Nancy Lake State Recreation Area Management Plan

Intent to Adopt Draft
Recommended Revisions Incorporated

*Note: Formatting of this document including page numbers will change due to revisions

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Alaska Department of Natural Resources
Division of Parks and Outdoor Recreation

This document has been released by the Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation, for the purpose of informing the public about the Public Review Draft of the Nancy Lake State Recreation Area Management Plan, at a cost of $16.27 per copy, in Anchorage, Alaska.

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Chapter 1
Introduction

Summary

Nancy Lake State Recreation Area (NLSRA) and Nancy Lake State Recreation Site (NLSRS) remain popular destinations for many recreation enthusiasts. These two areas are in close proximity to the majority of State residents in Southcentral Alaska and can be easily accessed by highway vehicle or float plane. While relatively compact in size, these two areas support a diversity of recreational opportunities year-round. Recognized as a "crown jewel" in the state park system, NLSRA is well known for the Lynx Lake Loop Canoe Trail, the South Rolly Lake Campground, and its 13 public use cabins. NLSRS is known for its public launch facility, easily accessible campground and day use facilities. Taken together, these areas offer an escape from urban environments where opportunities to engage in many recreational pursuits abound. See Map 1 on page 1 - 13 for a map depicting the planning boundary which includes the NLSRA and NLSRS.

The Nancy Lake State Recreation Area Management Plan (Plan) guides the management of recreation and other uses within the NLSRA and NLSRS for the next 20 years. It is intended to be adaptive to the changing needs of the recreating public and resource managers while preserving the primary function of the land as public recreation land. This plan substantially maintains the management orientation from the 1983 Plan; however some changes have been made. The management intent and recommendations clearly articulate how this area is to be managed on both a near and long-term basis while remaining sufficiently flexible to address changing or unforeseen circumstances. Important issues related to agency management and public use of the area are also addressed.

Maintaining the quiet natural setting while enhancing and expanding recreational opportunities remains the focus of management for the majority of land and water within NLSRA. To achieve this, the Plan recommends management that facilitates low density dispersed recreation opportunities for much of NLSRA. Recommendations that facilitate moderate to high density concentrated use are proposed in relatively close proximity to the South Rolly Lake Campground, Nancy Lake Parkway, and the NLSRS.

Key outcomes of this plan include: a policy to address access to private property; a policy to address the numerous existing unpermitted private structures; increased efficiency and consistency in permitting new structures; and, facilities and trails recommendations that meet current and future demands for public recreation. These are not the only solutions to issues

identified in the plan however. You are encouraged to read the plan in order to understand the full range of management guidelines and recommendations to determine how DPOR will manage these important areas for future generations in more detail.

Plan Purpose

This Plan provides guidance for management and development on all state-owned lands and waters within the boundaries of the NLSRA and NLSRS for the next 20 years. Facility and management recommendations that meet the current and anticipated future needs are provided. The Plan will bring consistency in management and permitting decisions made by DPOR staff. However; it is not intended to replace short-term or day-to-day operational management decisions or project specific decisions that are best handled by DPOR staff more familiar with the specific issues and resources. Once signed by the Commissioner, the plan becomes the policy and basis for decision making by DNR generally and specifically the Division of Parks and Outdoor Recreation (DPOR).

Overview

NLSRA contains approximately 22,000 acres of rolling hills with mature spruce/birch forests, numerous lakes and ponds, and extensive wetland habitats. It was established in 1966 by an act of the Legislature (AS 41.21.450 – 41.21.465[1]). Consistent with these statutes, regulations specific to NLSRA were adopted (11 AAC 20.540 – 20.555[2]). These regulations specifically address weapons, aircraft, motorized boats, and snowmobile use in the recreation area. The recreation area is well known for the Lynx Lake Loop Canoe Trail, its 13 public use cabins, and the largest campground in the state park system – the South Rolly Lake Campground. Camping also occurs at the NLSRS Campground and at the 31 remote camping sites on Lynx, Big Noluck, Red Shirt, Skeetna, and Ardaw lakes. Hiking opportunities are somewhat limited with only four terra trails receiving most of the pedestrian use – Red Shirt Lake Summer Trail, East Red Shirt Lake Trail, Chicken Lake Cross-Park Trail, and the Butterfly Lake Trail. Water orientated recreation is popular and includes motorized boating, waterskiing, fishing, swimming, and canoeing. Winter uses include snowmobiling, dog mushing, skiing, snowshoeing, and ice fishing among other uses.

NLSRS, established in 1967 by administrative action between the Division of Mining, Land & Water and DPOR, contains approximately 30 acres of relatively flat to steeply sloping wooded lakefront land on the northeast shore of Nancy Lake. These lands and waters are currently managed to facilitate relatively intensive recreational use with a campground, picnic area, and a highly developed state-owned boat launch. The campground is a short distance from the Parks Highway and is a popular stop for “car camping” or staying in a

[1] Statutes specific to NLSRA are provided in Appendix B.
[2] Regulations specific to NLSRA are provided in Appendix B.

recreational vehicle. The boat launch is popular for lake front property owners and for people launching watercraft to recreate on Nancy Lake. A small user created trail adjacent to the launch provides an opportunity to view spawning salmon and other wildlife. Fishing is possible from the floating dock associated with the launch.

There are 41 private parcels totaling approximately 323 acres of private inholdings[3] within NLSRA. Hundreds of private parcels are contiguous[4] or adjacent[5] to the boundaries of NLSRA and NLSRS and are primarily located in the areas of Nancy, Butterfly, Delyndia, and Red Shirt lakes. See Map 2 on page 1 - 15 for a depiction of land ownership in this area.

Nancy Lake State Recreation Area Purpose

The enabling legislation for NLSRA states: "The purpose of AS 41.21.450-41.21.465 is to restrict state-owned land and water within the boundaries described in AS 41.21.455 to use as a public recreation area." AS 41.21.455 provides additional direction stating: "The presently state-owned land and water and all that acquired in the future by the state, lying within the following described boundary, are hereby designated as the Nancy Lake 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. [legal description omitted]" Of the eight different types of units in the state park system, recreation areas are one of two types of units that are intended to have a more intensive public use management emphasis. See *"Alaska State Park System: Statewide Framework"* discussion below for information on the different park system units.

Nancy Lake State Recreation Site Purpose

Management of the recreation site was transferred from the Division of Mining, Land & Water to the DPOR through an Interagency Land Management Transfer agreement in 1967. This administrative action allowed the DPOR to assume all management of the site. Because the recreation site was not created by an act of the Legislature, it lacks a purpose statement or unit specific statutes. State recreation sites are the only other type of unit in the state park system that are intended to have an intensive public use management emphasis. See *"Alaska State Park System: Statewide Framework"* discussion below for information on these units.

[3] Inholdings are defined for the purpose of this document as private properties within the boundary of NLSRA.
[4] Contiguous parcels are defined for the purpose of this document as those parcels that are outside of the NLSRA or NLSRS, but share a common boundary with NLSRA or NLSRS.
[5] Adjacent parcels are defined for the purpose of this document as those parcels that lie near the boundary of NLSRA or NLSRS but do not share a common boundary line with the NLSRA or NLSRS.

Mission Statement

The enabling legislation for NLSRA did not provide detailed statements on how the area was to be managed. In the absence of detailed management statements in the enabling legislation, a mission statement has been developed for NLSRA. DPOR developed the mission statement during the planning process in conjunction with the DPOR MatSu Copper Basin Citizens Advisory Board. The mission statement for NLSRA is:

> *The Nancy Lake State Recreation Area shall be managed and developed to provide a balance of high quality recreational opportunities while maintaining and enhancing remote recreational experiences consistent with the natural and scenic values of the lake system at the heart of the area.*

Alaska State Park System: Statewide Framework

Approximately 1 ½ years before the 1983 Plan was finalized, DPOR approved as policy the document titled *Alaska State Park System: Statewide Framework* (Framework)[6]. The Framework was developed to:

- Define the purposes and goals of the State Park System;
- Establish criteria for the selection of state park units;
- Define the eight types of state park units;
- Establish a land-use zone classification system for the management and development of lands and resources within park units;
- Establish goals and policies for the management of the State Park System; and
- Facilitate the consideration of State Park System issues and concerns in the preparation of the Department of Natural Resources Statewide and Regional Resource Plans.

Among the policies established in the Framework, the classification of eight types of State Park System units and the establishment of the four land-use zones[7] within those park units are discussed in greater detail in the following text. The first of these two policies provides a definition and purpose for each type of park system unit, describes the characteristics of the units, and identifies development and activities for each of the park system units. Once classified into a unit, the second policy directs land and resources to be allocated into one or more land-use zones and more specific management direction to be provided through a planning process. These policies are highlighted here because they articulate where

[6] Alaska State Park System: Statewide Framework; DPOR 1982: Available on the DPOR Nancy Lake State Recreation Area planning website.

[7] The four zones identified in the Framework are: Recreational Development Zone, Natural Zone, Wilderness Zone, or Cultural Zone. Of these four land-use zones, this plan continues to use the same two zones used in the 1983 Plan – Recreational Development Zone & Natural Zone.

Recreation Areas and Recreation Sites fit within the statewide park system and how land and resources within these park system units are to be managed. The general and specific direction provided in the Framework was followed in the development of this plan. The classification of park system units and land use zones is discussed in greater detail in the following text.

Classification of Park System Units

Eight different types of units are identified within the statewide system of parks. Each of these units fulfills a niche within the statewide park system and is managed for varying levels of development and public use. See Table 1on page 1 - 17 for a table illustrating the eight different unit types. Understanding the differences between park system units will help the reader better understand the management intent and guidelines provided in this Plan. Classification of a park system unit into one of the eight types of park units identified in the Framework establishes the general management direction for a given unit. For NLSRA, this means that the area will be managed to provide a maximum level and diversity of recreational opportunities in a high quality natural setting. It is intended to have an intensive public use management orientation with moderate to high intensity developments. Similarly, NLSRS will be managed for intensive public use with moderate to high intensity developments. Unlike the NLSRA; however, NLSRS will be managed for site specific recreational uses. The following text is taken from the Framework and provides general management direction for the two state park system units within the plan boundary.

State Recreation Area

Definition and Purpose

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.

Characteristics

A state recreation area possesses recreational and/or natural resources of statewide or regional significance. Geographical distribution of these units and their relationships to population centers are important factors in the designation of an area as a state recreation area. The minimum size of a unit should be 200 acres so that the unit may have diverse natural landscapes capable of supporting a wide variety of outdoor recreational activities. The uniqueness and significance of an area's natural and cultural resources are not key criteria for the establishment of state recreation areas as is the case with state parks.

