

# CHENA RIVER STATE RECREATION AREA MANAGEMENT PLAN



Adopted November 2006

Alaska Division of Parks and Outdoor Recreation  
Department of Natural Resources



# **CHENA RIVER STATE RECREATION AREA MANAGEMENT PLAN**

**Adopted**

**November 2006**



Northern Area State Parks  
Alaska Division of Parks and Outdoor Recreation  
Department of Natural Resources



This publication was released by the Department of Natural Resources, Division of Parks and Outdoor Recreation, for the purpose of informing the public about the Chena River State Recreation Area Management Plan, at a cost of \$13.78 per copy, in Anchorage, Alaska.

# STATE OF ALASKA

**DEPARTMENT OF NATURAL RESOURCES**

**OFFICE OF THE COMMISSIONER**

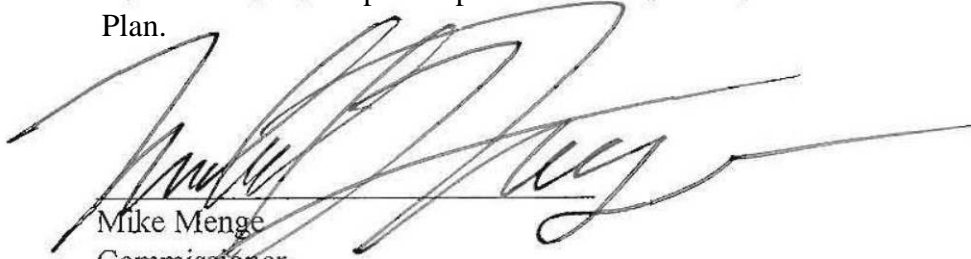
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## **ADOPTION OF THE CHENA RIVER STATE RECREATION AREA MANAGEMENT PLAN Revised November 2006**

The Commissioner of the Department of Natural Resources finds that the Chena River State Recreation Area Management Plan meets the requirements of AS 41.21.470-490 and hereby adopts this plan as policy for the Department of Natural Resources, which prescribes management of state lands within the boundaries of the park unit, including permitting and other department programs and activities. This plan supersedes the November 1984 Chena River State Recreation Area Master Plan.



Mike Menge  
Commissioner  
Alaska Department of Natural Resources

November 8, 2006  
Date



# STATE OF ALASKA

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December 17, 2006

Re: Chena River State Recreation Area Management Plan

Dear Reader:

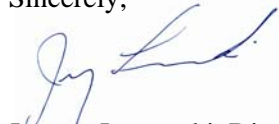
Prior to the Chena River State Recreation Area (CRSRA) being established in 1967, lands within the future Recreation Area were managed similar to other state lands in the Fairbanks area. This left the area open to a variety of developments including timber harvest, mining and subdivisions. Foresighted individuals acted on concerns that traditional outdoor recreation activities were starting to disappear in the Chena River Valley. They wanted to protect at least one area so these activities could continue in close proximity to Fairbanks. They encouraged the Legislators and the Governor to retain this area in public ownership. The CRSRA was designated by the legislature in 1967 and expanded in 1975. Today, the area remains in public ownership and continues to offer a wide variety of recreational opportunities.

Public involvement during the recent planning process emphasized how important the CRSRA continues to be for area residents. At different stages of the planning process, people provided many specific suggestions for improving management of the area. They also liked the general management direction our division had been taking ever since the first management plan was adopted in 1985. We heard this clearly, incorporated these ideas into the revised plan, and intend to continue to manage the area for a wide variety of recreational uses while still protecting the resources for future generations.

This revised management plan also looks to the future and emphasizes the need to gather more information about what is happening in the Recreation Area including the condition of the resources and specific feedback from the users to help us meet the increasing pressures and demands we face. The plan also allows for a carefully considered program to improve recreation facilities, trails, visitor services and other developments.

We are fortunate that this area was set aside for public use in 1967. However, it is only through your continued involvement in the management of the area that we can assure that a diversity of recreation facilities and opportunities continue to be available to the public and to meet the needs of future generations. I encourage your continued interest and involvement in the management of this area and I would like to thank all of you for your valuable input throughout this planning process.

Sincerely,



Jerome Lewanski, Director

*"Develop, Conserve, and Enhance Natural Resources for Present and Future Alaskans."*

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***Darryl Hunt at  
Twin Bears Camp, 2001***

### **IN MEMORIAM**

*This management plan is dedicated to the memory of Park Ranger Darryl Hunt, who worked for the Department of Natural Resources, Division of Parks and Outdoor Recreation from 1981 until 2003. Ranger Hunt managed the Chena River State Recreation Area from 1994 to 2003. For all except the last two years, he was the “lone ranger.” Darryl cared deeply about the Recreation Area, placing the well-being of the area and its visitors foremost in his heart.*

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# **Chapter 1**

## **Introduction**



## **Chapter 1: Introduction**



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### **PLAN PURPOSE**

The plan is intended to help the Division of Parks and Outdoor Recreation achieve its mission of providing a broad spectrum of outdoor recreation opportunities, while protecting the area's natural values. The purpose of this plan is to provide general guidance for management of the Chena River State Recreation Area (SRA). The plan serves as a guide for anyone involved in the SRA, either as visitor, commercial operator, Northern Area Citizens Advisory Board member or area manager. Background material included in this document will also serve as a comprehensive source of information on the SRA.

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### **PLAN OVERVIEW**

State Parks' overall goal is to manage the Chena River State Recreation Area for a wide range of recreation uses, based on its natural values, use patterns, and ability to support uses without significant adverse effects to this natural area. State Parks will maintain existing patterns of recreation use while managing for increased uses in developed, high-use areas and maintaining dispersed uses in less-developed, low-use areas. State Parks will keep impacts to a minimum through a variety of methods, such as by developing information and education programs; involving volunteers and user groups; monitoring and research programs; site improvements and hardening; seasonal restrictions, and other techniques.

This plan sets forth guidelines for the management of the Recreation Area's varied resources and makes recommendations on the development of recreation facilities. The Recreation Area is divided into six management units. Unit boundaries are based upon topography, resources, and the character of the unit. Each unit has a statement of management intent, program recommendations, and management guidelines for recreational development. This plan revision builds on the guidelines set forth in the original 1984 plan, making changes only where needed to adapt to the changes in use or conditions that have occurred since that time.

Provisions for revising or changing this plan have been incorporated into this document to ensure that the plan will remain flexible and adaptable to public preferences, changing conditions, and management needs.

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## THE PLANNING AREA

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Lying twenty-six miles east of Fairbanks, the Chena River State Recreation Area encompasses more than a quarter-million acres of rolling hills and river country of Interior Alaska (see Map 1-1). The Chena River SRA occupies an important niche in the Fairbanks area by providing regional recreation opportunities. Traditionally known for its excellent grayling fishing on the upper Chena River, the Recreation Area's diversity is recognized for the wide spectrum of summer and winter recreation opportunities available to local residents. Also, out-of-region visitors are discovering the area in increasing numbers.

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## ESTABLISHMENT OF THE RECREATION AREA

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Impetus for the establishment of the Chena River State Recreation Area came from farsighted individuals within the Fairbanks Garden Club, Tanana Valley Sportsmen Association, the Alaska Conservation Society and others who were concerned about increasing land development in the Chena River Valley and the resulting loss of traditional outdoor recreation opportunities. After the Recreation Area was established, the Citizens Advisory Board and other public entities served a key role in helping with determining the management direction of the SRA.

The Chena River State Recreation Area was created by two separate legislative actions:

- Senate Bill 101, June 18, 1967, designated 15,360 acres of state land along the Chena River and the Chena Hot Springs Road as the Chena River State Recreation Area;
- House Bill 152, May 13, 1975, expanded the SRA to its current size: 254,080 acres.

These two bills were codified as AS 41.21.475-490 (see Appendix B). These statutes mandate that all state-owned and -acquired land and water in the SRA would be:

- Reserved from all uses incompatible with its primary function as public recreational land.
- Assigned to the Department of Natural Resources (DNR), Division of Parks and Outdoor Recreation for control, development and maintenance.

Additionally, the legislation states that:

- The state may not acquire private inholdings by eminent domain unless it is to provide necessary access to state land.
- The Department may adopt zoning regulations for private inholdings (in accordance with AS 44.62).
- The Commissioner may designate, and by regulation, prohibit or restrict incompatible uses within the area as provided by legislation. However, these regulations may not prohibit:
  - Work on valid mineral leases or mining claims;
  - The legal taking of fur-bearing animals;
  - The traditional use of roads and trails by any means of transportation, including a vehicle propelled by machinery, if the use occurred regularly in or around the current Recreation Area before June 18, 1967, and
  - Cutting of dead and down or burnt timber.

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## **SRA MANAGEMENT PLANNING PROCESS, 1984 ORIGINAL AND 2006 REVISED**

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After this enabling legislation, with extensive public involvement, Alaska State Parks developed a management plan and regulations that assisted with implementing the plan and the enabling legislation. These regulations are included in Appendix B. There are other statewide statutes under Title 41 and regulations under Title 11 that apply to all units of the State Park System that also apply to the SRA that are not included in this Appendix.

Many program recommendations in the original 1984 plan have been implemented during the intervening two decades, including:

- Convened a Citizen Advisory Board as a liaison between the public and the agency;
- Initiated the public use cabin program, installing 2 road-accessible and 5 backcountry cabins;
- Developed a maintenance shop and storage shed;
- Installed volunteer facilities to house & support 6 – 8 volunteers;
- Acquired property to protect the Chena Hot Springs Winter Trail use and access;
- Developed a year-round 15-mile loop trail, the Stiles Creek Trail;
- Constructed 3 emergency shelter cabins on backcountry hiking trails;
- Developed several new trails – Angel Rocks to Chena Hot Springs, Tors Trail short loop; Compeau Trail, Mist Creek Trail, and major upgrades to several others;
- Installed several interpretive displays at milepost 27, 36, 39.5, and 48;
- Developed information flyers and brochures for cabins & trailheads; published the Chena Trailmarker newspaper for area-wide information;
- Provided significant upgrades to several campgrounds and trailheads; and
- Most recently, constructed the 18-mile Compeau Trail.

Though many other recommended tasks remain, the plan revision was initiated in 2003 in response to public concerns about various management issues. Population growth and technological advances in recreational equipment brought conflicting use patterns and new recreational demands. Public land managers needed clear, consistent guidelines for their decisions, based upon an open public process of airing concerns and gathering salient information.

Public participation is an essential part of the planning process. The plan revision process advertised and conducted 2 different series of community meetings – May 2003 and January 2004 – at which more than 250 people attended. Their comments were addressed in the final plan, which again offered a chance for comment in late 2004. The final plan garnered 120 individual letters and 515 form letters. Throughout the planning process, members of the planning staff met with representatives from many agencies and community and user groups, to inform them of the plan's progress and provide them the opportunity to review information and proposals. Information gathered at these meetings and the written comments were instrumental in identifying important issues, gathering data on local resource values, developing and evaluating alternatives, and shaping the final plan.

Table 1-1: The Planning Process

Date	Planning Stage
April 2003	<b><i>Planning Process Announced</i></b> Outlined process, major issues, public meeting dates; Letters & emails to agencies, organizations, and individuals inviting participation.
May 2003	<b><i>Issues Identified</i></b> Public meetings advertised and held in Fairbanks and Two Rivers; written comments solicited.
July 2003	<b><i>Public Comments Summarized</i></b> #1 Newsletter summarized public comments; distributed hard copy; posted on website.
Summer 2003	<b><i>Information Gathering Began</i></b> Researched resource uses, economy, trends. Continued throughout planning process. Many experts consulted.
Fall 2003	<b><i>Draft Plan Prepared</i></b> Agency Review Draft circulated October 2003; Public Review Draft written & distributed December 2003.
Jan 2004	<b><i>Draft Plan Available for Comment</i></b> #2 Newsletter distributed – draft plan available for comment; Public Meetings advertised and held in Fairbanks and Two Rivers. Citizen Advisory Board continued monthly meetings on plan issues.
April 2004	<b><i>Public Comments Summarized</i></b> Newsletter #3 summarized public comments.
July 2004	<b><i>Public Comment Report Distributed</i></b> Full comment and summary reports available online Newsletter #4 notified public of the plan delay.
Fall 2004	<b><i>Final Intent to Adopt Plan Prepared</i></b> Public comments incorporated; changes made to draft plan.
Nov 2004	<b><i>Intent to Adopt Final Plan Distributed</i></b> Newsletter #5 announces public comment period and summarizes final ITA Plan.
October 2006	<b><i>Public Comments on Final ITA Plan Summarized &amp; Final Plan Re-issued for Final Comment</i></b> Newsletter #6 summarized public comments on Final ITA Plan. Final plan made re-available for comment.
November 2006	<b><i>Final Plan Adopted</i></b> Commissioner reviews final comments, makes changes if needed. Plan provides state policy for public land management in the Chena River State Recreation Area.
	<b><i>Plan Implemented</i></b>

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## ALASKA STATE PARKS SYSTEM'S STATEWIDE FRAMEWORK PLAN

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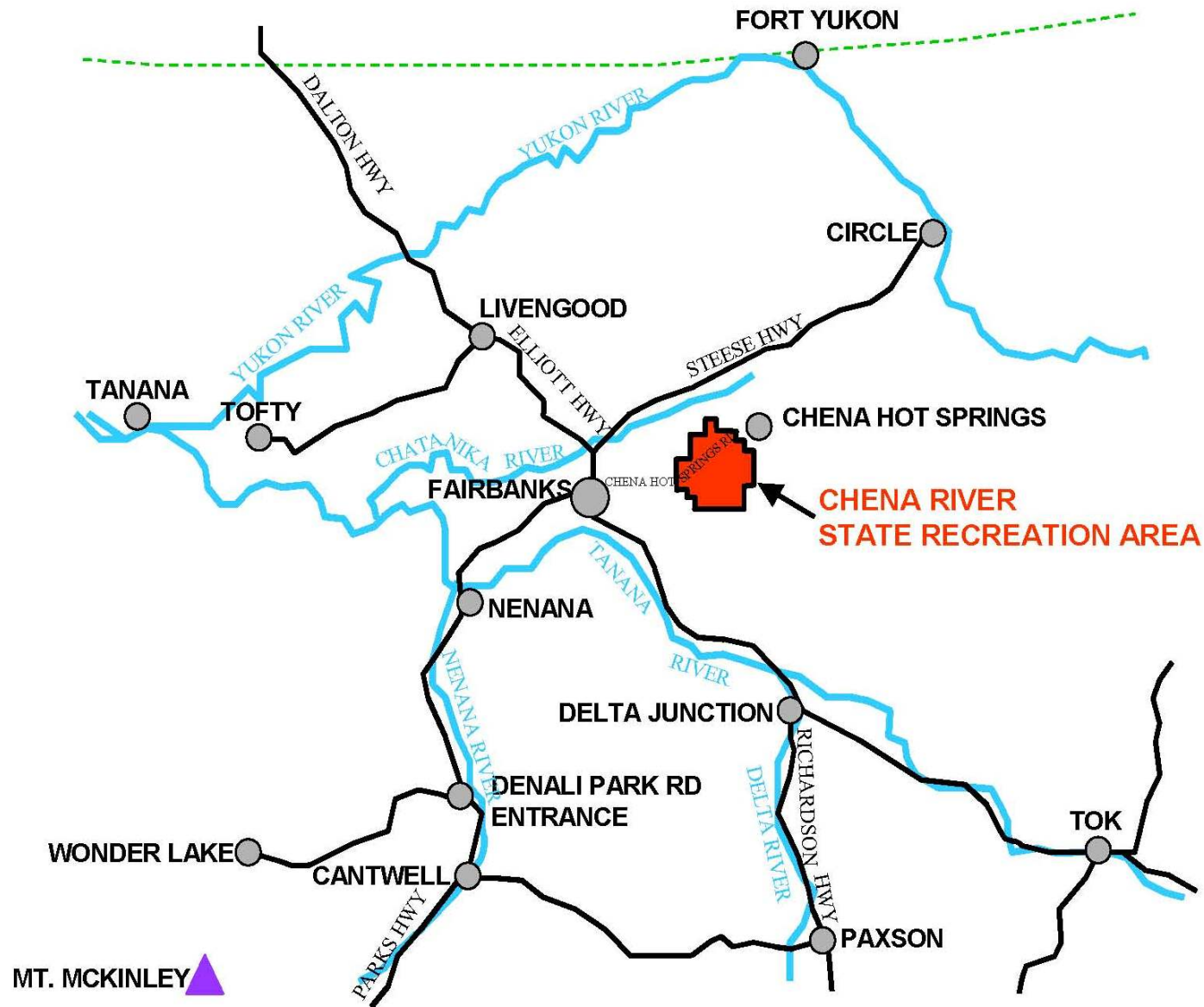
A management plan for the entire state park system, titled the *Alaska State Park System's Statewide Framework Plan*, adopted in 1982, defines the differences between state recreation areas and other state park units such as state parks and state recreation sites. The Framework Plan defines state recreation areas as follows:

*"A state recreation area is a relatively spacious unit and possesses a diversity of outdoor recreational opportunities. The dominant management objective of the unit is to provide a maximum level of outdoor recreational opportunities based on the natural values of the unit and its ability to sustain use without significant adverse effects on natural systems."*

The Statewide Framework also provides general direction for developments and activities within state recreation areas:

*"The management of a state recreation area allows for carefully planned and controlled resource modification to enhance outdoor recreational opportunities as long as the intensity of modification does not diminish the unit's natural and cultural values. Such modifications must be based upon a formal decision to enhance public enjoyment of the state recreation area's natural values or to provide for site-appropriate outdoor recreation activities. Lands within the unit will be developed to provide diverse, high quality outdoor recreational experiences in keeping with regional use patterns and preferences. Other than state recreation sites, recreation areas are generally the most intensively developed type of unit in the State Park System."*

Federal laws also help guide the management of the SRA. This plan acknowledges the 1990 Americans with Disabilities Act. Consistent with this law, Alaska State Parks will not exclude an individual with a disability whom with or without reasonable modifications can participate in the outdoor recreation opportunities and activities that the Chena River State Recreation Area provides.



## Map 1-1 REGIONAL LOCATION

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## GOALS, MISSION AND OBJECTIVES

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In combination with the statutory intent language included in the previous section, management intent for the area also derives from other plans adopted by DNR and the overall mission of Alaska State Parks.

The Tanana Basin Area Plan adopted by the Department of Natural Resources in 1991 has three main goals for recreation for all state lands in the Tanana Basin. These are:

- Recreation Opportunities: Provide the full spectrum of accessible, developed, and undeveloped recreation opportunities for Alaskans and visitors.
- Resource Protection: Protect ecologic, scenic, and other recreation resources for present and future generations.
- Economic Development: Manage Alaska's recreation resources to support a tourism industry that supplies jobs, income and revenue.

The Division of Parks and Outdoor Recreation's mission is to provide outdoor recreation opportunities, and conserve and interpret natural, cultural and historic resources for the use, enjoyment and welfare of the people.

Specific goals established for the Chena River State Recreation Area established by this plan, based on the Division's Statewide Framework Plan, are:

- Provide recreational opportunities appropriate to the regional setting and physical character and compatible with the natural significances of the Recreation Area;
- Protect, manage and interpret the area's natural and scenic character, cultural and historical significance and recreational values;
- Provide adequate maintenance and operation stewardship to ensure resource protection, to meet human health and safety concerns and to meet public service needs; and,
- Pursue marketing and cost-effective economic strategies to increase efficiency and effectiveness in the management of the park system and contribute to the role of recreation and tourism to the regional economy.

Specific objectives to be achieved by this management plan are:

- To provide for a spectrum of recreation opportunities and users;
- To analyze existing and anticipated trends of regional outdoor recreational use and demands; and determine the role of the Chena River State Recreation Area and the Division of Parks and Outdoor Recreation in satisfying those demands;
- To make specific recommendations concerning the development of facilities within the Recreation Area;
- To serve as a basis for capital and operation budget requests;
- To provide management and operational guidelines; and
- To establish management flexibility in meeting changing conditions, needs and opportunities.

## **Chapter 2**

### **Areawide Management Direction & Guidelines**



## Chapter 2: Areawide Management Direction & Guidelines



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### BACKGROUND

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The recreation area offers natural attractions and recreational opportunities of regional significance. Such features as the Granite Tors, Angel Rocks, Chena Dome, Chena River fishery, boating, trails and the public use cabin system offer destination points for residents and travelers alike.

In keeping with a national trend, participation in outdoor recreation of all kinds is increasing in the region. This is a result of population growth, increasing awareness of health, increases in disposable income, and advances in recreational equipment technology. Along with this trend is an increasing demand for recreation opportunities closer to home communities.

As the population and visitation of the area continues to grow, and more state lands convert to private ownership, pressure on open lands and facilities in the recreation area will increase. This increased use will place additional pressure on park managers to maintain existing facilities and accommodate more use.

This chapter includes management direction and guidelines on major issues in order to implement plan goals and objectives. Included is information about:

- Overall Recreation Management
- Access Roads
- Campgrounds
- Education & Interpretation
- Facilities
- Fees & Funding
- Gravel Bars
- Horse Use
- Hunting/Trapping
- Land Ownership
- Logjams
- Maintenance
- Monitoring
- Permits
- Public Use Cabins & Shelters
- River Uses
- Shooting Range
- Trails
- Wildlife Viewing

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## OVERALL RECREATION MANAGEMENT

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State Parks' overall goal is to manage the Chena River State Recreation Area for a wide range of recreation uses, based on its natural values, use patterns, and ability to support uses without significant adverse effects to this natural area. As stated in the Alaska State Park System: Statewide Framework, a state recreation area, as opposed to a state park or a state recreation site, "is a relatively spacious unit and possesses a diversity of outdoor recreation opportunities. The dominant management objective is to provide a maximum level of outdoor recreational opportunities based on the natural values of the unit and its ability to sustain use without significant adverse effects on natural systems." In the Chena River SRA, State Parks will maintain existing patterns of recreation use while managing for increased uses in developed, high-use areas and maintaining dispersed uses in less-developed, low-use areas.

State Parks will focus on gathering information to more clearly identify problems and to be able to make decisions based on facts. State Parks will seek to keep negative impacts to a minimum for both the resources and the users through a variety of methods. These methods may include providing information and education programs; involving volunteers and user groups; conducting monitoring and research programs; making site improvements and hardening; establishing seasonal restrictions, and other techniques. Future management actions will seek creative measures to minimize use conflicts and resource damage, avoiding as much as possible the use of over-reaching restrictions or unnecessary regulations.

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## ACCESS ROADS

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State Parks recognizes more access roads exist than can be effectively managed. State Parks' priority is to maintain the existing primary access roads. Incidental, unintentional roads or access points without clear purpose will be monitored, but not actively managed or signed unless significant resource damage or public safety concerns warrant management restrictions or closure. New roads, when proposed, will consider maintenance costs, benefits, impacts, and other concerns, similar to deciding on a new facility. Any site-specific planning for new roads will include public notice and opportunity for comment.

Access road locations are listed from west to east along the Chena Hot Springs Road and right (R) or left (L) driving from Fairbanks. Based on current management practices, the plan describes specifically which roads will be: a) monitored, maintained and improved for **primary facility access**, b) monitored and maintained for **dispersed site access**, or c) monitored and not maintained for **incidental access** that may be restricted or closed.

**a) Primary facility access.** Eighteen recreation access roads will be monitored, maintained, signed and improved as funding allows. These roads lead to the primary facilities and destination nodes, including nine trailheads (Milepost 26.6L, 29.9L, 31.6L, 36.4L, 41.6L, 45.5R, 48.9R, 49.2L and 50.5L), three campgrounds (Milepost 27.0R, 39.5L and 42.8L), three designated boat launch sites (Milepost 27.9R, 37.8R, and 44.1L); one residential camp (Milepost 30.0L), one maintenance compound (Milepost 33.0L) and two public use cabins (Milepost 32.2R and 47.8L).

**b) Dispersed site access.** Seventeen access roads to dispersed sites will be monitored and maintained at Mileposts 26.7R, 28.2L, 28.6R, 29.4R, 29.5L, 31.4R, 38.2L, 39.6R, 42.3R, 42.9R, 43.0R, 43.7L, 43.9R, 44.1R, 45.5L, 47.2L and 47.9L. These roads also may be signed.

**c) Other incidental access.** Several other incidental roads will be monitored and not actively managed or signed unless significant resource damage or public safety concerns warrant management restrictions or closure.

As the budget allows, ranger patrols will be increased to reduce vandalism, littering, and resource damage and other types of undesirable behavior, particularly at undeveloped sites.

State Parks' will make maintaining existing access a priority over developing new access to future facilities and will seek to secure funding that reflects this priority, particularly for deferred maintenance items.

**Trailered Boat Launches.** Launching boats from trailers is authorized at three sites in the Recreation Area: at the Milepost 27.9, at Milepost 37.8 (called "first bridge"), and at Milepost 44.1 (called "third bridge"). These three signed sites will offer motorized boating access at key locations – from the east end for access up the East (Middle) Fork, the west end for access up the South Fork and downstream of the Recreation Area, and from the middle of the Recreation Area.

Under current statewide regulations, off-road and highway vehicles may not be operated in the active channel of anadromous streams. The intent of this law is to protect salmon streams from adverse impacts. Under a special authorization administered by the Alaska Department of Natural Resources' Office of Habitat Management and Permitting, State Parks allows vehicle access into the Chena River for the purpose of launching watercraft from a trailer at these three sites. State Parks will continue to ensure that the General Permit for public launching at these sites remains current.

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## CAMPGROUNDS

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Current campsites are designed for 35-foot vehicles. Some future campsites will be designed to accommodate even larger vehicles including 45-foot RVs. All campgrounds in the Recreation Area allow RV camping.

Dispersed camping on gravel bars by RVs and tents will continue to be allowed. With increased use, these areas may require more active management by designating sites, limiting the number of campsites per gravel bar, and/or establishing a remote camping fee system (see Monitoring section in this chapter).

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## EDUCATION AND INTERPRETATION

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Education and interpretation provide important tools for affecting visitor behavior and reducing negative impacts. As a management policy, interpretation and visitor information will be incorporated into all development projects.

State Parks will incorporate **boating education** in their management strategies through information displays and trainings or seminars. To increase awareness and understanding of boating safety, operator courtesy, and river ethics, State Parks will work with the State Office of Boating Safety to provide training at various venues, such as meetings for river user groups, school groups and youth groups, including topics such as boat operator courtesy, river hazards and the Kids Don't Float Program.

State Parks will promote **responsible outdoor recreation use** by adding displays, such as trail courtesy and etiquette, leave-no-trace techniques, be respectful of other users, and other educational and interpretive displays at trailheads, inside public use cabins, and other activity nodes.

Road traffic will likely increase as the population of the region grows, and as other attractions in the area experience increased use, such as the Chena Hot Springs Resort. This use is likely to result in more visitors stopping for **sightseeing and wildlife viewing**, and increasing use of interpretive facilities and programs along the road. The Recreation Area plays an increasingly important regional role in offering opportunities for wildlife viewing and scenic views.

Where appropriate, for example where safe, off-road parking exists, State Parks will install interpretive panels near wildlife viewing areas and at pull-offs with natural or cultural significance. State Parks will design interpretive recreation opportunities for diverse groups including the elderly, families with young children, and those not able to venture along more challenging trails. These facilities can provide these groups with the opportunity to learn about those areas through informational panels.

Noise caused by increased traffic along the road, the river, or trails may detract from some of the activities occurring in the Recreation Area, such as wildlife viewing and interpretive learning. Road and other upgrades should take wildlife viewing and interpretation into consideration and take measures to reduce negative impacts on these activities.

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## FACILITIES

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State Parks will make maintenance of current facilities a priority over development of new facilities. If funding is available for new facilities or other improvements, the cost of operating and maintaining proposed facilities and upgrades is the first and primary consideration and will be evaluated on a project-by-project basis. Other factors that may be considered include benefits of reducing adverse effects to the natural environment; maintaining or improving public safety, and complying with the management intent for the

area. Unless the project is very minor, the site planning process will include public notice and an opportunity for comment. This management approach will apply to all facilities, including access roads, boat launches, campgrounds, public use cabins and shelters, shooting range, trails and trailheads.

Funding for facility development and maintenance is a major challenge for the Recreation Area. Several options have been considered to help remedy the problem. Grant writing has proven to be a good source of funding for specific projects. Partnerships with organizations to construct and maintain facilities should also be sought. State Parks will seek to use more volunteers, service organizations, and user groups to help with the maintenance of existing facilities, as well as the planning, construction and maintenance of new facilities or park improvements. Programs could be initiated that allow individuals or organizations to adopt a cabin, road, trail, or other park feature.

New public use cabins will be located a short distance from the river, trail, or road, so that a sense of privacy exists between the cabin site and other park users. Opportunities still exist for developing more pull-offs, connector trails, establishing better-defined boat put-ins and take-outs and an interpretive/welcome center. A dump station could be developed in the Recreation Area. The most logical location is the Rosehip Campground.

Future opportunities may exist to increase appropriate recreation facilities that might better serve year round recreation and be sources of revenue. For example, demand for winter recreation amenities, such as shelter cabins, yurts, or commercial facilities operated under contract or concession may be considered.

There may be undiscovered cultural resources within the Recreation Area, and development of future facilities should be done with care. Site inspections or testing is required where a cultural inventory has not been completed by the Office of History and Archaeology prior to ground disturbing development activity.

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## **FEES AND FUNDING**

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In a statewide survey, the 2004-2009 Statewide Comprehensive Outdoor Recreation Plan asked respondents about five different proposals to help fund the development and maintenance of park facilities and outdoor recreation programs throughout the state. The percent of support is noted:

- Allocate a portion of annual RV registration fees (91 percent).
- Allocate a portion of annual off-road vehicle registration fees (86 percent).
- Allocate a portion of annual snowmachine registration fees (87 percent).
- Impose a one-penny per gallon tax on gasoline (57 percent).
- Impose a small tax on the purchase of outdoor gear (43 percent).

When asked if they were willing to pay user fees for maintenance of outdoor recreation facilities, 82 percent said yes. If a statewide bond issue were put on a general election ballot to fund parks and outdoor recreation programs, 64 percent said they would vote for it. Seventy-two percent said they would purchase a ten-dollar pin with proceeds going to help fund outdoor programs.

During the summer of 1999, a UAF Department of Economics study in the Chena River SRA on “willingness to pay” found that if a \$4 or \$5 user fee was imposed, 30% of the visitation would likely be lost initially. Visitation would possibly increase if visitors purchased annual passes.

State Parks seeks to assess fees consistently statewide; however, regional differences should be recognized and allowed. For example, not all units of the park system offer dispersed use sites or multiple access roads, such as found in the Recreation Area.

Opportunities to collect fees in the Chena River SRA are limited to a few developed facilities. The more heavily used, dispersed sites within the Recreation Area incur significant maintenance costs that are currently not supported by fees. Legislative action is needed to allow additional fees to be collected for uses such as dispersed camping. Currently AS 41.21.026 only allows for fee collection for use of developed sites. State Parks, with local support and sponsorship, may seek to authorize changes in legislation.

Other sources of funding should be sought for the deferred maintenance backlog and new capital improvements. State Parks will carefully consider the maintenance and operations cost before constructing any new facilities to determine if there will be sufficient revenues generated and allocated to offset or decrease maintenance and operation costs.

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## **GRAVEL BARS**

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Gravel bars along the Chena River provide unique camping and picnicking opportunities. Resources are needed to ensure that the increase in these activities does not cause unnecessary damage to the river’s ecosystem. Dispersed camping, day-use, and picnicking along the river are likely to increase, but staffing and funding to minimize impacts and provide basic services are in short supply.

Camping on gravel bars by RV’s, car campers and tents will continue to be allowed. With increased use, these areas may require additional management, such as designating sites, adding sanitation facilities and better enforcement of existing sanitation regulations, limiting the number of campsites per gravel bar, or establishing dispersed-site camping fees. Also see the Monitoring section in this chapter.

Highway vehicles will continue to be allowed on gravel bars, but are not allowed to drive in the river under existing statutes (Title 41), except at the trailered boat launch sites discussed earlier in this chapter. Under current statewide regulations, off-road and highway vehicles may not be operated in the active channel of anadromous streams. See Access Roads section, Trailered Launches in this chapter.

Off-road vehicles (ORVs) will continue to be limited to trails designated open to ORV use in the Recreation Area. ORVs may be allowed on unvegetated gravel bars. To protect public safety and well-being of other campers and gravel bar users, ORVs may not create a nuisance or be operated in a reckless manner at gravel bar campsites. If use of gravel bars increases in the future, use conflicts may warrant ORV restrictions. When gravel bars are closed to ORV use, they will be posted.

Where feasible, information about gravel bar use will be displayed on interpretive panels or bulletin boards near the activity areas. Information will explain the constraints described above and offer education about user respect, courtesy, and sharing resources to minimize regulatory controls.

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## **HORSE USE**

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Horse use in the Recreation Area is allowed in designated areas. Trail conditions should be monitored and managed to protect the integrity of trails. Increased horse use can cause major trail destruction unless protection measures are taken, such as seasonal closures or enhancements such as trail hardening or boardwalks. Separation of horse trails from hiking trails should also be considered.

Areas where horses are currently allowed will remain available for horse riding. When portions of these trails have boardwalks installed, the boardwalk will be constructed to meet standards for horse use or horses will be directed to an alternate route through signage. Assistance from user groups for maintenance and special construction projects will be solicited.

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## **HUNTING/TRAPPING**

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Hunting with firearms is legal throughout the recreation area except within one-quarter mile of developed facilities, such as campgrounds, public use cabins and day-use areas. Hunting activities must comply with state hunting regulations.

The local Fish and Game Advisory Committee addresses hunting and trapping concerns. Changes to hunting regulations are made through the Alaska Board of Game, not State Parks.

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## **LAND OWNERSHIP**

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Reasonable and feasible access to private lands within the Recreation Area should be ensured in a manner that avoids, as much as possible, recreation use conflicts and minimizes environmental damage. Resources or lands that are developed or sold on state lands surrounding the Recreation Area should not be accessed through the recreation area unless beneficial to the management objectives of the park.

The Division of Parks and Outdoor Recreation should take the necessary steps to ensure continuing public access across private lands along the winter trail corridor, including purchase of the private land parcels or conservation easements.

Military lands south of the CRSRA require a permit before entry. See Appendix C.

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## **LOGJAMS**

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Logjams will not be removed within the Recreation Area by State Park staff. Woody debris is an important component for fish and other wildlife habitat. Firewood gathering and house log permits will continue to be available for harvest of dead and down or burnt timber.

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## **MAINTENANCE**

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Facility maintenance is a top priority for the Recreation Area. Management actions should be directed at caring for the facilities that already exist and should take precedence over the development of new facilities.

Funding for special projects, which in the past has come mainly from federal grants, is often restricted to construction of new facilities or upgrades to existing facilities. Federal grants cannot, as a general rule, be used for maintenance. While federal grants will continue to be sought, the cost of operation and maintenance of proposed facilities and upgrades will first be considered on a project-by-project basis. In addition, any significant facility development will include public involvement.

State Parks will seek to utilize more volunteers and non-profit organizations to help with the maintenance of existing facilities. These include trail projects, constructing interpretive signs, improving public use cabins and campground improvements.

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## **MONITORING**

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Proper decision-making requires adequate information, so the focus of management action in the near term mandates that a monitoring and assessment program be developed. State Parks shall strive to collect baseline data on visitor uses and the condition of park resources within five years of plan adoption, and periodically monitor and assess conditions, so management objectives can be tailored to support the types of use and diversity of recreation experiences enjoyed and desired in the Recreation Area.

State Parks will focus on assessing existing resource and use conditions, which may include user surveys by mail, phone or on-site interviews, field surveys, public workshops or focus group meetings, public comment stations, volunteer canvasses, general ecological and sociological research, online reporting system, and other appropriate inventory methods. With this monitoring program, managers can better describe the conditions sought by the various users and identify management actions to achieve and maintain these conditions. The Citizen Advisory Board will be asked to review new information every three years and recommend to park managers any appropriate actions. Before significant changes are implemented, public involvement will occur.

