

Borough Lands

Designation in the Fish Creek Management Plan	Classification
Agriculture	Agricultural land
Forestry	Forest management land
Habitat	General Purpose land (similar to State's Resource Management)
Resource Management	General Purpose land (similar to State's Resource Management)
Public Recreation	Public Recreation land
Settlement	Reserve Use, General Purpose (see above) lands
Water Resources	Watershed land, Wetland Bank land, General Purpose (see above) land

The following guidelines apply:

- **Parcels In or Near Existing Communities.** If the parcel is in or is immediately adjacent to an existing community or past State land offering, the designation of Settlement and classification of Settlement Land apply. Such land can be considered for disposal use unless it is appropriate as a site(s) for schools, material sites, roads, parks, or other similar public use. Unsold lots identified for disposal in existing subdivisions and lots that return to State ownership will be available for lease, sale, or conveyance. Tracts identified for community purposes in existing subdivisions will not be sold but may be conveyed to municipalities or homeowner associations if they are not needed for public purposes.
- **Parcels Near Other State or Borough Land.** If the parcel adjoins or is surrounded by other State or Borough land, the designation of that area(s) applies. It is to be managed according to the management intent and guidelines applicable to the adjacent lands. Such lands can be considered appropriate for disposal if they are designated Settlement or Settlement/Commercial unless it is appropriate as a site(s) for schools, material sites, roads, parks, or other similar public use. They may also be conveyed to a municipality even if it is suitable for these public uses as long as the proposed uses are for comparable municipal (public) use.
- **Parcels Not Near Other State or Borough Land.** Parcels not near other State land or that occur within areas designated Resource

Management are to be designated and classified as Resource Management Land. These lands are to be managed according to the management intent and guidelines applicable to the adjacent lands. Disposal of these lands to the adjacent landowner may be appropriate but will require reclassification to Settlement Land.

- **Newly Acquired State or Borough Lands.** Lands that were acquired proactively through exchange, purchase, or other methods will be managed and classified consistent with the purposes or which they were acquired.
- **Other Lands.** If the designation/classification of a parcel of acquired or omitted public land cannot be adequately determined, the parcel is to be designated and classified Resource Management.

Survivor Designations and Classifications

This revision of the Fish Creek Management Plan replaces and supersedes all previous plan designation and land classifications (termed ‘survivor’) that affect the planning area.

Coordination With Other State and Borough Plans and Procedures

Surface Leasing

Under the authority of AS 38.05 and 11 AAC 58.300-.350, State land within the Matanuska Susitna Borough is available for surface leasing, provided that the leasing is allowed under the classifications implemented by the plan and consistent with the management intent set forth in the area plan.

Applications for uses of State land within the Matanuska Susitna Borough will be considered by the Regional Manager, Department of Natural Resources, Division of Mining, Land and Water, Southcentral Region, 550 West 7th Ave. Suite 900C, Anchorage, AK 99501-3579.

Applications for Borough land use will be considered by the Land and Resource Management Chief, Matanuska-Susitna Borough, Land and Resource Management Division, 350 E Dahlia Avenue, Palmer, AK 99645

Alaska Coastal Management Program

The Matanuska Susitna Borough Coastal Management Program will be implemented by the Alaska Coastal Management Program (ACMP) through the coastal consistency review process described under Title 46 of the Alaska Statutes and associated regulations. State actions within the coastal zone must be consistent with the provisions of the Alaska Coastal Management Plan and the Matanuska Susitna Borough Coastal Management Plan.

Mineral Orders

Alaska law, AS 38.05.185, requires that the Commissioner of DNR determine that mineral entry and location is incompatible with significant surface uses in order to close State-owned mineral rights to mineral entry. The Department closed the area to new mineral entry in 1982 (Mineral Closing Order 423). The Fish Creek Management recommends no new mineral orders.

Oil and Gas Leasing

This plan does not make decisions concerning leasing for oil and gas on State mineral estate. Those decisions are made under separate processes under State law and regulations.