The majority of the lands within a state recreation area will be classified as natural and recreational development. Cultural zones will be established where appropriate. Only in special cases will any lands be classified as wilderness. Wilderness zones, if established, will be based upon documented public desire for wilderness-oriented recreation within the unit.

Development and Activities
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 recreational 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, state recreation areas are generally the most intensively developed type of unit in the State Park System.

State Recreation Site
Definition and Purpose
A state recreation site is a relatively small area and provides one or more outdoor recreational opportunities. A state recreation site may also be established to provide access to outdoor recreational lands and opportunities not managed as part of the State Park System. Management objectives are site-specific, but generally emphasize recreational use over resource protection.

Characteristics
State recreation sites possess recreational resources of statewide or regional significance. The unit should be of sufficient size to allow for future expansion of recreational facilities, to provide an adequate buffer between adjoining land uses, and to provide an adequate buffer for the protection of the quality of recreational opportunities in the unit.

Normally, from one-quarter to three-quarters of a state recreation site's land area will be classified as a recreational development zone. Because of the small size and recreation-use-oriented objective of these units, the wilderness zone will not be applied. Sensitive areas such as wetlands, beaches or streambanks normally will be classified as natural zones. Cultural zones will be identified and established where the presence of historic or archaeological resources is significant enough to warrant this designation.

Developments and Activities
The management of a state recreation site allows for resource modification to enhance outdoor recreational opportunities as long as natural and cultural resource values are protected. Activities and developments will vary according to the intent and purpose for which the unit is designated. Developments and activities which may be found at state recreation sites include – but are not limited to – picnic areas, campgrounds, parking lots, boat launches and scenic overlooks.

Land Use Zones
Consistent with the Framework, lands within each state park unit are classified into one of four land-use zones. These land use zones are intended to clarify the management intent and provide more detailed management direction. NLSRA has two land-use zones – Recreational Development and Natural, while NLSRS has one – Recreational Development.

These are the same land-use zones used in the 1983 Plan. As directed by the Framework, allocation of land and resources to a land-use zone is based on information contained in the plan. For this Plan, allocation of land and resources to a zone is based on the area-wide intent and management guidelines for state lands and waters provided in Chapter 5.[8] The land allocated to the zones and the more specific management direction for these zones is provided in Chapter 6.[9] The Framework also identifies the compatibility of many public-use activities generally within the zones and directs DPOR to use the table to guide preparation of a plan.[10] These general compatibility guidelines are included in Table 2 on pages 1 - 18 and 1 - 19 at the end of this chapter while specific guidelines for land-use zones are included in the Use Compatibility Table in Chapter 6.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) is a federal grant program that is administered by the National Park Service (NPS). LWCF provides matching funding to state and local governments to acquire, develop, and plan for public outdoor recreation areas. In Alaska, DPOR is the government agency that disperses federal grant dollars under this program. LWCF provisions require the agency receiving the grant dollars to maintain the funded project for public use and must identify and reserve enough area around the project to ensure continued public use. The boundary for the reserved lands is included on a map that is mutually agreed to by the State and NPS, this map is referred to as the "6f3 Boundary Map." Any property where LWCF funds have been expended may not be wholly or partly converted to anything other than public outdoor recreation uses without the prior approval of the Secretary of the U.S. Department of the Interior. If for some reason the recreational nature of the property is lost, it represents a conversion of use requiring mitigation in the form of acquisition of other recreational properties or outdoor recreational enhancement as approved by the National Park Service, the LWCF program administrators. The process to convert LWCF protected lands can be lengthy and can be costly for the agency requesting the conversion.

LWCF funds have been expended at both NLSRA and NLSRS to acquire private lands and to develop many of the public facilities that people enjoy today. As a result both areas, in their entirety, have been included in the 6f3 boundary map. Both areas are to be retained for outdoor public recreation in perpetuity and are subject to the LWCF program provisions. Actions that may represent a conversion of use include installation of cell towers or above

[8] The Framework states, "For any given park unit, the location of these zones and amounts of land and resources allocated to each zone will be determined during the preparation of a park management plan or site development plan."

[9] The Framework states, "Specific developments and activities for a given park unit's land use zones will be directed by a specific state park unit management or site development planning process."

[10] The Framework states, "This table is intended to guide preparation of unit management plans and the review of proposed park management actions in park units."

ground utilities, development of roads for primary purposes other than recreation, private developments, or encroachments such as driveways. Uses that may constitute a conversion of use are identified in the Use Compatibility Table in Chapter 6.

Reasons for Revision

There are two primary reasons for this plan revision: 1) address serious issues identified by park staff and members of the public; and, 2) update management guidelines and facility recommendations.

The plan is more than a tool to address issues; it is an opportunity to identify new or changing recreational needs and adjust management guidelines and facilities recommendations to meet those needs. Facilities recommended in the 1983 Plan may be functioning beyond their designed life; may be inadequate for current use levels; need to be re-designed and modernized to enhance use and safety; or, may need to be replaced to address environmental impacts.

Similarly, management recommendations from the 1983 Plan will need to be updated to reflect changes in agency policy and management direction. Management recommendations that are no longer applicable will be removed while management recommendations necessary to address identified issues will be included. Due to the extensive anticipated changes to the existing plan document the Department determined that a plan revision was appropriate. The process to revise the plan included public participation at several steps in the process.

Authorities

The authority for the Legislature to create special purpose sites (such as NLSRA), reserve them from the public domain, and provide for their administration and management is contained in Article VIII, Section 7 of The Constitution of the State of Alaska. The authority for the Alaska Department of Natural Resources (ADNR), through DPOR, to develop and manage these areas is provided for in Title 41 of the Alaska Statutes. Title 11 of Alaska Administrative Code provides both general (statewide) and unit specific regulations for components of the state park system, which includes state recreation sites and areas. DPOR is the agency responsible for managing recreation areas and recreation sites among other units of the state park system. DPOR has the authority and responsibility to address issues related to management and use within the NLSRA and NLSRS.

Planning Processes

Overview previous and new plan

The first plan for NLSRA (Nancy Lake Plan Program Budget) was presented to the Commissioner of the Alaska Department of Natural Resources in the spring of 1967 by Sam L. Huddleston & Associates. That plan envisioned an intensively developed recreation area where just over 16 miles of road looped around the lakes at the heart of the canoe trail. This road was proposed to provide access to a number of developed facilities including: just over 1,700 campsites, almost 3,000 picnic sites, 2 marinas, a 160 unit lodge, a grocery store, a gas station, a float plane drome, a golf course, and winter sports complex. The 1967 Plan analyzed the land base within NLSRA so planning would "…minimize the impact of mans' unnatural facilities on the natural scene. This is the critical factor in providing future generations with unspoiled, open-space recreation of natural character." Recognizing that some people would like to recreate in a natural area, the 1967 Plan recommended that the roughly 3 mile by 5 mile area within the looped road be preserved as a quiet zone "…for the hiker, the horseman, the canoeist, and the back packer or others who wish to get far away from it all." While the first plan for the area clearly articulated a heavy development orientation it recognized the need for natural areas for people to engage in low intensity recreational pursuits. It was this concept that was carried forward to the 1983 revision of the original plan.

It is clear from the text of the 1983 Nancy Lake State Recreation Area Master Plan – a revision of the 1967 Plan – that DPOR considered the intensive development orientation in the original plan to be inconsistent with the demands of the recreating public, inappropriate for the land base, costly, and would allow use at levels that would "negate" the ability of NLSRA to provide recreation opportunities in an unspoiled open space. The 1983 Plan shifted management orientation from intensively developing the majority of the area while maintaining a centrally located natural area, to restricting higher intensity development to a relatively compact area around the Nancy Lake Parkway while maintaining the remainder of the area as a minimally developed and primarily natural area. The revised plan emphasized retention of the quiet natural setting as the quality that people valued above all others. As a result, the Nancy Lake Parkway provides the majority of access to recreation opportunities as well as access to the largest campground in the state park system while the areas north and south of the parkway remain minimally developed. The 1983 Plan recognizes the wide variety of recreational uses that occur and the difference in use characteristics based on season.

This current planning process has resulted in a plan that maintains the management orientation of the 1983 Plan to a large extent. Similarly, several of the management and facility recommendations contained in the last plan are carried forward in this plan though they may have been revised or updated. As such, recommendations in this current plan reflect the desire to recreate in a quiet natural setting as well as the opportunity to engage in motorized recreation on specific lakes in the summer and to use snowmobiles south of the

parkway when snow conditions allow. Unlike the previous two plans developed for the NLSRA and NLSRS, this plan provides specific guidance for permitting uses and activities and provides clarity in policies that affect access to private property.

Public Participation in Current Planning Process

DPOR decided to update the 1983 Plan after an internal analysis of that plan and a discussion of current and future management needs for the area. Soon after that decision was made, DPOR developed a planning website, began compiling a distribution list with almost 1,000 contacts, and initiated the public planning process which began late in the fall 2008.

The early public scoping process consisted of two public meetings (one in Wasilla and one in Anchorage) and a formal comment period. Notice of the scoping meetings was provided via the online public system, email, letter, by public service announcement request, media release, and by a meeting flyer. Over 80 people attended the two scoping meetings. Written public comments were accepted via mail, email, fax, or through submission on the NLSRA planning website. Public comments were reviewed to help DPOR refine/redefine issues and to identify additional data needs. Eighty six public comments were received during the scoping process.

In the summer of 2010 a questionnaire was developed to get more specific information on preferences for facilities and trails and to learn more about access methods to private property. Notice of the availability of the questionnaire was mailed or emailed to 967 people. One hundred and fifty one people responded to the questionnaire. Responses to the questionnaire were analyzed in the late summer/fall of 2010.

Late in the fall of 2010 and winter of 2011, focus meetings were held to learn specifics about the types of recreational uses currently occurring and what types of recreation were not currently allowed but could be considered appropriate and facilitated at NLSRA or NLSRS. These discussions provided detailed information on the different types of recreation that people currently engage in and the changes that could be made to enhance existing recreation opportunities or provide new or different types of recreation. Types of facilities and levels of development for various types of recreational uses were also discussed during focus meetings.