Managers of the Recreation Area need baseline data on patterns of uses and activities to establish specific management objectives and to develop criteria for detecting change in patterns. State Parks will initiate a data collection strategy, and work with recreation survey professionals to design the strategy. The data should be standardized and collected over



time so trends and changes can be identified and effective management strategies can be formulated. In the future, State Parks will gather information to a) document key social and ecological conditions in the Recreation Area, and b) use that information to establish standards that identify acceptable levels of impacts on both resource conditions and the experience of Recreation Area users.

As use patterns change over time, impacts on resource and social conditions will likely occur. Management objectives should clearly identify the limits of acceptable change. Where these limits are currently known, they are included in the plan. However, much is not known about existing use patterns and user satisfaction and preferences. These must be identified and monitored over time, including:

- Level and type of gravel bar use;
- Level and type of commercial operations;
- Level and type of river use;
- Level and type of trail use;
- Level and type of dispersed camping and day use;
- Human use impacts on the resources;
- Extent of non-native plants on disturbed sites, especially those spreading along trails and gravel bars;
- Use preferences of existing Recreation Area users, particularly for river uses; and
- Tolerance for alternate types of management actions.

With this information, Recreation Area managers will work to set standards that define the conditions sought for the wide range of recreation opportunities, identify management actions desired to achieve and maintain these conditions, and adjust management accordingly.

Studies should also be initiated that address how fish and wildlife and their habitats are changing due to either natural or human causes. To assess the condition of representative wildlife habitat types within the park and their sensitivity to both natural and human-caused pressures, a baseline ecological research program should be undertaken in cooperation with ADF&G. The research should be designed as an ongoing program capable of measuring changes in the health and productivity of key habitats over time. Such a continuing research effort is especially important given the importance of fishing, hunting and wildlife viewing in the Recreation Area. Upland habitat areas identified for future research should focus on those used by furbearers and large game animals. Fish species to be addressed include, but are not limited to, Arctic grayling which are important to recreational anglers. This section of the Chena River also includes important salmon spawning habitat. Finally, water quality and stream flow should continue to be monitored within the Recreation Area.

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## PERMITS

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Currently, State Parks does not require the public to acquire a permit to use the Chena River SRA for general recreation. Certain activities require a permit under 11 AAC 18.010, such as reserved use of facilities, special events, commercial use, or groups of more than 20 people.

If commercial operator use in the Recreation Area begins to negatively impact its resources or wildlife habitat or other users' experiences, limits on the number of permits issued or additional stipulations may be required.

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## PUBLIC USE CABINS AND SHELTERS

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The strong public demand for public use cabins and shelters has been at least partly met in the Recreation Area. A system of seven cabins within the SRA, available on a rental basis, has increased opportunities for summer and winter overnight stays. Three shelters are also available on a first-come, first-served basis.

Road accessible cabins are booked months in advance and more cabins could possibly meet this demand. However, placement is an issue because of potential conflicts with other users.

State Parks' priority is to maintain current facilities before adding new ones. Remote facilities, particularly those with non-motorized access, are difficult and costly to maintain. State Parks will continue to assess the need for and costs of proposed future developments. State Parks will seek to expand the public use cabin and shelter program in response to public demand. State Parks will further seek partners who can help to keep the cabin program revenue-positive by maintaining existing cabins (adopt-a-cabin) or volunteering to construct new cabins or donating to cabin purchases. State Parks will consider special use permits for a private entity to construct and maintain new facilities, including public use cabins, shelters, and possibly yurts.

Cabins should be located a reasonable distance from the road, main trail and water bodies to maintain cabin user privacy. Cabins should be associated with the trail system or river system for ease of access and maintenance. Cabins should be signed and readily identifiable as state park cabins and not private cabins. The public use cabins should be available for reservation on a daily basis (with a maximum limit) to allow maximum public use. The Chena River Cabin and four cabins at the Twin Bears Camp have ramps connecting cabins to the toilet and are designed to be accessible by those with disabilities.

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## RIVER USES

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The Chena River within the Recreation Area is one of the most important fishing streams in the region. It also contains the highest-quality salmon-spawning habitat of the Chena River. With ever changing use of the Chena River, the need to monitor the river and river use is very important (see Monitoring section in this chapter).

No restrictions on motorcraft (including PWCs) or horsepower are proposed at this time. Based on studies in 2004 and 2005, most boat use on the river is by paddlers or floaters (non-motorized boaters). However, there is insufficient information about the nature and level of conflicts to develop specific management objectives or restrictions. For the time being, the shallow, twisting nature of the river self-limits many motorboats. All uses on the river will continue to be monitored and assessed. See Monitoring section for more details.

The predominance of public comment indicated that the use of personal watercraft, such as Jet Skis, interferes with the recreation of other users. However, imposing a full restriction should be the last resort, used only after other measures do not succeed in minimizing the conflicts. State Parks will actively pursue regular monitoring and assessment of conditions and uses and seek less intrusive ways to reduce problems. Initial data gathering should identify the existing use levels and type of use and type of conflict. Management actions should seek to reduce the level of conflicts by addressing specific factors, such as seasons, locations, stretches of the river, or behaviors. State Parks will use the monitoring and assessment data to develop practical management standards that effectively address the diversity of uses and opportunities within the Recreation Area.

User education for river ethics, etiquette and safety will be a priority (see Education & Interpretation section in this chapter). State Parks will also seek funding to help identify the nature and extent of concerns and to use education and interpretation efforts to increase awareness of recreation etiquette and courtesy to other users so as not to diminish or impair other users' enjoyment. If conflicts can be minimized through education, then further regulations can be minimized.

There is little airboat use on the river and State Parks is not proposing to limit them at this time. To reduce noise impacts in heavily used areas, education efforts will be made to encourage airboat operators to use the East (Middle) and South forks of the Chena River rather than the main stem. Airboat use on the river will continue to be monitored.

**Trailer boat launching.** See details under the **Access section** of this chapter.

**Size of groups.** Under regulations that apply to all units of the State Park System, a permit is required for parties larger than 20 people for all activities to minimize conflicts with other users and to prevent excessive impacts to sites and facilities. These limits will remain in effect.

**Monitor the Conditions of the River and its Uses.** State Parks will continue to collect baseline data and field observations on the types of river uses, frequency of use, user preferences and user conflicts. With this information, Recreation Area managers will set standards that define the conditions sought for the various users of the river, and identify management actions desired to ensure these standards are met. Before management restrictions are considered, public involvement will occur.

Management will also put a high priority on maintaining the integrity of Recreation Area's riparian habitats, and conserving the grayling fishery through careful planning and regulation in cooperation with the Alaska Department of Fish and Game.

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## SHOOTING RANGE

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State Parks will work with interested individuals and user groups to improve the shooting range and make it safer for trail users and others. If demand warrants and the facility can be upgraded, State Parks may contract out the management of the facility.

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## TRAILS

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The plan includes proposals to reroute, harden and improve existing trails. The plan also includes several proposals to build new trails. The plan does not propose changes that affect which trails are motorized or non-motorized, unless other measures prove inadequate to avoid unacceptable resource damage.

State Parks recognizes the damage that has occurred on low-lying trails during the summer by motorized uses and will make repairs a priority for Stiles Creek, Colorado Creek and Angel Creek trails. As in the 1984 plan, ORVs will continue to be limited to designated trails, which means summer motorized use is allowed only on certain trails and winter motorized use is allowed off-trail only after sufficient snow cover protects underlying vegetation.

State Parks will strive to develop summer trails on highland routes, so the lowland trails can be better maintained for use during the frozen winter months. As funding allows, trails in low-lying, wet areas will be reconstructed to withstand ORV use or rerouted to higher ground to improve conditions for trail users while reducing resource impacts. ORVs may be restricted from certain lowland trails where significant resource damage cannot be reduced to acceptable levels through other measures.

Consistent with the 1984 plan, the Angel Creek Trail will be actively managed for winter-only motorized use across wet areas because of extensive resource damage, primarily in the first three miles of the trail. The plan calls for a new or rerouted trail along the base of the hillside that will provide for summer motorized use to the Angel Creek Public Use Cabins. Acquiring funding for this new route will be a high priority for State Parks to retain the diversity of uses in the area.

The Chena Dome Trail will remain non-motorized. During the 2004 fire season, a fire break was bulldozed on adjacent general state land and within the Recreation Area. In 2005, the dozer line was rehabilitated, closed to highway vehicles, and opened to ORVs up to the Recreation Area boundary. In 2006, a new year-round motorized trail was built along the Colorado Ridge. The new trail provides a connection between the fire line and the Chena Hot Springs Road without impacting the Chena Dome area. This is consistent with the State Park's intent to develop new trails that will provide more loops and connections with the existing trail system.

State Parks will seek to enlist the support of volunteer user groups to help maintain and enhance trail use opportunities. An Adopt-a-Trail Program is one avenue to pursue.

Additional signage will be added as needed, limiting the number of signs to a reasonable level. Signage or other remediation will be added where confusion exists about the actual trail alignment.

State Parks will develop a detailed trail inventory, identify where problems exist and make appropriate repairs and improvements (see Monitoring and Assessment section). Appendix D describes the classification and management standards for each existing trail.

State Parks' goal is to provide a variety of recreation uses while maintaining trails in an acceptable condition. State Parks will seek sufficient funding to build new and reroute or improve existing multiple-use trails that require less maintenance to meet the diverse needs of motorized and non-motorized users. Future management actions designed to ensure the long term sustainability of trails and minimize damage should emphasize Best Management Practices and will conform to statewide trail standards, when they are developed. These practices may include:

- Hardening trails, installing water control features, drainage ditches and boardwalks;
- Rerouting trails to dry ground and constructing them with appropriate slopes and grades to be sustainable;
- Identifying appropriate use on the original trails when alternate trails are developed by:
  - Establishing acceptable levels of physical change with respect to hindrance of other allowed uses of the trail;
  - Evaluating environmental impacts of continued use through wet areas and determining where existing trail use creates increased resource damage;
  - Closing the original trail when damage exceeds acceptable levels and the alternate trail provides better access;
- Restricting ORVs from trails with significant resource damage where damage cannot be reduced to acceptable levels by other measures. For example, the Angel Creek Trail will be restricted to winter-only ORV use until a reroute or trail hardening occurs; and
- Trail closures during breakup;
- Continuing to limit ORV use to designated trails.

Within the limits of available funding for maintenance and operation costs, where extensive trail damage exists, the following trails will be repaired or rerouted:

Multiple use motorized trails (horse riding, ORVing, snow machining, dog sledding, bicycling, hiking and cross-country skiing)

- Colorado Creek Trail – reroute to higher ground where possible; harden existing trail where affordable; eliminate braided sections by posting and consolidating the trail to one route.
- Angel Creek Trail – reroute to higher ground where possible; harden existing trail where affordable; allow motorized use only during the frozen-season in damaged, low-lying wet areas.
- Stiles Creek Trail – harden existing trail where affordable; eliminate braided sections by posting and consolidating the trail to one route.
- Chena Hot Springs Winter Trail – manage trail to maintain or improve current condition.
- Compeau Trail – maintain appropriately to sustain stable condition.

Non-motorized Trails: (horse riding, snow shoeing, dog sledding, cross-country skiing and hiking)

- Granite Tors Trail – replace aging boardwalk across wet areas.
- Angel Rocks Trail – install boardwalk across wet areas; reroute trail to avoid areas subject to erosion; harden trail to eliminate cutting switchbacks. Keep existing trail open for horse use by installing boardwalks that meet standards for horse use or establish alternate routes for horses.
- Chena Dome Trail – harden or reroute hillside route segments subject to erosion.
- Mist Creek Trail – brush trail and install trail markers.

The trails program for the SRA should focus on maintaining and improving existing trails within the recreation area, as well as maintaining or enhancing connections to existing and proposed trail networks both within and outside the Recreation Area. State Parks should continue to develop and link Chena River SRA trails to the regional trail network, including the Chena Hot Springs Winter Trail from Fairbanks, other trails systems to the west (Jenny-M and Two Rivers, Chatanika and Cleary trails) and possibly extend trails to other areas, including to the north (White Mountains National Recreation Area and Steese National Conservation Area), east (Yukon-Fortymile country), and south (Salcha-Delta area).

No specific plans exist for new trails. Several routes are possible and should be considered for the future, such as trails connecting the Colorado Creek Trail with the Stiles Creek Trail or connecting the Mist Creek Trail with the Granite Tors Trail. Future new trails should link with existing trails to create more loop trail opportunities or to extend access into new areas. Before constructing new trails, the Citizen Advisory Board should be consulted and the public should be notified.

The plan designates areas for motorized and non-motorized use and trails for motorized use, summer or winter. Trail design, alignment, and allowed uses are in accordance with the conditions of the trail and the management intent for that unit. Trails will be classified into five general categories that will guide the trail's development, construction, maintenance, management and use. See Appendix D. Trail Classifications in the Chena River SRA. These trail classifications should be modified to comply with statewide trail maintenance and construction standards when they are developed.

Chena Dome Trail Interagency Land Management Agreement

Two short segments of the Chena Dome Trail lie outside the Recreation Area on land managed by the DNR Division of Mining, Land and Water (DMLW). State Parks should obtain management rights from the DMLW through an Interagency Land Management Agreement for these two segments so the entire length of the trail is managed by one agency.

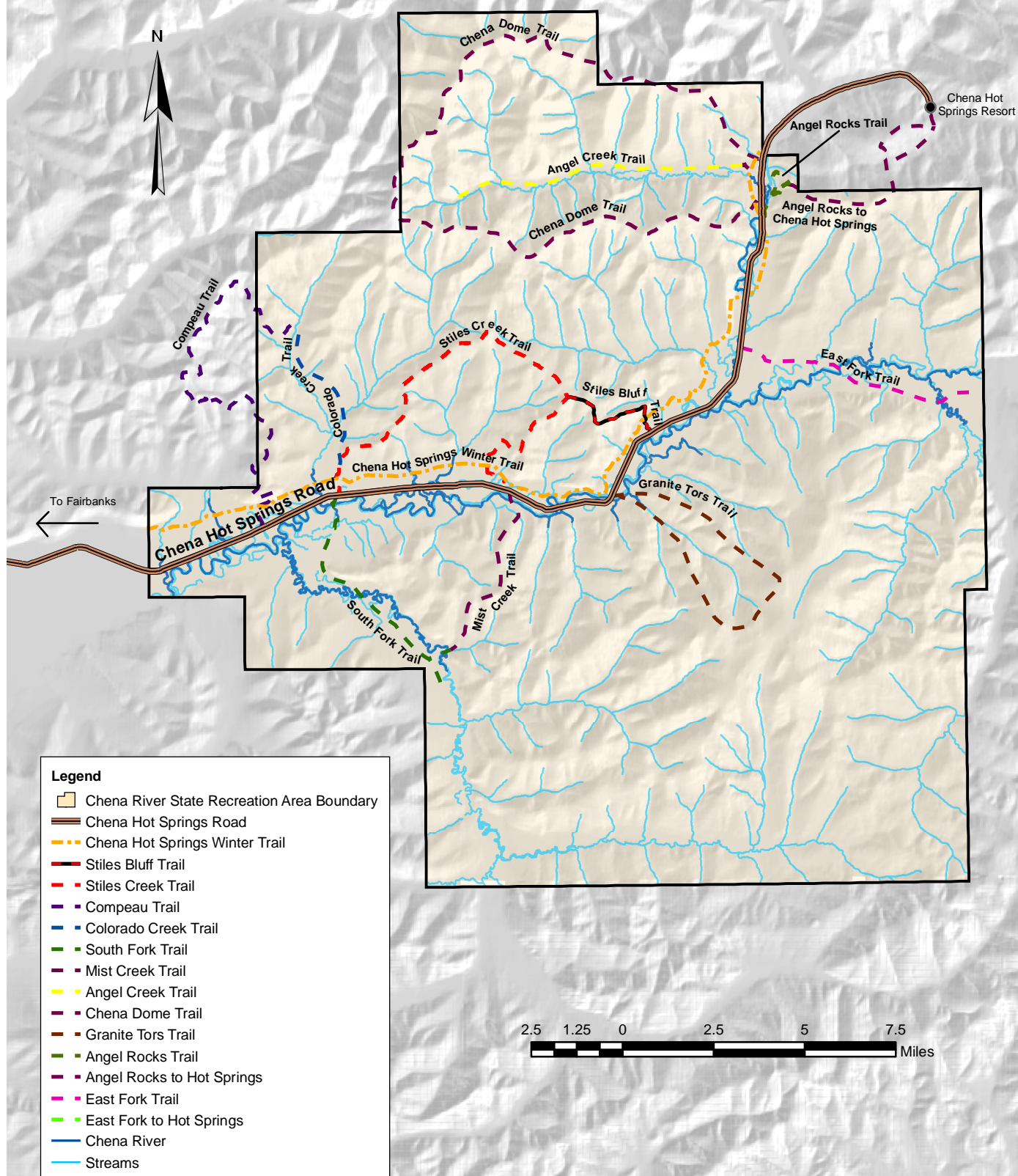
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## **WILDLIFE VIEWING**

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State Parks will continue to seek opportunities to develop safe wildlife viewing areas, particularly along the highway. Existing roadside pull-offs and other sites with wildlife viewing potential that could be improved are located at Milepost (MP) 27.8, 28.2, 29.2, 29.4, 38.8, 39.1, 41.6, 42.0, 42.8, 42.9, 46.0, 46.7 and 49.9.

## Map 2-1 Chena River State Recreation Area Trail System





## **Chapter 3**

### **Management for Each Unit**

## Chapter 3: Management for Each Unit




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### CLASSIFICATION OF MANAGEMENT UNITS

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*The Alaska State Park System: Statewide Framework Plan* establishes a land-use classification system for management and development of land and resources within all statewide park units. From the six statewide designations identified, only two are applied to the Chena River SRA: **Recreational Development** for Unit 1 along the road and river, and **Natural Area** for the remaining five units. Map 3-1 shows the boundaries of these units and their land-use designations. The unit boundaries and their designations remain unchanged from the 1984 Plan. However, the description of characteristics and developments allowed in each classification described in the original Framework were slightly modified to better reflect the Recreation Area's situation. For example, motorized use is clearly allowed on some of the designated trails in the Natural Areas, such as the Colorado Creek and Angel Creek trails. Described below are the purposes, characteristics, and developments/activities allowed under each designation within the Recreation Area.

#### Recreational Development

##### Purpose

Unit 1 was designated Recreational Development to meet the more intensive recreational needs of the public. This unit is intended to provide convenient and well-defined access via roads, boat access and high-standard trails; more intensively-developed recreational facilities; and a proposed information center to orient visitors to the unit's special features. The center may also be used to collect fees.

##### Characteristic

The landscape within this unit can be modified to support educational and recreational activities and/or to enhance wildlife habitat and scenic qualities. This description was applied to this unit to recognize the unit's soils, slope drainage and vegetation that can support more intensive recreational activities. Fire suppression and insect and disease control may be used, where appropriate, within this unit to maintain or enhance recreational use. This unit has already been influenced by prior developments and high public uses. This unit is intended to provide a transition area between the Chena Hot Springs Road and units located away from the road that are designated "Natural Area."

#### Development Activities

The highest level of development and levels of public use can occur within the Recreational Development Designation. The developments allowed include, but are not limited to, roads and trails, private vehicle and public transportation routes or access, campgrounds, dispersed campsites, picnic areas, visitor and interpretive centers, high-standard trails for all ages and abilities, and park management facilities. Commercial lodges or resorts on private lands within this unit are likely. High intensity activities related to the use of these developed facilities are generally encouraged. Summer and winter off-road vehicles (ORV's) and other motorized recreational vehicles are included in specifically designated areas or through management techniques such as time and/or space allocations.

### **Natural Area**

#### Purpose

Units 2, 3, 4, 5 and 6 are given this designation to provide for moderate to low impact and dispersed forms of recreation.

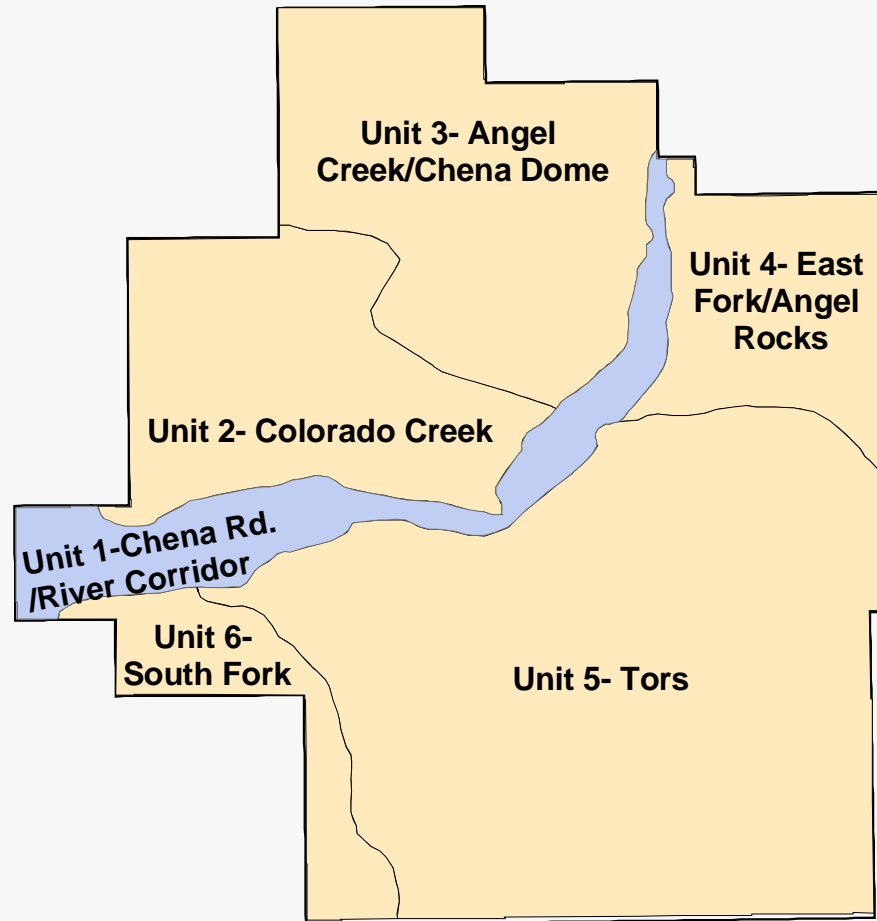
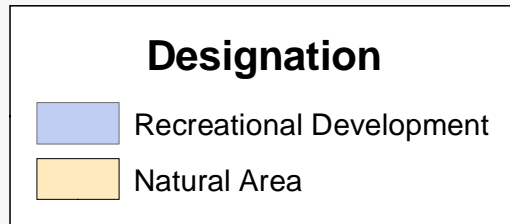
#### Characteristic

Units with this designation will remain relatively undeveloped and undisturbed, and will be managed to maintain high scenic qualities and provide visitors with opportunities for significant, natural outdoor experiences. Retaining these units' natural landscape character is a primary management intent, but landscape modification may be allowed to enhance, maintain, or protect the natural setting according to the units' specific management intent.

#### Development Activities

Developments in a Natural Area are intended to provide for the safety of park visitors and to provide for a moderate level of convenience in a high-quality natural setting. Allowable developments include, but are not limited to, backcountry shelters, public use cabins, high standard trails (paved or gravel), bridges and roads where necessary to access development zones and as provided for in an approved management plan. A medium level of activity is encouraged in natural areas. Activities include, but are not limited to, bicycling, backpacking, hiking, fishing, hunting, cross-country skiing, skijoring, camping, berry picking and rock climbing. Snowmachining and ORVing are allowed activities within specifically designated areas, depending on resource sensitivities and potential conflicts with other park uses.

**Map 3-1**  
**Land Use Designations In**  
**Chena River State Recreation Area**  
**by Management Unit**



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## MANAGEMENT UNITS

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This chapter presents the specific land management policies and guidelines for each of the six management units (Maps 3-1). Unit boundaries generally follow hydrographic boundaries, but may vary where patterns of public use and land ownership dictate. Management intent presented in each unit does not apply to private lands. Each management unit has a description and a statement of management objectives and guidelines for development.

The six management units are:

- Unit 1: Chena River - Road Corridor
- Unit 2: Colorado Creek Unit
- Unit 3: Angel Creek - Chena Dome Unit
- Unit 4: East Fork - Angel Rocks Unit
- Unit 5: Tors Unit
- Unit 6: South Fork Unit

## UNIT 1: CHENA RIVER – ROAD CORRIDOR

### Description

The Chena River – Road Corridor Unit parallels the Chena Hot Springs Road and the upper Chena River. See Map 3-2. This unit is a corridor that varies in width from one-half to three-miles wide. This unit encompasses the lower elevations of the Recreation Area, which are predominately flood plains, ponds, wetlands, and sloughs.

This unit lies within the Chena River floodplain and any development may be subject to periodic flooding. The 1967 flood (100 year stage) affected most of the area to some degree. The cost of building facilities in areas where they are affected by extreme flood events, as in 2003, must be factored into the costs of new construction. The three existing campgrounds are relatively protected from flooding. However, more recent flooding has impacted the riverbank of the Rosehip campground and picnic area, causing the loss of two campsites and half the picnic area. The Tors Campground received damage mainly to the parking area. All gravel bar access roads are of a low standard so the cost of repairing flood damage is generally minimal.

<i>Location</i>	<i>Experiences</i>	<i>Outdoor Recreation Activities</i>
<u>Facilities</u>	Visitors find large white spruce and clear water in the upper Chena lowlands. The open gravel bars provide good dispersed recreation sites. Three established campgrounds. Two public use cabins accessible by road. Established picnic areas. Opportunities for viewing wildlife along the road and salmon spawning in the river.	Dispersed camping. Dispersed picnicking. Camping in campgrounds. Overnighting in Public Use Cabins. Interpretation. Sightseeing and picnicking. Hunting and target shooting. Fishing.
<u>Trails &amp; Trailheads</u>	Trailheads associated with trail systems in other units provide parking, toilets, informational and interpretive displays and other facilities. There are a number of existing winter trails providing excellent dog sledding, snowmachine, skijor and cross-country skiing opportunities. These users can travel out of this unit into the trail systems of the other units.	Day hiking. Backpacking. Rock climbing. Picnicking. ORV use. Horseback riding. Dog sledding. Snowmachining. Skijoring. Cross-country skiing. Trapping. Snowshoeing. Bicycling. Hunting.
<u>Ponds and Sloughs</u>	Canoeing and kayaking on quiet water and pond fishing are popular activities. ADF&G stocks Twin Bears, Goldeneye, and North Fork ponds with grayling and rainbow trout.	Dispersed camping. Picnicking. Group picnicking. Hunting. Fishing. Swimming.
<u>River Corridor</u>	The upper Chena offers some relatively fast water with cut banks, sweepers and logjams to challenge boaters. Abundant grayling provide good fishing. Multiple river access roads provide ready access for many different experiences.	Day trips on river. Extended float trips. Fishing. Hunting. Gravel bar camping & picnicking.

## Management Objectives and Guidelines

This management unit is designated “Recreation Development” and will be managed consistent with this purpose.

The Chena River – Road Corridor Unit will be managed to provide campgrounds, increased dispersed camping and picnicking, improved river access for fishing and boating, winter trail use, and winter and summer access to trails within other units. Motorized travel will be restricted to designated roads and trails. With the exception of personal watercraft (PWCs), powerboats are allowed on the river, but all ponds are non-motorized. PWCs are prohibited in the Recreation Area, except from the third bridge to the East (Middle) Fork of the Chena River, and up the East Fork, where they are used to access private property and travel beyond the Recreation Area boundary.

The existing Twin Bears Camp group camp facility at Milepost 30.0 will continue to be managed under permit by a private operator. Public use of the pond for fishing and swimming will continue to be allowed. The camp will be open to the public on a reservation-basis year round.

### Access Roads to the River, Primary Sites and Dispersed Sites

*Note: Milepost locations are given R (right) or L (left) designators, heading eastbound.*

- Monitor, maintain and improve nineteen primary river and facility access roads: Milepost 26.6L, 27.0R, 27.9R, 29.9L, 30.0L, 31.6L, 32.2R, 33.0L, 36.4L, 37.8R, 39.5L, 41.6L, 42.8L, 44.1L, 45.5R, 47.8L, 48.9R, 49.2L and 50.5L.
- Monitor and maintain all roads to dispersed sites: 26.7R, 28.2L, 28.6R, 29.4R, 29.5L, 31.4R, 38.2L, 39.6R, 42.3R, 42.9R, 43.0R, 43.7L, 43.9R, 44.1R, 45.5L, 47.2L and 47.9L.
- Work with DOT/PF to widen shoulders at certain locations along the Chena Hot Springs Road to allow for safe summer biking and walking along the roadway.
- Work with DOT/PF to plow winter areas adequate to accommodate vehicles with snow machine trailers.
- Work with DOT/PF when brush clearing along the road is planned.
- Seek opportunities to develop safe wildlife viewing areas, particularly along the highway. Sites that could be improved are located at MP 27.8, 28.2, 29.2, 29.4, 38.8, 39.1, 41.6, 42.8, 42.0, 42.9, 46.0, 46.7 and 49.9.

### Facility Developments and Improvements

- Visitor Entrance Facility. Design and construct a visitor entrance station adjacent to the highway near Rosehip Campground that will provide Recreation Area information and collect site fees.
- Twin Bears Camp. Work with permittee to maintain and improve the facilities, including the public access to the trails and pond, improve the camp road and seek opportunities to reroute the camp road off the pond.
- Shooting Range
  - 1) Upgrade benches, trash receptacle, and re-install a vaulted toilet.
  - 2) Reroute the winter trail so that it avoids proximity to the target shooters and better sign the trails and trailhead for safety.

- 3) Seek funding and volunteers to upgrade or extend the shooting range.
- 4) Seek user group support for facility operations and maintenance.
- 5) Install trailhead information displays for Stiles Creek, the Winter Trail, and Mist Creek trails.
- 6) As camping popularity grows, consider designated sites to improve quality.
- Tors Trail Campground. Develop a self-guided nature trail with interpretive signing.
- Stiles Creek Extension Trailhead. When trail is rerouted to a more sustainable alignment, develop the trailhead facility.
- Red Squirrel Campground
  - 1) Develop a self-guided nature trail with interpretive signing.
  - 2) Separate the picnic area from the camping area.
- East Fork Trail
  - 1) Install informational display for East Fork Trail.
  - 2) Provide picnic tables, bear resistant trash receptacles, and toilets at the Goldeneye Pond and East Fork trailhead.
  - 3) If area becomes heavily used, consider establishing designated parking locations.
- North Fork Pond. Develop an interpretive display and self-guided nature trail with signing.

#### Public Use Cabins

- Construct a road- or boat- or trail-accessible public use cabin adjacent to the river or a pond, primarily for summer use. The location should be chosen in an area with a stable sloped-bank so that there is minimal resource damage. Winter trail access should also be considered when choosing the location.
- Additional cabins may be considered in the future, based on demand and funding. Cabins should be sited off (out of sight of) main trails or public attractions to avoid user conflicts and vandalism.

#### River

- Near Flat Creek Slough. Develop a canoe put-in/take-out with stable banks and adequate parking.
- Rosehip Campground. Develop an improved canoe take-out nearby and reclaim the steep bank at the current site.
- Hodgins Slough. Develop a canoe put-in/take-out with adequate parking.
- Trailered boat launch sites. Place signage for the three designated launch sites at MP 27.9, MP 37.8, and MP 44.1 and place signs at them. If a launch site is identified at the west end of the recreation area closer to the highway than the 27.9MP site, seek authorization and develop that site.



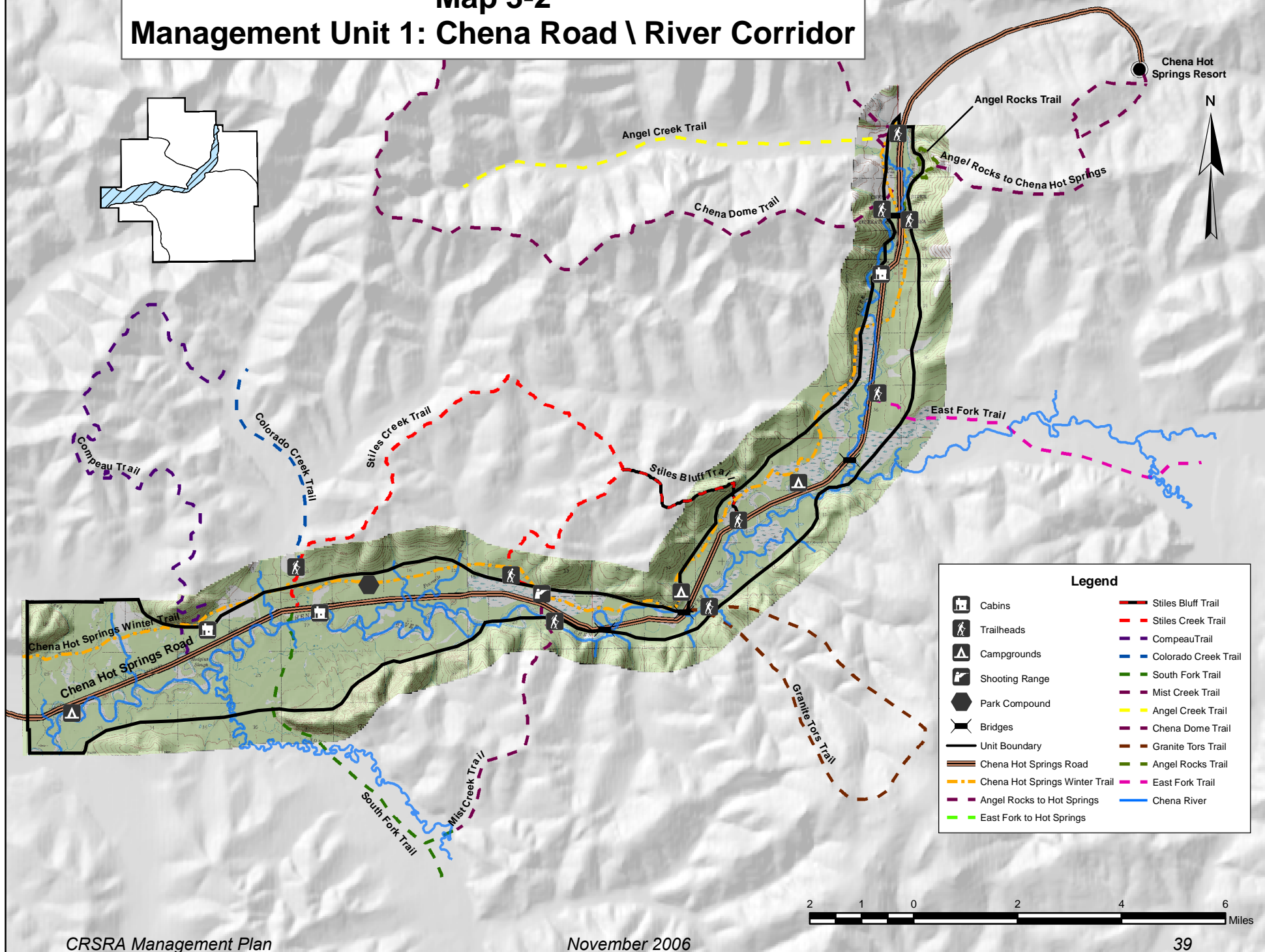
## Road

- Several highway-associated safety hazards exist within the Chena Hot Springs Road right-of-way in the Chena River Recreation Area. State Parks will continue to work with DOT/PF to ensure in that necessary highway maintenance and management standards are met. At the same time, DOT/PF should make improvements such as wider shoulders in key locations so the Chena Hot Springs Road is safer for vehicles turning on to or off of side roads. When improving and maintaining the road and its right-of-way, DOT/PF should take into account the recreational and scenic character of the road corridor.
- State Parks should continue to work with DOT/PF to address flood mitigation and repair.
- DOT/PF and State Parks should identify access points, safety hazards and turnouts, and vegetation maintenance management for enhancing viewing opportunities. Wider shoulders will help reduce “moose jams” and other safety concerns.
- Establish a way for hikers to safely access the Tors Trail entrance without having to cross the highway at a dangerous curve.
- Primary facility access roads and dispersed river site access roads will be signed, maintained and monitored. Other incidental access roads to the river will be monitored but not actively managed or signed unless resource damage or public safety concerns warrant management restrictions or closure.
- Soft sections of river access roads should be hardened.