Public Trust Doctrine

Under the Alaska Constitution, the State has special duties and management constraints with respect to State-owned land underlying navigable waters. The Alaska Constitution contains provisions embracing the principles commonly known as the public trust doctrine. That doctrine, as it has evolved in court decisions over hundreds of year, requires the State to exercise authority to ensure that the paramount rights of the public to use navigable water for navigation, commerce, recreation and related purposes is not substantially impaired.

The Alaska Constitution (Article VIII, sections, 1, 2, 3, 6, 13 and 14) and Alaska Statutes (38.05.127 and 38.05.128) are the legal basis for applying the public trust doctrine in Alaska. This doctrine guarantees the public right to engage in such things as commerce, navigation, fishing, hunting, swimming and protection of areas for ecological study.

The Constitution provides that “Free access to the navigable or public waters of the State, as defined by the legislature, shall not be denied any citizen of the United States or resident of the State, except that the legislature may by general law regulate and limit such access for other beneficial uses or public purposes.” Eliminating private upland owners’ reasonable access to navigable waters may result in compensation.

Because 99 percent of Alaska was in public ownership at statehood, both federal and State laws providing for the transfer of land to private parties also provide for public access to navigable waters. Implementing the State constitutional guarantee of access to navigable water under Article VII, Section 14, AS 38.05.127 requires that the State commissioner of natural resources must “provide for the specific easement or rights-of-way necessary to ensure free access to and along the body of water, unless the commissioner finds that regulating or eliminating access is necessary for other beneficial uses or public purposes.”

It has never been held that any lands normally subject to the public trust doctrine in Alaska are exempt from it, including land occupied and developed.

These statutes and concepts are considered and used throughout this plan. Any management actions shall be consistent with the public trust doctrine as defined by the Alaska Constitution, statutes, court decisions and public involvement.

Municipal Entitlement

Each municipality in Alaska is entitled to conveyance of certain State lands under AS 29.65. The municipal entitlement for the Matanuska-Susitna Borough has been satisfied as of the date of the Fish Creek Management Plan. For that reason, the plan did not consider issues related to selection of State lands by the Borough under its municipal entitlement.

Changes to the Plan

The method for changing the plan depends on the type of change required. There are three types of changes possible to a plan: amendments, special exceptions, and minor changes. Amendments and special exceptions are plan revisions subject to the planning process requirements of AS 38.04.065; minor changes are not. On State land, the Director of DNR’s Division of Mining, Land and Water determines if a proposed change constitutes an amendment, a special exception, or a minor change. On Borough land, the Community Development Director makes the decision. Changes to the plan may be proposed by agencies, municipalities, or members of the public. Requests for changes on State land are submitted to the Southcentral Region of the Division of Mining, Land and Water in Anchorage; changes on Borough land are submitted to the Community Development Director of the Matanuska Susitna Borough. Changes involving both State and Borough may be submitted to either location. In either case, the State and Borough will coordinate with one another prior to reaching a decision on a requested change.

Amendments

An amendment permanently changes the plan by adding to, or modifying, its basic intent. Changes in allowed uses, prohibited uses, policies, guidelines, and some implementation actions constitute amendments. For example, an amendment may close to new mineral entry an area that the plan designated to be open, allow a land use in an area where the plan prohibited it, or allow land to be opened to land disposal in an area the plan designated for retention in public ownership. Plan amendments for State land must be approved by the Commissioner of DNR. For Borough land, Borough asset management plan amendments shall be reviewed by the Real Property Assets Management Board and approved by ordinance of the Assembly.

Amendments must be accompanied by a written finding that explains the new information or new conditions that warrant the revision, describes the alternative course of action and the reasons for it, and includes interagency review and public notice of the proposed revision. This finding may be incorporated into a DNR

finding under AS 38.05.035. DNR or the Borough may schedule a public meeting if the Commissioner of DNR or the Manager of the Matanuska Susitna Borough determines that the level of controversy warrants it. Borough asset management plans may be amended per code MSB 15.24.032, Borough asset management plans shall be reviewed by the Borough Real Property Asset Management Board and adopted by ordinance of the Assembly.