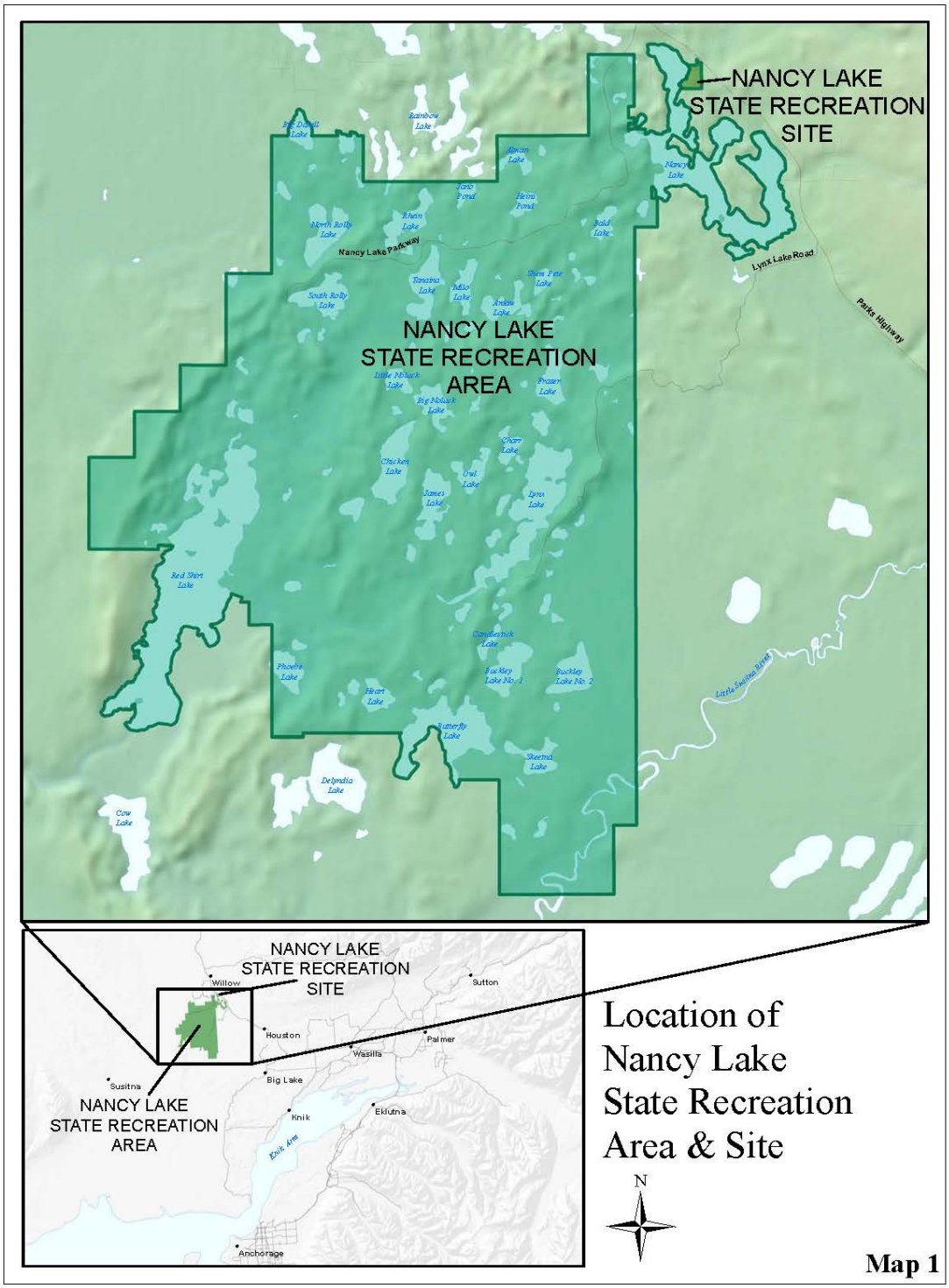
In the fall of 2012 several proposed management actions and a suite of alternatives that addressed access on Lynx Lake Road and Butterfly Lake Trail were provided for public review and comment. Notice of the alternatives and recommendations meetings was provided via the online public notice system, letter, email, newspaper display advertisement, media release, and flyer. Shortly after the release of this information two public meetings were held (one in Willow and one in Anchorage) which were attended by over 90 people. A formal comment period provided an opportunity for the public to submit written comments via email, mail, fax, or through submission on the NLSRA planning website with 97 public comments received.

Multiple meetings were held with DPOR staff to identify issues and to discuss policy and management direction based on the available information as well as issues of mutual interest to participating agencies. Several meetings were held with Alaska Department of Fish and Game or Matanuska Susitna Borough staff to discuss issues of mutual concern between the agencies.

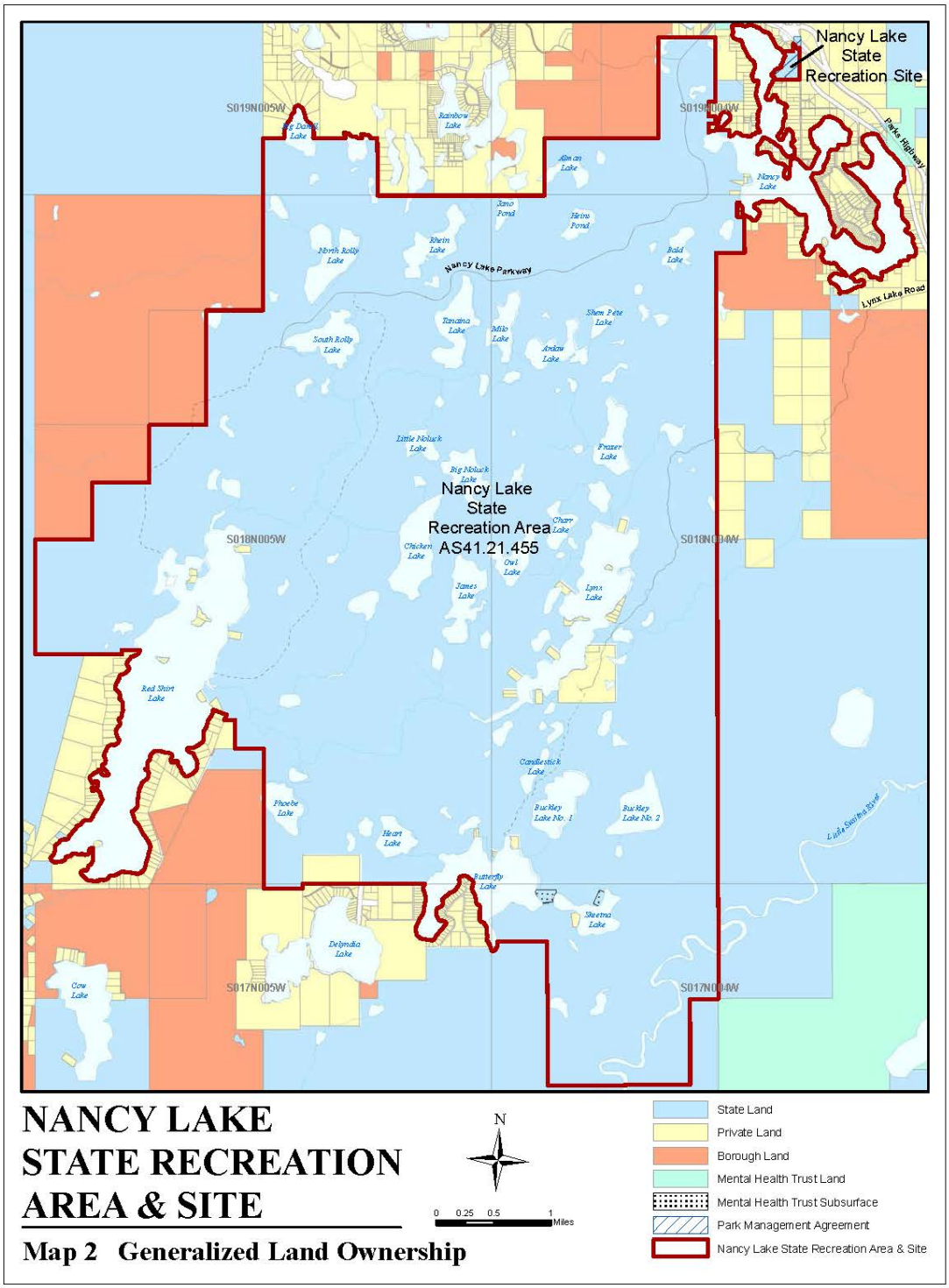
Plan Period

This plan is written as a twenty year document; however, it should be periodically reviewed to determine the effectiveness of management prescriptions and to remain adaptive to changing use characteristics or new issues that affect resources, management, and public use of the areas. Even though it is written as a twenty year document, this plan remains in effect until formally revised.

Map 1: Location of Nancy Lake State Recreation Area & Site



Map 2: Generalized Land Ownership



*Please note the depiction of Lynx Lake Road and Butterfly Lake Trail crossing private property will not be shown on the final plan maps.

Table 1: State Park Unit Characteristics

	Representative Example	Description	Management Objective	Overall Intensity of Development	Management Orientation	
					Intensive Public Use Management Emphasis	Resource Preservation Management Emphasis
STATE PARK	Chugach State Park	An area possessing outstanding distinct natural and/or cultural resource values	Prevent the deterioration of the natural and cultural resources while providing for appropriate outdoor recreational opportunities	Low		
STATE HISTORIC PARK	Independence Mine State Historic Park	An area containing an assemblage of cultural resources	Preserve and interpret the cultural resources	Low to Moderate		
STATE HISTORIC SITE	Old Sitka State Historic Site	A small area containing a single cultural resource	Preserve and interpret the cultural resources	Low to Moderate		
STATE RECREATION AREA	Nancy Lake State Recreation Area	A spacious area possessing a diversity of outdoor recreation opportunities	Provide the maximum level of outdoor recreation opportunities in a high quality natural setting	Moderate to High		
STATE RECREATION SITE	Dry Creek State Recreation Site	A small area providing one or more outdoor recreational opportunities	Emphasis on site specific recreational use	Moderate to High		
STATE TRAIL	Juneau State Trails	A land-based linear corridor	Provide for and protect resource related opportunities	Varies	Variable	
STATE RECREATION RIVER	(Potential) Lake Creek State Recreation River	A corridor encompassing a river (or portions) and associated uplands	Provide for and protect resource related opportunities	Varies	Variable	
STATE (SCIENTIFIC, EDUCATIONAL OR ECOLOGICAL) PRESERVE	(Potential) Augustine Island State Preserve	An area containing outstanding scientific and/or educational values	Prevent the deterioration of scientific, educational or ecological resources	Low		