## Trails and Trailheads

- Chena Hot Springs Winter trailhead, near Flat Creek (MP 26.6L). Construct an interpretive and informational display.
- South Fork trailhead should be relocated and signed closer to the trail, so that a road crossing is not required.
- Compeau Trail. Develop and improve the trailhead parking area. Consider dispersed campsites with ATV access directly to the trail.
- Stiles Creek and Chena Hot Springs Winter trailheads (MP 36.4L). Install trailhead informational displays for Stiles Creek, Chena Hot Springs Winter, and Mist Creek trails.
- Mist Creek trailhead (MP 36.4). If use increases substantially, State Parks will consider the development of a trailhead on the south side of the road for the safety of the trail users.
- Granite Tors trailhead. Construct a safer Chena Hot Springs Road pedestrian crossing between the trail and the trailhead.
- Stiles Creek Bluff trailhead (MP 41.6L). Add an informational display, install a toilet, and improve parking.
- Lower Chena Dome trailhead (MP 49.2L). Establish designated parking spaces if parking area fills on a regular basis.
- Upper Chena Dome and Angel Creek trailheads (MP 50.5L). Install water well and expand parking area to accommodate vehicles towing trailers.

# Map 3-2 Management Unit 1: Chena Road \ River Corridor



## UNIT 2: COLORADO CREEK

### Description

The Colorado Creek Management Unit encompasses the northwest part of the Chena River Recreation Area between approximately Milepost 27.0 and 41.5, including lowlands and creek bottoms and culminating in alpine country along the Northern border. See Map 3-3. This unit provides outstanding opportunities for off-road vehicle use. Twenty-five miles of multi-use trails access two public use cabins. The Stiles Creek Trail offers excellent high country vistas. The Colorado Creek Trail navigates the valley and is better suited to winter travel. The Compeau Trail, constructed in 2006, is a high-country year-round trail that connects to the 2004 Little Chena Dozer Line outside the Recreation Area boundary and to the Colorado Creek Trail.

<i>Location</i>	<i>Experiences</i>	<i>Outdoor Recreation Activities</i>
Trails (summer)	Few areas in interior Alaska offer ORV trails due to bogs and permafrost; but two trails in this unit offer this opportunity – Stiles and Compeau. Heavy use of lowland sections of these trails have created deep ruts and multiple braided trails through wet areas.	ORVing. Horseback riding. Hunting. Hiking. Overnight camping and cabin rental.
Trails (winter)	Traveling on the Colorado Creek, Compeau, and Stiles Creek trails, a snowmachiner or dog sledder can feel isolated while being only a short distance from the Chena Hot Springs Road. Overnight camping in cabins enhances this experience.	Snowmachine travel. Dog sledding. Skijoring. Skiing. Overnight camping and cabin rental. Hunting.

### Management Objectives and Guidelines

The Colorado Creek Unit is designated “Natural Area” and will be managed consistent with these purposes. This unit should be managed to optimize use of the existing trail network for multiple use, including motorized vehicles, horse-back riding, skiing, dog sledding and hiking.

This area will be managed for a variety of uses, including motorized uses. Existing trails will continue to be brushed for use in the winter and new trails constructed if use warrants, particularly trails that connect to existing trails and that create loop trails. The resource impacts of trail use will be monitored. Summer motorized use is limited to designated trails to ensure the protection of soils and vegetation and to minimize erosion problems so trail use may continue.

State Parks will develop a horse-picketing site near the Stiles Creek Public Use Cabin.

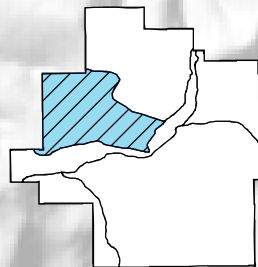
### Public Use Cabins/Shelters

- Colorado Creek Trail
  - 1) Upgrade the Colorado Creek Cabin.
  - 2) Construct a public use cabin near the fork of the Colorado Creek and the Stiles Creek trails.
- Stiles Creek Bluff Trail. Construct a public use cabin at a location along the trail with a view of the East Fork Valley.
- Compeau Trail. Construct a public use cabin at a location along the trail with a view of the high country ridges.

### Trails

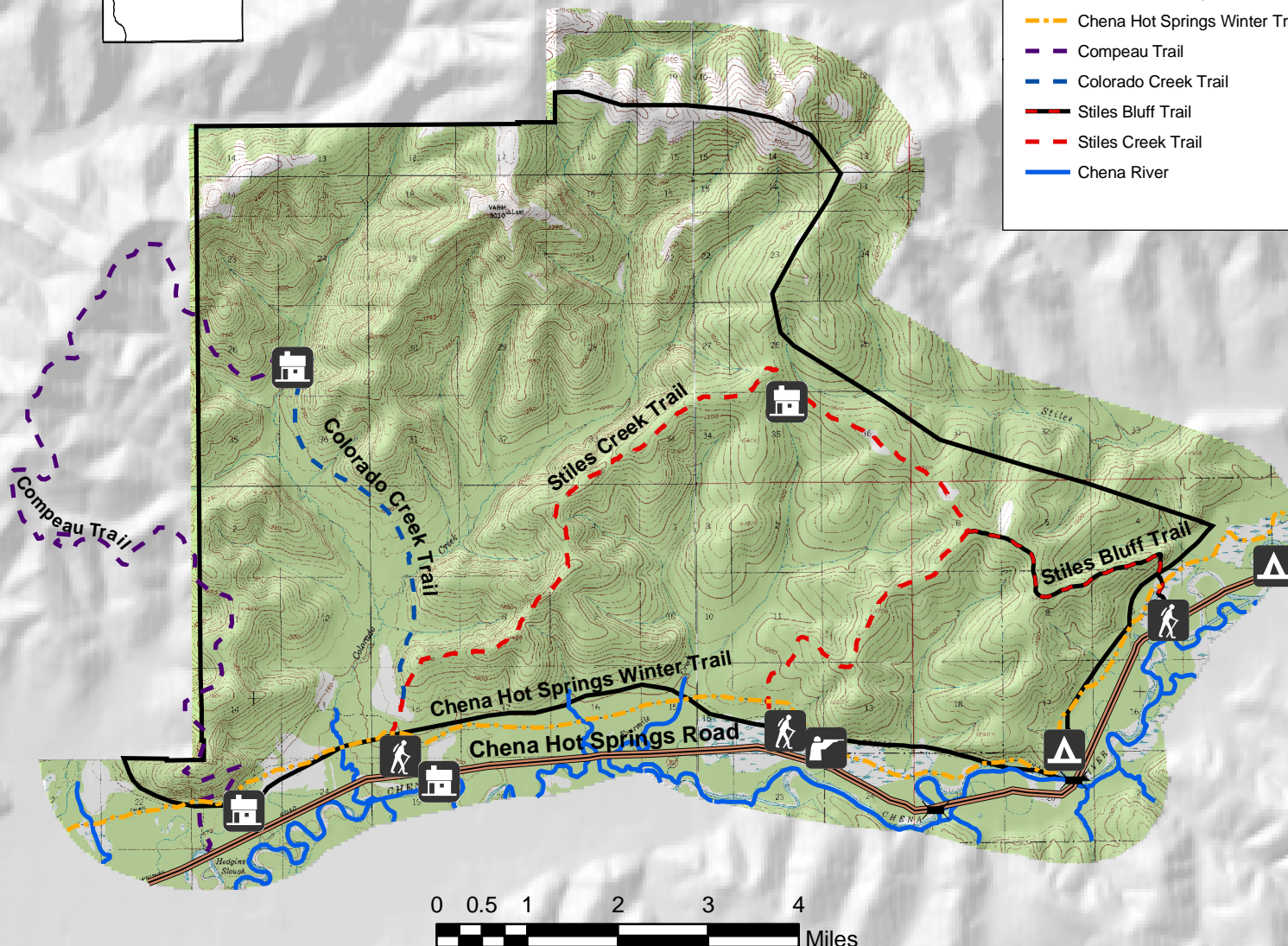
- Reroute or install hardened surfaces for trails in low-lying areas and reconstruct and harden a single trail at locations where various braided trails have developed.
- Maintain the Compeau Trail for summer, multi-use access to the Colorado Creek Public Use Cabin.
- For new trails, assess the alternatives, provide for public review, seek funding for construction, and construct, particularly those that connect to existing trails or create loop trails.
- When alternate routes are developed to accommodate motorized summer use to a destination that was previously reached with a lowland valley trail, redesignate the lowland valley trail so that motorized use is allowed only in winter.

# Map 3-3 Management Unit 2: Colorado Creek



## LEGEND

- Unit Boundary
- Chena Hot Springs Road
- - - Chena Hot Springs Winter Trail
- - - Compeau Trail
- - - Colorado Creek Trail
- - - Stiles Bluff Trail
- - - Stiles Creek Trail
- Chena River
- Cabins
- Developed Campgrounds
- Trail Heads
- Shooting Range
- Bridge





### UNIT 3: ANGEL CREEK – CHENA DOME

#### Description

This unit encompasses the northern portion of the Recreation Area between Milepost 41.5 and 51.0. See Map 3-4. The magnificent, fragile high alpine country associated with the Chena Dome dominates the Angel Creek Valley. The expansive panoramas and series of open alpine ridges with Chena Dome as a focal point create a destination for extended trail hiking. Another distinctive feature of this unit is the view eastward down the valley to Angel Rocks, one of the best views in the Chena River Recreation Area. The gradient is not steep but the narrow valley provides ever-changing scenes of the high country and the valley floor. The popular for both sightseeing and trail-related activities. The area is also popular because guests of the Angel Creek Lodge and Chena Hot Springs Resort located nearby often visit this unit to use its trails in both summer and winter.

<i>Location</i>	<i>Experiences</i>	<i>Outdoor Recreation Activities</i>
<u>Chena Dome and associated ridges</u>	The high country ecosystem surrounding the Angel Creek drainage is not readily visible from trails in this part of the state. The scenery is spectacular and the alpine wildflowers are exceptionally beautiful in the first half of the summer. Also, an historical plane crash site can be viewed along the Chena Dome Trail.	Hiking, backpacking. Overnight camping and Hunting. A shelter cabin for inclement weather is on the Chena Dome Trail.
<u>Angel Creek Valley</u>	Fishing at the mouth of Angel Creek is good, the scenery is beautiful, and the low gradients make this an accessible, attractive area for winter travel. The lowlands are very wet in summer making travel along the Angel Creek Trail difficult at times.	Hiking, fishing, hunting, cross-country skiing, snow machining, dog sledding, horseback riding. Two public use cabins are located on the Angel Creek Trail.

#### Management Objectives and Guidelines

The Angel Creek-Chena Dome Unit is designated “Natural Area” and will be managed consistent with these purposes.

This unit will be managed for low density hiking and backpacking in the alpine country during the summer, and medium density cross-country skiing, snowshoeing, skijoring and snowmachining in the lowlands in the winter. The Angel Creek Trail will be open to motorized uses in the winter. When the trail is rerouted to a drier route, the realigned Valley Trail may be open to motorized use in the summer.

This unit will be managed to provide for hiking, horseback riding, and mountain biking experiences in the high country in the summer. The Chena Dome summer trail is a non-motorized mostly alpine loop trail of approximately 29 miles. The hike generally takes three-four days. A shelter is located on the far eastern end of the trail. Two cabins are located along the Angel Creek Valley Trail. This trail will be managed for non-motorized uses in the summer and motorized and non-motorized use in the winter.

### Public Use Cabins/Shelters

- Chena Dome Trail. State Parks will consider issuing special use permits for an organization to construct and maintain new facilities (including public use cabins, shelters, yurts and tent pads).
- Seek partners with user groups to help maintain the existing trail shelter.
- Install rain water run-off collection systems to provide water at the trail shelters or at cabins where surface water is not available.

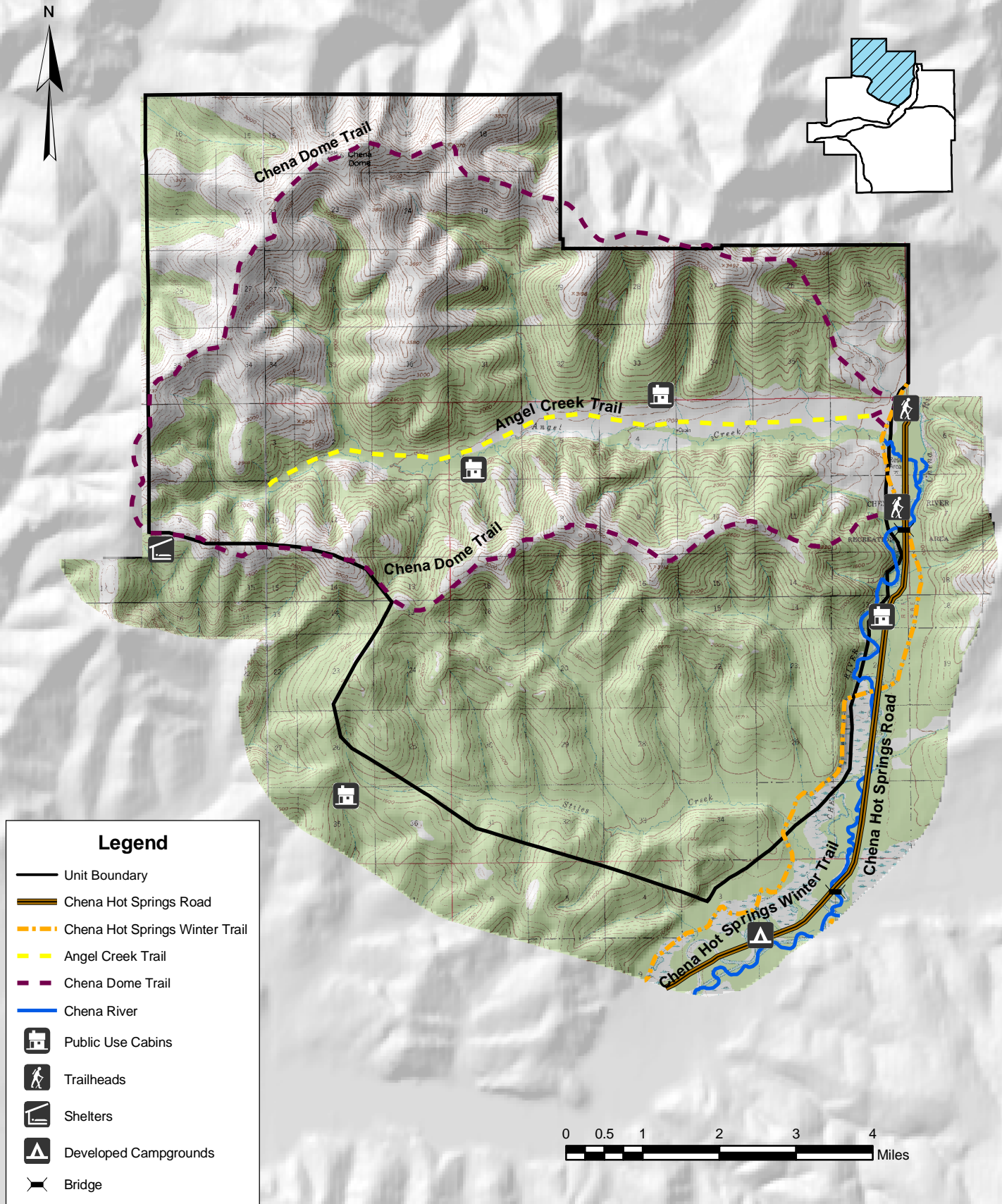
### Trails

- Improve signage at the spur trail that connects the Chena Dome Trail with the Angel Creek Trail.
- Install better signage along the Chena Dome Trail.
- Reroute the Angel Creek Trail from low, wet areas near the trailhead and repair or install hardened surfaces on the trail so that it can be opened for ORV use in summer.
- There are two short segments of the Chena Dome Trail that are outside the Recreation Area and cross land managed by the DNR Division of Mining, Land and Water. The Division of Parks and Outdoor Recreation should apply for an Interagency Land Management Agreement for these two segments so that the entire length of the trail is managed by the same division.

### Fire line Trail

- During the 2004 fire season, a fire line was bulldozed from the Two Rivers Road, through the Tanana Valley State Forest and up to the western edge of the Recreation Area. The Fire Line is open to ORVs up to mile 13.5, just within the western boundary of the Recreation Area, where signs are posted informing the public of current ORV regulations and the trail is blocked.

# Map 3-4 Management Unit 3: Angel Creek/Chena Dome





## UNIT 4: EAST FORK – ANGEL ROCKS

### Description

The East Fork – Angel Rocks Unit encompasses the northeastern portion of the Recreation Area. See Map 3-5. This area provides both motorized and non-motorized trails to two distinct and outstanding landforms that characterize this unit: the East Fork Valley and Angel Rocks. The non-motorized Angel Rocks loop trail winds through granite rock outcroppings and delivers stunning alpine views. The Angel Rocks Trail can be followed along the ridgeline to the trail shelter near the Recreation Area boundary. At this point, the trail meets a motorized cross-trail, heading north to the Chena Hot Springs Resort and south to the East Fork Valley Trail. The East Fork Valley forms the boundary between motorized use to the north and non-motorized use to the south and provides miles of snowmachine access, extending far beyond the Recreation Area boundary. Summer access up the East Fork is difficult due to shallow river conditions, remoteness and lack of access.

<i>Location</i>	<i>Experiences</i>	<i>Outdoor Recreation Activities</i>
<u>East Fork</u>	The East Fork offers a primitive backcountry experience with cross-country skiing and snow machining opportunities on the East Fork-Chena Hot Springs trail system.	Remote access to boating and fishing. Snow machining. Cross-country skiing and skijoring. Trapping. Hunting. Motorized winter use on East Fork-Chena Hot Springs Trail.
<u>Angel Rocks</u>	Angel Rocks are large granite outcroppings near the north boundary of the recreation area. They provide an easy day hike -- the top of the rocks is less than two miles from the trailhead. The trail connects with a 5-mile extension to the Hot Springs. There is a shelter cabin located at the junction of these two trails on the ridge top.	Trail hiking. Snowshoeing. Skijoring. Rock climbing. Picnicking. Overnight camping including in a shelter. Hunting.

### Management Objectives and Guidelines

The East Fork – Angel Rocks Unit is designated “Natural Area” and will be managed consistent with these purposes. This unit will be managed primarily for low density, river floating, hiking and cross-country skiing experience. Exceptions are the Angel Rocks Trail, which is a high use trail; the motorized winter-only East Fork Trail and the East Fork to Chena Hot Springs Trail. Motorboats also ascend the river, some to access private land east of the Recreation Area.

In the winter, the East Fork valley is open to commercial mining traffic on the East Fork winter trail. Commercial use will be monitored carefully and managed through park permitting procedures. The East Fork Trail is designated and marked as motorized in winter only. Permits are required for heavy equipment use.

The Angel Rocks Trail is a non-motorized 3.5-mile loop trail to large granite outcroppings near the north boundary of the Recreation Area. The Angel Rocks to Chena Hot Springs Trail connects the Angel Rocks Trail to Chena Hot Springs. The first 6.1 miles of the trail is

non-motorized. The remaining 2.2 miles of trail to Chena Hot Springs outside the Recreation Areas is open to motorized use. The Angel Rocks Shelter is located at approximately mile six of the Angel Rocks to Chena Hot Springs Trail.

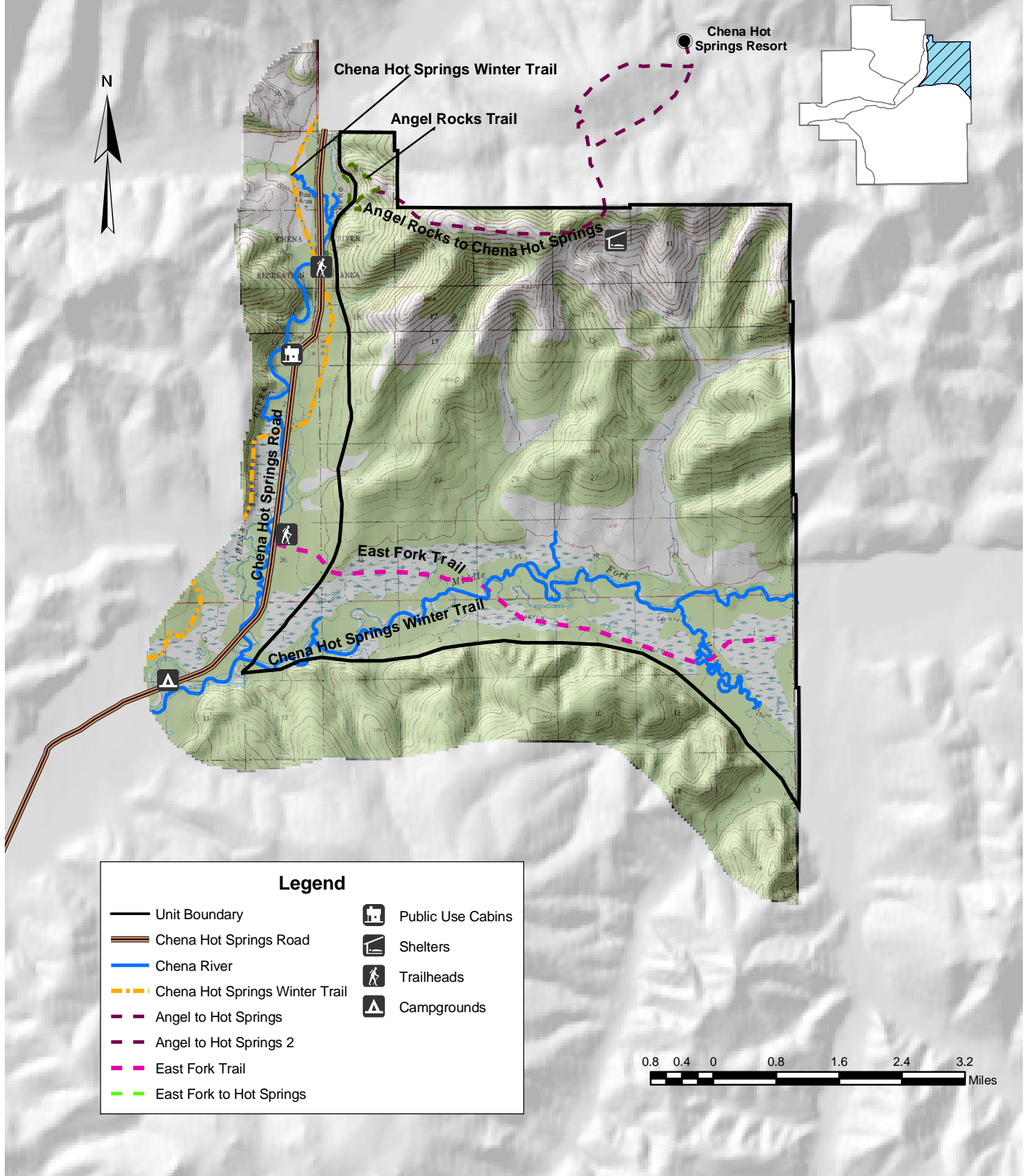
#### Public Use Cabins/Shelters

- State Parks will consider issuing special use permits for an organization to construct and maintain new facilities (including public use cabins, shelters, yurts and tent pads).
- Seek partners with user groups to help maintain trail shelters.
- Install rain water run-off collection systems to provide water at the trail shelters or at cabins where surface water is not available.

#### Trails

- Angel Rocks Trail
  - 1) Install better trail signage, particularly at junctions and along the return loop trail.
  - 2) Install horse reroute signs that direct horse riders to appropriate routes, off the boardwalk.
- East Fork Trail
  - 1) Continue to monitor and maintain.
- Angel Rocks to Chena Hot Springs Trail
  - 1) Install better signage.
  - 2) Complete improvements to the first half of the trail.
  - 3) Improve return route on second half of the trail.
- East Fork to Chena Hot Springs Trail
  - 1) Install better signage.
  - 2) Reroute trail to improve the grade on the steep sidehill section.
  - 3) When trail is improved, produce trail map and flyer for public distribution.
- East Fork Chena River
  - 1) Motorboats, including personal watercraft, will continue to be allowed to use this fork of the Chena River.

# Map 3-5 Management Unit 4: East Fork / Angel Rocks



## UNIT 5: TORS

### Description

The Tors Unit encompasses the southeast portion of the Recreation Area. See Map 3-6. This unit consists mainly of the rugged uplands between the South and East forks of the Chena River with narrow strips of lowlands bordering the main stem of the Chena River, Little Munson Creek and Beaver Creek. Contained within this unit are the Granite Tors which jut dramatically from the alpine tundra on the highest ridges. These granite monoliths are a region-wide attraction for hikers, rock climbers and spring skiers. The Tors Trail leads hikers to the ridgeline where these massive rocks reside.

<i>Location</i>	<i>Experiences</i>	<i>Outdoor Recreation Activities</i>
<u>Granite Tors</u>	The Granite Tors are the primary destination for backcountry travelers, offering a unique natural feature jutting incongruously out of the alpine tundra. Use of the trail system is enhanced by a shelter located in the unit.	Trail hiking. Backpacking. Cross-country hiking on high ridges. Cross-country skiing. Overnight camping. Shelter camping. Rock climbing. Sightseeing. Picnicking. Hunting.
<u>Mist Creek</u>	The Mist Creek Trail system offers a non-motorized connector trail to the South Fork Trail and to Nugget Creek Shelter in Unit 6. If used in summer, the Chena River crossing requires a boat.	Trail hiking. Backpacking. Cross-country hiking on high ridges. Cross-country skiing. Overnight camping. Public use cabin. Sightseeing. Picnicking. Hunting.

### Management Objectives and Guidelines

The Tors Unit is designated “Natural Area” and will be managed consistent with these purposes. This unit will be managed for non-motorized use in all seasons, providing a large expanse of backcountry in a quiet, primitive state, except for the Beaver Creek Valley, where winter motorized use will be allowed in designated areas, in accordance with the military land use policies. The lower few miles of the Tors Trail will be managed for higher density use and additional improvements to the trail will be made.

Developed facilities in this unit consist of trails, trail markers and a shelter for overnight use. There are a series of unmarked trail routes looping from the existing Granite Tors Trail to the northeast, southeast and west, along with a trail route up Little Munson Creek through Beaver Creek to the East Fork and Nugget Creek. These provide over 50 miles of trails for hiking and skiing.

Approximately 11,520 acres in the southern portion of this unit is owned by the military. This land is state topfiled – the state will assume title to the land when the military relinquishes ownership. The United States Army has its own regulations that apply to recreational use (Appendix C). If the Army surpluses all or portions of this land, it will become part of the Recreation Area and managed by State Parks.

### Public Use Cabins/Shelters

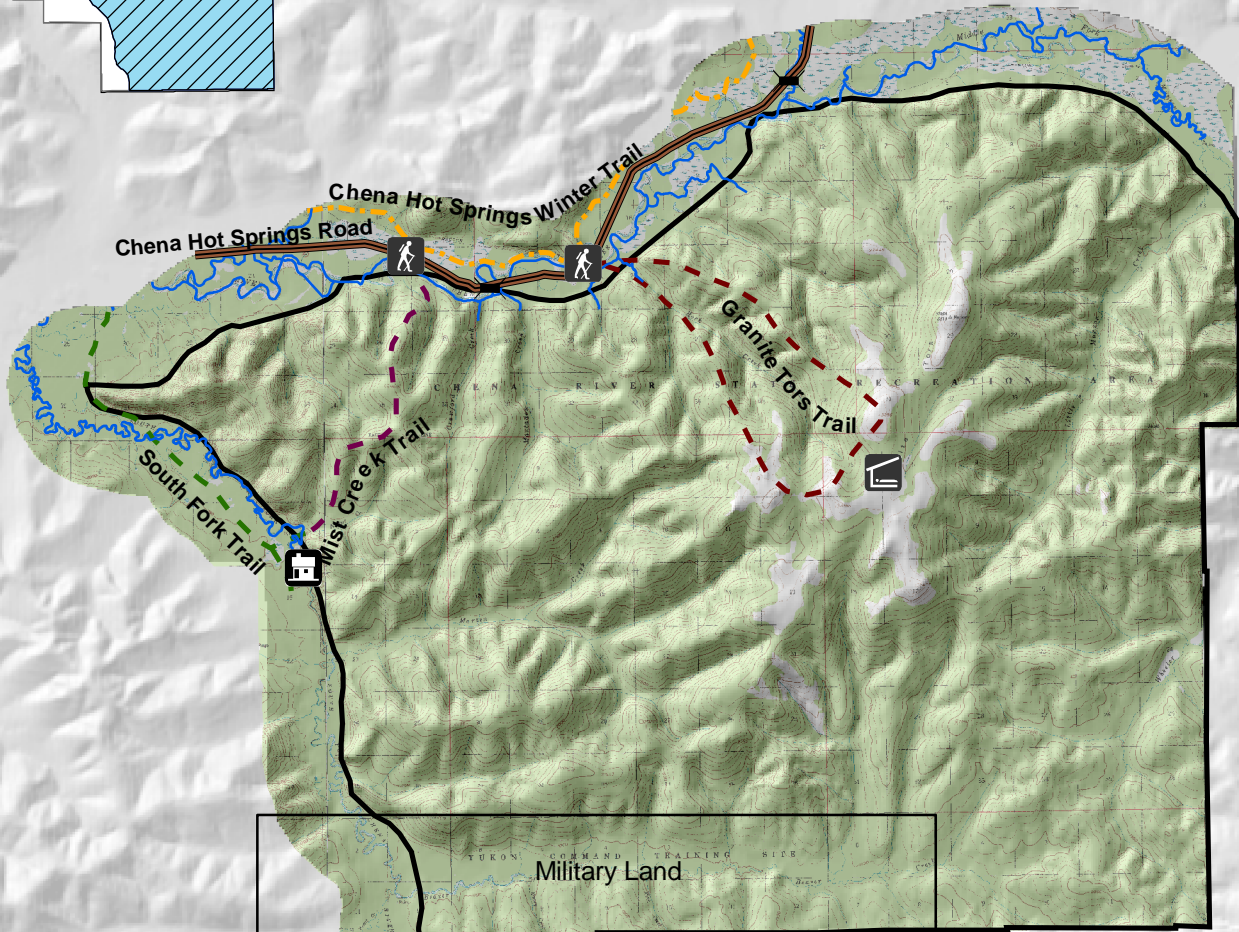
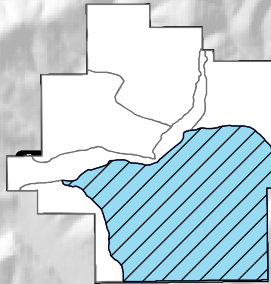
- Tors Trail. State Parks will consider issuing special use permits to organizations to construct and maintain new facilities, including public use cabins, shelters, yurts and tent pads.
- If level of use warrants, construct a toilet near the trail shelter.
- Install rain water run-off collection systems to provide water at the trail shelters or at cabins where surface water is not available.

### Trails & Trailheads

- Tors Trail
  - 1) Maintain and enhance the shorter loop trail on the Granite Tors Trail.
  - 2) Install better signage along the Granite Tors Trail.
- Mist Creek Trail
  - 1) Place trail markers on the trail and brush to a standard width.
  - 2) Design trail for winter and summer non-motorized use.
  - 3) Clearly designate the trail as non-motorized, particularly where it joins the South Fork Trail.
- State Parks will work with user groups and individuals to expand winter trails and a cabin system for non-motorized users.



# Map 3-6 Management Unit 5: Tors



## LEGEND

- |                                |          |  |            |
|--------------------------------|----------|--|------------|
|                                | Shelters |  | Trailheads |
|                                | Cabins   |  | Bridges    |
|                                |          |  |            |
| Unit Boundary                  |          |  |            |
|                                |          |  |            |
| Chena Hot Springs Road         |          |  |            |
|                                |          |  |            |
| Chena River                    |          |  |            |
|                                |          |  |            |
| Chena Hot Springs Winter Trail |          |  |            |
|                                |          |  |            |
| Granite Tors Trail             |          |  |            |
|                                |          |  |            |
| Mist Creek Trail               |          |  |            |
|                                |          |  |            |
| South Fork Trail               |          |  |            |



## UNIT 6: SOUTH FORK

### Description

This unit consists mainly of the low valley lands surrounding the South Fork of the Chena River, from its confluence with the main fork upstream to Beaver Creek, and the foothills on the Recreation Area's west boundary. See Map 3-7. The South Fork delineates the western boundary of the non-motorized section of the park. Nugget Creek cabin on the South Fork provides a popular winter destination. From the cabin, skiers have access to the non-motorized Mist Creek Trail system. Summer use is minimal due to remoteness, river conditions, and lack of access.

<i>Location</i>	<i>Experiences</i>	<i>Outdoor Recreation Activities</i>
<u>South Fork</u>	This section of the Chena River is a small meandering stream with deep pools, beaver dams, logjams and excellent grayling fishing.	Boating. Fishing. Sightseeing. Hunting.
<u>Bog/slough topography</u>	Much of this subunit is ideal for trails.	Cross-country skiing. Designated snowmachine route.
<u>Nugget Creek</u>	The Nugget Creek Public Use Cabin is available for overnight use in all seasons.	Hiking and overnight stays in cabin. Hunting.

### Management Objectives and Guidelines

The South Fork Unit is designated "Natural Area" and will be managed consistent with these purposes. This unit will be managed as a low density, river floating, hiking and low to medium density winter trail use. Snowmachining is allowed on designated trails. This unit is managed to allow winter motorized uses on the South Fork Trail.

The southern-most portion of this unit (approximately 4,400 acres) is owned by the military. Land managed by the military in both this unit and Unit 5 is topfiled by the State. The United States Army has its own regulations that apply to the recreational use in this area (Appendix C). If the military surpluses these lands, this area will be state owned and will be managed by State Parks as part of the Recreation Area.

#### Public Use Cabins/Shelters

- Upgrade Nugget Creek Public Use Cabin.
- Improve trail access to the Nugget Creek Cabin.
- State Parks will consider issuing special use permits for an organization to construct and maintain new facilities (including public use cabins, shelters, yurts and tent pads).
- Seek partners with user groups to help maintain the Nugget Creek Cabin.