Special Exceptions

A special exception does not permanently change the provisions of the plan, and cannot be used as the basis for a reclassification of the subunit. Instead, it allows a one-time, limited-purpose variance of the plan's provisions, without changing the plan's general management intent or guidelines. Special exceptions may be made if complying with the plan would be excessively difficult or impractical, or if it would be inequitable to a third party, and if the purposes and spirit of the plan can be achieved despite the exception. Special exceptions must be accompanied by a written finding that explains the new information or new conditions that warrant the revision, describes the alternative course of action and the reasons for it, and includes interagency review and public notice of the proposed revision. Similar to amendments, the finding may be incorporated into a DNR finding under AS 38.05.035. In addition, the State or the Borough may schedule a public meeting if the Commissioner of DNR or the Manager of the Matanuska Susitna Borough determines that the level of controversy warrants it. Special exceptions and minor changes shall be approved by the Borough Real Property Asset Management Board, and the Assembly shall be informed of their decision by informational memorandum.

Minor Changes

A minor change does not modify or change the basic intent of the plan. Minor changes may be necessary to clarify the plan, make it consistent, facilitate its implementation, or make technical corrections. Minor changes are made at the discretion of the Regional Manager of DMLW for State land. For Borough Land a minor change is made at the discretion of the Borough Community Development Director and the change shall be noted in the plan as a minor staff change with date of the change. Minor changes do not require public review. The Borough or the State, as appropriate, will notify planning team representatives 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 Commissioner of DNR, or the Borough Manager.

Implementation

Action	Plan Reference	Timing	Notes
West Mat-Su Access Project	Chapter 1, Access section; page 6	In progress	Determines feasibility, timing, and route of proposed road connection into Fish Creek area from east
Timber management plans	Chapter 2, Forestry section; pages 6-9	State & Borough regional plans - in progress; site specific plans - prior to harvest	The Borough will include the timber plan into its Forest Management Plan once it is completed
Agricultural lot layout	Chapter 3, Lower Fish Creek Mgmt Unit, Management Guidelines; page 13	As part of planning for specific agricultural disposals	Includes evaluation of water needs, public access
Monitor ORV use	Chapter 2, Trails and Access, Guideline L; page 25	Monitor in the near term to the degree resources permit; need for monitoring will be greatest if and when access improves	Determine if special use areas are needed to protect resources while maintaining access.
Respond to railroad routing decision	Chapter 1, Access section; page 6	Once decision is made on timing, routing of proposed new rail link	Plan would need to be reviewed, and perhaps updated, if proposed railroad goes through area

Appendix A.

Glossary

AAC. Alaska Administrative Code, regulations for the State of Alaska.

Access. A way or means of approach. Includes transportation, trails, easements, rights of way and public use sites.

ACMP. Alaska Coastal Management Plan. A program developed to implement the Alaska Coastal Management Act. The program deals with coastal resources in the coastal area.

ADF&G. Alaska Department of Fish and Game

ADL. Alaska Division of Land (now the Division of Mining, Land and Water) (used most often with a number to identify a land use case file.)

ADOT/PF. Alaska Department of Transportation and Public Facilities

Anadromous Fish. A fish or fish species that spends portions of its life cycle in both fresh and salt waters, entering fresh water from the sea to spawn; these include the anadromous forms of pacific trout and salmon of the genus *Oncorhynchus* (rainbow and cutthroat trout, and chinook, coho, chum, sockeye, and pink salmon), Arctic char, Dolly Varden, sheefish, smelts, lamprey, whitefish, and sturgeon.

Anadromous Waters. A river, lake or stream from its mouth to its uppermost reach including all sloughs and backwaters adjoining the listed water, and that portion of the streambed or lakebed covered by ordinary high water used by salmon to spawn. Anadromous waters are shown in “The Atlas to the Catalog of Waters Important for Spawning, Rearing, or Migration of Salmon” (referred to as the Anadromous Fish Stream Catalog) compiled by ADF&G.