Table 2: Guidelines for Activities within Land-Use Zones

Generally Compatible ●
Conditionally Compatible ◑
Not Compatible ○

LAND USE ZONES	RESOURCE MODIFICATION FOR:					INTENSITY OF RECREATION FACILITY DEVELOPMENT IN DESIGNATED LOCATIONS									
						INTENSITY			EXAMPLES						
	Educational Purposes	Recreational Purposes	Habitat Enhancement	Scenic Enhancement	Resource Restoration	High	Medium	Low	Trail Bridges	Ski Lifts	Wildlife Observation Blinds	Visitor Centers	Winter Warm-up Huts	Public Use Cabins	Trail Shelters
RECREATIONAL DEVELOPMENT ZONE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NATURAL ZONE	◑	◑	●	◑	●	○	◑	●	●	○	●	○	●	●	●
WILDERNESS ZONE	○	○	○	○	◑	○	○	◑	◑	○	○	○	◑	◑	◑
CULTURAL ZONE	◑	○	○	○	◑	○	○	○	●	○	◑	◑	◑	○	○

				TRAILS		CONCES-SIONS		MANAGEMENT CONTROLS			MOTORIZED ACTIVITIES								FIREARM DIS-CHARGE			
Tent Platforms	Developed Walk-in Campsites	ROADS	SCIENTIFIC INVESTIGATIONS	High Standard	Low Standard	Commercial Lodges	Guiding Permit	Fire Suppression	Insect & Disease Control	Wildlife Habitat Enhancement	Private Automobile/Vehicle	Public Transportation	Off-Road Vehicle (ORV)	Snowmachine	Aircraft Landings	Motorboating	Motorcycle	HORSEBACKRIDING	Shooting Range	Hunting	TRAPPING	FISHING
●	●	●	●	●	●	●	●	●	●	●	●	●	●	◑	◑	◑	◑	●	◑	◑	○	●
●	●	◑	●	●	●	○	●	◑	◑	◑	◑	◑	◑	◑	◑	◑	◑	◑	○	◑	◑	●
◑	◑	○	◑	○	◑	○	●	◑	◑	○	○	○	○	○	◑	○	○	◑	○	●	●	●
○	○	◑	●	◑	◑	◑	●	●	●	◑	◑	◑	◑	◑	◑	◑	○	◑	○	◑	◑	◑

Chapter 2
Natural and Human Environment

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Chapter 2
Natural and Human Environment

Introduction

This chapter will provide background information on the natural and human environment for the Nancy Lake State Recreation Area and Nancy Lake State Recreation Site. The natural and human environment will be considered when making facility, trail, and management recommendations.

Natural Environment

Climate

The climate for NLSRA and NLSRS is transitional maritime-continental, characterized by long cool winters and short warm summers. The area lies within the transitional zone, bounded by the continental zone to the north, west and east, and the maritime zone to the south. Temperatures for the community of Willow just a few miles north of NLSRA range from a lowest recorded temperature of -50°F in January 1989 to the highest recorded temperature of 89°F in July 1999. The average high temperature in June is 68°F while the average low temperature in December is 1°F. Daily minimum temperatures in summer are generally between 44 and 47°F.

Yearly precipitation for the area around NLSRA is just over 21 inches per year. Precipitation is usually light in spring and summer and increases in late summer and fall with most of the precipitation occurring as rain in August. Snow accumulation is more typical of the continental zone with most of the snowfall occurring between November and March. December and January are the months most likely to get the heaviest snowfall.

Long days in summer and short days in winter have a strong influence on recreation in Southcentral Alaska. While a recreationist in mid-summer can expect approximately 19 hours of daylight, mid-winter recreational activities which depend on natural daylight, are restricted to about 5 hours.

Geology

Surface Features

Vast sheets of ice once covered the area of the Nancy Lake State Recreation Area and Recreation Site. This sheet moved down the Susitna Valley from the north, coalesced with

glaciers from the Matanuska Valley and Turnagain Arm, and moved down Cook Inlet. Around 10,000 years ago this ice sheet began receding and the landforms we see today were revealed. Surface features consist of glacial till and ground moraine deposits (uplands and ridges) adjacent to scoured depressions or flat areas (lakes, ponds, and wetlands).

Elongate ridges and uplands that we see today – in terms of glacial morphology, drumlins and eskers – are derived from glacially pulverized rock, known as till, that was eroded from parent material and transported to this site by the glaciers. Within and under glaciers, the till was formed by both ice and water into the elongate ridges seen today. The direction of ice flow over this area is evidenced in the northeast/southwest trend of these ridges. Glacial deposits in this area have been recorded at more than 140 feet in depth.

The same glaciers that formed the ridges also formed the lakes and lowland areas. Significant scouring occurred in the Susitna basin as a result of the tremendous weight and generally north to south movement of glaciers in the Valley. This glacial scour is evidenced by the numerous lakes that formed in lower depression areas. Other deperessional or lowland features were formed in ground moraine deposits under the ice.

Soils

The Soil Survey of Matanuska-Susitna Valley Area, Alaska was finalized in 1998. The updated soil survey reclassified many of the soils identified by earlier surveys for this area. The planning area is located within two general soil map units: Estelle-Disappoint Association and Histosols (peatlands). Generally speaking, the majority of upland soils in the planning area are Estelle soils while the majority of wetland soils are Histosols. However, there are several classified units of both upland and wetland soils in addition to those previously mentioned. Upland soils comprise approximately 50% of the total planning area; wetland soils comprise approximately 29%; and the remaining 21% is surface waters. See Map 3 on page 2 - 7 for a general depiction of wetland and upland soils.

The Estelle-Disappoint Association contains two soils units that are found within the same unit. Estelle soils are found in areas of deep glacial till that is overlain with wind-blown silt and volcanic ash. These soils are well drained and can be found throughout the planning area. These soils have slight to severe restrictive soil features for recreational development because of slope, percolation, or erodability. Disappoint soils are similarly found in areas of deep glacial till overlain with silt and volcanic ash. Unlike Estelle soils, Disappoint soils are found in depressions or at toeslopes and are very poorly drained (wetlands). These soils have severe restrictive soil features for recreation development because of wetness and large stones.

Histosols are deep organic soils found on low landscape positions and depressions and includes bogs and fens on glacial till within the planning area. These soils are very poorly drained (wetlands) and may have water present at the soil surface.

Subsurface
Below the glacially influenced surface formations lie Tertiary aged sedimentary bedrock of the middle Kenai formation. Below that formation is igneous bedrock of the Jurassic period. Coal is present at varying quantities and depths.

Water

Surface Water
There are 131 lakes within the NLSRA. Sixty seven are over five surface acres in size and 20 are over 40 acres in size. The four largest lakes are Red Shirt Lake (1,183 acres), Nancy Lake (761 acres), Lynx Lake (315 acres), and Butterfly Lake (310 acres). The Little Susitna River flows through the southern portion of the recreation area. In addition to being in NLSRA the Little Su is also legislatively designated as one of the Recreation Rivers. Lakes and streams within NLSRA make up approximately 4,632 acres (or 21%) of the planning area.

Surface waters generally drain southwesterly into the Susitna River. Only Nancy Lake and the lakes in the extreme southeastern corner of the recreation area drain into the Little Susitna River. The lakes north of Nancy Lake Parkway drain westerly into Rolly Creek and then into the Susitna, while those south of the parkway drain southwesterly into Red Shirt Lake, then into Fish Creek and the Susitna. Although flooding of the lakes and streams within NLSRA along natural rivers may pose some hazard problems, flooding from heavy rains or snows are not considered to be a significant hazard.

There are five water rights issued for withdrawal of surface waters in NLSRA. All five authorizations occur on Nancy Lake.

Subsurface Water
Ground water from three wells within the NLSRA supply water for state maintained facilities. These wells are located at the State Recreation Site campground, South Rolly Lake Campground, and at the agency staff/maintenance facility. Numerous private wells exist on the adjacent private parcels, and range from 25 feet to over 140 feet deep. Hand dug/driven wells range from 15 feet to over 40 feet.

Vegetation

Most of NLSRA and NLSRS are covered by boreal forest. There are four general forest cover types in the planning area. The most predominate cover type is a pure White Birch (Betula papyrifera) type; these stands dominate the higher elevation areas particularly on the well drained eskers and ridges. These stands give way to the second cover type as elevation is lost and the land forms more closely adjoin the lakes and muskeg areas. This second type is a White Birch/White Spruce (Picea glauca) type. White Birch is the predominate species in this type with White Spruce being scattered throughout the stand. The third cover type is recognized as elevation decreases at toe-slopes where ridges give way to rolling to flat terrain. This type is a transition between and mostly Black Spruce (Picea mariana) to a

mixture of White Spruce and Black Spruce (Picea mariana). Drainage at these sites is better than the adjoining pure Black Spruce type on the muskegs, but not as well drained as the White Birch or the White Birch/White Spruce stands upslope. The fourth cover type is the Black Spruce type; this type occurs on poorly drained soils and is located next to the numerous lakes and muskegs in the Recreation Area. Cottonwood (Populus balsamifera) and Quaking Aspen (Populus tremuloides) along with alder (spp) and willow (spp) are present but scattered in riparian areas, seep locations, and at the edge of muskegs. See Map 4 on page 2 - 9 for a depiction of the vegetative cover for the planning area.

Since this area is a designated State Recreation Area, timber management and stand manipulation is generally not appropriate in most circumstances. However, there may be circumstances where timber management is consistent with management, facility, or visitor use objectives. Under some extenuating circumstances (i.e. a large wildfire, insect epidemic, or hazard trees) stand manipulation may be appropriate in order to enhance visitor safety.

Fish and Wildlife

The rolling hills interspersed with lakes and wetlands provide rich habitat for fish and wildlife. Few detailed studies specific to this area exist; however some general information on fish and wildlife does exist. The following information contained in this plan was taken from general data developed by ADF&G, peer reviewed literature, and is augmented with personal communication with staff from ADF&G, USFWS, and DPOR.

Large Mammals

Several species of large mammals utilize this area's diverse habitat. Species include bears (black and brown), moose, and wolves. ADF&G data indicates that all of these species are present within the NLSRA.

Both brown and black bears have been sighted in the planning area; however, exact numbers are not known. Black bears are distributed across much of Alaska, particularly in "open" forests with mixed habitat types. Similarly, brown bear are distributed across much of Alaska. However, the preferred type of habitat for brown bear includes large areas of grasslands that provide high quality foods when other food sources are unavailable. The planning area contains habitat types suitable to both types of bears.

Moose have a circumpolar distribution and inhabit a wide range of habitats in the northern hemisphere. In Alaska, moose occupy a range of habitats from the North Slope to the Alaska Peninsula and Southeast Alaska. Moose are commonly sighted throughout the planning area and utilize all available habitats (uplands, wetlands, and waterbodies). Habitat information produced by ADF&G indicates concentration areas to be present. Based on this information, numbers of moose in the planning area can increase during the spring, summer, and winter.

Wolves exist in a wide variety of habitats, climates, and terrains across Alaska and have been sighted in the planning area. Moose is an important food source for wolves but they will prey upon other small mammals, birds, and fish. All of these prey species are found within NLSRA.