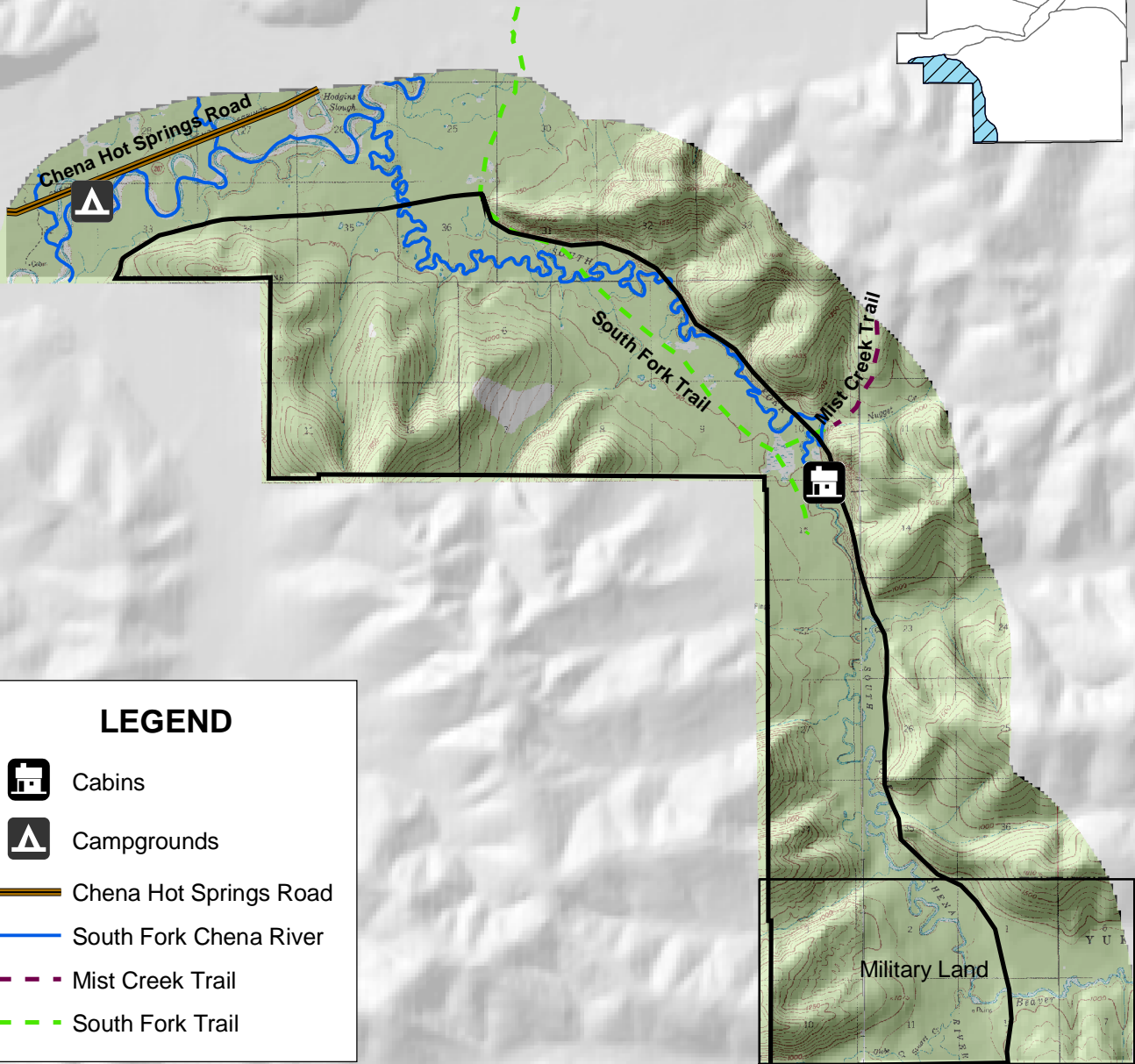
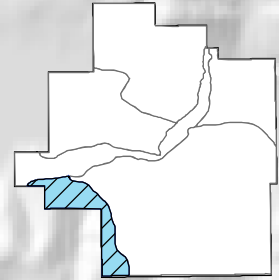
### Trail

Though much of this unit is poorly suited for summer travel except by boat, it provides good opportunities for winter recreation. To provide for these opportunities, ten miles of winter trail should be developed in the South Fork valley; originating at the Colorado Creek trailhead, connecting to the Nugget Creek cabin and trail, and continuing south to connect with the Beaver Creek Trail in Unit 5. If this trail is constructed, it will be possible to travel approximately 30 miles from the South Fork to East Fork of the Chena River.

- Signing should be placed to define motorized and non-motorized areas for Snowmobiles.
- Place trail markers on the Mist Creek Trail. Brush trail to the appropriate width. Clearly designate it as non-motorized, with signs and appropriate barriers at both ends.
- Install rain water run-off collection systems to provide water at the trail shelters or at cabins where surface water is not available.



# Map 3-7 Management Unit 6: South Fork



## LEGEND



Cabins



Campgrounds



Chena Hot Springs Road



South Fork Chena River



Mist Creek Trail



South Fork Trail



## **Chapter 4**

### **Recommendations & Implementation**

## Chapter 4: Recommendations & Implementation



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### MANAGEMENT ACTIONS

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This plan is only as good as its implementation. Numerous management actions are necessary to implement the plan and to respond to physical, social and economic conditions. These actions include soliciting advice from the Northern Area State Parks Citizen Advisory Board; establishing an administrative, staffing and budgeting system; working closely with recreation users and user groups; developing cooperative interagency agreements; examining management efficiencies and effectiveness; researching visitor preferences, behavior and response to management actions; and identifying management actions to achieve and maintain these resource and social conditions.

Public involvement is essential to the successful implementation of the plan. It is important that recreation users and user groups be involved in the interpretation of land management issues, development, and design and serve as advocates for the recreation area. The use of a citizen advisory board serves as an interface between the Division and the public.

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### FACILITY DEVELOPMENT

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While new and improved facilities are recommended for the Recreation Area in Chapters 2-4, construction priorities are not prescribed in the plan. Funding for such facilities depends on several factors that cannot be predicted over the long term. These include DPOR's annual budget, capital funding appropriations from the legislature, reception of grants, and other agencies' funding. For example, many recommended improvements along the Chena Hot Springs Road depend on DOT/PF's construction priorities and funding. Nonetheless, State Parks' staff and the Northern Area Parks Citizen Advisory Board should work together on a regular basis to identify near term development priorities when likely sources of funding sources are better known.

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## **INTERAGENCY AGREEMENTS AND ACTIONS**

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Cooperative management agreements provide a common framework that enables land managing and regulatory agencies to work together, inform others of their activities, and avoid incompatible and duplicative efforts. In addition, actions by other agencies are essential to the successful management of the Recreation Area. Proposed agreements and actions by other agencies are listed below.

### **U.S. Army and BLM**

Encourage the development of public access to or through military lands and facilities and the relinquishment of withdrawn lands to the state. Enter into a cooperative management agreement with the military and BLM.

### **Department of Environmental Conservation**

Actively monitor water quality as needed. Manage refuse, solid waste, and potable water in compliance with applicable laws.

### **Department of Fish and Game**

- Fisheries: Stock ponds with game fish as appropriate. Consult with ADF&G during development of ponds and angler/boating access. Develop salmon spawning interpretive areas, exchange visitor use statistics, assess stock status of fish populations as needed, and consult on fishing regulations and law enforcement.
- Reconstruction of pond shorelines and areas near shorelines may be necessary. ADF&G will work closely with State Parks to provide planning input for the construction of fishing ponds, and provide recommendations to improve fish survival and the attractiveness of the waterbody to all, including anglers.
- Wildlife: Determine feasibility of establishing wildlife viewing areas and non-game programs, monitor wildlife populations, encourage research, hunter access, hunter education and safety, and consult on hunting regulations and law enforcement.
- Develop an ecological research program to assess habitat health & productivity over time.

### **DNR Division of Forestry**

- Fire Management: Continue to work with the Division of Forestry to review wildland fire management options for the recreation area using the Alaska Interagency Wildfire Management Plan for guidance.
- Personal Use Timber: Revise, if necessary, the established criteria to permit the gathering or cutting of timber that will protect or enhance the values for which the Recreation Area was established.

### **DNR Division of Mining, Land and Water**

- There are two short segments of the Chena Dome Trail that are outside the Recreation Area and cross land managed by the DNR Division of Mining, Land and Water. The Division of Parks and Outdoor Recreation should apply for an Interagency Land Management Agreement for these two segments so that the entire length of the trail is managed by the same division.

### **Department of Transportation and Public Facilities**

- Gravel Pits: Work with DOT/PF to identify road maintenance needs, restore inactive gravel pits and reduce public safety hazards.
- Work with DOT/PF on flood mitigation and control projects.
- Highway Right-of-Way: Improve visitor access and safety at bridge sites, dikes, pullouts, viewing areas, river access and other features of attraction. Construct safer transitions from Chena Hot Springs Road onto primary facility access roads. Provide for greater informational signing.
- The roadside shoulders of Chena Hot Springs Road should continue to be cleared of all vegetation to enhance driver safety. Hydroaxing is allowed to minimize collisions with moose and other wildlife. Future highway improvements should consider constructing wide shoulders or separated pathways for bicycle and pedestrian use along the Chena Hot Springs Road.

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## **PLAN REVIEW, MODIFICATIONS AND SPECIAL EXCEPTIONS**

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This plan represents the best efforts of the Division of Parks and Outdoor Recreation to analyze natural features of the recreation area and their capability to provide sustained outdoor recreational opportunities without significantly compromising the area's character. The planning period for this document is 20 years or until the plan is revised. This period is used for the basis of decision making with the realization that intermediate reviews and modifications may be warranted and are appropriate. The Director may initiate a plan review at any time. The plan guides the management and development of the area.

The plan is not a stagnant document. There are several activities that affect the plan implementation that may occur outside the specific planning process or the specific guidelines for this park unit. For example, the park unit may be affected by statewide decisions on:

- policy
- statutes or regulations
- budget allocations, and
- capital projects.

The adopted management plan is a policy statement for the park unit, requiring that developments, uses, and management must be in accordance with its directions. However, the plan must be flexible in order to adapt to changing circumstances and new information. The procedures listed below are intended to permit this flexibility and ensure that the plan continues to be a useful management tool.

### **Periodic Review**

The Northern Area Citizen Advisory Board should be encouraged to schedule regular review of the plan, for example to assess the monitoring program every three years. The management plan may also undergo periodic review when the Director considers it necessary and so directs. The decision to review the plan may be triggered by:

- written public or agency requests for review;
- policy changes within the Division;
- availability of new data;
- availability of new technology for recreational equipment; or
- changing social or economic conditions that place different demands on the park or affect the division's capabilities.

In addition, the Northern Area State Park's Citizen Advisory Board (CAB) may recommend changes to the management plan and implementation procedures at any time after its approval and implementation.

The plan review will include meetings, as appropriate, with the CAB, interested groups, the general public, affected agencies, the Area Superintendent and other Division of Parks and Outdoor Recreation personnel. The periodic review will lead to one of the following actions:

- a. no modification of the plan;
- b. modification of the plan; or
- c. granting of a special exception.

Items "b" and "c" are explained in detail below.

### **Modifications**

- a. *Minor changes:* These are changes that, if accomplished, would not cause a deviation from the original intent of the management plan. Minor changes may be necessary for clarification, consistency, or to facilitate plan implementation. Minor changes do not require public review but must be coordinated with the Area Superintendent and appropriate staff.
- b. *Major changes:* These are changes that, if accomplished, would cause a deviation from the original intent of the plan. Major changes require public notice and review prior to adoption.

## **Special Exceptions**

Exceptions to the provisions of the management plan may be made without modification of the plan. Special exceptions shall occur only when compliance with the plan is excessively difficult or impractical, and an alternative procedure can be implemented which adheres to the purposes and spirit of the plan.

The Division of Parks and Outdoor Recreation may make a special exception in the implementation of the plan through the following procedures:

- a. The person or agency requesting the special exception shall prepare a written finding that specifies:
  - 1) the nature of the special exception requested;
  - 2) the extenuating conditions that require a special exception;
  - 3) the alternative course of action to be followed; and
  - 4) how the intent of the plan will be met by the alternative.
- b. The Director will review the findings and issue a determination. If warranted by the degree of controversy or the potential impact, the Director will hold a public hearing before reaching a decision.
- c. The decision of the Director may be appealed to the Commissioner of the Department of Natural Resources whose decision will be final.

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## **RECREATIONAL OPPORTUNITIES NEAR THE RECREATION AREA**

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The lower reaches of the Chena River, running from the west boundary of the Recreation Area to and through Fairbanks to the Chena River's confluence with the Tanana River, represent a significant recreation resource to the region and the state. Except for short stretches in the Tanana Valley State Forest and the Chena Lakes Recreation Area, the lower Chena River has poor access from the road and is not in protective status. An open space river corridor is recommended downriver from the Recreation Area that would result in the protection of the recreation potential for most of the length of the Chena River. The Department of Natural Resources and the Fairbanks North Star Borough should develop a cooperative management plan for this corridor working closely with local communities, interest groups, landowners and river users.

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## **RESOURCE MANAGEMENT**

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### **Monitoring and Compliance**

Continue to monitor visitor use in the Recreation Area. This includes gathering information on user characteristics; overall perceptions of environmental conditions; visitor satisfaction; reported and preferred types of experiences; impact and tolerances of impacts (ranging from litter and human waste to perceived crowding); river encounters and fishing competition; and

acceptability of proposed management actions. This information will help guide future revisions of the management plan and substantiate funding requests for operations and maintenance. This information will also help park managers better manage the Recreation Area for its intended purposes.

Continue to monitor water quality and the Recreation Area's environment including measuring changes in the health and productivity of key habitats, organisms and water quality over time.

Establish means of monitoring and compliance, especially access roads, trail use, commercial use permits, access to private lands and wood cutting activities.

### **Private Landowners**

Work with private landowners to minimize land use conflicts, encourage compatible development, ensure continued public access and provide incentives for the private sector investment in providing visitor services.

### **Gravel Sites for Recreation Developments**

Gravel needs for recreation developments, campgrounds, trails, and roads may be obtained from sources within the Recreation Area. Gravel extraction must follow a plan of operation, address resource values, public safety, visitor use, rehabilitation and compatibility to park management objectives. Regional alternatives shall be considered.

### **Media**

The status of existing facilities and new development, as well as trail status, should be provided to the appropriate media on a timely basis.

### **Sign Management Plan**

A sign management plan should be prepared to ensure appropriate signing of existing facilities and new developments as they are added to the Recreation Area. This will ensure standardization, avoid confusion and over-signing, and improve public safety and enjoyment.

### **Staffing**

#### Summer

Extend the one seasonal ranger to year-round for the Chena River SRA. Add a new ranger position for on-the-ground management of recreational use when funding is available. Develop a supervisory ranger for the Recreation Area separate from the one full-time ranger who is supervisory for the entire Northern Area. Add a maintenance worker to the staff structure available to assist in the Recreation Area. Continue to provide field support staff, including Recreation Technicians for front- and back-country, along with trail crews and campground hosts. Continue to support volunteer caretakers who reside at the maintenance compound. As the facilities and infrastructure improve, convert some volunteer positions to paid assistants, as funding allows.



### Winter

As budget allows, State Parks will continue to break open trails to the public use cabins, and plow trailheads and recreation access points within the Recreation Area. Extend the summer seasonal maintenance worker to year round. Volunteer caretakers will be recruited to help with winter operations and will be stationed within the Recreation Area. As the winter program grows, volunteer positions may be converted to paid positions, as funding allows.

## **Trail Design and Construction**

Trail design standards need to be established according to a trail classification system. Alignment of trails should be based on management objectives considering resource protection, user group, user experience, maintenance and operating costs, site constraints, avoidance of user conflicts and public preferences. Trail construction by user groups volunteering services is encouraged based on the trail plan and design standards. Table D-1 shows the types of trail classifications in the Recreation Area. See Appendix D.

## **Trail Management and Use**

Summer motorized use is allowed only on designated trails. Winter off-trail motorized use is allowed after the snow depth is adequate to protect underlying vegetation. The agency will announce when the backcountry is open (fall) and closed (spring), generally mid-October and mid-April.

In accordance with regulations, motorized ORVs are permitted on designated trails if they are less than 1,500 pounds gross weight, or less than 8 pounds per square inch ground pressure; if they have more than one drive wheel or track; and are less than 88 inches wide.

Vehicle operators must be over 14 years to operate a snowmachine or other off-road vehicle in the Recreation Area unless accompanied by and under the direct supervision of a parent or person 21 years or older.

## **Roadside Clearing**

State Parks should continue to coordinate with DOT/PF when clearing vegetation along the roadside is planned. To enhance one of the major visitor experiences, driving for pleasure, selective thinning of vegetation along the Chena Hot Springs Road should continue in order to enhance views of distant landforms such as the Granite Tors and views of foreground features such as lakes, sloughs, wildlife areas, the Chena River and other attractions. Vegetation manipulation, including hydroaxing, may serve other management purposes such as improving habitat, maintaining a seral stage of the forest, fire suppression and research. Roadside clearing also increases sight distances thus reducing the number of vehicular collisions with moose and other wildlife.

## **Widening Road Shoulders and Parallel Trails**

Future highway improvements should consider adding wide shoulders or bike/pedestrian pathways along the Chena Hot Springs Road.

## **Utility and Transportation Corridors**

Corridors which would alter the landscape or otherwise detract from the enjoyment of Recreation Area visitors shall not be routed through the Chena River State Recreation Area. Utilities to serve private lands within or adjacent to the recreation area should be planned to avoid or minimize their impact. All utility lines servicing park facilities will be placed underground with vegetation being restored to a natural appearance. All new and existing roadways will be designed to follow existing contours, and any necessary cuts or fills will be revegetated and returned to a natural appearing condition.

## **Visitor Count**

Accurate and complete visitor statistics must be maintained for the recreation area. Attendance figures are necessary to measure user preferences and trends so the construction of new facilities and the redesign of existing facilities can be carried out to meet real demand. Trail registers or trail counters should be kept at all major trailheads. Methods of counting visitors should include induction loop road counters, mechanically triggered trail counters, photoelectric counters, car counts and observations. Surveys of visitors will not be utilized unless authorized by the Director.

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## **SITE PLANNING**

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Prior to developing facilities recommended by this plan, site planning will occur. The site planning process also serves as an opportunity to review and reassess the management plan's recommendations. Although this plan's recommendations represent the division's objectives and priorities at the time of publication, changing conditions may warrant plan revisions.

During site planning, a detailed site analysis will be performed which may suggest minor revisions to the Plan's recommendations. The site planning process follows standard operating procedures involving internal review and public participation. Adjustments to the plan are expected as more site-specific detail becomes available and is analyzed. If a major departure from the intent of the management plan is warranted, public notice and review is required, unless a Special Exception is granted. The Director may determine the need for public review and comment. See the Plan Review, Modifications and Special Exceptions section in this chapter.

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## **OTHER MANAGEMENT ACTIONS**

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### **Partners and Volunteers**

Strategies should be developed to increase management effectiveness and efficiency through use of volunteers, campground hosts, Youth Conservation Corps (YCC) and Adult Conservation Corps (ACC) crews, prison labor, and non-profit organizations. There should also be greater emphasis on cost saving measures, restructuring fees, and partnering with the private sector.

## **Education and Interpretation**

Additional educational materials should be developed that are designed to assist in protecting public safety and park resources, enhance the public's experience in the SRA, and reduce conflicts between users.

## **Chapter 5**

### **The Natural Environment**

## **Chapter 5: The Natural Environment**



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### **OVERVIEW OF THE RECREATION AREA**

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The Chena River, paralleled by Chena Hot Springs Road, forms the spine of the area, providing a free-flowing clear-water stream for grayling fishing, salmon viewing, boating, river floating, camping and a variety of associated recreational opportunities. Landforms flanking the river valley rise to panoramic alpine ridges, the highest of which, Chena Dome, is 3,700 feet above the river valley. In summer, the Stiles Creek, Chena Dome, Angel Rocks and Granite Tors areas are major hiking attractions. In winter, the area provides excellent opportunities for snowmachining, cross-country skiing, skijoring and dog mushing, especially in the lowlands adjacent to streams.

This chapter describes the natural environments within the Recreation Area and Chapter 6 describes the human environment.

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### **CLIMATE**

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The Chena River Valley has a distinctly continental climate characterized by large seasonal variations in temperature and daylight. The area experiences cold, dry winters and warm summers, with more than half of the annual precipitation falling from June through September. The large mountain ranges lying to the south of the basin form an effective barrier to the flow of maritime air from the North Pacific for most of the year. The area receives as much as 22 hours of sunlight per day during June and as little as 4 hours per day in December.

The mean annual temperature for the Recreation Area is 27° F. The coldest month is January with an average temperature of -9.8° F and the warmest month is July with an average 60.0° F. Strong temperature inversions persist through the winter as cold air drains into low lying areas and remains trapped at valley level, while elevated locations are considerably warmer. Temperatures of -40° F or colder occur on an average of 10 days each winter, with an all time record low of -66° F recorded nearby in Fairbanks on January 14, 1934. Temperatures climb above 80° F about 9 days each summer, with the all time record high of 99° F occurring on July 28, 1919, in Fairbanks.

The Recreation Area receives an average of 15 to 25 inches of precipitation annually. The distribution of precipitation is highly variable due to the mountainous terrain, with the most significant amounts falling at higher elevations. The seasonal average of snowfall across the basin ranges from about 70 inches at valley level to over 100 inches at the higher elevations. The snowpack builds through the winter months and reaches a maximum depth during March. The snowpack generally persists for six to seven months. Rainfall typically comes from brief afternoon showers and thunderstorms from late May through mid July, leaving the majority of the summer warm and sunny. Upper level winds shift to the southwest in late July and bring moisture from the Bering Sea and North Pacific and result in frequent weather fronts moving across the area. August is the wettest month of the year with two to five inches of precipitation on the average in the Chena Basin. The average rainfall tapers off in the fall.

Throughout the Recreation Area local winds are influenced by topography and vary greatly in direction and intensity throughout the year. The prevailing wind direction for all seasons is from the northeast, with the strongest winds occurring during the winter over higher terrain and in channeled areas. While winds in excess of 60 mph are not uncommon at higher elevation, it's not at all uncommon for air to remain nearly still along the valley bottoms. As a result, ridges are often bare of snow in midwinter and cannot be depended on for snowmachining. Winds are more variable in summer and are influenced by differential solar heating of the mountainous landscape.

The extreme winter and summer climatic conditions heavily influence the visitation rates and the visitor activities. Summer's long daylight hours and warm temperatures enhance recreation opportunities and increase the number of overnight stays related to camping, hiking and river use. In mid-winter, long periods of limited daylight and extreme low temperatures restrict recreation activities in the Recreation Area to primarily day use. When the sunlight and relative warmth return around mid-February, visitation increases again, particularly for trail use and overnight stays at public use cabins. Opportunities to use the Recreation Area's trails are greater in winter due to frozen ground and snow cover.

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## **LANDFORMS AND GEOLOGY**

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As seen from Chena Hot Springs Road, the main landforms of the area are river valleys, often broad and flat, bounded by bluffs and low, rolling hills, which gradually build up to the high alpine areas. Viewed from the air, or the high trails, the Recreation Area is seen as part of a seemingly endless progression of rolling hills and dissecting streams interspersed with sporadic rock-crowned highlands.

The Chena River valley runs in a predominantly east-west direction. The valley profile is anchored by Chena Dome (4,421 feet) to the north and the Granite Tors (3,407 feet) to the south. On clear days the summits provide excellent views of the surrounding region, as well as Denali, 200 miles to the south. The river gradient on the upper stretch varies from eight feet-per-mile to eleven feet-per-mile. The gradient on the lower stretch of the river within the Recreation Area is approximately 3.5 feet-per-mile. A meandering flow, sloughs, gravel bars, wetlands and floodplain conditions characterize the river. Slope gradients in the Recreation Area vary from nearly level in the valley bottoms and on ridge tops, to over 40 percent on the bluffs and highlands (Map 5-1).

Variable depths of wind-blown silt covers most of the Recreation Area. These surficial deposits are locally rich in mammalian fossils.

Metamorphic rocks underlie most of the Recreation Area; south of the Chena Dome Trail these are low-grade, fine-grained, crumbly, largely metasedimentary rocks similar to those present along the south flank of Birch Hill in Fairbanks. These rocks are poorly exposed and form low, gentle, vegetation-covered slopes and ridges. Metamorphic rocks along and north of the Chena Dome Trail are of high metamorphic grade, commonly coarse grained, hard, well-layered and constitute most of the highest ridges and points (e.g., Chena Dome and Angel Rocks) in the Recreation Area. These rocks include gneiss and quartzite with lesser schist. They are commonly used for cairns marking trails in the region; coarse garnet is variably present.

Large granite bodies are present in the immediate Granite Tors area, along Angel Creek and at Angel Rocks. This rock is variably resistant to erosion and forms tooth-like "tors" up to 100-feet high. These projections are composed of less-fractured granite (resists erosion) surrounded by a sand of highly eroded, fractured granite. These tors are visible from many points in the Recreation Area and are an impressive attraction to hikers, skiers, photographers and rock climbers. The Angel Rocks body continues to the east beyond Chena Hot Springs and to the west along Angel Creek and the lower slopes of the Chena Dome Trail.

Smaller bodies of darker colored granodiorite and quartz diorite are present in the Tors Trail Campground area, both east and west of Chena Hot Springs Road. These bodies are usually covered by vegetation and their true extent is not known. One body of granodiorite immediately adjacent to the Tors Trail Campground is quarried and used extensively for rip-rap and coarse gravel in the region. Unlike the metamorphic rocks, rock from this quarry breaks equi-dimensional pieces ranging in size from large blocks to gravel. Because the body is poorly exposed it is not clear how much farther it extends beyond the present quarry.

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## **MINERAL RESOURCES**

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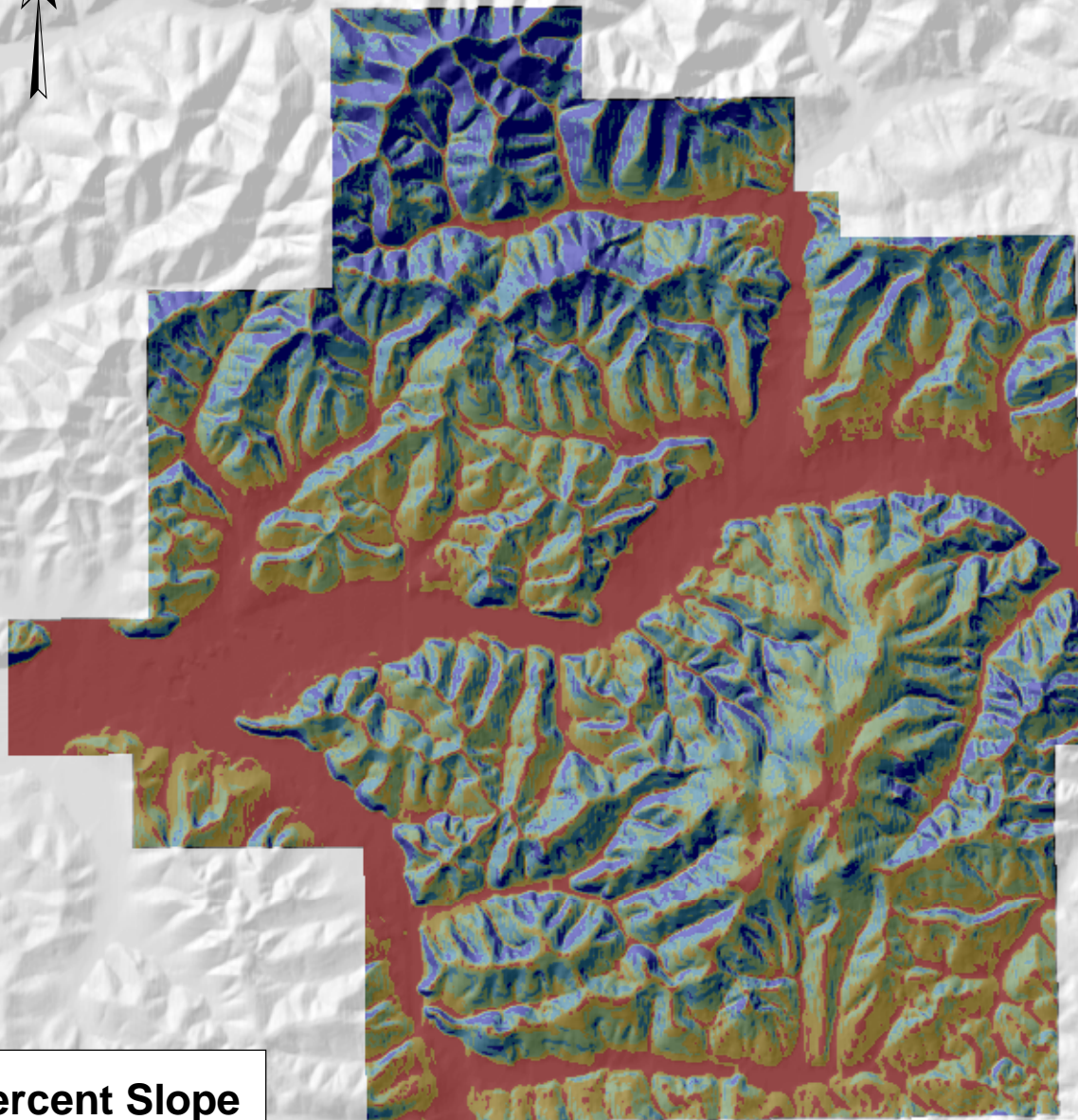
The Recreation Area has been closed to mineral entry by a state administrative order that determined mining as an incompatible use. Small amounts of placer gold were produced from Nugget Creek, Beaver Creek and Pine Creek, near the southwest edge of the Recreation Area and from Colorado Creek near the west-central edge. The Nugget Creek (South Fork) and Colorado Creek trails are derived from access trails to these placer mining sites. The only known lode prospect in the area is the Munzie (gold) lode in Section 34, T2N; R6E; FM above Colorado Creek, with claims maintained from 1971-1984.

Three prospecting sites, filed in 1996, occur in the northern portion of T2S R7E; FM, near the southwest edge of the Recreation Area. These prospecting sites total 480 acres. Although these sites are located within the legislatively defined boundary of the Recreation Area, the lands on which they are located are still in federal ownership and closed to mineral

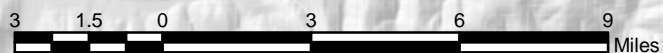
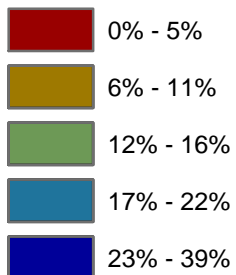
entry (see Map 6-1). Mining cannot occur at these sites until the Bureau of Land Management conveys the land to the state. Mining activity is also taking place just outside the Recreation Area boundary on the East Fork of the Chena River. Access to this mining area has been through the Recreation Area.



## Map 5-1 Slope Analysis



### Percent Slope



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## **SOILS**

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Four main soil associations are found within the Recreation Area. There are two soil types in the alluvial bottomlands and floodplain. The Tanana-Goldstream Association, an older soil, is poorly drained, permafrost laden and not suitable for development. The Salchaket Series consists of nearly level, well-drained soils that originated from water-deposited material along the Chena River. The upper layers are predominantly sandy with layers of silty material, which are underlain by thick deposits of coarse sand and gravel. Stream laid gravels and frost-stabilized ground along the main river channel are some of the best-drained soils in the Recreation Area. These soils have no permafrost and are suitable for development. Erosion hazards may exist on other alluvial soils in the bottomlands, but do not exist on the Salchaket soils.

Two other soil associations are found in the hills and uplands of the Recreation Area. Goldstream-Saulich soils occur generally south and east of the Chena River, in narrow strips along tributary drainages and frequently at the base of steep north-facing slopes. These are usually on slopes of three to seven degrees, very silty "muck" soils, containing almost no sand, often many feet thick and containing permafrost. Their ability to support any development is very poor.

On the high, moderately steep to very steep (20°- 40°) ridges north of the river is the Gilmore-Ester Soil Association. Gilmore soils occur on warm south-facing slopes, have no permafrost and are suitable for light development. The Ester soils occur on the north facing sides of the high ridges, contain permafrost and are typically covered with a thick mat of mosses, lichens and low bushes.

The study area is within the discontinuous permafrost zone of Alaska. Within this region localized areas of continuous permafrost, which have high ice content, are found in the poorly drained areas of fine-grained sediment. Areas of sporadic permafrost are found in well-drained coarse sediment or bedrock areas. Slopes exposed to the south, ground areas under birch, aspen and white spruce stands and soil beneath the Chena River provide conditions where permafrost is least likely to occur.

Due to permafrost, the Recreation Area contains many areas of wet and poorly drained soil. Such boggy conditions are especially prevalent along the lower Granite Tors Trail. Lengthy portions of this trail require boardwalks to avoid creating erosion problems in these areas. Boggy areas along streams, such as Colorado and Angel creeks, are also susceptible to disturbance.

In 1974 the United States Soil Conservation Service completed a supplement to the Fairbanks Soil Survey for areas containing "soil interpretations for non-agricultural planning and development." These findings show that development and use restrictions due to soil properties range from severe to moderate throughout most of the Recreation Area. The supplement demonstrated that certain soil types in the Recreation Area have significant environmental constraints, particularly where permafrost is present. Development of structures, roads and trails on these soils requires careful planning. In some cases, where alternative locations exist, these developments should avoid such areas in order to avoid costly modifications and long-term maintenance problems.

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## **WATER QUALITY**

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The Chena River is unique. It is the only clear water river of such a length in Interior Alaska that is extensively road accessible. The productive grayling fishery is an indicator of its excellent water quality. Grayling fishing is one of the main attractions of the Recreation Area.

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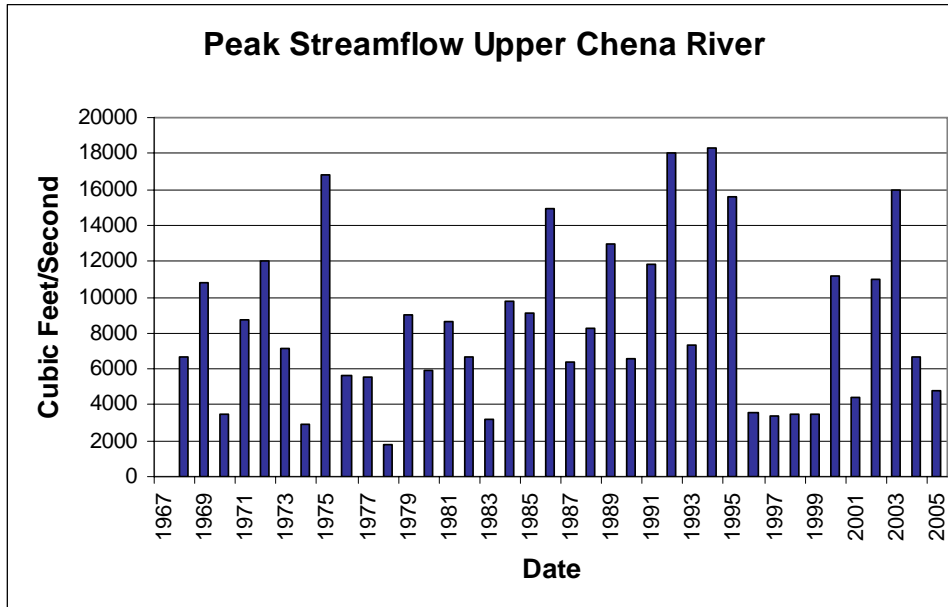
## **HYDROLOGY**

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A meandering channel characterizes the Chena River and drains the non-glaciated, mountainous region northeast of Fairbanks. It is estimated that as much as 50 percent of the Chena River Basin is underlain by permafrost (USACE, 1993). The presence of permafrost inhibits infiltration, thus increasing runoff. Stream flow patterns in the basin consist of high flows during the months of May through September and low flows from November through April. During the winter months, the Chena River and its tributaries are frozen over and the principle source of flow is from groundwater. As the groundwater storage is gradually depleted, the flow diminishes to a minimum in March or April. With the advent of above-freezing temperatures in April and May, the flow increases from snowmelt runoff and breakup of river ice. Peak flows generally occur in May or June, but can also occur between July and September as a result of widespread rainfall. The mean annual flow of the Chena River within the Recreation Area at the gauging station near Milepost-40 Chena Hot Springs Road is approximately 689 cubic feet-per-second (cfs). At this same location, the mean summer flow (open water, May-September) is approximately 1,328 cfs second and the mean winter flow (ice covered, October-April) is approximately 227 cfs second (US Geological Survey, with the period of record being 1968-2001).