ANCSA. Alaska Native Claims Settlement Act.

ANILCA. Alaska National Interest Land Conservation Act.

Area Plan. A plan approved by the Commissioner of the Department of Natural Resources under the authority of AS 38.04.065 that establishes the land and resource management policies for state land within a planning area. Such plans also assign land use designations to individual parcels of state land, which are subsequently converted to land use classifications in a Land Classification Order. When used in this plan, the term ‘Area Plan’ refers to the revised Fish Creek Management Plan.

AS. Alaska Statutes.

ASLS. Alaska State Land Survey.

ATS. Alaska Tideland Survey.

Authorization. A decision issued by DNR or the Matanuska-Susitna Borough allowing a use and setting the conditions for that use. This usually takes the form of a permit or lease.

Authorized Use. A use allowed by DNR or by the Borough by permit or lease.

Banks. The portion of the stream channel cross section that restricts the lateral movement of water at normal bank-full levels, often exhibiting a distinct break in slope from the stream bottom.

Borough. The Matanuska-Susitna Borough

Buffer. An area of land between two areas with different activities or resources, used to reduce the effect of one activity or resource upon another.

CSU. See Federal Conservation System Unit.

Caretaker Facilities. Single or multi-family floating residential facilities used as housing that are necessary to contain equipment or processing facilities for economic development activities, such as commercial timber harvest, mineral exploration or aquatic farming operations, or associated with public activities. Caretaker facilities may be floating facilities or may be located on uplands.

Classification. Land classification identifies the purposes for which state land will be managed. All classification categories are for multiple use, although a particular use may be considered primary. Land may be given a maximum of three classifications in combination.

Classification Order. See Land Classification Order.

Clean fill. Fill that is free of organics, human refuse, and toxic pollutants.

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. Existing mineral claims that are active at the time of plan adoption are not affected by mineral closures.

Commissioner. The Commissioner of the Alaska Department of Natural Resources.

Concurrence. Under existing statutes, regulations and procedures, the Department of Natural Resources or the Borough is required to obtain the approval of other groups before taking a specific action. Concurrence binds all parties to conduct their activities consistent with the approved course of action.

Consultation. Under existing statutes, regulations, and procedures, the Department of Natural Resources or the Borough informs other groups of its intention to take a specific action and seeks 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.

DEC. Alaska Department of Environmental Conservation.

Department. Alaska Department of Natural Resources.

Designated Use. An allowed use of major importance in a particular management unit. Activities in the unit will be managed to encourage, develop, or protect this use. Where a unit has two or more designated uses, the management intent statement and guidelines for the unit and Chapter 2 guidelines, together with existing statutes, regulations, and procedures, will direct how resources are managed to avoid or minimize conflicts between designated uses.

Designation. See Land Use Designation.

Developed Recreational Facility. Any structure or facility that serves either public or private recreational needs.

Director. The division director of the state division responsible for managing state land. Most often, “director” refers to the Director of the Division of Mining, Land and Water; for lands administered by DPOR, director refers to the Director of DPOR.

Dispersed Recreation. Recreational pursuits that are not site specific in nature, such as beach combing, recreational boating or wildlife viewing.

DMLW. Division of Mining, Land and Water, a division of DNR.

DNR. Alaska Department of Natural Resources.

Dock. A platform or landing pier that extends over, or onto water, and is usually used for receiving boats.

DOF. Division of Forestry, a division of DNR

DPOR. Division of Parks and Outdoor Recreation, a division of DNR

Easement. An interest in land owned by another that entitles its holder to a specific limited use.

17(b) Easement. Easement across Native corporation land reserved through the Alaska Native Claims Settlement Act (ANCSA, Section 17(b)). 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 modified by the term “feasible and prudent” [from ACMP regulations: 6 AAC 80.900 (20)]. A written decision by the land manager is necessary justifying a variation from a guideline modified by the terms “feasible” or “feasible and prudent”. See also, Types of Plan Changes, Chapter 4.