Small Mammals

Small mammals are commonly found in habitats similar to those located in the planning area. These animals can include: wolverines, coyotes, lynx, martin, weasels (ermine), red foxes, beavers, hares, squirrels, muskrats, and voles to name a few. Of these animals, hares, squirrels, beavers, and muskrats are commonly sighted in the area.

Birds

Common throughout the planning area, birds utilize all available habitat types. The upland areas and transitional habitats provide habitat for migratory and resident songbird populations. The numerous wetlands, ponds, and lakes provide habitat for several species of water birds including multiple species of ducks, Canada geese, common and Pacific loons, red-necked grebes, and trumpeter swans. Open meadows are frequented by sand hill cranes in the summer. ADF&G habitat information indicates that waterfowl and swan nesting, molting, and brood rearing occurs in portions of the recreation area. Common loons have been observed on many of the lakes and nesting is known to occur on several waterbodies. Similarly, red necked grebes have been observed nesting and brood rearing on several waterbodies.

Fish

Many of the waterbodies have both resident and anadromous fish populations. Resident fish species include burbot, Dolly Varden, rainbow trout, whitefish species, and Northern pike. With one exception – Northern pike – the listed species are native to these waters. Northern pike have recently become established in the Susitna River watershed where they are considered an invasive species. Since their introduction they have spread to many waterbodies, including those in the recreation area. A voracious predator, Northern pike negatively impact native fish populations in waters where they are introduced. Several waterbodies have seen a reduction or elimination of native salmon and trout species where pike have become established.

Twenty five waterbodies are identified as anadromous in the *Atlas to the Catalogue of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes*[1]. These waterbodies support various habitat needs for fish species including spawning and rearing habitats. Anadromous fish species include chinook, coho, pink, and sockeye salmon. Once abundant in many of the lakes, salmon populations have been deceased or eliminated where pike are present. See Map 5 on page 2 - 11 for a depiction of anadromous waterbodies in the planning area.

[1] Alaska Department of Fish and Game (ADF&G) publication available online or in hard copy at certain locations across the state.

Ten waterbodies have been stocked by ADF&G. Four of these lakes – North & South Rolly, Rhein, and Tanaina – were stocked with rainbow trout in 2011. See Table 3 on page 2 - 13 for information on stocked lakes.

Natural Hazards

Wildland fires

Many tree stands within NLSRA are over-mature or have been affected by forest pests. Because of the prior spruce beetle mortality in the white spruce and the age and condition of the white birch some active management of the high risk trees may be required to protect the recreating public. Dead and dying white and black spruce in areas of high public use may necessitate active forest management to reduce the threat of wildfire. The type and composition of understory species also affects the rate spread of wildland fires. Modification of the understory may be necessary to provide vegetative breaks or control areas to help reduce rate of fire spread in this area. High use areas such as campgrounds and public use cabins are particularly vulnerable to wildfire due to concentrated and reoccurring public use where fires are authorized. Most wildfires in the Mat-Su Valley are caused by humans.

Hazard Trees

For the same reasons stated above, some trees in close proximity to trails and facilities have become hazardous to the recreating public. Over-mature, diseased, or declining trees are susceptible to failure of the bole or limbs. Injuries may occur if a person is present when the failure occurs. This is particularly true where use is concentrated at campgrounds, remote campsites, or public use cabins.

Water

Much of the recreation in this area is centered on water based recreation activities in both summer and winter. Unexpected water immersions are possible through a number of scenarios including boat capsizing, falls overboard, or unsafe ice conditions. These events may result in hypothermia or drowning. The majority of boating fatalities in Alaska involve adult males that have capsized a boat or have fallen overboard while recreating. By statute, persons under 13 must wear their personal flotation device when in an open boat or on the deck of a boat, and when waterskiing.

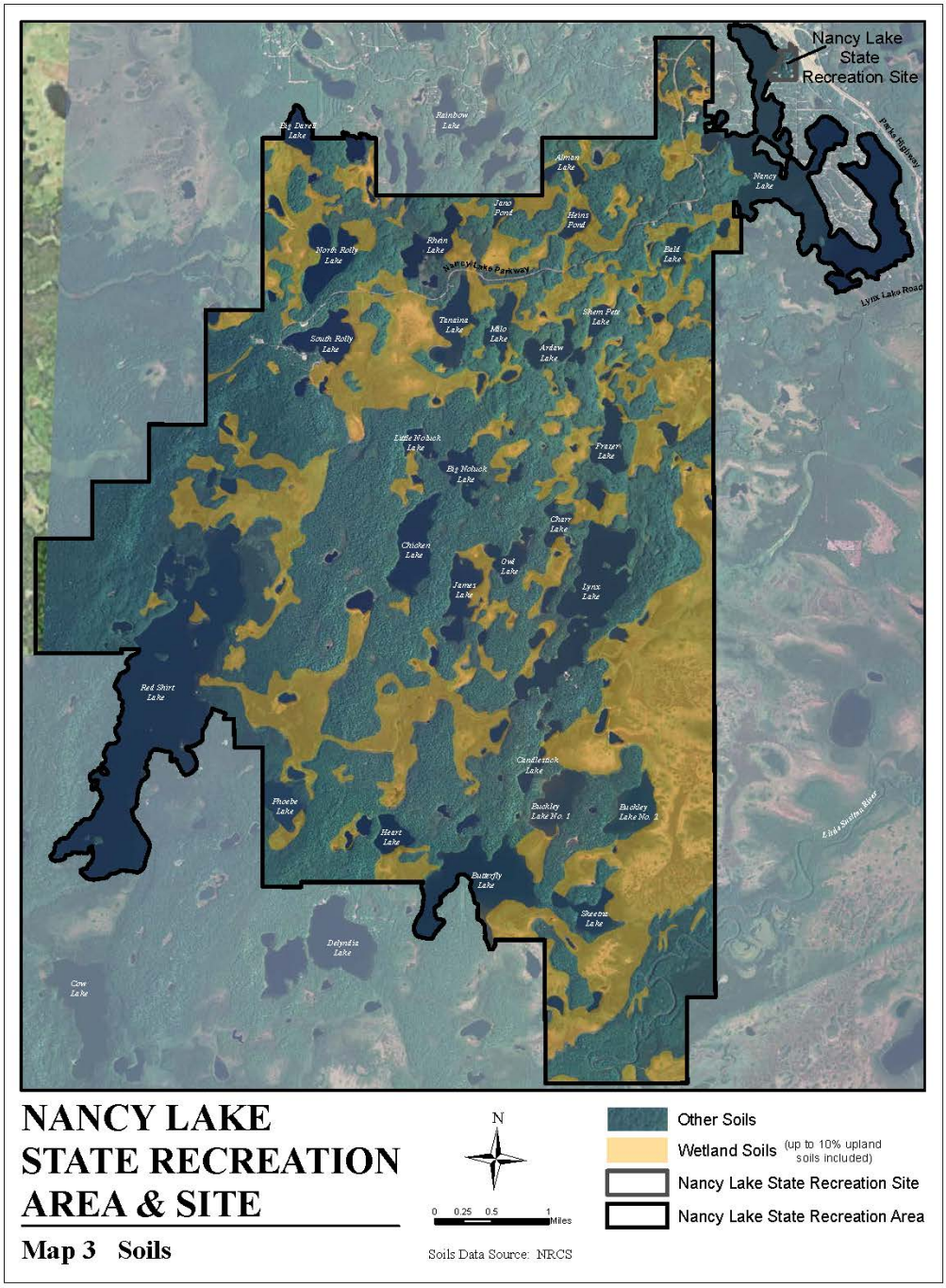
Cold Temperatures

When recreating in the winter time, people can expect cold temperatures that persist for extended periods. Average low temperatures for January, February, and March are 1, 3, and 8ºF respectively. The lowest recorded temperatures for these same months are -47, -41, and -43ºF respectively. Exposure at these temperatures can result in frostnip or frostbite, or if prolonged, death.

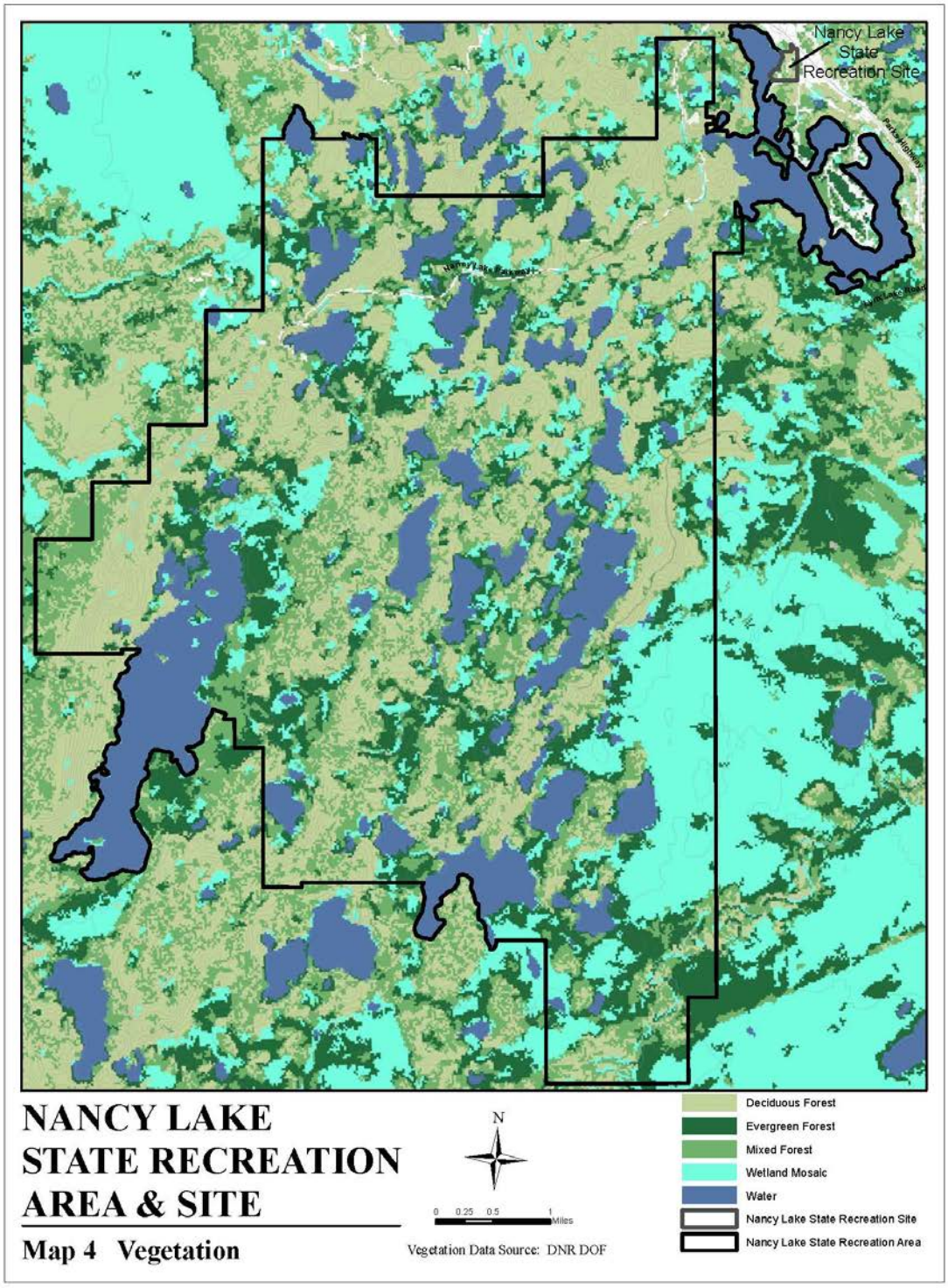
Other Hazards

Other hazards include slip, trip, and fall accidents; encounters with traps; encounters with wildlife; and, accidents related to discharge of bow and arrow.