Floods in the Chena River Basin result from a combination of rainfall and snowmelt. Major floods have occurred when a sudden rise in temperature combines with a warm rain on saturated snow cover. As a general rule, major floods will occur during spring breakup. When rain accompanies snowmelt runoff, floods have both high peaks and large runoff volumes. This is especially true when the ground is frozen (USACE, 1971). However, the most severe documented flood occurred in August 1967, when an exceptionally high peak produced record flows, which was the result of an intense widespread rainstorm over the Chena River Basin and adjacent watersheds. The record flood of 1967 had flows which exceeded a "one-hundred-year" flood event. Figure 5-1 shows the peak flows on the Chena River in the recreation area from 1967 to 2005.

Floodwaters add warmth to the ground, which promotes thawing of permafrost, which, in turn, can cause initiation of "thaw ponds" and areas of unstable topography. Thus large floods can cause substantial changes in topographical conditions, beyond just deposition of new alluvium. The most significant overall effect of floods is the cutting of new river channels and establishment of sloughs. The likelihood of periodic flooding along the main river channels must be considered in all phases of human activity in the bottomlands. In addition, the extensive permafrost and shallow bedrock areas of the upper Chena provide the ingredients for very rapid rises in water levels with heavy rains or warm spring weather. Any flooding can be intensified locally by log jams.

**Figure 5-1: Peak Streamflow Upper Chena River, Courtesy U.S. Geological Survey**

## FIRE

Wildfires are a natural component of the ecosystem processes in interior Alaska. The Recreation Area has a history of such naturally occurring fires, as well as human-caused fires. Evidences of burns can be found many places within the area. Since 1950 approximately 85,982 acres of land within the area have burned. Since 2000, several wildfires have occurred: a small fire in Beaver Creek drainage and the relatively small Rock Creek fire in 2000 and the West Fork fire of 2002 that burned a portion in the north around Angel Creek. In 2004, the biggest fire season in recorded history in interior Alaska, the 30,800-acre Tors Fire consumed vegetation from most of the north slopes on the south side of the Chena Hot Springs Road between the East Fork and South Fork drainages. Thirteen miles of the fifteen-mile Tors Trail was burned. Map 5-2 shows the fire protection levels and fire history in the Recreation Area.

Fires reduce the vegetative cover and the surface albedo (reflection of sunshine), which results in warmer soils and deeper thawing of the permafrost layers. This can cause portions of the ground surface to either rise or subside, resulting in hummocky terrain. In following years the low spots may fill with ice and water and trees may tip as a result of the unstable conditions.

The black spruce woodlands of the Recreation Area are particularly susceptible to fire, due to their stand density, high percentage of dead lower branches and high pitch content.

Areas that have sustained fires in effect offer more stages within the forest growth cycle and therefore provide a more diversified habitat than mature forests. A forest with varying stages of growth is healthier and ultimately establishes more diversified wildlife. Also, some plant communities, depend on periodic fires for their survival.

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## **FIRE MANAGEMENT**

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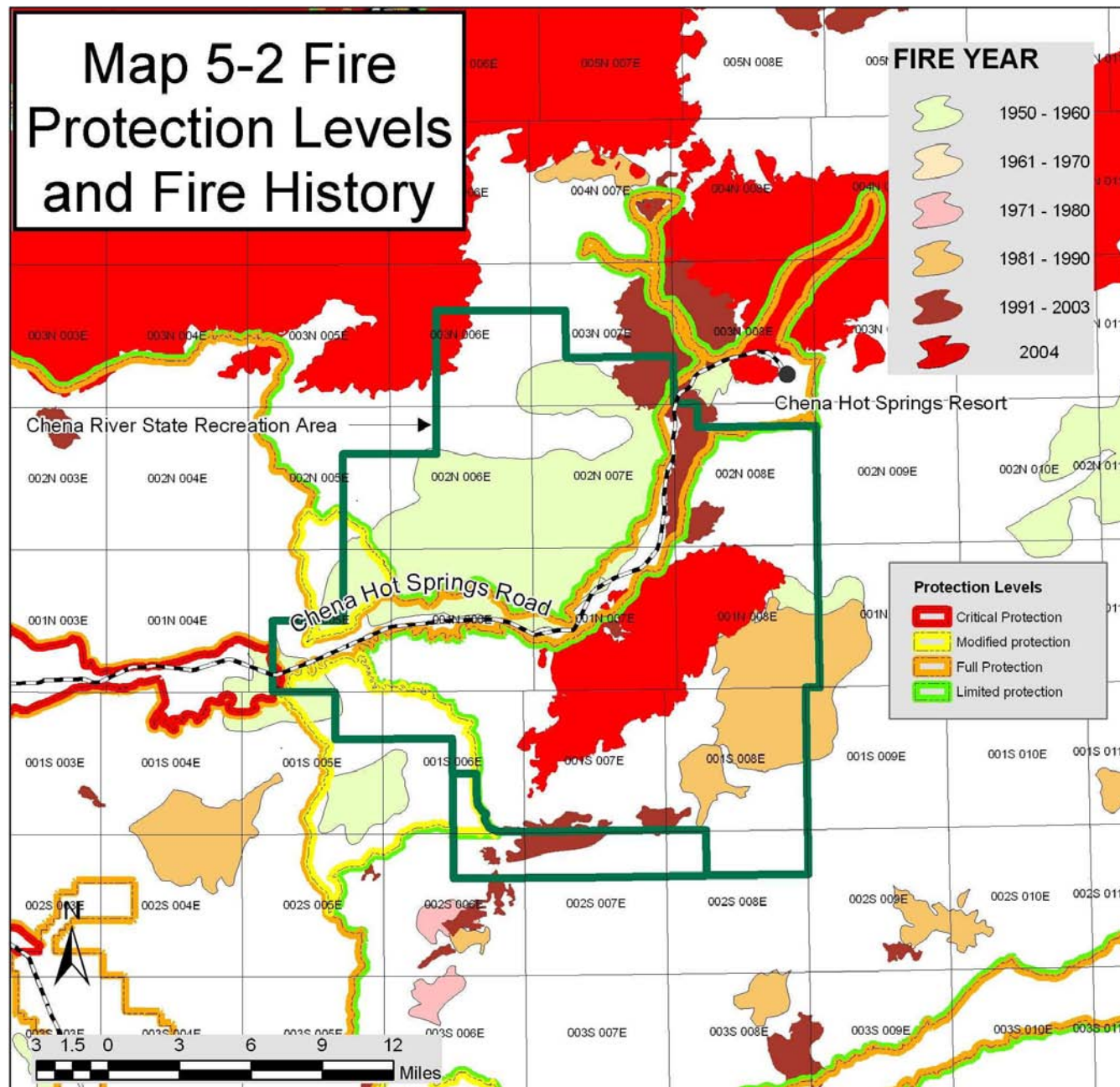
The Department of Natural Resources, along with other state and federal agencies and Native corporations, has developed an interagency fire management plan for Alaska. This plan identifies the appropriate level of wildland fire suppression for all lands in Alaska. In some areas, wildland fires are actively suppressed to protect life, property, or valuable resources. In other areas, wildland fires are allowed to burn to improve wildlife habitat, decrease long-term risks of severe wildland fires and reduce the costs of fire suppression.

Critical Management Option areas have been identified where immediate and aggressive fire suppression efforts are taken to protect life and property. Critical Management Option areas are typically close to residential areas and cover less than one percent of the Recreation Area. Full Management Option areas also receive immediate suppression efforts to protect high value resources where fire may adversely impact resources. Full Management Option areas follow the major highways in the Tanana Basin, and where there are valuable resources close to access. Approximately nine percent of the Recreation Area is in a Full management Option area. Modified Management Option areas are those with high-value resources where land managers may consider trade-offs of acres burned versus suppression costs. Fires are attacked immediately, but land managers guide the suppression effort. Modified Management Option areas cover six percent of the Recreation Area. Limited Management Option areas are those where fire is beneficial or benign, or fire-fighting costs are greater than fire damage. In these areas, fires are monitored, but no suppression action is taken except to prevent fires from burning onto higher value land. Approximately 84% of the Recreation Area is in Limited Management Option areas.

Fire suppression levels are reviewed annually among the agencies and major landowners. Map 5-2 shows the current fire suppression levels within the Recreation Area. For additional information on fire management policies, see the Alaska Interagency Wildland Fire Management Plan.

During the 2004 fire season, a fire line was bulldozed from the Two Rivers Road, through the Tanana Valley State Forest and into the western edge of the Recreation Area. The fire line is open to year-round motorized or non-motorized trail use up to a specified point in the Chena River SRA. At that point, signs are posted and a large rock barrier is placed to restrict ORVs from using the Chena Dome Trail.





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**WILDLIFE**

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Numerous wildlife species inhabit the Recreation Area, some as residents, some as migrants. The Alaska Department of Fish and Game publishes management reports on Game Management Unit and species type. Map 5-3 shows the 254,080-acre Chena River State Recreation Area within the 5,832,960-acre Game Management Unit 20B. The Recreation Area is roughly four percent of Game Management Unit 20B. Appendix E contains figures specific to species within Unit 20B.

Large mammals include moose, wolf and brown and black bear, all of which cover shifting territories according to season, snow cover and available food sources. Moose are common, year-round residents of the area. They frequently occupy the valley bottoms and slough ponds in the summer, but may move upward in the fall to the sub-alpine areas to feed on upland willows. Moose habitat also includes recently burned areas that contain willow and birch shrubs and along timberline plateaus. In winter, moose gather in groups and move to lower elevations to feed on willow along the rivers and sloughs. Because moose hunting season finds most bull moose in the upland drainages, the distances involved in packing out a moose have been a limiting factor to hunting. Park ranger observations indicate that most of the Recreation Area harvests are mainly young bulls along the road corridor.

In the past, the Fortymile caribou herd used the northernmost portion of the Recreation Area as summer range and calving area. In past years, the herd has reduced greatly in size and their range has also diminished and changed location. Their traditional range should be protected from any uses that might discourage the return of caribou to the area. In 1982, several thousand caribou wintered in the East Fork and Munson Creek area east of the Recreation Area. Since then, no caribou sightings have been reported within the Recreation Area until the fall of 2003, when several thousand found their way into and near the northern portion of the Recreation Area. Results from efforts to increase the Fortymile caribou herd have been successful. This increase can be attributed to management, private citizens action and favorable winter climate condition.

Brown bear habitat in most of Unit 20B is classified as low density, although the upper Chena and Salcha rivers have been classified as medium density. Fish and Game's Management Report estimates a brown bear density in this area to be approximately 16.1 bears per 1,000 square miles. Brown bears have been spotted in the Recreation Area. Hibernation occurs during the winter and can be anywhere from five to seven months.

Black bears are abundant and may be found in many habitats within the area. Fish and Game estimates, for the regulatory year 2000, a population between 750-1200 black bears in Unit 20B (the Recreation Area comprises four percent of Unit 20B). They are normally out of hibernation from approximately May 1 through October 1. During the spring and summer they frequent the lowland valleys, then spend August and September in the uplands, feeding primarily on berries.

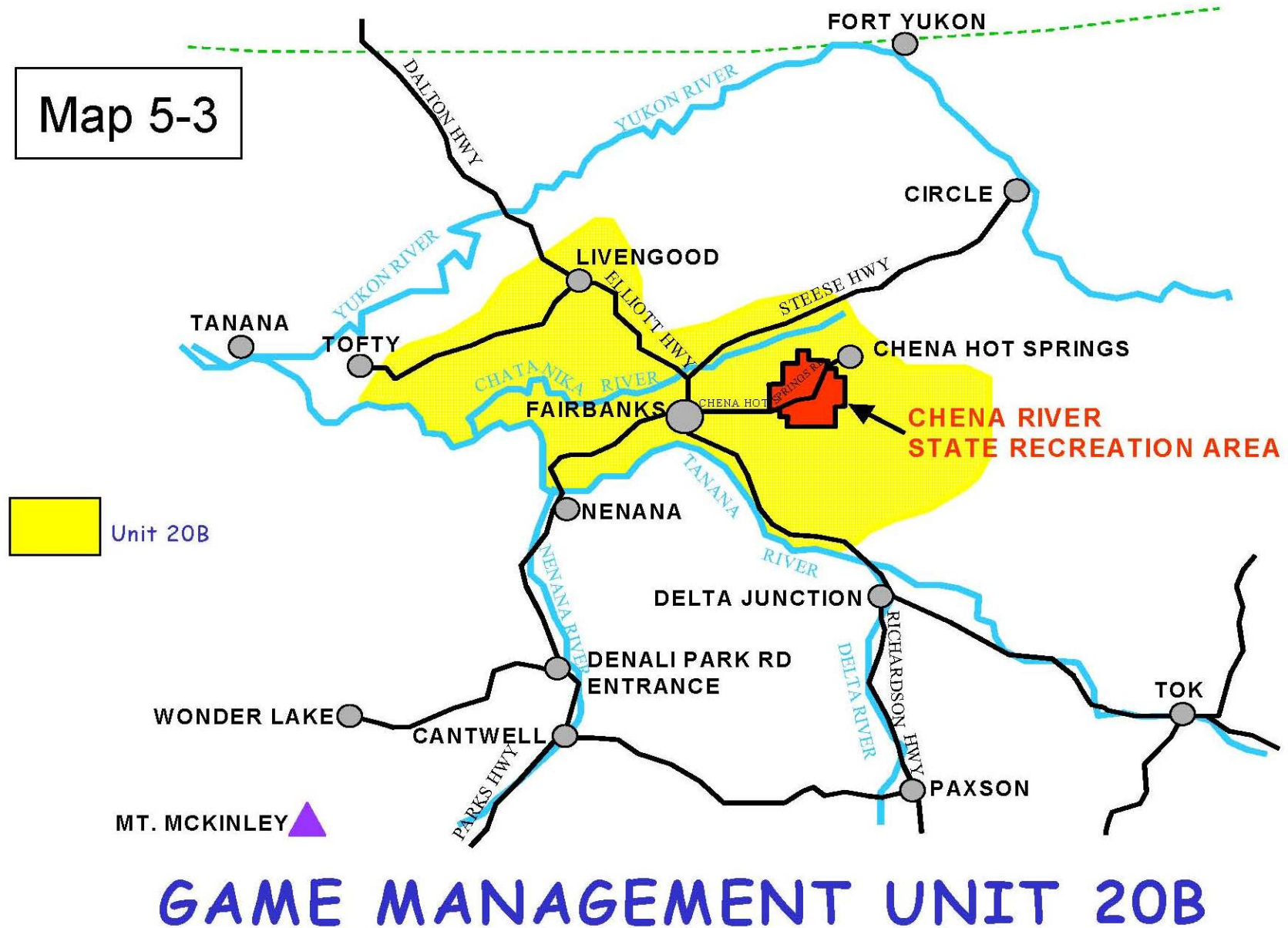
Fish and Game 2003 Wolf Management Report states, "Wolf population size and harvest have varied considerably, both spatially and temporally, within this management area [Unit 20B]. Wolf numbers are primarily regulated by prey availability, but wolf control and harvest have periodically reduced wolf populations in portions of the management area." Unit 20B has an estimated 150-225 wolves and 20-30 wolf packs. This has been consistent since 1992.

Numerous smaller fur bearing species are found in the Recreation Area. Trappers utilize several of these. Furbearers are difficult to study due to their elusive behavior and diverse habits and habitats. Trappers have provided key information in the population estimates of these furbearers by answering Fish and Game questionnaires. Species within the Recreation Area include ground squirrel, red squirrel, snowshoe hare, river otter, beaver, marten, mink, weasel, red fox and lynx.

Many places along Chena Hot Springs Road afford excellent wildlife viewing opportunities. In a non-standardized count of wildlife observations conducted in 1997 by state park staff, many sites were identified, with the three prominent moose viewing areas being: Milepost 28; Milepost 33; and Milepost 42.8. These locations are at beaver ponds where moose congregate to feed. There are also opportunities to view salmon spawning at Milepost 47. Other possible wildlife viewing sites include: MP 27.8, 29.2, 29.4, 38.8, 39.1, 41.6, 42.0, 42.8, 46.0, 46.7 and 49.9.



Map 5-3



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## **BIRDS**

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The Recreation Area supports a rich diversity of birds. At least 93 species of birds are known to breed in the area and approximately 35 other species can be found during spring and fall migrations. Represented in the area are waterfowl, shore birds, raptors and birds that inhabit the forests, brush and alpine areas.

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## **FISH**

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The Chena River is a rapid-runoff tributary to the Tanana River originating in the Tanana Uplands 90 miles east of Fairbanks. The river flows approximately 160 river miles from the uppermost reach in the East (Middle) Fork to the confluence with the Tanana River at Fairbanks. The Chena River watershed is about 2,000 square miles and includes five major tributaries: North Fork, West Fork, South Fork, East (Middle) Fork and the Little Chena River. Collectively, these major tributaries and the main channel are over 290 miles in length. The streams are transparent green at low water, but become stained with tannins during mild runoff events and become darker with silt and organic material during high water events.

The upper Chena River is accessible from the Chena Hot Springs Road within the Recreation Area beginning at Milepost 26, and intermittently at about 20 sites, until Milepost 48.9. This makes it a popular stream for fishing by Alaskan residents, visitors and fishing guides.

Among the 12 species of fish in the Chena River, the Arctic grayling is the most popular sport fish. Grayling spawning occurs in May, shortly after break-up, while the waters are naturally high and turbid. Spawning occurs throughout most of the river, except in the uppermost reaches. After spawning, many adult fish migrate further upstream to summer in the river's headwaters. Many adults and the developing young remain in the middle and lower river. In the fall most of the grayling move up or down the river to over-wintering areas outside the Recreation Area.

Fishing season on the Chena River is open all year. Reductions in grayling abundance, particularly larger fish, precipitated a series of regulation changes culminating in the fishery being restricted in 1993 to catch-and-release and unbaited, single hooks.

Round whitefish are occasionally caught on sport tackle in the Recreation Area. Humpback whitefish, burbot and northern pike are also present in much lower densities than in areas downstream outside the Recreation Area. They are rarely caught.

Chinook (king) and chum salmon spawn in the Recreation Area. The Chena and nearby Salcha rivers are the two most important chinook salmon spawning streams in the Yukon River drainage in Alaska. Although yearly spawning populations are variable, the salmon runs in the Chena have been increasing since the early 1980s. Escapements of close to 10,000 chinook salmon are not uncommon in the Chena River, with spawning abundance in

the river within the Recreation Area in the range of 5,000 to 7,000 during the peak in late July and early August. Typical abundance of chum salmon is unknown, but there are far more chum salmon than chinook salmon. Salmon fishing is closed in the upper section of the Chena River, including the entire river within the Recreation Area.

The Alaska Department of Fish & Game stocks three gravel pit ponds in the Recreation Area with arctic grayling and rainbow trout. The rainbow trout are sterile. These stocked ponds provide children and less experienced anglers easier fishing than the river. They also provide off-river opportunity for anglers when the river is high and turbid and during the winter. Other species found in the river and sloughs are long nose sucker, Arctic lamprey, least cisco and slimy sculpin.

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## VEGETATION

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The Recreation Area contains an unusual diversity of plant communities representative of interior Alaska, ranging from bogs and river bottomlands through hillside woodlands to high alpine tundra (Figure 5-4). The plant associations of the area vary dynamically with the interactions of soil characteristics, elevation, slope orientation to sun and wind, climatic and fire events, water drainage, river dynamics and location of permafrost.

The vegetation of the valley bottomlands, because of the constantly shifting river channels, is in a continual state of long-term dynamic succession. Freshly deposited alluvium is colonized by willow and herbs, which give way to the slower developing balsam poplar. At first, the poplars shelter, then give way after 50-75 years to white spruce, which may last up to 300 years. These stands of mature white spruce among the river meanders are the largest trees found in the Recreation Area. Eventually permafrost is established beneath their heavily shaded roots. This allows the development of black spruce and moss woodland, the final and most stable stage of the succession. When black spruce woodlands are disturbed by fire, the most prevalent agent of change, the underlying permafrost will thaw, warming the soil and the succession cycle starts again.

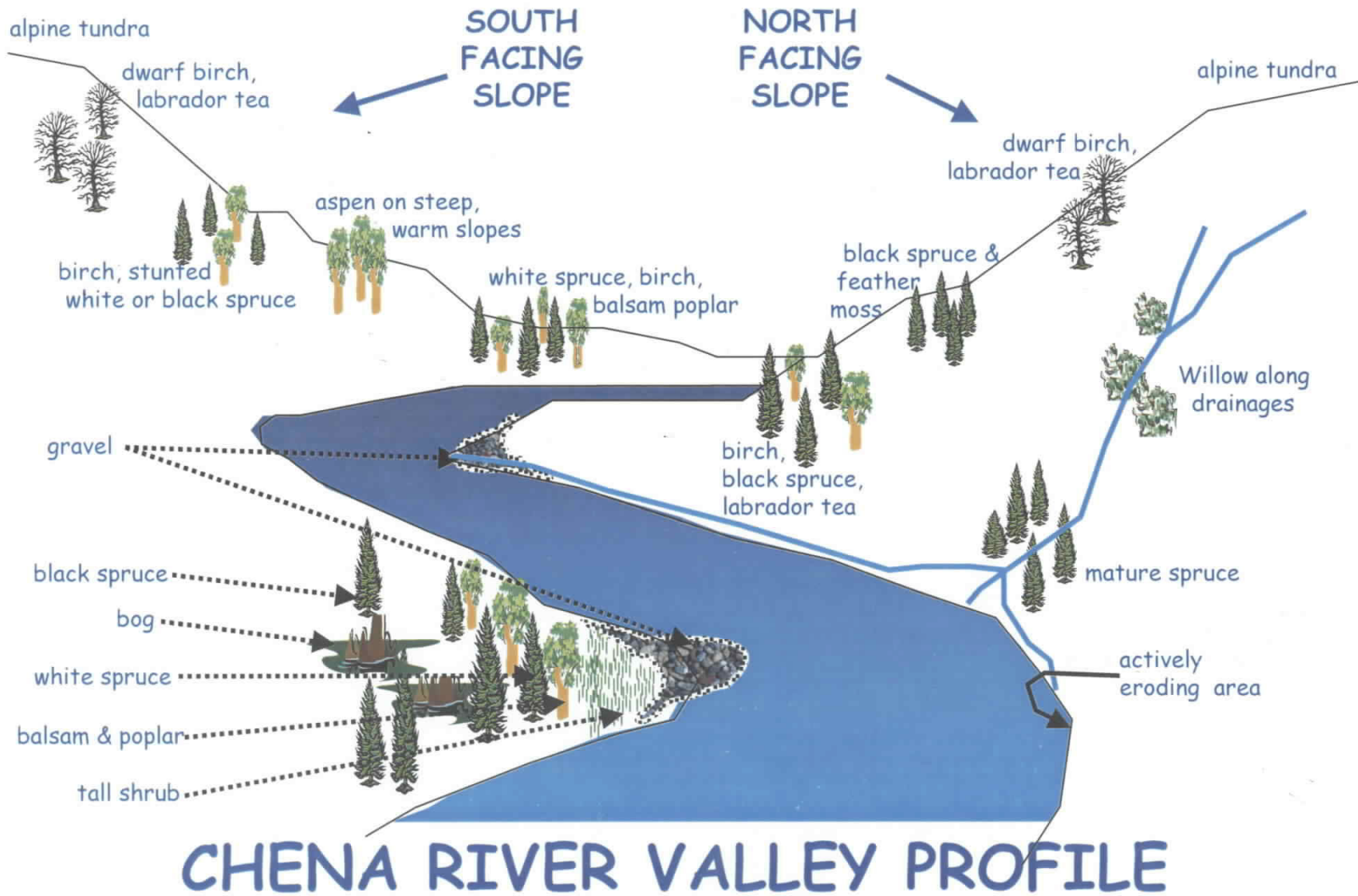
Slope aspect is the determining factor in the type and extent of woodlands covering the hillsides of the area. South-facing slopes generally support mixed woodlands of birch, aspen and white spruce, with an understory of prickly rose, highbush cranberry and other shrubs. The north-facing slopes, underlain by permafrost, are covered with black spruce forest, with occasional birch and tamarack and a thick ground cover of mosses, lichens, Labrador tea and low-growing berries.

Of all the vegetative communities, black spruce woodlands are the most susceptible to fire, due to the high amount of dead branches close to the ground and the thick mat of mosses and lichens.

The alpine tundra is limited to the high ridges and hilltops around Chena Dome and the Granite Tors. With its open vistas, profusion of summer wildflowers and association with unique plants and geologic features, the high tundra is the most desirable destination for hikers and trail users.

High and low bush cranberries, blueberries, cloudbberries, raspberries and currants are abundant throughout the Recreation Area and berry picking is a popular activity for visitors and a major food source for wildlife.

**FIGURE 6**



## **Chapter 6**

### **The Human Environment**

## Chapter 6: The Human Environment



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### HISTORIC USE AND ARCHAEOLOGICAL REMAINS

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There are no known historic or prehistoric sites within the boundaries of the Recreation Area; however, there are remains of early travel and exploration along the Chena River.

Mammalian fossils have been found in the banks of the Chena River.

During the years 1902 through 1909 the area was surveyed and geologic maps from the survey indicated the presence of Chena Hot Springs and the Granite Tors. The first development at Chena Hot Springs occurred in 1915 with construction of a hotel, cabins and a log bathhouse containing wooden hot tubs. In those days, taking the 124-mile round trip by sleigh to enjoy the hot springs was not uncommon. Three roadhouses along the winter sled trail helped make the trip more pleasant: one at the junction of the Little Chena River, one at the junction of Colorado Creek and a third near the present highway Milepost 48 (Gregg's Roadhouse).

In the early 1920's there was limited gold mining on the upper reaches of the East Fork of the Chena River, outside the Recreation Area. By 1940, all mining operations of any significance had ceased. In 1980, placer mining activity was reestablished in this area and continues to this day.

Logging has occurred throughout the past 50 years and signs of this activity are still evident. Many of the structures in Fairbanks were built with Chena River timber.

Recreation use of the area grew slowly over the years since 1915. Primarily fishermen and hunters used the area, with access from the Chena Hot Springs Road.

On June 18, 1967 legislation established the Chena River State Recreation Area as a corridor along the river. In 1975, the Alaska Legislature expanded the Recreation Area to its present size.

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## POPULATION

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Fairbanks is the second largest city in the state, with an estimated population of 29,670 in 2002. The Fairbanks North Star Borough, which includes the city of Fairbanks, encompasses 7,361 square miles and has an estimated population in 2002 of 84,791. The population of the borough is 13 percent of Alaska's overall population.

During the construction of the Trans-Alaska Oil Pipeline in the 1970's the population in the region increased dramatically. The Fairbanks population increased to almost 27,000; the borough increased to 65,000. Since 1984, the population of Fairbanks has increased approximately 8% while the Fairbanks North Star Borough population has increased by approximately 23%.

Statistics from the Fairbanks North Star Borough indicate that the population of Fairbanks tends to be, on the average, slightly younger than national norms with the median age being 29.5. Approximately 20 percent of the population in 2002 was military personnel. The mean household income in 2002 was \$49,076.

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## LAND OWNERSHIP

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Within the Recreation Area, there are eight blocks of land in private ownership; six former homesteads and two Open to Entry sites totaling approximately 300 acres. Also within the Recreation Area is one Public and Charitable Lease, for 80 acres, first issued to the University of Alaska Fairbanks Geophysical Institute in 1966. Land status within and around the Recreation Area is shown in Map 6-1.

The Chena Hot Springs Road right-of-way is managed and maintained by the State Department of Transportation and Public Facilities (DOT/PF). Many improvements to the road's alignment, surface and other safety features have been made over the years. Recreation access, highway pull-offs, viewing areas and other recreation uses occur within the right-of-way and are managed by the Division of Parks and Outdoor Recreation. Measures to protect the road from flooding will continue. Sources of gravel and riprap from within the Recreation Area are utilized, under a park use permit, to maintain and protect the road within the Recreation Area.

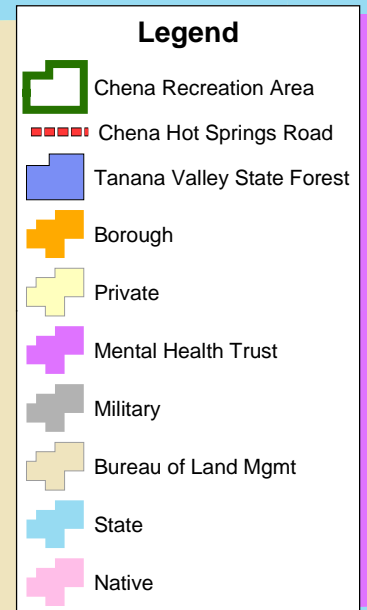
When the State Legislature established the 1975 boundary of the Chena River State Recreation Area, 13,760 acres of the Fort Wainwright Yukon Training Area were included. These lands have been withdrawn for Army use since 1956. In 2001, the withdrawal was extended for another twenty-five years for military training. The United States Army will continue to use the lands adjacent to the Recreation Area (known as Beaver Creek-South Fork of the Chena area) in the Yukon Training Area. The Military Lands Withdrawal Act (Public Law 99-606) requires the Army to renew this withdrawal by November 2026 or the land reverts back to the Bureau of Land Management.



# Map 6-1 Land Status



0 1.5 3 6 9 12 Miles



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## **ECONOMIC GROWTH**

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The Fairbanks North Star Borough economy is based on three major components: government and civil service, military and private industry. Results from the 2000 U.S. Census indicate that employment is approximately 26% government and civil service, 15% military and the remaining 59% is through private industry.

The Alaska Department of Community and Economic Development reports the Fairbanks North Star Borough's economy as healthy and growing. Since 1995, the personal income of workers in the economic base has increase 29%, primarily due to increases in federal government, mining, tourism and manufacturing.

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## **TOURISM**

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Tourism is a significant part of the borough's economy and its economic importance is growing. The Fairbanks International Airport receives about 750,000 passengers annually from scheduled flights for vacation and pleasure, while business travelers make up a small proportion of overall visitation. Just over half of the summer tourists are independent travelers not associated with packaged tours.

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## **TRANSPORTATION**

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The Chena Hot Springs Road, which runs through the center of the Recreation Area and beyond it to Chena Hot Springs Resort, is the only paved road that accesses the Recreation Area. Two Revised Statute 2477 rights-of-way exist within the Recreation Area. One is the Chena Hot Springs Winter Trail (RST 278) and the other is a winter trail that runs east on the East Fork of the Chena River (RST 46). Both of these RS2477s are primarily used in the winter months.

There is no public transportation to the Recreation Area. However, guests at the Chena Hot Springs Resort are provided van service from Fairbanks.

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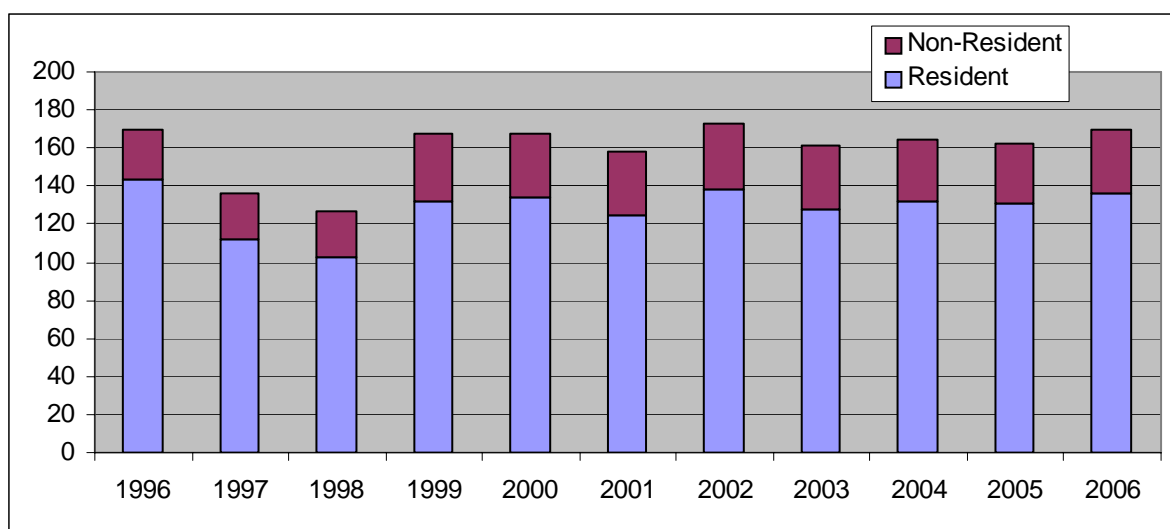
## **VISITATION**

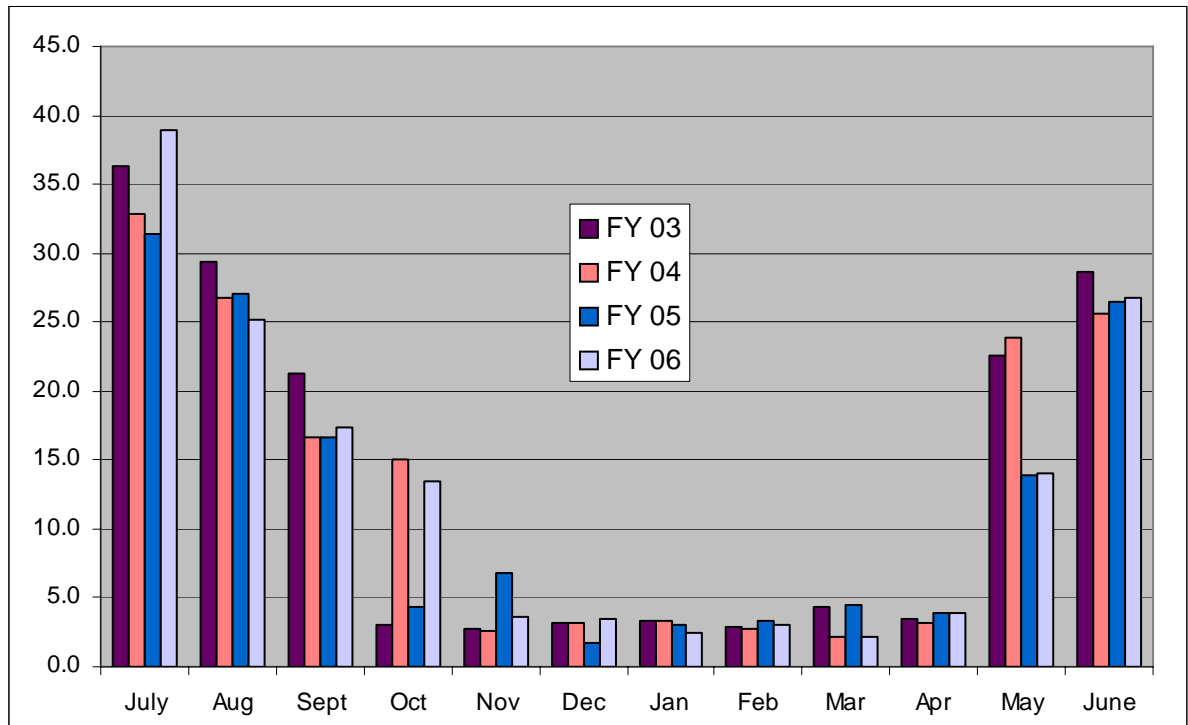
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The Division of Parks and Outdoor Recreation has been monitoring visitor counts since 1997 using mechanical roadway counters (see Figure 6-1). The total visitation to the Chena River State Recreation Area in fiscal year 1997 was 136,400 and in fiscal year 2004 was 163,900. Figure 6-2 shows the seasonality of visitation, indicating that the summer 5 months comprise an average of 75 percent of the annual visits to the Chena River SRA. Visitation can vary widely from year to year, depending on the price of vehicle fuel, the weather, world events and other volatile, unpredictable factors. For example in 2004, extensive wildfires in the area kept visitation lower than expected, due to smoky skies and concerns with threat of fire. That surprise event followed right after the summer of 2003 that reached the lowest visitor count in years, due to flooding from heavy rains in late July through September.