Federal Conservation System Unit. In this plan, this term refers to those areas of federal land that are in some form of protected status and are identified in ANILCA (National Wildlife Refuge, National Park, National Monument). Not included in this definition are lands administered by the U.S. Bureau of Land Management or the U.S. Forest Service except those lands administered by those agencies that are designated Wilderness or National Trails, which are considered to be Conservation System Units.

Fish and Wildlife. Any species of aquatic fish, invertebrates and amphibians, in any state of their life cycle, and all species of birds and mammals, found in or which may be introduced into Alaska, except domestic birds and mammals. The term “area(s)” in association with the term “fish and wildlife” refers to both harvest and habitat areas.

FLUP. Forest Land Use Plan. Prepared by the Division of Forestry, Alaska Department of Natural Resources.

Forestry. On tidelands: any activity or structure for timber harvest or for transfer of logs from uplands to tidelands, including, but not limited to felling, yarding and hauling of logs, roads, log transfer facilities, floating A-frame logging, upland and marine log storage areas, and camps and other support facilities associated with timber resource development. On uplands: any activity or structure for the harvest or management of timber resources.

Generally Allowed Use. An activity conducted on state land managed by the Division of Mining, Land and Water that is not in a special category or status. See 11 AAC 96.020.

Goal. A statement of basic intent or general condition desired in the long term. Goals usually are not quantifiable and do not have specified dates for achievement.

Green Infrastructure. Green infrastructure is defined as an interconnected network of natural areas and open spaces that conserves natural ecosystem values and functions, sustains clean air and water, and provides a wide array of benefits to people and wildlife.

Guideline. A course of action to be followed by DNR or Borough resource managers or required of land users when the manager permits, leases, or otherwise authorizes the use of state land or resources. Guidelines also range in their level of specificity from giving general guidance for decision making or identifying factors that need to be considered, to setting detailed standards for on-the-ground decisions. Some guidelines state the intent that must be followed and allow flexibility in achieving it.

ILMA. See Interagency Land Management Agreement/Transfer.

ILMT. See Interagency Land Management Agreement/Transfer.

Improvements. Buildings, wharves, piers, dry docks, and other similar types of structures permanently fixed to the uplands, tidelands, or submerged lands that were constructed and/or maintained by the applicant for business, commercial, recreation, residential, or other beneficial uses or purposes. In no event shall fill be considered a permanent improvement when placed on the tidelands solely for the purposes of disposing of waste or spoils. However, fill material actually utilized for beneficial purposes by the applicant shall be considered a permanent improvement. [11 AAC 62.840]

Instream Flow. An instantaneous flow rate of water through a stream during specified periods of time, from a designated location upstream to a designated location downstream.

Instream Flow Reservation. The legal water reservation for instream uses such as fish, wildlife, recreation, navigation, and water quality.

Interagency Land Management Agreement/Transfer (ILMA/ILMT). An agreement between DNR and other state agencies that transfers some land management responsibility to these other agencies.

Land Classification Order. An order approved by the Commissioner of the Department of Natural Resources that classifies state land into specific land use categories (AS 38.04.065). The Land Classification Order in this Area Plan (Appendix B) classifies all state lands within the planning area according to the land use designations assigned to individual land parcels in the Resource Allocation Tables contained in Chapter 3 of the Area Plan.

Land Disposal. Same as Land offering, defined below; except that land disposal areas referenced in Chapter 3 may include lots reserved for lease or sale for public commercial, or industrial facilities.

Land Manager. A representative of the Borough or of a state agency or division responsible for managing state land.

Land Offering. Transfer of state or borough land to private ownership. If authorized by DNR it is authorized by AS 38.04.010, including fee simple sale, homesteading, and sale of agricultural rights. The term does not include leases, land use permits, water rights, rights-of-way, material sales, or other disposals of interest in lands or waters. (See also, Land disposal.)

Land Sale. Same as Land offering as defined above.

Land Use Designation. A category of land allocation determined by a land use plan. Designations identify the primary and co-primary uses for state land. (Chapter 4 sets out how the land use designations of this plan will be classified according to 11 AAC 55.)