Map 3: Soils


Nancy Lake State Recreation Site
Rainbow Lake
Big Darek Lake
Alman Lake
Nancy Lake
Parks Highway
Juno Pond
Heins Pond
North Rolly Lake
Rhein Lake
Belt Lake
Shirley Lake Parkway
Lynx Lake Road
Tanaina Lake
Milo Lake
Shem Pete Lake
South Rolly Lake
Ardew Lake
Little Hobuck Lake
Fraser Lake
Big Hobuck Lake
Charr Lake
Chicken Lake
Owl Lake
James Lake
Lynx Lake
Red Shirt Lake
Candlestick Lake
Phoebe Lake
Buckley Lake No. 1
Buckley Lake No. 2
Heart Lake
Butterfly Lake
Sheetna Lake
Delyndia Lake
Cow Lake
Little Susitna River
NANCY LAKE STATE RECREATION AREA & SITE
Map 3 Soils
N
0 0.25 0.5 1 Miles
Soils Data Source: NRCS
Other Soils
Wetland Soils (up to 10% upland soils included)
Nancy Lake State Recreation Site
Nancy Lake State Recreation Area

Map 4: Vegetation Cover



1

Map 5: Anadromous Waterbodies

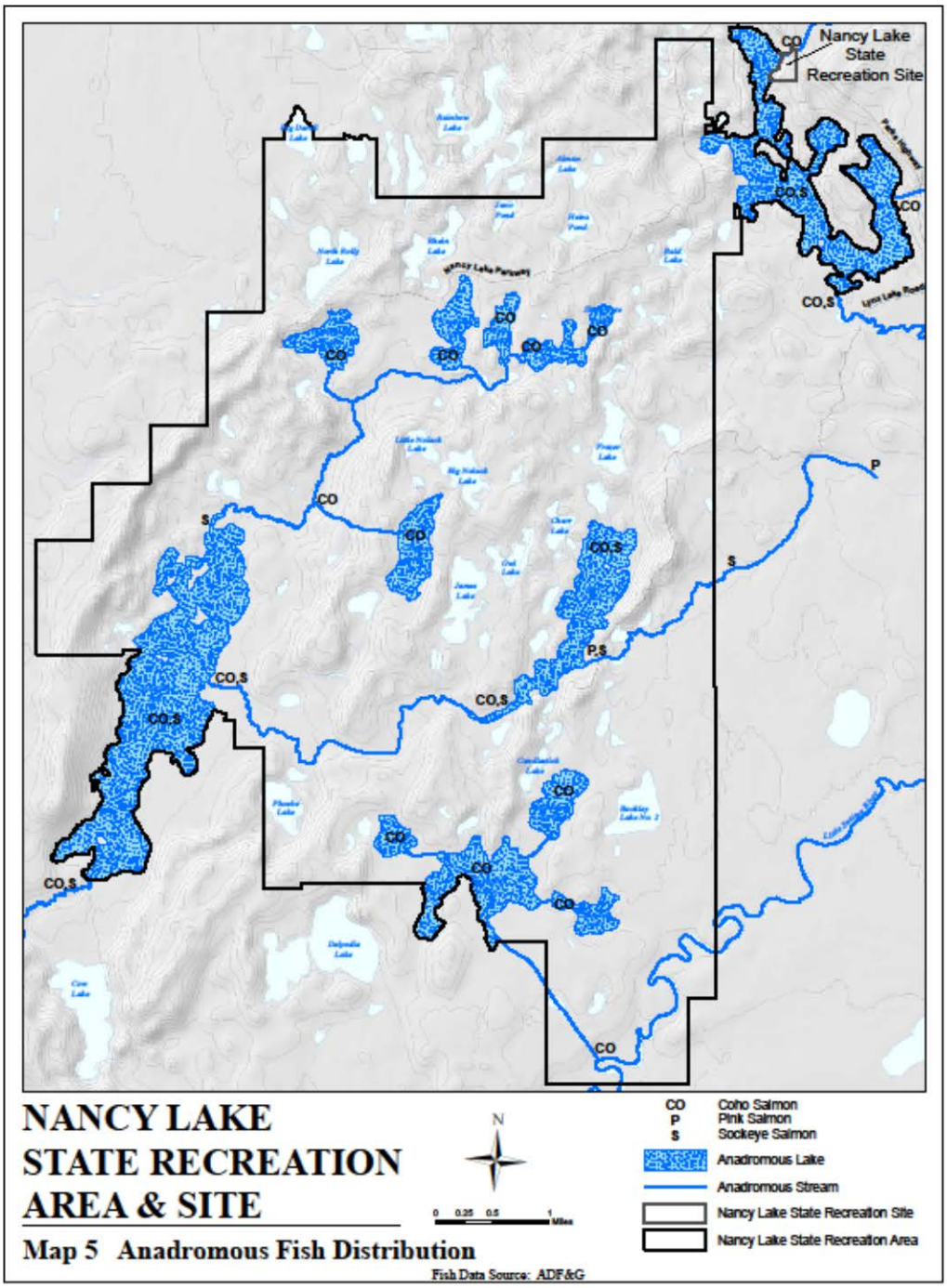


Table 3: Stocked Lakes

Waterbody Name	Stocked by ADF&G	Most recent year stocked	Species Stocked (past and present)
Big Noluck	Yes	1999	rainbow trout
Delyndia Lake	Yes	1990	coho salmon
Little Noluck	Yes	1992	rainbow trout
Milo Lake	Yes	1972	rainbow trout
Nancy Lake	Yes	1994	sockeye and coho salmon
North Rolly Lake	Yes	2012	rainbow trout
Rhein Lake	Yes	2012	rainbow trout
South Rolly Lake	Yes	2012	rainbow trout
Tanaina Lake	Yes	2012	rainbow trout
Little Susitna River	Yes	1995	Arctic grayling and coho salmon

Human Environment

Population

Just over 50% of the State's population is within a couple hours drive of NLSRA and NLSRS. See Map 1 on page 1 - 13 for a depiction of the locations of NLSRA and NLSRS within Southcenteral Alaska. Most of these people live within the Municipality of Anchorage (291,826); however, a substantial number of people (88,995) reside in the Matanuska Susitna Borough. The population within Alaska increased by 83,299 people between 2000 and 2010. Over 60,000 of these new residents reside in Anchorage and Matanuska Susitna Borough in roughly equal numbers (31,543 Anchorage; 29,673 Matanuska Susitna Borough). This translates into just over 70% of the statewide population growth occurring in Anchorage and the Matanuska Susitna Borough.

Cultural History

Not long after the glaciers retreated, this rich and diverse area was inhabited by Alaska Natives. While exhaustive archaeological surveys have not been completed for the entire area, some specific areas have been studied and have yielded evidence of past settlement and use. Dating of sites within the Susitna Valley indicates that the first Alaskans may have come into this area approximately 10,000 years before the present day. The oldest sites of these are associated with the American Paleoarctic Tradition, dating from 10,500 to 5,200 years ago. Sites in the Cook Inlet region dating from 3,000 to 1,000 years ago suggest a Pacific Eskimo cultural affiliation with coastal Southcentral and Southwestern Alaska. Linguistic data suggests there were several migrations of Dena'ina into the region starting 1,000 to 1,500 years ago. By between 600 and 500 years ago, they had replaced earlier populations.

People were drawn to this area because of plentiful salmon, resident fish populations and the availability of moose and other animals. Artifacts related to these early inhabitants have been located within the recreation area and site. In addition to archaeological studies, detailed information about local village sites and use of the area by the Dena'ina people has been provided by Shem Pete and his son Billy Pete. This father and son were both residents of the area. Remnants of Billy Pete's cabin and the village where Shem Pete once lived are still visible today.

The area around Nancy Lake was an important home and cross-roads for Alaska Natives and early Alaskans. NLSRA and NLSRS are positioned at the transition between the Talkeetna Mountains to the east and the vast wetlands and flats of the Susitna River to the west. Initially, this area was inhabited by people that relied on the fish and game resources for sustenance. These people often traveled with the seasons and natural patterns of the fish and game they depended upon and established village sites and seasonal camps where harvests would occur. The recreation area, site, and surrounding lands contain several such sites. American gold prospectors made their way to the Susitna River by 1896. As prospecting and gold mining expanded in the Talkeetna Mountains many people traveled the mining trails including the Nancy Lake-Susitna Trail – a trail that is also recognized as a segment of the Iditarod Trail. After European contact and settlement, people continued to live, hunt, fish, and trap in this area. Others were only visitors on their way to destinations elsewhere in the Susitna Valley or surrounding mountains.

Surface Estate

The surface estate is the land that you can see in addition to common variety materials. The NLSRA encompasses just over 22,500 acres of land and water. Of that, approximately 323 acres are private ownership inholdings[2]. At approximately 30 acres, the NLSRS encompasses a significantly smaller area of land and water. There are no private inholdings within the recreation site. There are approximately 500 parcels of private land contiguous[3] with the boundary of NLSRA and NLSRS. Over 400 more private parcels are adjacent[4] (within ½ mile) to the recreation area and site. See Map 2 on page 1 - 15 for a generalized depiction of land ownership.