Under contract with the U.S. Air Force, the National Park Service Pacific Northwest Cooperative Ecosystem Studies Unit, conducted an extensive mail-back survey of 706 visitors to the Chena River SRA in 2001. The survey indicated that about 40 percent of respondents lived within a 100 mile radius of the park unit and about 40 percent of respondents were non-Alaskan U.S. residents. Non-local Alaskans comprised 14 percent of respondents and foreign residents 5 percent. Local Alaskans made on average 14.3 trips to the Chena River SRA in the previous three years compared to less than two trips for respondents who lived elsewhere. These findings indicate that some local residents make heavy use of the area. About two-thirds of respondents to a contact interview were male and the average age of respondents was 46. Thirty percent of respondents' parties had people under the age of 18.

**Figure 6-1: Visit Counts by Fiscal Year 1996 - 2006**



**Figure 6-2: Visit Counts by Month, Fiscal Year 2003 - 2006**

The most recent survey of Chena River SRA visitors was conducted by University of Alaska students in Outdoor Recreation Management in Spring of 2006. Under the direction of Dr. Peter Fix, they conducted a telephone survey of a representative sample of Fairbanks North Star Borough residents to determine why people visited the Recreation Area, which activities they participated in and factors that contributed to or detracted from their experience.

## SERVICES AND UTILITIES

There are no public utilities, electricity, phone, water or sewer, available within the Recreation Area.

Cellular service is currently unreliable beyond Milepost 30 CHSR, except from highlands.

Private services are located at Angel Creek Lodge (Milepost 49.1).

Public services available within the Recreation Area include Emergency Medical Services, State Troopers and refuse pick-up.

## **Chapter 7**

### **Regional Recreation and Visitor Use**

## Chapter 7: Regional Recreation and Visitor Use



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### REGIONAL RECREATION PREFERENCES

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The State Comprehensive Outdoor Recreation Plan 2004-2009 (SCORP), published by the Division of Parks and Outdoor Recreation in July of 2004 determined that the availability of quality outdoor recreation opportunities is highly valued by Alaskans. The 2004-2009 SCORP contains detailed information about the preferences of railbelt and other Alaskan residents based on an independent survey. The Recreation Area is located within the railbelt. The railbelt includes those urban and rural communities accessible from Alaska's limited road and rail system, generally from the southern end of the Kenai Peninsula, north to Fairbanks and east to the Canadian Border. Survey results applicable to the management and development of the Chena River State Recreation Area follow. Appendix F contains some of the 2004-2009 SCORP results in table format.

The survey found:

1. Fishing, day hiking, bicycling and mountain biking, walking for fitness and sport hunting rank highest for overall favorite outdoor recreation activities for Alaskans. The Recreation Area currently provides opportunities for all these activities, with the potential for increasing and improving facilities, access and trails.
2. The majority of respondents report general satisfaction with outdoor recreation opportunities in their community, and within an hour's travel time (78% and 77% respectively). The Recreation Area falls within the report's findings related to satisfaction for residents in the general Fairbanks area.
3. Driving for pleasure or sightseeing, walking for fitness, day hiking, bird watching or wildlife viewing and picnicking ranked highest for the top participation activities. To meet this demand, the Recreation Area has undergone extensive renovations of pullouts, trails and trailheads, picnic areas and campgrounds.
4. Males participate more often in shooting, golf, ORV riding, court games, power boating, snowmobiling, sport fishing and hunting. Women participate in greater numbers in sledding, swimming, walking for fitness, kayaking, horse riding and back country skiing. The Recreation Area provides opportunities for a number of these activities, but not all.

5. Respondents were asked a series of value statements to determine what kind of facilities or experiences they would like. There was strong to moderate public support for all the proposed park facility improvements and developments. Tables 7-1 and 7-2 compare 1997 and 2004 data showing the percent of statewide support for the most frequently mentioned facility improvements and developments.

**Table 7-1: 1997 Support for Facility Improvements and Developments**

TYPE OF DEVELOPMENT	% SUPPORT 1997
Disabled accessible facilities	86
Public use cabins	79
Tent campgrounds	77
Trailheads along roads	76
Roadside toilets	74
Non-motorized trails	74
Road upgrade (park roads)	71
Picnic areas	68
New parks	67
RV dump stations	64
Boat launches	63
Recreation programs	61
Water/toilets in campgrounds	59
Off-road-vehicle trails	56
RV campgrounds	52
Visitor centers	49
Tourist facilities	41

**Table 7-2: 2004 Support for Facility Improvements and Developments**

TYPE OF DEVELOPMENT	% SUPPORT 2004
Public use cabins	77.09
Roadside toilets	75.88
Trailheads along roads	75.37
Non-motorized trails	71.06
New parks	69.42
Disabled accessible facilities	63.59
Tent campgrounds	60.84
Picnic areas	52.72
Road upgrade (park roads)	48.91
Off-road-vehicle trails	47.29
Boat launches	47.02
RV dump stations	43.15
Water/toilets in campgrounds	37.33
RV campgrounds	35.38
Recreation programs	34.42
Visitor centers	29.33
Tourist facilities	23.75

Despite strong support for the facilities and improvements mentioned above, when presented with the choice of using limited funds for facility development or maintenance, 78 percent of respondents favored maintaining current facilities.

6. Railbelt community outdoor recreation providers throughout the state were asked to rank in order of importance the outdoor recreation needs in their communities and regions. The top two needs over time have remained consistent: facilities and maintenance. Table 7-3 summarizes these results.

**Table 7-3: Ranking of Community Outdoor Recreation Needs for Railbelt**

Need	1992	1997	2004
Facilities	1	1	1
Maintenance	2	2	2
Access	4	3	3
Land	5	4	4
Programs	6	5	5
Other	3	6	6

7. Most significant barriers to outdoor recreation are the chronic lack of funding for outdoor recreation facility maintenance and development, supervised programs, the shortage of land suitable or available for development and a lack of connecting trails.

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## REGIONAL RECREATION OPPORTUNITIES AND PROVIDERS

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Designated, developed recreation areas or facilities are limited in the Fairbanks/Chena region. Providers are the State of Alaska Department of Natural Resources (DNR) Division of Parks and Outdoor Recreation, the Fairbanks North Star Borough (FNSB), the United States Bureau of Land Management (BLM) and a few private facilities (Map 7-1).





Approximately two-thirds of the land in the Fairbanks/Chena region is in state ownership with the majority of the remaining lands in federal ownership. Most of these lands are currently open to dispersed recreation wherever there is access, but this pattern is shifting and recreational opportunities will continue to be lost or displaced as public land goes into private ownership. Another significant provider of land for recreation is the Fort Wainwright military training land south of the Recreation Area. Access for recreation is allowed as long as it doesn't interfere with military training. The area receives high recreational use from the adjacent Eielson Air Force base and the community of North Pole due to its road and trail network. Appendix C lists recreation regulations on military lands.

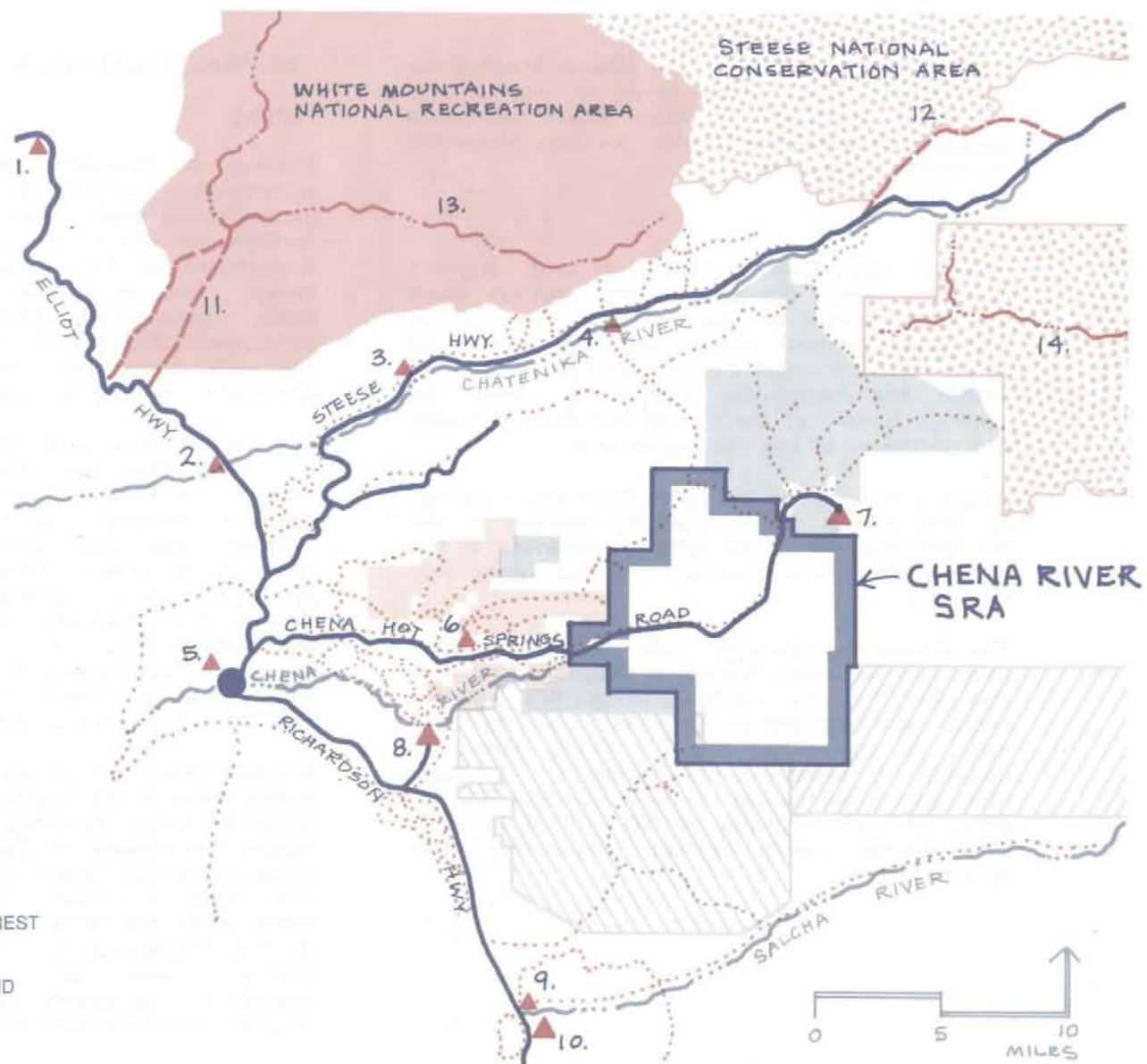
### Destinations with Facilities

On a regional scale, there are three federally managed recreation areas within a half-day drive of Fairbanks. Denali National Park and Preserve offers internationally renowned scenery and wildlife viewing opportunities as well as privately managed overnight facilities. The White Mountains National Recreation Area and Steese National Conservation Area offer a variety of year-round recreation opportunities including campgrounds, trails and public-use cabins. Beaver Creek and Birch Creek National Wild and Scenic Rivers are located within these areas.



1. TOLOVANA CGND. BLM
2. LOWER CHATENIKA SRS STATE
3. UPPER CHATENIKA SRS STATE
4. CRIPPLE CREEK CGND. BLM
5. CHENA RIVER SRS STATE
6. TWO RIVERS REC. AREA BOROUGH
7. CHENA HOT SPRINGS RESORT PRIVATE
8. CHENA LAKES REC AREA BOROUGH
9. SALCHA RIVER SRS STATE
10. HARDING LAKE SRS STATE
11. WHITE MTN TRAIL FEDERAL
12. PINNELL MTN TRAIL FEDERAL
13. BEAVER CREEK NAT. WILD & SCENIC RIVER
14. BIRCH CREEK NAT. WILD & SCENIC RIVER

-  STATE DISPOSAL LANDS
-  TANANA VALLEY STATE FOREST
-  MILITARY WITHDRAWAL LAND
-  OTHER MILITARY LAND
-  STATE/LOCAL TRAILS



## REGIONAL RECREATION OPPORTUNITIES

Some of the more developed outdoor recreational opportunities within one hour's drive of Fairbanks are the Upper Chatanika State Recreation Site, Harding Lake State Recreation Area, Salcha River State Recreation Site, BLM's campground at Cripple Creek and trailhead access to the White Mountains National Recreation Area.

Within one-half hour drive of Fairbanks are the Lower Chatanika State Recreation Area, three areas managed by the borough: the Birch Hill Recreation Area that provides a Nordic ski complex and 32 kilometers of ski trails, the Heritage Forest in North Pole and Two Rivers Recreation Area.

Also, within a half-hour drive, the borough manages the very popular Chena Lakes Recreation Area. The area provides 78 campsites, 92 picnic sites, 3 group shelters, 2 boat launches, swimming, fishing, wildlife viewing areas and a trail network including a 2.5-mile nature trail. Chena Lakes Recreation Area also receives extensive winter use including cross-country skiing, skijoring and ice fishing. The table below shows the visitor count for the Chena Lakes Recreation Area in the summer (May through September). Other borough visitation studies show that winter recreation is as popular as summer recreation in the Chena Lakes Recreation Area.

**Table 7-4: Summer Visitation Counts for the Chena Lakes Recreation Area**

Year	Number of Visitors
2000	40,980
2001	42,094
2002	41,675
2003	42,485

Within, or closely adjacent to, the Fairbanks metropolitan area are a state campground (Chena River State Recreation Site) and many urban parks, trails, paths and bike trails maintained by various agencies (the city, borough, Department of Transportation and Public Facilities, Department of Fish and Game, the School District and the University of Alaska). There are also several privately operated campgrounds. Also available in the city of Fairbanks are indoor recreation facilities and a full range of commercial facilities that support recreation.

## **Trails**

Trail uses in the region are many and varied. Trails are used recreationally in many different ways, including hiking, jogging, backpacking, wildlife and nature viewing, horseback riding, biking, off-road vehicles, hunting, fishing access, trapping, snow machining, snowshoeing, dog sledding, skijoring, cross-country skiing, access to rock climbing, cabin access, races and group outings. Non-recreational and commercial uses of trails include mining access, research access and guided trips.

Trail use in the region has increased dramatically in the last two decades and is expected to continue increasing in the future.

Trails are numerous and heavily used along the Fairbanks to Chena River Corridor and in many locations throughout the area. Of the 60 trails identified in the Fairbanks North Star Borough Comprehensive Recreational Trail Plan, nine of them are in the Chena River State Recreation Area: Chena Dome, Granite Tors, Colorado Creek, Stiles Creek and Connector, Angel Rocks and Connector, Angel Creek, East Fork, South Fork and the historic Chena Hot Springs Winter Trail. There is an extensive existing trail network between Fairbanks and the Recreation Area that, if protected, could provide permanent connections to the trails within the Recreation Area.

Trails within the Tanana Valley State Forest, BLM Recreation and Conservation areas and the military lands in the region, though not specifically designated in the FNSB Trail Plan, are important for recreation. The military land south of the Recreation Area contains approximately 125-miles of trails, which are used occasionally by hunters and fishermen.

One of the most heavily used trails is the Chena Hot Springs Winter Trail, which includes a portion of the Yukon Quest race route. Due to its regional significance, the Tanana Basin Area Plan also recommends the Chena Hot Springs Winter Trail for legislative designation as a State Trail.

All other trails in the region, no matter how heavily or continuously used, are subject to interruption or loss due to land use changes and development of private and agricultural lands.

## **Rivers**

Of the many rivers accessible and utilized by recreationists in the Fairbanks region, only two outside the Recreation Area are designated and protected for recreation use; Beaver Creek National Wild River and Birch Creek National Wild River which are both part of the National Wild and Scenic River System. Along with the Chena River, other rivers in the region that receive heavy use include the Tanana, Salcha and Chatanika rivers.

## **Hunting**

Hunting is an important seasonal recreational and lifestyle activity for residents and visitors alike and occurs on public lands around and within the Recreation Area. The BLM, DNR, the Fairbanks North Star Borough and the Military manage public lands around the Recreation Area where hunting is allowed. Significant acreages of state lands are open to hunting, especially north of the Recreation Area, and may be affected by future land disposals and private development of lands.

The Recreation Area provides many hunting opportunities for people residing in the greater Fairbanks area. Most hunting occurs during September when hunters use the rivers, trails and road system extensively. An average of 5-12 bull moose are harvested each year from the Recreation Area. Small game hunting, especially grouse hunting, is also popular in the Recreation Area. Waterfowl hunters set out decoys and jump shoot ducks from the river and area ponds.

Hunting also occurs in the spring and winter. Spring black bear hunting is popular. Approximately 30 bait stations in the Recreation Area are registered annually by the Alaska Department of Fish and Game. Snowshoe hare hunting and predator calling are enjoyed during the winter.

## **Fishing**

Fishing is a popular activity for residents and visitors in the Fairbanks/Chena area. Fishing access and facilities in the region are often sponsored by the Alaska Department of Fish & Game and Alaska State Parks.

The Alaska Department of Fish & Game statistics for 1996-2000 show that the upper Chena River received an average of 13,000 angler days a year, about 12 percent of the effort expended in the Fairbanks area, which is included in the Lower Tanana Management Area. This, combined with the effort expended on the lower river, makes it the most frequently used river in the interior. While the fishery in the lower river targets a mix of species, of which chinook salmon is an important component, the fishery in the Recreation Area is almost entirely directed toward grayling. The Chena River five-year-average annual grayling catch for 1996-2000 was about 45,000 fish, 30 percent of the total grayling catch for the Fairbanks area. Harvesting of grayling in the Recreation Area is illegal. To protect the health of the fishery, they are managed under a catch-and-release program.

The Salcha River, 50 miles to the south, has a fishery resource of comparable quality to the Chena River, but is less accessible. North of Fairbanks, another popular fishery is the Chatanika River, which is accessible from the Steese and Elliott highways. Grayling, chinook salmon, sheefish and whitefish are taken.

Stocked lakes within an hour's drive of Fairbanks include Chena Lakes, Birch, Harding, Little Harding and Lost lakes and several smaller ponds and gravel pits. These waters are stocked with rainbow trout, landlocked salmon, Arctic char and grayling. A single stream system, Piledriver Slough near Eielson Air Force Base, is stocked with rainbow trout.

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## **CHENA RIVER STATE RECREATION AREA RECREATIONAL PREFERENCES**

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A study published late in 2006, titled "Effects of Military Overflights on Human Users of Selected Alaska Military Operations Areas" compiled survey information on recreationists visiting the Recreation Area. While the study focused on encounters with military overflights and their related impacts on recreationists, valid information was obtained in the process regarding visitation and activities performed by the visitors. The study used a combination of on-site/mail survey, qualitative interviews and a telephone survey completed during May 31 through August 31, 2001. Over 1,000 individuals participated in the study. It should be noted that data collection occurred during the weekdays as the study was interested in collecting data during military air operations. Significantly more local resident activity takes place during the weekend, so data may not directly reflect local resident information.

Demographic data obtained through the questionnaires and the contact interviews provide insight into the make-up of the individuals visiting the Recreation Area. See Appendix G for more information.

Two-thirds of respondents were male (67.5%) compared with one-third female respondents. Almost half (46.7%) of respondents reported a party size of two with approximately 15 percent reporting a party size of one, three or four. Thirty percent of respondents reported having at least one person under the age of 18 in their party. Respondents to the survey were fairly equally distributed by ages as depicted in Table 7-5.

**Table 7-5: Age of Chena River State Recreation Area Respondents**

Age	Percentage
60 or more	18.8%
50-59	24.7%
40-49	22.8%
30-39	21.6%
20-29	12.0%

Information was also gathered on the number of trips made to the Recreation Area in the last three years. Results are listed below in Tables 7-6 and 7-7.

**Table 7-6: Number of Trips Respondents Made to Chena River SRA in Last Three Years**

20 or more	9.3%
10 to 19	12.5%
4 to 9	14.1%
3	6.4%
2	8.0%
1	49.5%

**Table 7-7: Number of Trips Local Alaskan Respondents Made to Chena River SRA in Last Three Years**

20 or more	23.0%
15 to 19	10.7%
10 to 14	18.9%
5 to 9	22.1%
4	3.3%
3	11.5%
2	5.7%
1	4.9%

Survey results applicable to the management of the Recreation Area are described below. Appendix G contains a selection of other results of the study in table format.

The surveys also found:

1. About 40 percent of visitors lived within a 100-mile radius of the Recreation Area and about 40% were non-Alaskan U.S. residents. There were smaller percentages of non-local Alaskan residents (13.7%) and foreign residents (5.2%). Almost half of the parties visiting consisted of two people and 30% of the parties had people under the age of 18.
2. Local Alaskans made an average of 14.3 trips to the Recreation Area in the past three years compared to less than two trips for respondents who lived elsewhere. These findings indicate that some local residents make heavy use of the area.

3. The average trip length was about one day, and more than half of visitors stopped at only one specified location (e.g. campground, trail, public use cabin). For 39% of the visitors, their visit to Recreation Area consisted of driving through it without stopping until they reached Chena Hot Springs to the east of the Recreation Area.

4. The most common activities while visiting were driving around viewing scenery (62%), viewing wildlife (58%), taking photos (57%) and walking/hiking (56%).

Other activities respondents engaged in are shown in Table 7-8 below.

**Table 7-8: Activities Respondents Engaged in at Chena River SRA**

<b>Activity</b>	<b>Percent Engaged</b>
Drove around viewing scenery	61.8%
Viewed wildlife	57.8%
Took Photographs	56.9%
Took walks or hikes	56.0%
Went swimming/soaking in hot springs	45.9%
Viewed wildflowers	42.2%
Camped overnight in campground	21.7%
Had a picnic	21.4%
Fished	19.6%
Picked berries	10.1%
Went kayaking or canoeing	7.6%
Shot targets	4.3%
Camped overnight while backpacking	3.4%
Rode all terrain vehicles	3.4%
Rode mountain bikes	2.8%
Stayed at the State Cabins	2.1%
Other activities	13.1%

5. Almost 75% of visitors were motivated to “get away from the usual demands of life”, 69% were motivated to “experience tranquility” and 65% cited “doing something with family.”

Another visitor survey was conducted by telephone in Spring of 2006 by the University of Alaska Outdoor Recreation Management class, under direction of Dr. Peter Fix. From a random sample of 2,000 Fairbanks North Star Borough residents, they interviewed 483 individuals over 18 years of age in a statistically representative telephone survey to determine for those who had visited in the past 12 months:

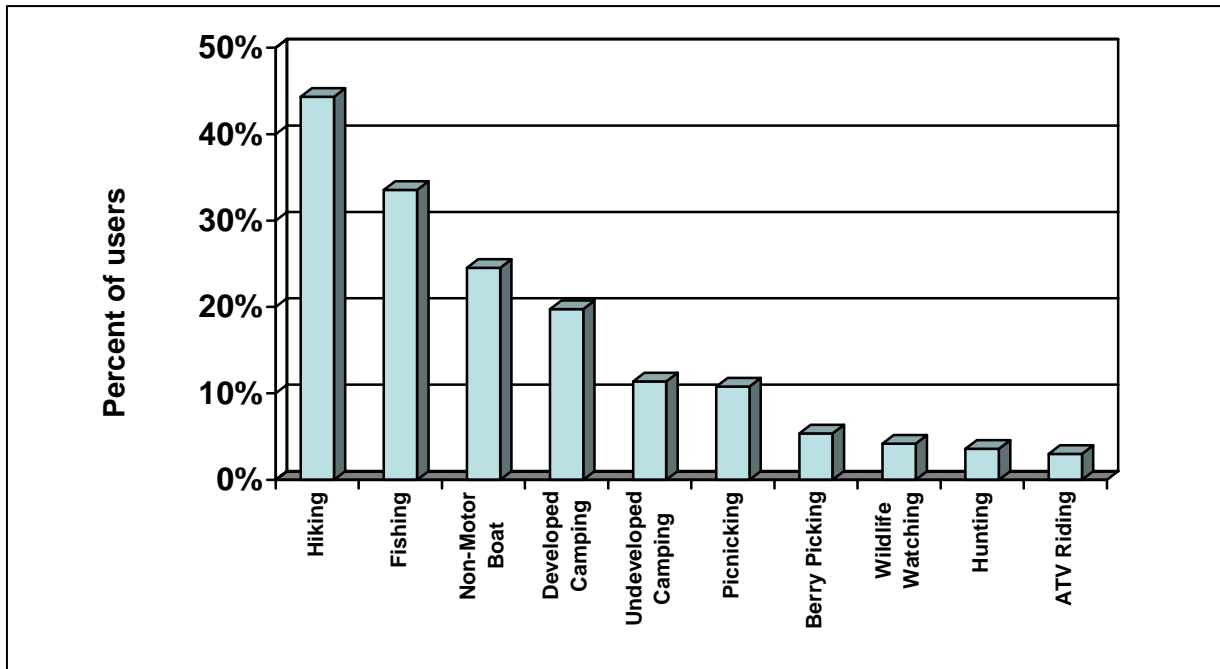
- frequency of use of the Recreation Area and activities in which respondents participate,
- reasons for visiting or engaging in respondents' favorite activity,
- factors that contribute positively or negatively to the respondents' experience in the Recreation Area, and
- for those who had not visited the Recreation Area, what were some of the reasons.

Overall, the survey results were consistent with those of the SCORP and of the earlier survey by the University (Girud 1999). Hiking and fishing were the most frequent activities in the summer, with skiing and snow machining the most frequent in the winter. Enjoying nature and spending time with family were the primary reasons for visiting the Chena River

SRA. The primary reason that people did not visit was a simple lack of time in their busy lives. Negative impacts associated with facilities, fees, service, resource conditions, and encounters with others were not salient among most respondents.

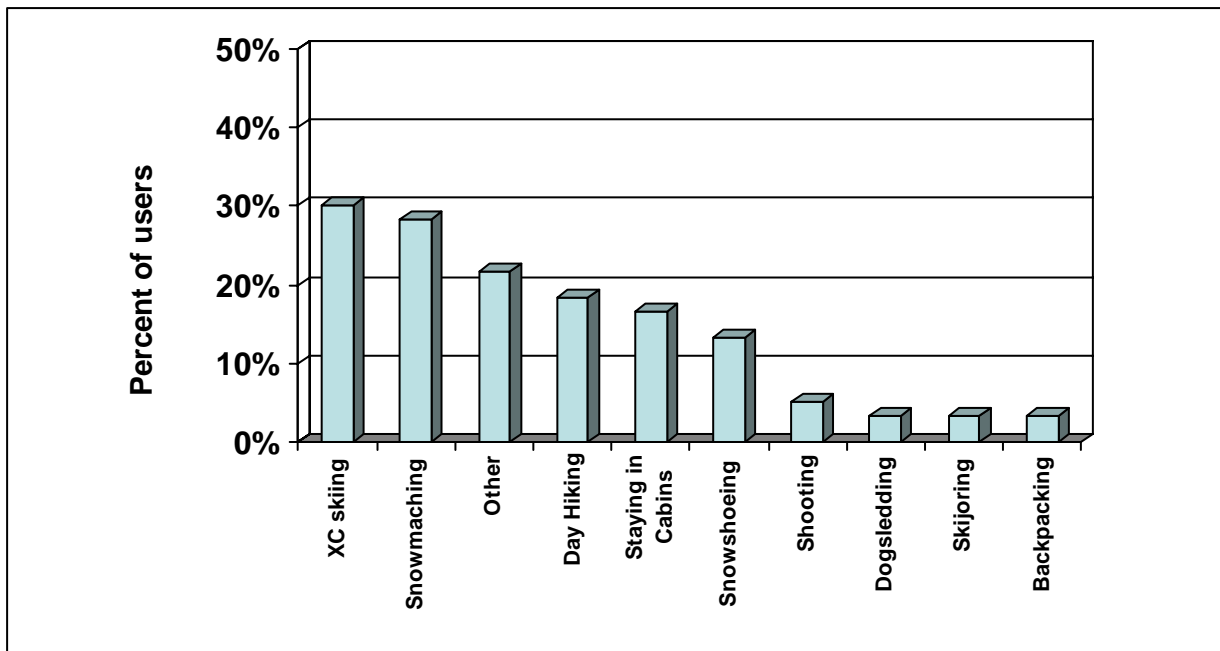
There were 172 respondents who answered questions on factors affecting their visitation experience. Encounters with other visitors were positive 47% and negative 8% of the time, whereas experiences with resource conditions were positive 73% and negative 5% of the time (remaining encounters neither positive nor negative). Experience based on services/employees, fee structures, and facilities were also far more positive than negative. Six usable responses were obtained from a follow up question regarding negative impacts associated with resource conditions; there were 8 usable responses to a follow up question to negative encounters. Diminished recall of positive or negative experiences may vary among people and can affect subsequent characterization of past events. This survey may be replicated at a future date to assess trends in use patterns and levels of satisfaction.

Figure 7-1: Popular Activities During the Summer in the CRSRA.



n = 167

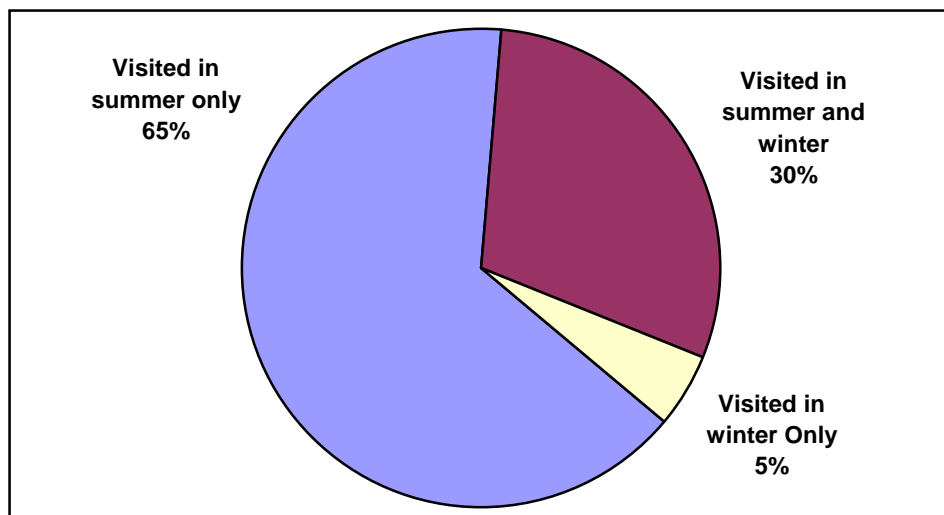
Figure 7-2: Popular Activities During the Winter in the CRSRA.



n = 60

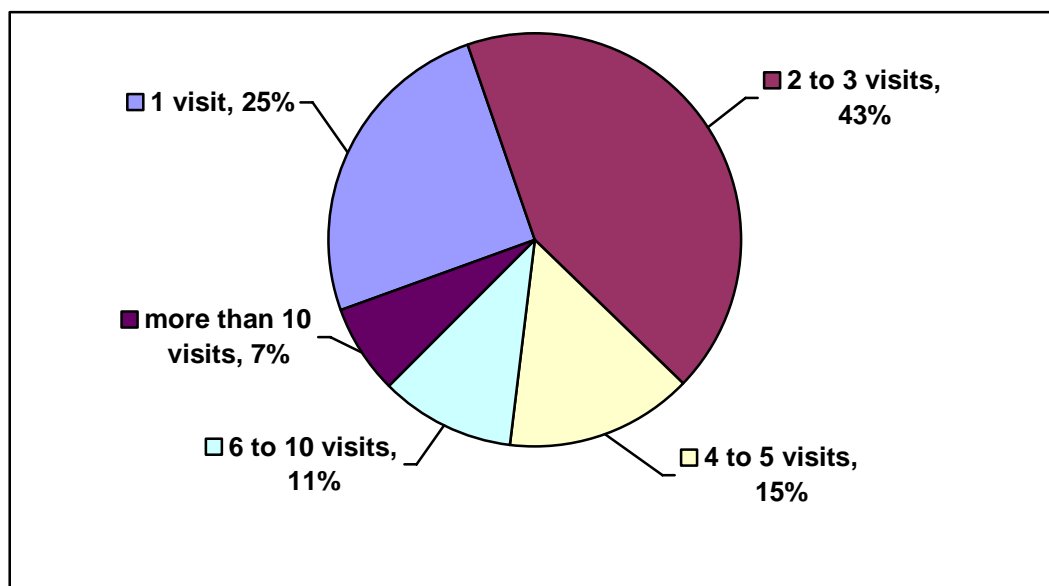


**Figure 7-3: CRSRA Visitation Patterns of Fairbanks North Star Borough Residents**



n = 175

**Figure 7-4: Frequency of Visitation in CRSRA During Summer**

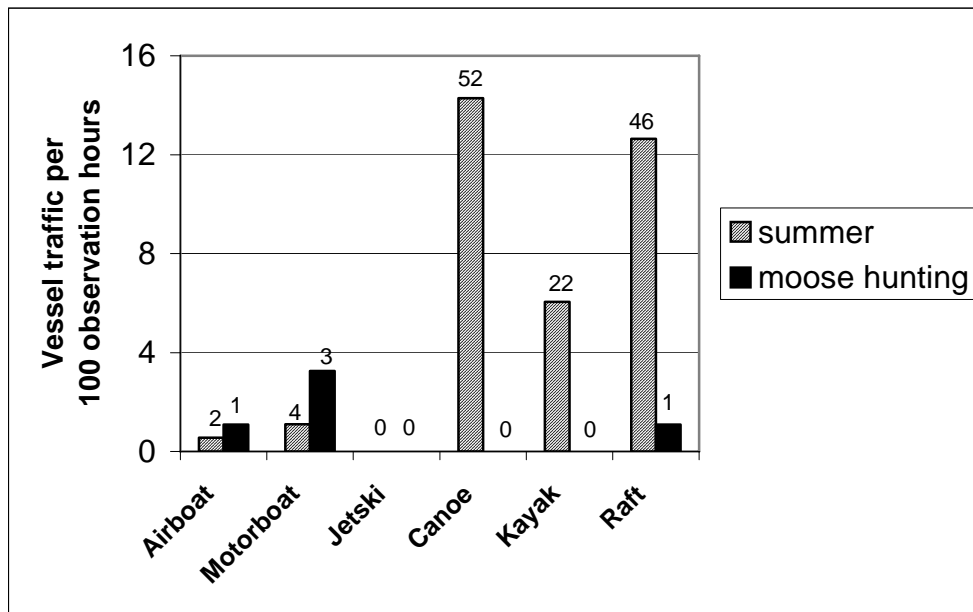


n=167

Additionally, the survey found that 28 percent (adjusted for non-response rate) of borough residents had visited the Chena River SRA during the past 12 months, 50 percent had visited previously, and 21 percent had never visited. The survey was designed to be repeated again in the future to identify trends and changes in visitation and use preferences that may influence management actions.

During the public review process for the management plan, questions were raised about extent of river use and potential conflicts between user groups. The Citizen Advisory Board for Alaska State Parks, Northern Area, designed a pilot study to quantify vessel traffic in 2004 and 2005 on the upper Chena River. Sampling was stratified by week, by randomly chosen daily observation periods, and by summer vs. hunting season (Table 1). The effect of sampling period and week stratum on vessel counts was evaluated by use of contingency tables, which statistically compare counts among different categories. In both years motorized traffic was much lower than non-motorized traffic over all periods of sampling (Fig. 7-5).

**Figure 7-5: Comparison of Traffic Rate Between Motorized and Non-motorized Vessels During the Period of May 14<sup>th</sup> to September 25<sup>th</sup> 2005, Upper Chena River.**



Because of unequal sampling efforts between summer (91 periods) and moose hunting season (23 periods), counts are standardized by hours of observation for comparison. Actual counts are shown above the bars.

## CHENA RIVER STATE RECREATION AREA OPPORTUNITIES

### Summer

Visitor use of the Recreation Area centers predominately in the first 13 miles of the road corridor (Milepost 27 - Milepost 40). This stretch is closest to Fairbanks and has the best developed access and facilities. The most popular activities are pleasure driving, fishing and use of the river gravel bars for camping, picnicking and socializing.