Leasable Minerals. Leasable minerals include deposits of coal, sulfur phosphates, oil shale, sodium potassium, oil and gas. Leasable minerals do not include the locatable minerals.

LDA. Legislatively Designated Area. This includes state parks, critical habitat areas, game refuges, etc.

Lease. A Department of Natural Resources authorization for the use of state land according to terms set forth in AS 38.05.070-105, or a similar authorization by the Borough.

Legislative Designation. An action by the state legislature that sets aside a specific area for special management actions and ensures the area is kept in public ownership.

Limited State Holding (LSH). Land in which the state has a limited (less than fee) property rights interest. Examples are easements, airspace easements, clear zone easements, rights of ways, leases, fish weir permits, conservation easements, equitable servitude, etc., acquired from other source authorities, such as direct purchase, donation, escheat, condemnation, and special congressional legislation.

Locatable Minerals. Locatable minerals include both metallic (gold, silver, lead, etc.) and nonmetallic (feldspar, asbestos, mica, etc.) minerals. Locatable minerals do not include the leasable minerals.

Management Intent Statement. The statements that define the department's or the borough's near and long-term management objectives and the methods to achieve those objectives.

Management Unit. A geographic unit used in the Fish Creek Management Plan to describe part of the planning area. The management unit is typically contiguous and most of the unit has similar resource values. The management unit is given a single classification and description in Chapter 3 of the Management Plan, though different guidelines or management may apply to different parts of the unit.

Materials. "Materials" include but are not limited to common varieties of sand, gravel, rock, peat, pumice, pumicite, cinders, clay and sod.

MCO. See Mineral Closing Order.

Mineral Closing Order (MCO). All state lands are open for the prospecting and production of locatable minerals unless the lands are specifically closed to mineral entry. The Commissioner of the Department of Natural Resources may close land to mineral entry if a finding has been made that mining would be incompatible with significant surface uses on state land (AS 38.05.185; 11 AAC 55.040e). [Note: A significant surface use of the land has been interpreted by DNR to include not only residential and commercial structures, but also fish and wildlife habitat, recreational, and scenic values.]

Mineral Entry. Acquiring exploration and mining rights under AS 38.05.185-38.05.275.

Mining. Any structure or activity for commercial exploration and recovery of minerals, including, but not limited to resource transfer facilities, camps, and other support facilities associated with mineral development. The term "mining" does not refer to offshore prospecting.

Mining Claim. Rights to deposits of minerals, subject to AS 38.05.185-38.05.275, in or on state land that is open to claim staking may be acquired by discovery, location and recording as prescribed in AS 38.05.185-38.05.275. The locator has the exclusive right of possession and extraction of the minerals lying within the boundaries of the claim, subject to AS 38.05.185 - 38.05.275.

Minor Change. A minor change to a land use plan is not considered a revision under AS 38.04.065. A minor change is a change that does not modify or add to the plan's basic intent, and that serves only to clarify the plan, make it consistent, facilitate its implementation, or make technical corrections. [11 AAC 55.030]

MSB. Depending on context may mean either Matanuska-Susitna Borough or Matanuska-Susitna Borough Code.

Multiple Use. Means the management of state land and its various resource values so that it is used in the combination that will best meet the present and future needs of the people of Alaska, making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; it includes:

1. the use of some land for less than all of the resources, and
2. a combination of balanced and diverse resource uses that takes into account the short-term and long-term needs of present and future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific, and historic values. [AS 38.04.910]

NPS. See U.S. National Park Service.

Native Owned. Land that is patented or will be patented to a Native corporation.

Native Selected. Land selected from the federal government by a Native corporation but not yet patented.

Navigable. Used in its legal context, it refers to lakes and rivers that meet federal or 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.

Off-Road Vehicle (ORV). Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding non-amphibious motorboats, fixed-wing and rotor-winged aircraft, and snowmobiles.