Subsurface Estate

The subsurface estate includes the lands below the surface and the leasable minerals[5] and locatable minerals[6] such as gold, coal, oil and gas. The state owns the entire subsurface estate at NLSRS and NLSRA with the exception of 15 acres on Skeetna Lake where 15 acres

[2] Inholdings are defined for the purpose of this document as private properties within the boundary of NLSRA.
[3] Contiguous parcels are located outside of the external boundary of NLSRA or NLSRS but share a common boundary with NLSRA or NLSRS.
[4] Adjacent parcels lie near the external boundary of NLSRA or NLSRS but do not share a common boundary with NLSRA or NLSRS.
[5] Leasable minerals include deposits of coal, sulfur phosphates, oil shale, sodium potassium, oil, and gas. Leasable minerals do not include the locatable minerals.
[6] Locatable minerals include both metallic (gold, silver, lead, etc.) and non-metallic (feldspar, asbestos, mica, etc.) minerals. Locatable minerals do not include the leasable minerals.

of the hydrocarbon estate is owned by the Alaska Mental Health Trust Authority. Because the lands and waters were withdrawn from the public domain as a special purpose site they cannot be leased for private or commercial development of the subsurface resources.

Recreational Uses

The recreation area is well known in Southcentral Alaska for its canoe trail (Lynx Lake Loop) and 13 public use cabins. In addition to these well know opportunities, many different recreational uses occur within NLSRA and NLSRS. These uses vary by location and season. During ice free periods recreational uses include motorized and non-motorized boating, hiking, camping, fishing, bike riding, waterskiing, wildlife and nature viewing, photography, and swimming. When snow and ice conditions allow, winter recreationists enjoy skiing, dog sledding, skijoring, snowshoeing, skating, snowmobiling, and ice fishing among other pursuits. A lesser known canoe trail – the Pioneer Loop – provides access to several lakes north of the Nancy Lake Parkway. Local and regional recreation preferences are discussed below.

Use Trends

Visitor count data for fiscal year 2001 to fiscal 2010[7] was reviewed to see if any trends in overall use and use of public use cabins were evident. Generally speaking, overall use of NLSRA reached a ten year high of just over 70,000 people in fiscal year 2002 but has been declining in recent years to a ten year low of approximately 40,000 people in fiscal year 2010. In contrast, use of NLSRS has increased in recent years to a ten year high of just over 12,000 people in fiscal year 2008 from a low of just under 5,000 people in fiscal year 2004. See Graph 1 on page 2 - 19 for a depiction of overall visitor use count data.

Overall use of the 13 public use cabins at NLSRA has ranged from a low of 4,368 people to a high of 6,496 people. Generally, use of the cabins has increased recently to over 6,000 people per year for the last two years. Cabins on Nancy Lake are the most readily accessible and receive the highest levels of use (consistently over 2,000 people per year) while the more remote cabins at James and Lynx lakes receive the least amount of use (between 274 and 675 people per year). See Graph 2 on page 2 - 19 for a depiction of public use cabin visitor count data.

Taken together, just over 600,000 people have visited NLSRA and NLSRS including over 55,000 people at the public use cabins over a ten year period.

Public Access

Access to NLSRA and NLSRS is provided to residents and visitors via the George Parks Highway. Three primary access routes lead west from the highway into the recreation area and site – Nancy Lake Parkway, Lynx Lake Road and Butterfly Lake Trail, and Buckingham Palace Road. A number of lesser routes also access private land or subdivisions on borough roads or from roads and trails originating on private, borough, or state land.

[7] The most recent visitor count data available at the time of plan development was fiscal year 2010.

The Nancy Lake Parkway is a 6.5 mile long paved road that provides access to the majority of developed recreation facilities at NLSRA. The facilities include trailheads, parking areas, picnic area, and the South Rolly Lake Campground. Among the trailheads are those used to access the canoe trails. The road is also used for access to private property near Red Shirt Lake.

Lynx Lake Road is a minimally developed and maintained dirt road that is approximately 6 miles long. This road primarily serves as an access route for private property owners on Nancy, Lynx, Butterfly, Skeetna, and Delyndia lakes. This road leaves the George Parks Highway at mile 63.9 and generally travels west and south to the boundary of NLSRA. A small parking area with a traffic control gate has been developed just inside the NLSRA boundary. From this parking area, the road continues south and east to private property on the eastern shore of Lynx Lake. From this property, the route continues as a moderately developed trail to the northeast shore of Butterfly Lake. This trail is commonly known as the Butterfly Lake Trail. ~~Property~~ In the past, property owners ~~have~~ had been authorized to use both highway vehicles and ATV's on Lynx Lake Road and Butterfly Lake Trail for access to their private property. Use of a highway vehicle or ATV is now restricted beyond the traffic control gate ~~for all other people~~ by anyone who applies for a special permit. Only ~~two~~ three facilities are accessible from this road and trail – Lynx Lake boat launch, Lynx Lake Public Use Cabins 2 & 3 and the Butterfly Lake boat launch. The Lynx Lake launch is small and only minimally developed whereas the Butterfly Lake launch ~~has had no real development is~~was recently developed as a hand launch for small boats.

Buckingham Palace Road together with multiple connected local roads provides access to the NLSRS and to numerous private properties on Nancy Lake. Public access to the surface of Nancy Lake is provided where local roads terminate at the shoreline. These road access sites can accommodate a small amount of use but lack sanitation, waste, or parking facilities common to other water access sites.

Recreational Preferences

Statewide

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is a document that is produced to guide recreation-related decisions and policies on a large scale over a 5 year period from 2009 to 2014. It is necessary to develop the SCORP every 5 years to maintain the State's eligibility to participate in the federal Land and Water Conservation Fund program. Among other plan requirements, it assesses the supply and demand for outdoor recreation on a statewide basis. The public process used to develop information for the SCORP was extensive and included: 600 telephone surveys conducted in three representative regions of the state; a survey distributed to park professionals across the state; and, a survey that was mailed out to 2,357 households across the state. An additional survey was provided to school districts to get input from the youth of Alaska. The following text highlights some information contained in the SCORP.

The majority of people surveyed indicated that they are generally satisfied with the outdoor recreation opportunities in their community or within 1 hour of their community. Ninety-six percent of all respondents indicated that parks and outdoor recreation were important or very important to their life style. The importance of outdoor recreation is reflected in the number of people that own equipment that facilitates recreation. The type of equipment owned ranges from relatively small and inexpensive items such as backpacks, tents, bicycles, and fishing equipment to larger more expensive items such as canoes, rafts, ATV's, snowmobiles, and recreational vehicles among other types. Hiking is the activity favored by most people in addition to being the activity most people reported participating in. Other favorite activities include fishing, hunting, ~~snowmachining~~ snowmobiling, cross country skiing, camping, biking, ATV riding/4 wheeling, skiing/snowboarding, and running.

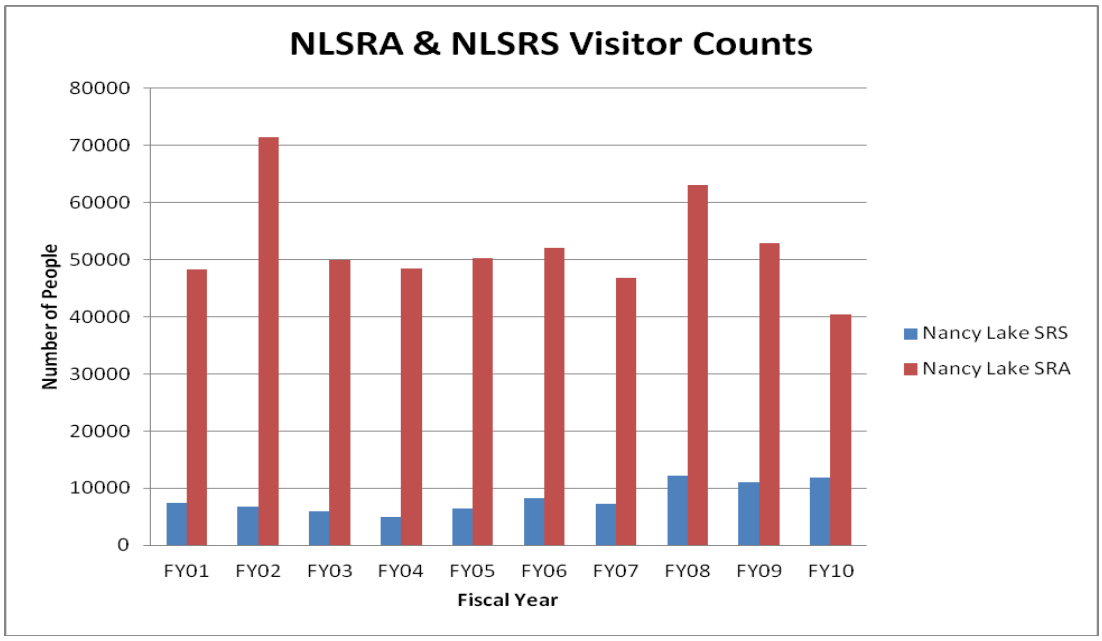
Many of the activities listed above rely upon a developed facility or trail that allows the person to engage in the recreational pursuit. A series of questions were asked to better understand what types of developments and experiences people would support. People supported development of new facilities to provide recreational opportunities and experiences to varying degrees while registering opposition to a few. The developments that drew the most support were: establishment of new parks and recreation areas; and, expansion of the public use cabin system. Other developments and experiences that were supported to a lesser degree included: providing toilets at regular intervals along road systems; development of new trailheads on roads and highways; and, development of more non-motorized trails. Development of visitor centers drew the least support while several other types of developments and experiences similarly garnered little support, these included: development of tourist facilities; more RV campgrounds; more organized recreation programs; providing more facilities for disabled people; providing more RV dump stations; and, more boat launches and ramps. Respondents overwhelmingly supported improving the maintenance of existing facilities before developing new facilities when funding is limited.