The following developed facilities receive heavy public use: Rosehip Campground (Milepost 27), Tors Trail Campground and day use/trailhead parking area at the second bridge (Milepost 39.6) and the smaller Red Squirrel Campground at Milepost 42.8.

Parking for trailhead access is available at Colorado Creek, Stiles Creek, Tors Trail, Angel Rocks Trail, Lower Chena Dome and Upper Chena Dome, which coincides with Angel Creek Valley Trail.

The undeveloped gravel bars in the Recreation Area are also heavily used because they are sunny, adjacent to water, generally more free of mosquitoes and have a good surface for vehicle parking and camping. Other areas along the road corridor that receive fairly heavy use are the access roads and pull-offs for fishing and roadside hunting. Scenic views and wildlife viewing occur at several locations along the road corridor.

Fishermen heavily utilize both sides of the main river and some venture up the tributary streams. Three ponds (former gravel pits) are stocked by ADF&G to provide fishing opportunity, often in conjunction with camping and picnicking at Milepost 30, 45.5 and 48. Some fishing occurs in the natural sloughs along the road corridor, though wild stock fish populations occupying these habitats are not as abundant as in the main river.

The main river is also used for river floating, especially the stretch downriver from Third Bridge at Milepost 44.1. Some motorized boaters put in on the main river from the access road at Milepost 27.9, motor up the South Fork and then float back down. Very occasionally the South Fork is used by river paddlers who put in from the military roads near Beaver Creek and float down to the main river. The East Fork of the Chena receives occasional use, with launches from gravel bars near Third Bridge, or fly-in to Van Curler's bar to start the float trip. Airboats find this route suitable for accessing the high country beyond the Recreation Area boundary.

Generally, visitors do not swim in the river because of the cold water, but sometimes the warmer surface waters of the ponds in the area attract swimmers and waders. Swimming occurs in the ponds with developed parking and other facilities at Mileposts 30.0, 36.4, 42.8, 45.5 and 48.0.

Of the backcountry trails, three stand out as the most popular summer hiking trails: Angel Rocks, Granite Tors and Chena Dome (Map 7.2). The most heavily used trail, perhaps in all of interior Alaska, is the Angel Rocks Trail. The loop trail provides a short half-day hike to a few of the large tors, dominant geologic features visible from the road near Angel Creek. In 2001, to accommodate the increasing use, the trailhead received a major upgrade with expanded parking, new toilets, interpretive displays and picnic area. In 2004, the trail was hardened and widened and a boardwalk was added around a low, wet section. In summer 1999, the estimated trail visitation was 2,500 users and in summer 2002 visitation was over 4,000. Another trail connects to the loop trail as it nears the ridge and continues another five miles to Chena Hot Springs Resort. These routes are used mostly from May through October. The trail is non-motorized up to the border of the Recreation Area. A trail shelter near that point offers protection from the weather that can change quickly in the high country. A motorized winter trail connects from the trail shelter to the East Fork Trail, making a 25-mile loop trail to the Hot Springs.

The Granite Tors Trail is another one of the most heavily used, leading hikers on a 15-mile loop trail up into the high ridges on which the tors are scattered. Though the use level is difficult to monitor or quantify, rough estimates indicate over 4,000 visitor days per year on this trail. A small percentage of this use is by cross-country skiers or snowshoers in the

spring, the rest is summer hiking and backpacking. This trail is partially board-walked and is closed to horseback use. A trail shelter near the ridge provides emergency cover for those caught by inclement weather. In 2001, the trailhead parking area near the campground was rebuilt and expanded with new toilets, picnic sites and interpretive displays. In 2004, a trail upgrade project is planned to add a shorter loop trail and replace the old boardwalk.

The upper parts of the Chena Dome Trail, the highest and most rugged of the three main trails, receive light to moderate hiking use and occasional use by hunters in the fall. The trail is a 30-mile "horseshoe" loop, with two trailheads separated by about 2 road miles. Visitors hiking in from the trailheads at Milepost 49.4 or 50.5 to the first lookout point frequently use the lower two miles. A trail shelter also exists near the ridge on the lower Dome side, and frequently placed rock cairns are used to guide hikers on the trail in poor weather conditions.

Stiles Creek Trail is popular to both motorized and non-motorized users, in part because it offers a public use cabin halfway along the 12-mile trail for use by reservation. A relatively new hiking and ORV trail leaves from the Twin Bears Camp and heads up to the top of the hill behind camp, about a 3-mile round trip. Colorado Creek and the South Fork and East Fork valleys are very wet, have no developed summer access and receive little or no summer use at present.

## **Winter**

Winter conditions create expanded opportunities for trail use in the Recreation Area. The valley bottomlands, too wet for summer use, become ideal for winter trails with frozen ground and snow cover. A few drainages, particularly Angel Creek and Colorado Creek, may have extensive ice glaciating in the creek bed, which makes trail use very challenging.

Trail use in the winter centers mainly around the Chena Hot Springs Winter Trail, which parallels the entire length of the road. The trail is a main thoroughfare of travel for snowmachiners, dog mushers and others. Dog mushers heavily use this trail for recreation and training for race competition. It is also used for several dogsled races. Currently it is used as a portion of the annual "Yukon Quest" 1,000-mile dogsled race (between Fairbanks and Whitehorse, Yukon Territory), the Junior Yukon Quest and medium distance dog races. This trail is especially versatile because it is long, it connects with trails extending beyond the park, and it has many access points from the road.

In addition to snow machining and dog sledding, cross-country skiing, skijoring and mountain biking also occur on the winter trail, with many trail users venturing up side trails. Several developed trails continue into the backcountry, and are used primarily to access public use cabins and by those adventuring away from the road. These trails include Stiles Creek, Colorado Creek, Angel Creek, East Fork and the South Fork trails. The five mile cross-country ski trail loop behind Twin Bears Camp is also used. There is increasing use of the Granite Tors Trail during the warmer days of spring.

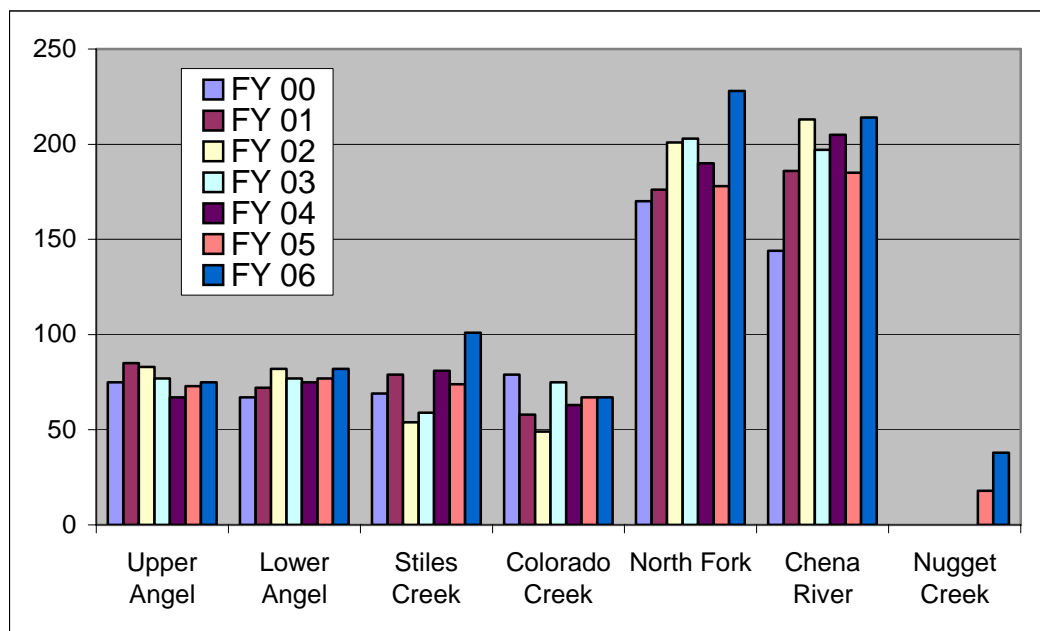
The East Fork Trail is also used non-recreationally in early spring, on a permit basis, by miners for access to placer mines beyond the east boundary of the Recreation Area. This use requires monitoring to ensure protection of natural resources.

Trapping is another winter activity that occurs throughout the Recreation Area. Beaver trapping in the spring is heavy along the road corridor and major tributaries. Upland furbearers (marten, fox, lynx, wolverine, wolf) are trapped throughout the Recreation Area during season. Several trap lines originate in the Recreation Area and extend for many miles beyond the boundaries.

The ponds are occasionally used for ice-skating when weather conditions are favorable, and are also used for ice fishing.

Public use cabins within the Recreation Area have continued to grow in popularity since 1984. There are six public use cabins (two-roadside accessible, four-backcountry) available by reservation. Four shelters are also provided in the Recreation Area. Shelters are used for emergency and first-come first-serve use. Figure 7-1 shows each cabin and shelter location. The Nugget Creek cabin became available for rent, rather than just as an emergency shelter, once trail signing and maintenance started in 2004.

**Figure 7-6: Public Use Cabins (Nights Used From FY 2000 to FY 2006)**



## EXISTING FACILITIES

The existing facilities are listed here by Milepost location from Fairbanks along the Chena Hot Springs Road and on the right (R) or left (L) coming from town. Table 7-9 identifies current facility development (Map 7-2).

**Table 7-9: Existing Facilities**

Location Mile Post	Name	Facilities	Unit
26.0	SRA Boundary	Chena River State Recreation Area Highway Sign	1
26.7 L	Chena Hot Springs Winter Trailhead	Parking area with 12 pull-through parking spaces, 22 regular parking spaces, a loading ramp, a bulletin board, and a connector trail to the Chena Hot Springs Winter Trail. The Chena Hot Springs Winter Trail runs almost parallel to the Chena Hot Springs Road for 26.5-miles and continues past the Recreation Area's boundary and has multiple access points within the Recreation Area.	1
26.7 R	Flat Creek Slough	Dispersed parking for approximately six vehicles.	1
27.0 R	Rosehip Entrance Area	Parking with a vehicle capacity of 10, a vaulted toilet, bear-resistant trash receptacles, interpretive and informational displays, and a 24'x30' pad for a visitor station.	1
27.0 R	Rosehip Campground	36 campsites; each having a picnic table, fire grate, bench, parking, and tent pad. Also in campground are vaulted toilets, bear-resistant trash receptacles, water well and a camp host site. A picnic area includes picnic tables, interpretive displays, a self guided nature trail, canoe take-out, bear-resistant trash receptacles and a vaulted toilet.	1
27.9 R	Access Road	A 0.6-mile river access road with a toilet and picnic table.	1
28.2 L	Slough Lake	Dispersed parking for approximately three vehicles.	1
28.6 R	Access Road	A 0.6-mile river access road.	1
29.2 L	Pull-off with Wildlife Viewing Potential	Other possible wildlife viewing sites are located at MP 27.8, 28.2, 29.4, 38.8, 39.1, 41.6, 42.0, 42.8, 42.9, 46.0, 46.7 and 49.9.	
29.4 R	Hodgins Slough	Dispersed parking.	1
29.9 L	Undeveloped Trailhead	Undeveloped Chena Hot Springs Winter Trail access point and trailhead for Twin Bears Mountain Trail and the Compeau Trail.	
30.0 L	Twin Bears Camp	Twin Bears Camp includes 13 primitive cabins, 3 insulated buildings (a recreation hall, a dining hall and a cabin); 4 vaulted toilets, pressurized water, laundry facilities, 2 shower houses, an electric generator, a camp host site, group fire ring, and 3 trailheads.	1
30.0 L	Twin Bears Pond	Picnic area with a picnic shelter, bear-resistant trash receptacles, picnic tables, storage shed, and parking. The 4-acre pond is stocked by ADF&G with Rainbow Trout and Arctic Grayling, and is suitable for swimming, fishing, and non-motorized boating.	1

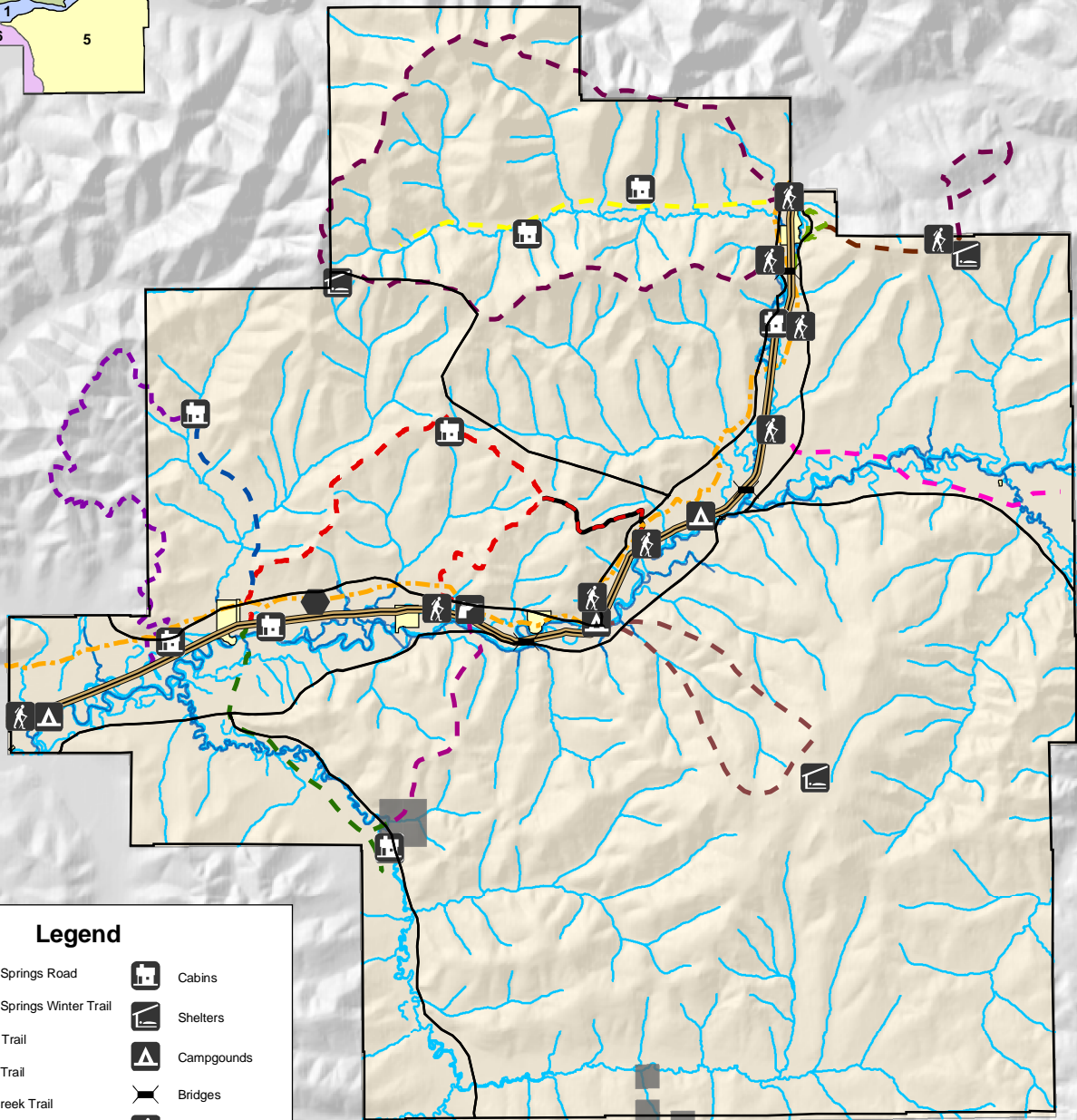
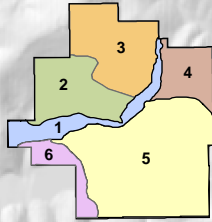
Location Mile Post	Name	Facilities	Unit
31.4 R	Access Road	A 0.2-mile river access road with dispersed parking for approximately ten vehicles and dispersed camping.	1
31.6 L	Trailhead for Colorado Creek, Stiles Creek, South Fork, and Chena Hot Springs Winter trails.	<i>Trailhead</i> includes parking area for six vehicles, loading ramp, toilet, horse hitching rail, information board, water well, and a bear-resistant trash receptacle. <i>Colorado Creek Trail</i> is a motorized 5.8-mile destination to the Colorado Creek Cabin (sleeps four). <i>Stiles Creek Trail</i> is a motorized 17-mile loop trail with another trailhead at 36.4-mile. The Stiles Creek Cabin is located approximately 8.0 miles on the Stiles Creek Trail from this trailhead and sleeps six. <i>The South Fork Trail</i> is located in Unit 6. The Nugget Creek Cabin is located approximately 6.2 miles from the trailhead and sleeps three. <i>The Chena Hot Springs Winter Trail</i> can be reached from this trailhead.	1
32.2 R	Chena River Public Use Cabin	The Chena River Cabin is road and river accessible, located 0.1-miles off Chena Hot Springs Road, and is gated. This cabin sleeps nine and is located next to the Chena River, with handicap ramps to the cabin and outhouse, with a firewood shed.	1
33.0 L	Maintenance Compound	Access road to the compound is gated. Four volunteer housing cabins, pressurized water well, generator, dining hall, garage, washhouse and a recreation host site are within the compound.	1
36.0 R	Granite Tors Viewpoint	Parking with a vehicle capacity of six, and interpretive displays on vegetation and the Granite Tors.	1
36.4 L	Target Shooting Range, Pond and Stiles Creek Trailhead	<i>Target Shooting Range</i> has 3 benches, refuse container, and vaulted toilet. Dispersed camping at pond. <i>Trailhead</i> for Stiles Creek and Chena Hot Springs Winter trails.	1
36.4 R	Mist Creek Trail	The beginning of a low-standard trail that connects to the South Fork Trail near Nugget Creek Shelter; river crossing is required.	1, 5 & 6
37.7 R	First Bridge	Dispersed parking is available, gravel bar camping, river access, opportunities for fishing, and informational display.	1
37.7 L	First Bridge	Some dispersed parking, river access, opportunities for fishing, and informational display.	1
38.2 L	37-Mile Levee	Dispersed parking is available, four picnic tables, four fire rings, river access, and opportunities for fishing and dispersed camping.	1
39.4	Second Bridge	<i>Granite Tors Trail</i> trailhead departs from the west end of the bridge; requires crossing the highway on a curve and climbing over the guardrail.	
39.5 L	Tors Trail Campground and Granite Tors Trailhead	24 campsites; each having a picnic table, fire grate, parking, and tent pad. Also in campground are vaulted toilets, bear-resistant trash receptacles, water well, and a camp host site. The picnic area includes picnic tables, interpretive displays, opportunities for fishing, bear-resistant trash receptacles and a vaulted toilet. Location of the <i>Granite Tors Trailhead</i> parking.	1

Location Mile Post	Name	Facilities	Unit
39.5 R	Granite Tors Trail	<i>Granite Tors Trail</i> is accessed by crossing over the second bridge from the trailhead parking area. Granite Tors Trail is a non-motorized 15.0-mile loop trail. The primitive, but enclosed, Granite Tors Shelter is located at approximately the mid-point and sleeps five (no furniture, just woodstove).	1 and 5
39.6 R	Access Road	A 0.2-mile forked, river access road with 2 vaulted toilets, opportunities for fishing, a bear-resistant trash receptacle, and dispersed camping.	1
41.6 L	Stiles Creek Bluff Trailhead	<i>Trailhead</i> includes parking area for 15 vehicles. <i>Stiles Creek Bluff Trail</i> is a motorized 4-mile connector trail that crosses the Chena Hot Springs Winter Trail and connects to the Stiles Creek Trail on the ridge.	1 and 2
42.0 R	Wildlife Viewing Pull-off	Parking with a vehicle capacity of 15, river access, and opportunities for fishing.	1
42.3 R	Access Road	A 0.1-mile river access road with dispersed parking for three vehicles and/or camping, and opportunities for fishing.	1
42.8 L	Red Squirrel Campground and Picnic Area	5 campsites; each having a picnic table, fire grate, bench, parking, and tent pad. There is additional camping available for Self-contained RVs. Also in campground are vaulted toilets, bear-resistant trash receptacles, drinking water and a camp host site. Included in the picnic areas are picnic tables, two picnic shelters, interpretive displays, bear-resistant trash receptacles and a vaulted toilet. Opportunities for swimming and fishing and non-motorized boating are available.	1
42.9 R	Pull-off	Parking with a vehicle capacity of six.	1
43.0 R	Pull-off	Parking with a vehicle capacity of six; access to river.	1
43.7 L	Access Road	Access road to a pond.	1
43.9 R	Access Road	A <0.1-mile river access road with dispersed camping.	1
44.1 L	Third Bridge	Dispersed parking is available, gravel bar camping, river access, with opportunities for fishing, vaulted toilet, and an informational display. Designated boat launch.	1
44.1 R	River Access	Dispersed parking is available, gravel bar camping, river access, and opportunities for fishing.	1
45.5 L	Access Road	A 0.1-mile river access road with dispersed parking, approximately three dispersed camping locations, and opportunities for fishing.	1
45.5 R	Goldeneye Pond and East Fork Valley Trailhead	<i>Trailhead</i> includes dispersed parking for 30 vehicles, a picnic table, and dispersed camping. <i>East Fork Valley Trail</i> is a winter motorized non-loop trail that continues out of the Recreation Area. <i>Golden Eye Pond</i> is stocked by ADF&G with Rainbow Trout, suitable for fishing, swimming, and non-motorized boating.	1 and 4
46.0 R	Pull-off	Parking with a vehicle capacity of two and river access.	1
46.7 R	Pull-off	Parking with a vehicle capacity of 15 and river access.	1
47.2 L	Levee	Dispersed parking for approximately ten vehicles, river access, opportunity for fishing and dispersed camping.	1



Location Mile Post	Name	Facilities	Unit
47.8 L	North Fork Public Use Cabin	The North Fork Cabin is located on a 0.3-mile gravel road that is gated. This cabin sleeps eight and is located near to the river; toilet, firewood shed.	1
47.9 R	North Fork Pond	Dispersed parking, picnicking and camping, vaulted toilet. The pond is stocked by ADF&G with Rainbow Trout, suitable for fishing, swimming, and non-motorized boating.	1
48.9 R	Angel Rocks and Angel Rocks to Chena Hot Springs trailheads	<i>Trailhead</i> includes parking area for twenty-four vehicles, a large overflow parking area, four picnic tables and four fire rings (two of the four are accessible to people with disabilities), a vaulted toilet, bear-resistant trash receptacle, and interpretive and informational displays. This trailhead also provides access to the river and opportunities for fishing. <i>Angel Rocks Trail</i> is a non-motorized 3.5-mile loop trail to large granite outcroppings near the north boundary of the Recreation Area. <i>Angel Rocks to Chena Hot Springs Trail</i> connects the Angel Rocks Trail to Chena Hot Springs Resort. The first 6.1 miles of the trail is non-motorized in the Recreation Area. The remaining 2.2 miles of trail to Chena Hot Springs is outside the Recreation Area and is open to motorized use during the winter only, and splits to form a loop. The left fork is named the Upper Trail and the right trail is named the Lower Trail. Approximately 6.1-miles along Angel Rocks Trail to Chena Hot Springs Trail is the Angel Rocks Shelter (sleeps four). The shelter is the point on the trail system that also connects to the East Fork Valley Spur Trail (motorized) connecting the East Fork Valley Trail (motorized winter only) to the Angel Rocks trail system.	1 and 4
49.1 L	Lower Chena Dome Trailhead	<i>Trailhead</i> includes parking area for ten vehicles, toilet, water well, bear-resistant trash receptacle, and informational display. <i>Chena Dome Trail</i> is a non-motorized 29-mile loop trail that crosses the Chena Hot Springs Winter Trail and connects to the Upper Chena Dome Trailhead. Chena Dome Shelter is located at approximately 17-mile of the trail (from the upper Trailhead) and sleeps four (primitive, enclosed, no furniture, just a woodstove). A steep spur trail connects to the Angel Creek Trail. Public use cabins are located at 6.4-mile and 3.6-mile of the creek trail.	1 and 3
50.5 L	Upper Chena Dome and Angel Creek trailheads	<i>Trailhead</i> includes parking for ten vehicles, a toilet, bear-resistant trash receptacle, and an informational display. <i>Chena Dome Trail</i> is a non-motorized 29-mile loop trail that crosses the Chena Hot Springs Winter Trail and connects to the Lower Chena Dome Trailhead at Milepost 49.1. Chena Dome Shelter is located at approximately mile 17 of the trail and sleeps four. <i>Angel Creek Trail</i> is a motorized 6.7-mile trail that ends at the Upper Angel Creek Public Use Cabin. This cabin sleeps five. The Lower Angel Creek Public Use Cabin is located at mile 3.6 on the trail and sleeps six.	1 and 3
50.8	Boundary	Chena River State Recreation Area Sign	1

# Map 7-2 Development Summary



## Legend

- |                                |                   |
|--------------------------------|-------------------|
| Chena Hot Springs Road         | Cabins            |
| Chena Hot Springs Winter Trail | Shelters          |
| South Fork Trail               | Campgrounds       |
| Mist Creek Trail               | Bridges           |
| Colorado Creek Trail           | Trailheads        |
| Stiles Creek Trail             | Shooting Range    |
| Compeau Trail                  | Park Compound     |
| Stiles Creek Bluff Trail       | Prospecting Sites |
| Granite Tors Trail             | Private           |
| Angel Creek Trail              |                   |
| Chena Dome Trail               |                   |
| East Fork Trail                |                   |
| Angel Rocks Trail              |                   |
| Angel to Hot Springs           |                   |
| Angel to Hot Springs 2         |                   |
| Chena River                    |                   |
| Streams                        |                   |



## COMMERCIAL ACTIVITIES

Authorization for commercial activities is an integral part of the management of the Recreation Area. These activities not only provide revenue that is used to manage the Recreation Area, they also provide the public with services that enhance their enjoyment of the area. Such activities include guided river trips, canoe rentals, horseback treks, dogsled trips, ice fishing and guided hikes. Development of a visitor center in the future could incorporate private sector involvement in providing visitor services.

Commercial activities in the Recreation Area are authorized under permit. State Parks issues four types of permits:

- 1) **Non-competitive Compatible or Special Park Use Permits** are for regulated activities such as competitive events, large group picnics, or gathering plants for scientific study.
- 2) **Non-competitive Incompatible or Park Land Use Permits** are for activities that are generally incompatible uses, unrelated to recreation and that authorize long-term use of parkland or water.
- 3) **Commercial Use Permits** (Competitive and Non-competitive) are issued for activities that generate a profit to private sector permit holders.
- 4) **Concession Contract** is a permitted contract with gross receipts more than \$100,000 and/or major facility development. Contracts of this type have not been issued or requested for the Recreation Area.

## PRIVATE SECTOR

Private sector businesses focusing on recreation have been long-standing users of public recreation facilities. They provide additional means in which to recreate in these areas and have offered support through suggestions, promotional events and volunteer work groups.

Beginning at Milepost 15, private recreational providers and support facilities along the Chena Hot Springs Road Corridor consist of the following:

**Table 7-10: Private Recreational Related Facilities Near the Recreation Area**

Mile	Business	Amenities Provided
15.0	Two Rivers Lodge	Restaurant and bar
17.5	Transfer Site	(Public) Refuse disposal site
18.6	Chandalar River Outfitters and Ranch	Horseback riding
22.4	Poppa Wes' Little Store	General store
23.2	The Quickie Pizza	Restaurant/carry-out
23.3	U.S. Post Office	Postal services & PO boxes
23.3	Pleasant Valley Store	Convenience store, gas, liquor store
23.7	Soapy Suds	Laundromat and public telephone
23.8	Pleasant Valley Equipment	Equipment, hardware, propane

Mile	Business	Amenities Provided
25.3	HIPAS Observatory- University of CA	The High Power Aurora Stimulation (HIPAS) facility studies the Ionosphere using high-power radio transmitters as well as a state-of-the-art LIDAR (Light Detection and Ranging). The facility occupies 120 acres and includes six buildings. The HIPAS facility could provide opportunities for undergraduates to conduct outdoor experiments on the environment.
30.0	Twin Bears Camp (private contract)	Cabins, central building, parking, picnic area and pond (Swimming and Fishing)
50.0	Angel Creek Lodge	Restaurant and bar, lodging
61.0	Chena Hot Springs Resort	Restaurant and bar, lodging, hot springs and airstrip, camping, touring services.

With additional accommodations provided by the private sector, the Recreation Area accommodates a greater variety of users in all seasons. The two private overnight facilities closest to the Recreation Area are described below.

Angel Creek Lodge provides food and lodging for the public. Six rental cabins are available year round. Hunters use it in the fall and snowmachiners and dog mushers in the winter, often in connection with the winter dog sled trail use and races.

Chena Hot Springs Resort provides a wide range of activities and facilities on their 440-acres, including a historic lodge, restaurant, bar, hotel rooms, cabins, yurts, an outdoor natural mineral hot springs lake, an outdoor spa tub, indoor pool for swimming, two additional indoor spas, viewing wildlife, meeting and convention space and an activity center. It is open year-round with 25 miles of trails for activities such as cross-country skiing, snow machines, snow-shoeing, horseback riding, canoeing, year-round biking, flight seeing (utilizing the airstrip), fishing, ORVs and hiking. Many visitors are attracted to Chena Hot Springs Resort in the wintertime because of the exceptional opportunity for northern lights viewing. Visitation in 2003 was estimated at 80,000 people. The resort continues to expand and improve its facilities.

These nearby lodges, private recreational facilities and outdoor activity guides provide a working relationship between the State Recreation Area and the private sector, offering excellent opportunities for partnerships.

Recreational and hunting guides often acquire park use permits for specific activities within the Recreation Area. Approximately six Commercial Use Permits have been issued each year for the past three years. These permits include outfitters and guides, as well as vendors. For the past three years, approximately seven special Park Use Permits (personal use, organized recreation events, construction, access, etc.) have been issued each year. No park Land Use Permits have been issued during this time period.

Competitive events that have been occurring within the Recreation Area on a regular basis include the: Yukon Quest, Junior Yukon Quest, Run-N-Soak, Chena Hot Springs Bike Classic and Two Rivers Dog Mushers' Association races.

## **Appendices**

### **A. Glossary**

### **B. Statutes and Regulations**

### **C. Regulations for Recreation on U.S. Army Garrison Lands**

### **D. Trail Classifications for Chena River SRA**

### **E. Alaska Department of Fish and Game Unit 20B Figures**

### **F. Figures from SCORP, 2004-2009**

### **G. Effects of Military Overflights on Human Uses**

### **H. Bibliography and Information Sources**

## APPENDIX A

### Glossary

**AAC.** Alaska Administrative Code (state regulations).

**ADF&G.** Alaska Department of Fish and Game.

**AS.** Alaska Statutes.

**Airboat.** A shallow draft boat driven by an airplane propeller and steered by a rudder (11 AAC 20.990).

**Aircraft.** A motorized device that is used or intended for flight or movement of people or goods in the air (11 AAC 12.340).

**BLM.** United States Bureau of Land Management.

**Boat or Vessel.** A device that is used or designed to be used for the movement of people or goods in or on the water, whether manually or mechanically propelled, but does not include personal flotation devices or other floats such as inner tubes, air mattresses, or surf boards (11 AAC 20.990).

**Camp and Camping.** To use a vehicle, tent, or shelter, or to arrange bedding, or both, with the intent to stay overnight in a park (11 AAC 12.340).

**Commercial Activity.** The sale of, delivery of, or soliciting to provide, goods, wares, edibles, or services in exchange for valuable consideration through barter, trade, or other commercial means; a service offered in conjunction with another sale of goods, wares, edibles, or services, which service involves the use of state park land or water, is a commercial activity whether or not it is incidental to, advertised with, or specifically offered in the original sale; all guide, outfitter, and transportation services are commercial activities if any payment or valuable consideration through barter, trade, cash, or other commercial means is required, expected, or received beyond the normal and customary equally shared costs for food and fuel for any portion of the stay in the park (11 AAC 12.340).

**DNR.** Alaska Department of Natural Resources.

**DOT&PF.** Alaska Department of Transportation and Public Facilities.

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

**Department.** The Department of Natural Resources.

**Director.** The Director of the Division of Parks and Outdoor Recreation, Department of Natural Resources, or the director's authorized agent.

**Division.** The Division of Parks and Outdoor Recreation, Department of Natural Resources.

**Firearm.** Includes a pistol, rifle, shotgun, revolver, or mechanical gas or air-operated gun (11 AAC 20.990).

**FNSB.** Fairbanks North Star Borough.

**Guideline.** A specific course of action that must be followed when a DPOR resource manager permits, leases, or otherwise authorizes use of state lands. Guidelines range from giving general guidance for decision-making or identifying factors that need to be considered, to setting detailed standards for on-the-ground decisions.

**Hovercraft.** A vehicle supported above the surface of land or water by a cushion of air produced by downward-directed fans (11 AAC 20.990).

**May.** Same as “should.” See *should*.

**Monitoring.** Periodically gathering information, either onsite or through off-site methods, and assessing what the information indicates.

**Motorized vehicle.** A motorized device for carrying persons or objects over land, water, or through the air, and includes automobiles, snowmachines, bicycles, off-road vehicles, boats, and aircraft (11 AAC 21.290).

**ORV.** See “off-road vehicle.”

**Off-Road Vehicle.** A motorized vehicle designed or adapted for cross-country operation over irregular terrain, consisting of more than one drive wheel or track, having a gross vehicle weight less than 1,500 pounds or exerting less than 8 pounds per square inch ground pressure, and which is less than 88 inches wide (11 AAC 20.990).

**Ordinary High Water (Line).** That line on the shore of a non-tidal river or stream that reflects the highest level of water during an ordinary year and is established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding area (11 AAC 20.990).

**Permit.** A written authorization to engage in uses or activities that are otherwise prohibited or restricted (11 AAC 18.200).

**Personal Watercraft.** A vessel that is (A) less than 16 feet in length; (B) propelled by a water-jet pump or other machinery as its primary source of motor propulsion; and (C) designed to be operated by a person sitting, standing, or kneeling on the vessel, rather than by a person sitting or standing inside it (11 AAC 21.290).

**PWC.** Personal Watercraft.

**Shall.** Same as "will." See *will*.

**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.

**Snowmachine.** A self-propelled vehicle (A) intended for off-road travel on snow; (B) having a maximum width of 46 inches and a curb weight of not more than 1000 pounds; (C) driven by one or more tracks in contact with the snow; and (D) steered by one or more skis in contact with the snow (11 AAC 20.990).

**Snow Vehicle.** A motor vehicle of 850 pounds or less gross vehicle weight, primarily designed to travel over ice or snow, and supported, in part, by skis, belts, cleats, or lowpressure tires (11 AAC 20.990).

**SRA.** State Recreation Area, referring to the Chena River State Recreation Area.

**Structure.** Something constructed or built in, or transported to, a state park unit, including a dock, cabin, floatcamp, building, shanty, or facility used for residential or commercial purposes; it does not include a vessel with overnight berthing whose primary use is not as a domicile, but for commercial or sport fishing, general recreational boating, or transportation (11 AAC 12.340).

**Vehicle.** Means a mechanical device for carrying persons or objects over land, water, or through the air, including automobiles, motorcycles, snowmachines, bicycles, off-road vehicles, motorized boats, and aircraft (11 AAC 20.990).

**Weapon.** Includes a bow and arrow, slingshot, crossbow, and firearm (11 AAC 20.990).

**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.



## APPENDIX B

### Statutes and Regulations

#### Alaska Statutes

Following are laws that specifically apply to the Chena River State Recreation Area including enabling legislation that first created the Recreation Area in 1967 and expanded it in 1975.