Ordinary High Water Mark. The mark along the bank or shore up to which the presence and action of the nontidal water are so common and usual, and so long continued in all ordinary years, as to leave a natural line impressed on the bank or shore and indicated by erosion, shelving, changes in soil characteristics, destruction of terrestrial vegetation, or other distinctive physical characteristics [from 11 AAC 53.900 (23)].

Permanent Use. A use that includes a structure or facility that is not readily removable.

Permanent Facility. Permanent facilities are improvements that do not need to be removed and usually involve the construction of a foundation for the improvement. In the context of the RRMP (only), it also refers to a significant ground area that may be affected by an allowed activity but that may not involve the construction of a foundation for structure improvements. Permanent facilities on state land shall be authorized by the Department of Natural Resources by lease. Examples of permanent facilities are structures that require a foundation, log or solid wall structures or frame tents.

Permit. A Department of Natural Resources authorization for use of state land according to terms set forth in 11 AAC 96, or a similar authorization by the Borough

Personal Use. The harvest of fish and wildlife for personal consumption, including but not limited to subsistence and recreational harvest. Commercial harvest is not included.

Planning Period. The period of time that the area plan guides the management of state land and is to be used as the basis for DNR or Borough decision making. This period is 20 years or until the area plan is revised.

Policy. An intended course of action or a principle for guiding actions; in this plan, policies for land and resource management include goals, management intent statements, management guidelines, land use designations, implementation plans and procedures, and various other statements of DNR's or the Borough's intentions.

Primary Use. See Designated use.

Prohibited Use. A use not allowed in a management unit because of conflicts with the management intent, designated primary or secondary uses, or management guideline. Uses not specifically prohibited nor designated as primary or secondary uses in a management unit are allowed if compatible with the primary and secondary uses, the management intent statements for the unit, and the plan's guidelines. Changing a prohibited use to an allowable use requires a plan amendment.

Public Trust Doctrine. A doctrine that requires the state to manage tidelands, shorelands, and submerged lands for the benefit of the people so that they can engage in such things as commerce, navigation, fishing, hunting, swimming, and ecological study. (See Navigable Rivers and Lakes: Public Trust Doctrine at the end of Chapter 3.)

Public Use. Any human use of state land, including commercial and non-commercial uses.

Public Use Cabin. A cabin owned or built by the state on state land that is managed for the benefit of the residents of the state and visitors to the state.

Public Use Site. Any site identified on state land that is important for public access (including important float and wheeled plane landing areas), camping, hunting, fishing or other recreation or public use.

Rearing. The developmental life phase of a fish from fertilization of eggs to adult.

Recreation. Any activity or structure intended for recreational purposes, including but not limited to hiking, camping, boating, fishing, and sightseeing. "Recreation" does not refer to subsistence or sport hunting and fishing.

Retained Land. Uplands, shorelands, tidelands, submerged lands, and water that are to remain in public ownership.

Right-Of-Way. The legal right to cross the land of another. May be abbreviated ROW.

SCRO. Southcentral Regional Office of the Division of Mining, Land and Water, Alaska Department of Natural Resources.

Settlement. The sale, leasing, or permitting of state lands to allow private recreational, residential, commercial, industrial, or community use.

Shall. Same as "will."

Shoreland. Land belonging to the state that is covered by navigable, nontidal water up to the ordinary high water mark as modified by accretion, erosion or reliction. (See definition of Navigable.) Shorelands are generally lake bottoms or the beds of navigable rivers and streams.

Shoreline Development. Any water-dependent or water-related structure or facility that is permanent and/or used for private, public, commercial, or industrial purposes. "Shoreline Development" excludes log or other resource transfer facilities, log storage, floating A-frame logging, or camps and other resource development support facilities associated with forestry or mineral development.

Should. States intent for a course of action or a set of conditions to be achieved. Guidelines modified by the word “should” state the plan’s intent and allow the manager to use discretion in deciding the specific means for best achieving the intent or whether particular circumstances justify deviations from the intended action or set of conditions. A guideline may include criteria for deciding if such a deviation is justified. (See Types of Plan Changes, Chapter 4.)