#### **AS 41.21.475. Chena River State Recreation Area Established.**

The presently state-owned land and water, vacant and unappropriated, and all that acquired in the future by the state, lying within the following described boundary, are hereby designated as the Chena River State Recreation Area, are reserved from all uses incompatible with their primary function as public recreation land, and are assigned to the department for control, development and maintenance:

- (1) Protracted Sections and Townships. - Township 1 North, Range 6 East, Fairbanks Meridian, Section 24; Township 1 North, Range 7 East, Fairbanks Meridian, Sections 1, 2, 3, 8, 9, 10, 11, 12, 15, 16, 17, 19, 20 and 21; Township 2 North, Range 7 East, Fairbanks Meridian, Sections 12, 13, 24, 25, 35, and 36; Township 2 North, Range 8 East, Fairbanks Meridian, Sections 6, 7, and 18;
- (2) Beginning at the N.W. corner of the area designated in (1) of this section, said point being the N.W. corner of Section 6, T2N, R8E, Fairbanks Meridian; thence north along the section line to the N.E. corner of Section 25, T3N, R7E; thence west along the section line to the S.W. corner of the S.E. 1/4 of Section 20, T3N, R7E; thence north along the 1/4 section line to the N.E. corner of the N.W. 1/4, Section 17, T3N, R7E; thence west along the section line to the N.W. corner of Section 16, T3N, R6E; thence south along the section line to the N.W. corner of Section 16, T2N, R6E; thence west along the section line to the N.W. corner of Section 14, T2N, R5E; thence south along the section line to the N.W. corner of Section 23, T1N, R5E; thence west along the section line to the N.W. corner of Section 20, T1N, R5E; thence south along the section line to the S.W. corner of Section 32, T1N, R5E; thence east to the N.W. corner of Section 2, T1S, R5E; thence south along the section line to the S.W. corner of Section 11, T1S, R5E; thence east along the section line to the S.W. corner of Section 10, T1S, R6E; thence south along the section line to the S.W. corner of Section 10, T2S, R6E; thence east along the section line to the S.W. corner of Section 7, T2S, R9E; thence north along the section line to the N.W. corner of Section 6, T1S, R9E; thence east to the S.E. corner of Section 36, T1N, R8E; thence north along the section line to the N.E. corner of Section 12, T2N, R8E; thence west along the section line to the N.E. corner of Section 7, T2N, R8E; thence north along the section line to the N.E. corner of Section 6, T2N, R8E; thence west along the section line to the point of beginning, containing approximately 254,080 acres.

#### **AS 41.21.480. Eminent Domain Authorized to Acquire Necessary Access.**

The state may not acquire by eminent domain privately owned land within the Chena River State Recreation Area unless it is for the purpose of providing necessary access to state land.

**AS 41.21.485. Zoning of Private Land.**

The department may adopt, in accordance with AS 44.62 (Administrative Procedure Act), zoning regulations governing privately owned land in the Chena River State Recreation Area.

**AS 41.21.490. Incompatible Uses.**

The commissioner shall designate by regulation incompatible uses within the boundaries of the Chena River State Recreation Area in accordance with the requirements of AS 41.21.020 (a)(13) and 41.21.470, and those incompatible uses designated shall be prohibited or restricted, as provided by regulation. The regulations may not prohibit

- (1) work on valid mineral leases or mining claims;
- (2) the legal taking of fur-bearing animals;
- (3) the traditional use of roads and trails by any means of transportation, including a vehicle propelled by machinery, if the use occurred regularly in the area of the state recreation area before June 18, 1967;
- (4) the cutting of dead and down or burnt timber.

**Regulations**

Following are regulations that apply specifically to the Chena River State Recreation Area.

**11 AAC 20.460. Use of Weapons.**

(a) The use and discharge of a weapon for the purpose of lawful hunting or trapping is allowed in the Chena River State Recreation Area except within one-quarter mile of a developed campground, picnic area, trailhead, the 33 Mile Chena Hot Springs Road maintenance compound, and the Twin Bears Camp. (b) Target shooting is allowed in areas developed and posted by the division for such use. (Eff. 5/11/85, Register 94; am 7/1/89, Register 110; am 5/24/96, Register 138)

**Authority:** AS 41.21.020 AS 41.21.022 AS 41.21.040 AS 41.21.490 AS 41.21.950

**11 AAC 20.465. Off-Road Vehicles.**

The use of off-road vehicles is allowed in the Chena River Recreation Area on trails officially designated and marked as open to off-road vehicles. (Eff. 5/11/85, Register 94; am 12/25/91, Register 120)

**Authority:** AS 41.21.020 AS 41.21.022 AS 41.21.040 AS 41.21.490

**11 AAC 20.470. Motorized Boats.**

The use of motorized boats in Chena River State Recreation Area is allowed on the Chena River and its tributaries. (Eff. 5/11/85, Register 94; am 5/18/97, Register 142)

**Authority:** AS 41.21.020 AS 41.21.040 AS 41.21.475

**11 AAC 20.475. Horses.**

(a) The use of horses, mules, and burros is allowed in the Chena River Recreation Area, with the exception of Rock Creek/Granite Tors Hiking Trail and the boardwalk portions of any developed hiking trail.

(b) The use of horses, mules, and burros is subject to the following conditions:

- (1) groups using 10 or more animals must obtain a park use permit under 11 AAC 18.010 before entering the park;
- (2) tethering horses, mules, or burros within 100 feet of fresh water is prohibited;
- (3) loose herding of animals is prohibited. (Eff. 5/11/85, Register 94)

**Authority:** AS 41.21.020 AS 41.21.040 AS 41.21.475

**11 AAC 20.480. Snow Vehicles.**

If the director finds that the snow depth is adequate to protect underlying vegetation, the director shall post the Chena River Recreation Area as open to the use of snow vehicles in all areas north of Chena River, west of the south fork valley, and north of the east fork valley. (Eff. 5/11/85, Register 94)

**Authority:** AS 41.21.020 AS 41.21.040 AS 41.21.475

**11 AAC 20.485. Campfires.**

Open fires are allowed on gravel bars and gravel pits. (Eff. 5/11/85, Register 94)

**Authority:** AS 41.21.020 AS 41.21.040 AS 41.21.475

**11 AAC 20.490. Bicycles.**

The use of bicycles in the Chena River State Recreation Area is allowed only in campgrounds and in the following areas:

- (1) Chena Dome Hiking Trail;
- (2) picnic areas;
- (3) trails designated as open to off-road vehicles. (Eff. 2/3/88, Register 105; am 5/18/97, Register 142)

**Authority:** AS 41.21.020 AS 41.21.040 AS 41.21.475

**11 AAC 20.492. Camping.**

Camping in Chena River State Recreation Area is permitted in all areas except where otherwise posted. (Eff. 7/1/89, Register 110)

**Authority:** AS 41.21.020 AS 41.21.040 AS 41.21.490

## **APPENDIX C**

### **Regulations for Recreation on U.S. Army Garrison Lands**

Recreation is allowed and encouraged on US Army Garrison Alaska (USAG-AK) lands. Two requirements must be met before entering the US Army training lands:

1. All persons entering the USAG-AK training lands must first obtain the Recreation Access Permit. Permits are free and available at the Fort Wainwright front gate. Permits are good for two years from date of issue and may be renewed upon expiration.
2. After obtaining the Recreation Access Permit, you must sign into the USARTRAK automated access system. A recorded message stating the days training area closures will be heard. This system has been designed to reduce military training and recreational conflicts, ensuring maximum use for both activities.

To use the access system, you must:

- Call 353-3181
- Enter your Recreation Access Permit Number
- Answer remaining questions about activity and location.
  - Location: For Purposes of the USARTRAK check-in, the military training area adjacent to the CRSRA is the Yukon Training Area, #6 Northeast corner.
  - Hunting: If hunting on USAG-AK lands, you must have an NRA or equivalent hunter education course permit. Permits from any state are acceptable. This is a nationwide Army lands requirement.

Additional information can be found on our website:

[WWW.USARAK.ARMY.MIL/CONSERVATION](http://WWW.USARAK.ARMY.MIL/CONSERVATION)

Natural Resources Office on Fort Wainwright at 353 9685/353 9686

Conservation Officers 353 1168

## APPENDIX D

### Trail Classifications for Chena River SRA

Table D-1: Trail Classifications for Chena River SRA (Based on the U.S. Forest Service Classification System)

Designed Use		Trail Class 1 Undeveloped	Trail Class 2 Simple/Minor Developed	Trail Class 3 Developed/Improved	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
<b>Purpose</b>		Natural game-type or "social" trails maintained only by use.	Primitive paths maintained for low-level non-motorized use. Provides private, natural experience.	Semi-primitive paths maintained for moderate non-motorized use. Provides a more primitive experience.	Moderately developed trails maintained for a high level of motorized and/or non-motorized use. May be fully or partially ADA compliant	Highly developed trails maintained for a high level of shared uses. May be fully ADA compliant.
<b>Design Tread</b>	<b>Width</b>	0" – 12"	12" minimum	2 ft minimum	4 ft minimum	8 ft minimum
	<b>Height</b>	6 ft	8 ft	8 ft	8 ft	>8 ft
	<b>Clearing</b>	Sufficient to define trail corridor, if any	12" – 36" corridor	12" – 36" outside of tread edge	12" – 36" outside of tread edge	12" – 36" outside tread edge
<b>Design Surface</b>	<b>Type</b>	Native, ungraded, intermittent, rough	Native with limited grading, continuous, rough, hardened only where waterlogged organic soils cannot be avoided.	Native with some on-site borrow if available, or imported compactable materials.	Improved with compactable gravels in problem areas, such as D-1 aggregate or chips. Boardwalk, double plank or decking, if horses routed around	Uniform, firm, and stable; such as asphalt, pavement, chips or compacted D-1 aggregate
	<b>Obstacles</b>	Roots, rocks, logs, steps to 24"	Roots, rocks and log protrusions to 6"; steps to 14"	Generally clear, protrusions to 3"; steps to 10"	Smooth, few obstacles, protrusions 2-3"; steps to 8"	Smooth, no obstacles. Protrusions <2"
<b>Design Grade**</b> 1% = 1ft rise/100ft 100%=45°	<b>Target Range</b> (>90% of Trail)	< 25%	< 12%	< 10%	< 10% (<5% typical, <8% max ADA)	< 5% (<5% for FULL ADA)
	<b>Short Pitch Max</b> (Up to 50' lengths)	50%	50%	25%	15%	8% 12% at 100 ft max
	<b>Max Pitch Density***</b>	< 10% of trail	< 5% of trail	< 5% of trail	<5% of trail	< 3% of trail
<b>Design Outslope</b>	<b>Target Range</b>	Not applicable	5 – 20%	5 – 10%	3 – 7% (<2% max. ADA)	2 – 3% (or crowned) (<2% max for FULL ADA)
	<b>Maximum</b>	Up to natural side-slope.	Up to natural side-slope	15%	10%	3%
<b>Structures</b>	<b>Boardwalk</b>	None	Minimal, 12" single-plank (butt-run)	24" minimum double-plank (butt-run)	4 ft minimum higher standard (cross-plank)	Highest standard (cross-plank)

Designed Use		Trail Class 1 Undeveloped	Trail Class 2 Simple/Minor Developed	Trail Class 3 Developed/Improved	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
<b>Structures, continued</b>	<b>Bridges</b>	None	Minimal to none (ford or rock steps); boardwalk	30" preferred, <3 foot spans may be boardwalk width	5 ft minimum; for motorized use 72" minimum for 10,000 lbs.	8-10 ft minimum, engineered
	<b>Water Control</b>	None	Waterbars only if unavoidable	Waterbars only if unavoidable	Grade reversals or rolling grade dips at these intervals: <6% slope = every 100 - 125' 7-12% = every 75 - 100 ' >12% = every 50 - 75'	No
	<b>Turns</b>	As needed	Radius > 4'	Radius >6'	Climbing turns on slopes <30% Switchbacks on slopes >30% Radius > 8' (wider for snow use)	Radius > 25'; clear visibility throughout
	<b>Culverts</b>	None	None	Yes	Yes, min. 6" cover compacted	Yes
<b>Signs</b>	<b>Directional</b>	None	Low profile directional signs at junctions with Class 2+ trails.  High profile posts to be set at both primary and secondary trailheads.  Minimum signage needed for basic direction.	Low profile directional signs at junctions with Class 2+ trails.  High profile posts to be set at both primary and secondary trailheads.	Low profile directional signs at junctions with Class 2+ trails.  High profile posts to be set at both primary and secondary trailheads.	High profile posts to be set at both primary and secondary trailheads.
	<b>Informational/Regulatory</b>	None	Appropriate or prohibited trail use symbols at trailheads	Appropriate or prohibited trail use symbols at trailheads	Appropriate or prohibited trail use symbols at trailheads	Regulatory, interpretive or informational signs.  Appropriate or prohibited trail use symbols at trailheads
<b>Trail Assignments</b>  *ADA – indicates trail will be developed to be American with Disabilities Act compliant		Un-named trails	- Mist Creek - Chena Dome	- Angel Rocks - Tors Trail - Angel Rocks to Chena Hot Springs - East Fork	- Colorado Creek - Stiles Creek - Angel Creek - South Fork - Compeau	- Chena Hot Springs Winter

\*\* Grade variances should be based upon soils, hydrological conditions, use levels, and other factors contributing to surface stability and erosion potential.

\*\*\* Maximum pitch density refers to the percentage of the trail that is within 5% (+/- of the Short Pitch Maximum Grade).

## APPENDIX E

### Alaska Department of Fish and Game

### Unit 20B Figures

Figure E-1

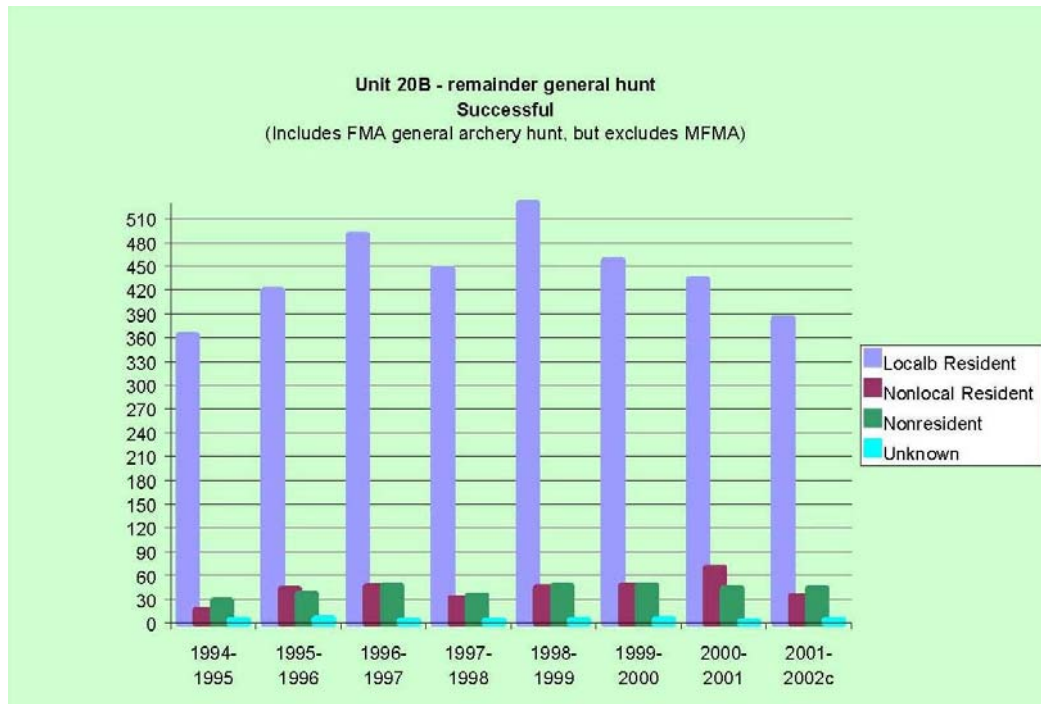
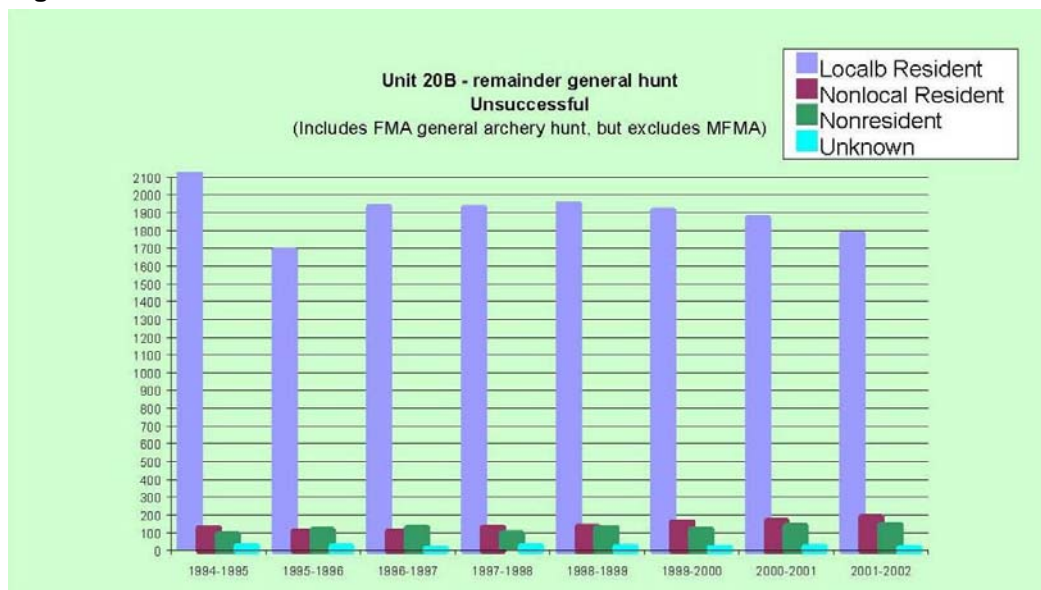


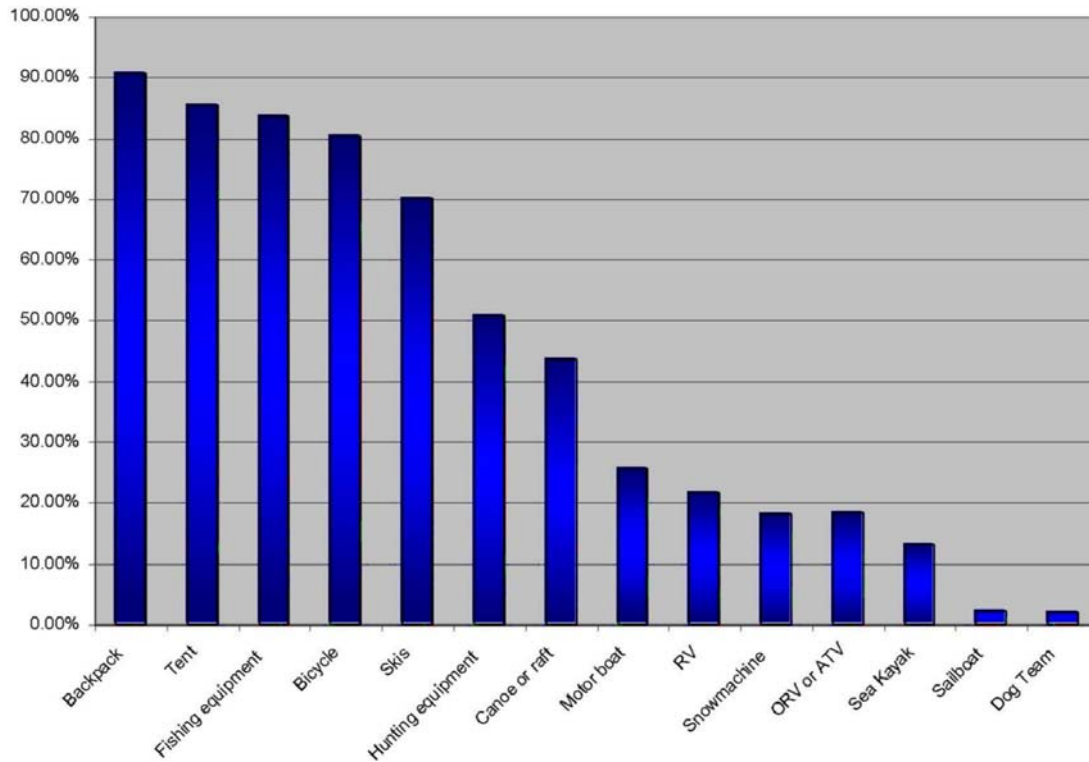
Figure E-2



## APPENDIX F

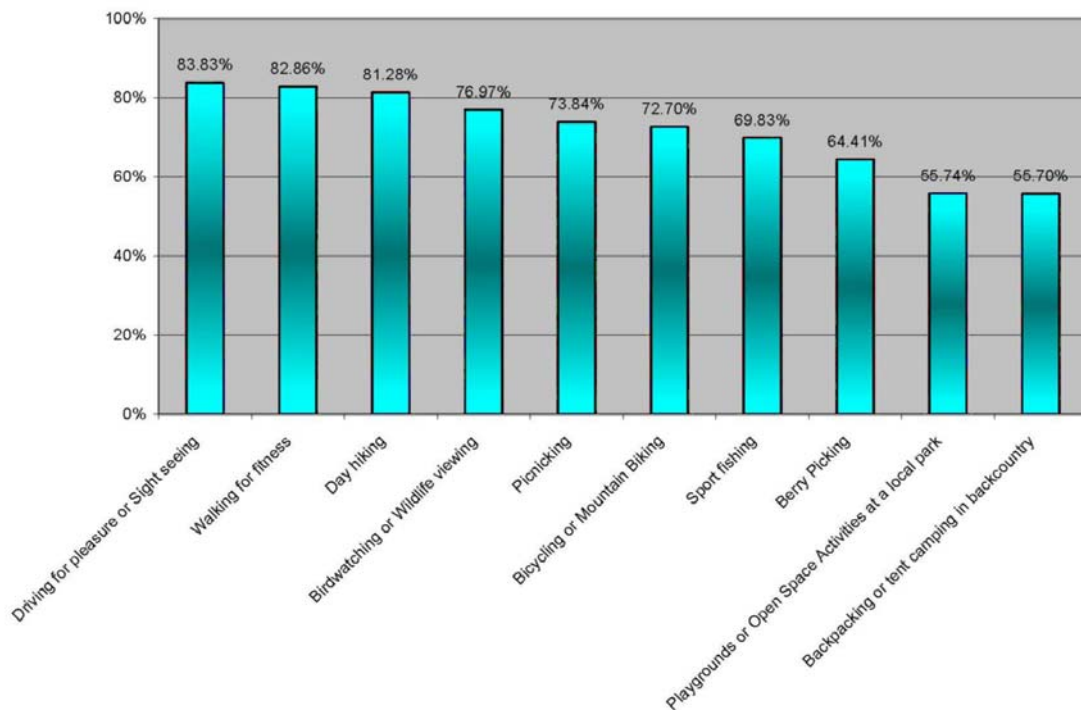
### Figures from SCORP, 2004-2009 (Statewide Comprehensive Outdoor Recreation Plan) Alaska's Outdoor Legacy

Figure F-1: Recreational Equipment Ownership 2004

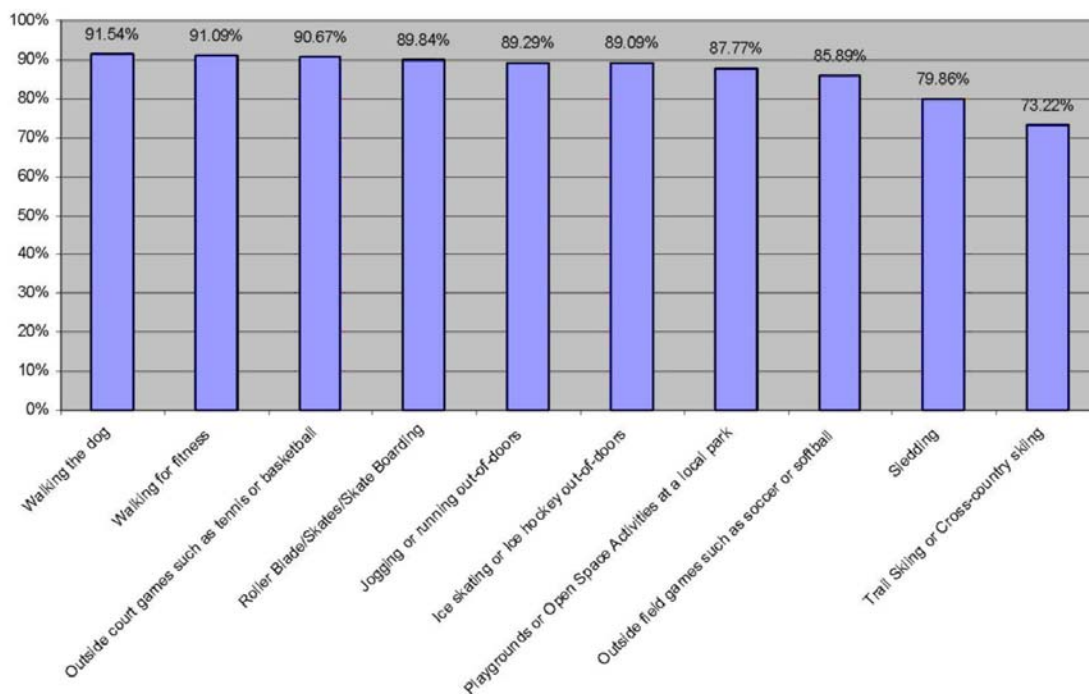




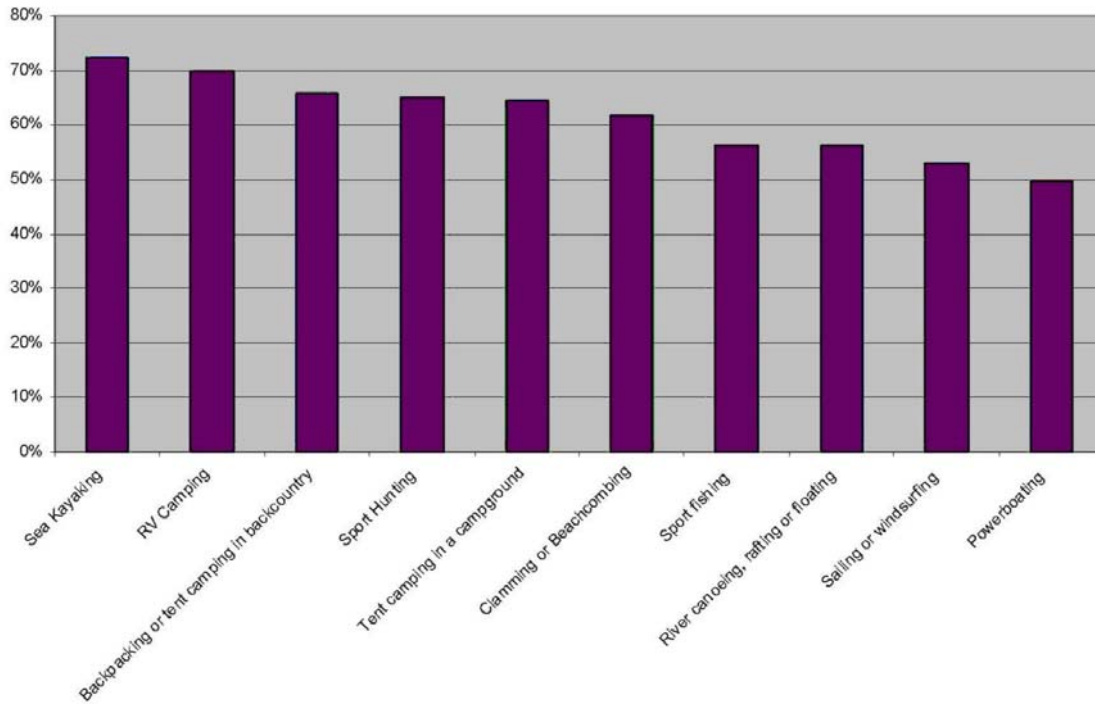
**Figure F-2: Top 10 Participation Activities**



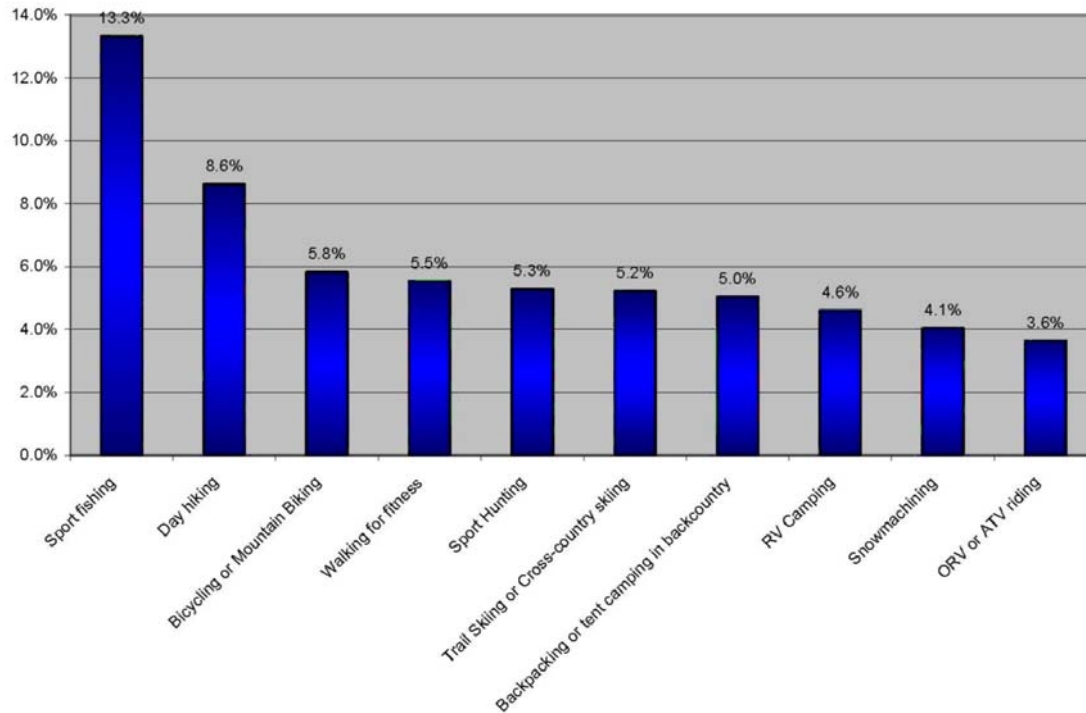
**Figure F-3: Top 10 Activities Available in Communities**



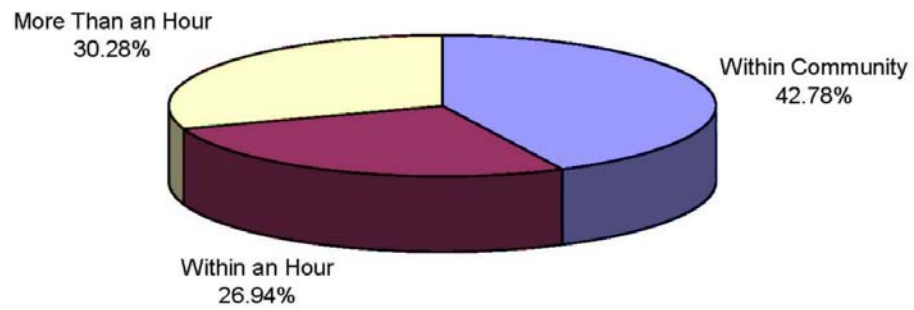
**Figure F-4: Top 10 Activities Available More Than an Hour Away**



**Figure F-5: Top 10 Overall Favorite Activities**



**Figure F-6: How Far for Favorite Activities**



## APPENDIX G

### Effects of Military Overflights on Human Uses

Swanson, et. al., 2006.

Technical Report NPS/PWR/PNWCESU – 2007/002

National Park Service, Pacific West Region,

University of Washington, Seattle

This Appendix contains summaries of the data recorded from the summer 2001 Mail-in Survey. The final response rate for the survey was 65.2 percent with 452 of 639 questionnaires completed and entered in the datafile. Additional information is available recording data by local Alaskan residents, non-local Alaskan residents, non-Alaskan U.S. residents and foreign residents in the published report. *Effects of Military Overflights on Human Users of Selected Alaska Military Operations Areas*, by Swanson, VandeKamp, Johnson, and Grinley, Box 352100, University of Washington, March 2006. [NOTE: update this report “for copies of . . . .” when it is published.]

**Table G-1: Activities Local Alaskan Residents Engaged in at Chena River SRA**

Activities	Percent Engaged
Viewed wildlife	54.7%
Drove around viewing scenery	53.8%
Took photographs	48.7%
Viewed wildflowers	40.2%
Fished	32.5%
Went swimming/soaking in hot springs	31.6%
Camped overnight in campground	16.2%

**Table G-2: Activities Non-Local Alaskan Residents Engaged in at Chena River SRA**

Activities	Percent Engaged
Went swimming/soaking in hot springs	75.0%
Drove around viewing scenery	68.8%
Viewed wildlife	41.7%
Viewed wildflowers	41.7%
Took photographs	37.5%
Camped overnight in campground	31.3%
Fished	14.6%

**Table G-3: Activities Foreign Residents Engaged in at Chena River SRA**

Activities	Percent Engaged
Took photographs	95%
Viewed wildlife	80%
Drove around viewing scenery	70%
Went swimming/soaking in hot springs	70%
Viewed wildflowers	40%
Camped overnight in campground	35%

**Table G-4: Most Important Activity Respondents Engaged in at Chena River SRA**

Activities	Percent Engaged
Went swimming/soaking in hot springs	30.8%
Took walks or hikes	11.0%
Fished	8.2%
Drove around viewing scenery	7.5%
Viewed wildlife	5.7%
Went kayaking or canoeing	4.4%
Camped overnight in campground	4.1%
Shot targets	2.5%
Camped overnight while backpacking	1.6%
Other activities	6.5%
No activity was most important	9.9%

**Table G-5: Importance of Doing Something with Family**

Importance Level	Percentage
Extremely important	34.4%
Very important	30.3%
Moderately important	9.1%
Somewhat important	2.5%
Not important	23.7%

**Table G-6: Importance of Bringing Family Closer Together**

Importance Level	Percentage
Extremely important	22.5%
Very important	30.0%
Moderately important	10.0%
Somewhat important	8.7%
Not important	28.9%

**Table G-7: Importance of Experiencing New and Different Things**

Importance Level	Percentage
Extremely important	22.5%
Very important	40.0%
Moderately important	19.4%
Somewhat important	8.9%
Not important	15.2%

**Table G-8: Importance of Learning More About Nature**

Importance Level	Percentage
Extremely important	16.3%
Very important	26.5%
Moderately important	26.8%
Somewhat important	13.7%
Not important	16.6%

**Table G-9: Importance of Getting Away from Usual Demands of Life**

Importance Level	Percentage
Extremely important	38.0%
Very important	35.5%
Moderately important	11.4%
Somewhat important	5.9%
Not important	9.3%

**Table G-10: Importance of Being with Others Who Enjoy the Same Things**

Importance Level	Percentage
Extremely important	14.9%
Very important	27.3%
Moderately important	16.2%
Somewhat important	10.5%
Not important	31.1%

**Table G-11: Importance of Being with Friends**

Importance Level	Percentage
Extremely important	14.5%
Very important	23.2%
Moderately important	12.2%
Somewhat important	7.1%
Not important	43.1%

**Table G-12: Importance of Experiencing Tranquility**

Importance Level	Percentage
Extremely important	35.1%
Very important	33.5%
Moderately important	16.9%
Somewhat important	4.7%
Not important	9.7%

**Table G-13: Importance of Learning What One is Capable of**

Importance Level	Percentage
Extremely important	5.1%
Very important	8.0%
Moderately important	12.2%
Somewhat important	17.9%
Not important	56.7%

## **APPENDIX H**

### **Bibliography and Information Sources**

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