Significant Impact, Significant Effect, Significant Conflict, or Significant Loss (adapted from the ACMP statutes, AS 46.40.210). A use, or an activity associated with that use, which proximately contributes to a material change or alteration in the natural or social characteristic of the land on which:

1. the use, or activity associated with it, would have a net adverse effect on the quality of the resources;
2. the use, or activity associated with it, would limit the range of alternative uses of the resources; or
3. the use would, of itself, constitute a tolerable change or alteration of the resources but which, cumulatively, would have an adverse effect.

Spawning. The deposition or fertilization of fish eggs, including preparation for deposition or fertilization.

State Land. All land, including shore, tide, and submerged land, or resources belonging to or acquired by the state. [AS 38.05.965 (20)] See also definitions of state-owned land and state-selected land as well as definitions for shorelands, tidelands, and submerged lands. Refer to Figure 1.1 in Chapter 1 for a graphical depiction of these areas. ‘State Land’ excludes lands owned by the University of Alaska, the Mental Health Trust Authority, or by state agencies that have acquired them through deed.

State-Owned Land. Land that has been conveyed to the State of Alaska, including uplands, shorelands, tidelands, and submerged lands (includes Tentatively Approved land).

State-Selected Land. Federal land selected by the State of Alaska, pursuant to federal grants and statehood entitlement, that has not yet been conveyed (includes topfilings).

Submerged Lands. Land covered by tidal waters between the line of mean lower low water and seaward to a distance of three geographic miles or as may hereafter be properly claimed by the state. (AS 38.05.965) (See definition of Tidelands and Figure 1.1, Chapter 1.)

Subsistence Uses. The noncommercial, customary and traditional uses of wild, renewable resources by a resident domiciled in a rural area of the state for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation, for the making and selling of handicraft articles out of non-edible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption; in this paragraph, “family” means persons related by blood, marriage, or adoption, and a person living in the household on a permanent basis. [AS 16.05.940 (33)]

Suitable. Land that is physically capable of supporting a particular type of resource development.

Temporary Use. A low impact, short-term use that does not involve the establishment of permanent improvements or foundations. Any structure associated with a temporary use must be readily removable within 48 hours.

Temporary Facility. Temporary facilities or structures or those that can be dismantled and removed from a site or that can be dismantled and stored on the site. Temporary facilities on state land are authorized under permits. Examples of a temporary facility are heliports or frame, dome, or pup tents.

Trapping Cabin. A cabin constructed under a Trapping Cabin Construction Permit as authorized and described in AS 38.95.080 and 11 AAC 94.

Unsuitable. Land that is physically incapable of supporting a particular type of resource development (usually because that resource doesn't exist in that location).

Uplands. Lands above mean high water (See Figure 1.1, Chapter 1.)

US Fish and Wildlife Service. United States Fish and Wildlife Service, a division of the U.S. Department of Interior.

USFWS. See US Fish and Wildlife Service.

U.S. National Park Service. United States National Park Service, a division of the U.S. Department of Interior.

Water-Dependant. A use or activity which can be carried out only on, in, or adjacent to water areas because the use requires access to the water body. [6 AAC 80.900 (17)]

Water-Related. A use or activity which is not directly dependent upon access to a water body, but which provides goods or services that are directly associated with water-dependence and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered. [6 AAC 80.900(18)]

Wetlands. Includes both freshwater and saltwater wetlands. "Freshwater wetlands" means those environments characterized by rooted vegetation which is partially submerged either continuously or periodically by surface freshwater with less than .5 parts per thousand salt content and not exceeding three meters in depth. "Saltwater wetlands" means those coastal areas along sheltered shorelines characterized by salt tolerant, marshy plants and large algae extending from extreme low tide which is influenced by sea spray or tidally induced water table changes.

Will. Requires a course of action or a set of conditions to be achieved. A guideline modified by the word "will" must be followed by land managers and users. If such a guideline is not complied with, a written decision justifying the noncompliance is required. (See Types of Plan Changes, Chapter 4.)

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