Local

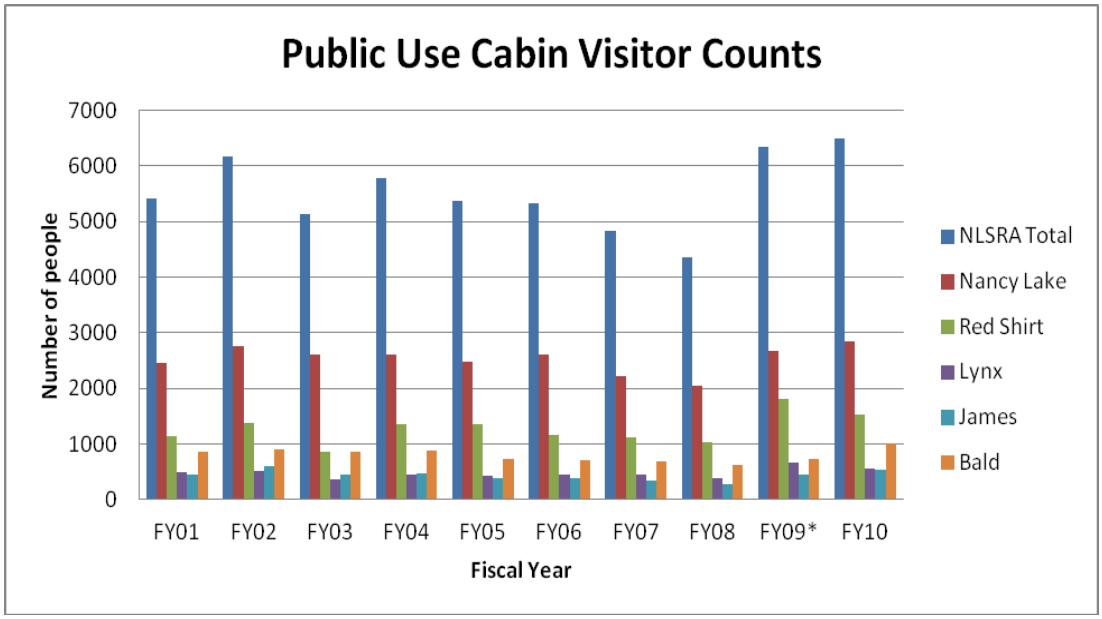
A questionnaire was developed to help DPPOR better understand people's preferences for types of recreation and facilities, and to gain a better understanding of access within and through NLSRA to private property. The questionnaire was made available to be completed electronically at the NLSRA planning website or people could request a hard copy be mailed to them. Notice of the availability of the questionnaire was sent to the distribution list of over 900 people and included property owners in the area, non-governmental organizations, and other people interested in management of these state resources. The questionnaire was available for people to complete for over 30 days in the fall of 2010. One hundred and fifty-one people completed the questionnaire by the September 13th deadline. While not taken directly from the 1981 survey, several questions are variants of those asked in the earlier survey. This was done to determine if there had been any shifts in preferences since 1981. The first part of the questionnaire focused on recreation, experiences, and facilities while the second part was focused on private property, access to that property, and how NLSRA facilities are used to facilitate private access. Information from the questionnaire is summarized in the following text while a more detailed review of results is provided in Appendix D.

- Of the 151 respondents to the questionnaire, 99% indicated that they recreate, or had recreated, in NLSRA in the past. Opportunity to escape urban environments was the primary reason people chose to recreate at NLSRA. Slightly more people recreate during the summer (88%) than in winter (87%); however, respondents indicate that recreation occurs in all seasons.
- Recreation occurs in all areas of the NLSRA with snowmobiling (68%), canoeing (66%), boating (61%), fishing (54%), and hiking (51%) indicated as the five activities most engaged in.
- Respondents indicated that many of the commonly occurring recreational facilities and uses *were appropriate* at NLSRA with hiking (72%), cross country skiing (69%), camping (69%), public use cabins (65%), and snowmobile riding (64%) being the five uses and facilities that drew the most support.
- Horse riding (33%), dog training (31%), float plane use (29%), education & interpretation center (16%), and snowmobile riding (15%) drew the most responses as the five uses and facilities that are *not appropriate* at NLSRA.
- The "quiet natural setting of the area" is what people like most about NLSRA while people indicated that the least liked "motorized use in the recreation area" (62% and 33% respectively).
- Seventy-two percent of respondents indicated that development should remain at current levels or be increased slightly.
- Fourteen questions were specific on the types of uses and facilities. Respondents indicated support for many trail and facility proposals with the exception of equestrian trails. The question of where to develop new trails and facilities that are supported by respondents remains problematic with over ½ of respondents indicating opposition to higher levels of development in Nancy Lake Parkway corridor or in the Lynx Lake Road and Butterfly Lake Trail area.
- Fifty-two percent of respondents indicated they were property owners within, contiguous to, or adjacent to NLSRA. On average these people have owned their property for 17 years. The five methods of access most commonly used by these property owners are Snowmobile (79%), highway vehicle both summer and winter (46% and 43% respectively), canoe (44%), and hiking (42%). Sixty-two percent of landowners that responded use trails, launches and boat storage areas to access their private property.

Graph 1: Overall visitor counts for NLSRA and NLSRS



Graph 2: Public use cabin visitor counts.



Chapter 3
Issues

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Chapter 3
Issues

Introduction

This chapter presents several of the major issues that are addressed in this plan revision. The issues are briefly discussed then followed by a brief discussion of actions taken in the plan to address the issue.

Issues

Lynx Lake Road and Butterfly Lake Trail Summer Access

There are two issues regarding access on Lynx Lake Road and Butterfly Lake Trail: the first issue focuses on access to private property and the type of access to be authorized; while the second issue centers on general public access on the Lynx Lake Road and Butterfly Lake Trail. Currently, vehicle access on Lynx Lake Road and Butterfly Lake Trail is prohibited by regulation[1] and a traffic control device (gate) has been installed by DPOR just inside the NLSRA boundary to restrict vehicle access[2].

The Lynx Lake Road was developed prior to the legislative establishment of the NLSRA and was used to access private lands on Lynx, Butterfly, and Delyndia lakes. The 1983 Plan identified Lynx Lake Road as originating at the George Parks Highway and extending south and west toward Delyndia Lake outside of the NLSRA boundary. How this route is identified has changed in recent years and Lynx Lake Road is now addressed as two distinct features – Lynx Lake Road and Butterfly Lake Trail. Presently, Lynx Lake Road refers to the unimproved road that extends from the Parks Highway to the Anchorage Church of Christ property, located on the east shore of Lynx Lake. What is now referred to as the Butterfly Lake Trail extends from the Anchorage Church of Christ property to a bay on the northeast shore of Butterfly Lake.

Until recently, consistent with management recommendations made in the 1983 Plan the DPOR had issued Permits to local property owners that allowed the use a vehicle on Lynx Lake Road and Butterfly Lake Trail for the purpose of accessing their private property within and adjacent to NLSRA (under authority of 11 AAC 18.010) . A lawsuit filed against the State challenged DNR authority to issue these Permits. The Superior Court ruled in favor of

[1] 11 AAC 12.020(c)
[2] 11 AAC 12.020(b)

the State, but the case was appealed to the Alaska Supreme Court. The Alaska Supreme Court ruled that Permits that are not revocable at will and that are issued only to property owners constitute easements, and as such are disposals of an interest in State land. State law does not authorize disposals within legislatively designated park units, such as the NLSRA, so use of the permits in their current application cannot be continued. ~~Consistent with management recommendations made in the 1983 Plan, DPOR had issued Special Park Use Permits (under authority of 11 AAC 18.010) to authorize access to private properties on Lynx, Butterfly, Skeetna, and Delyndia lakes via the Lynx Lake Road and Butterfly Lake Trail. But, t~~The 1983 plan did not clearly identify the type of vehicles that could be authorized for access by existing property owners, nor did it identify the number of people that were "authorized and holding access permits;" that is, the number of permits that were appropriate to be authorized. Under ~~the current~~ policy provided in the 1983 Plan, vehicle access is authorized for people that are able to prove ownership in the area of Lynx, Skeetna, Butterfly, and Delyndia lakes. Under this ~~current~~ scenario, the number of authorizations allowing vehicle access on Lynx Lake Road and Butterfly Lake Trail ~~to these waterbodies~~ could increase significantly based on the amount of developable property on these waterbodies. As the number of people accessing private property increases, it is reasonable to expect increased impacts to the existing natural environment to accommodate that use. It is appropriate for DPOR to determine what type, location, and level of vehicle access, if any, could be authorized at NLSRA consistent with the statutory purposes and management intent for this area.

~~While much is known about vehicle access to private properties on Lynx Lake Road and Butterfly Lake Trail, some information gaps still exist. Frequency and distribution of vehicle use is not known and the impacts associated with these uses have not been quantified. This plan identifies a policy that allows vehicle access on these two routes to continue to be authorized at current levels until a study is completed and DPOR determines if the current policy needs to be changed. Essentially, this plan allows vehicle access at 2012 levels without exacerbating impacts to the natural environment until additional information is acquired and a decision is made to maintain or change the current policy. It is intended that the access study be completed within 5 years of the adoption of this plan.~~

Public access on Lynx Lake Road and Butterfly Lake Trail is re-examined in this plan revision. Lynx Lake Road and Butterfly Lake Trail provide access to a large swath of land and lakes in the southern portion of NLSRA. The 1983 Plan analyzed this issue and stated that the Lynx Lake Road "… is not now, nor planned to be, a public access." Consistent with that analysis, the 1983 Plan states, "It [Lynx Lake Road] shall remain gated at the recreation area boundary and its use restricted to existing property owners authorized and holding access permits issued by the Director or designee." Consistent with this management direction, property owners ~~are~~ have been authorized to travel via motorized vehicle beyond the gate on Lynx Lake Road during snow free periods. Public pedestrian use beyond the gate is allowed without authorization ~~during snow free periods~~ at any time. The existing policy to restrict use of this existing access route has resulted in low levels of public recreation in the southern area of NLSRA during snow free periods. Because NLSRA is intended to be managed to provide a maximum level of outdoor recreation opportunities it is appropriate to

re-evaluate the need to increase public access within NLSRA. This plan recommends increased public access on a portion of Lynx Lake Road and potentially on Butterfly Lake Trail. This access may be restricted based on impacts to developed roads, trails, and facilities and impacts to natural resources.

Personal Property Storage and Boat Moorage

Year-round storage of private property on state uplands and moorage of boats on state waters occurs on state-owned lands and waters on Butterfly, Lynx, and Red Shirt lakes in violation of current regulations[3]. Most of this storage and moorage is done by private property owners to facilitate access to their private property; however, some boats and personal property may be left by people that do not own property in the area as well. DPOR estimates 100 boats and other personal property are being stored long-term (year-round) on state-owned uplands or moored long-term (year-round in some cases) on state waters[4]. The type of boats stored and moored range from canoes and skiffs to larger flat decked barges while the common types of personal property being stored includes vests, batteries, motors, fuel, locked boxes/lockers, and paddles among other items. Storage of boats and personal property on state uplands and moorage of boats is prohibited unless authorized by permit under 11 AAC 18.010. The majority of the storage and moorage occurs at these sites primarily for the convenience of people accessing private property. An example of this is storing life vests, fuel, oars and batteries on state uplands to avoid having to carry these items in addition to food or other items needed for the stay at their private property.

Impacts to the natural resources associated with personal property storage are occurring and include: soil compaction, trampling and loss of riparian vegetation, and litter from discarded or no longer used items. An issue of particular concern to DPOR is the storage of fuel in high concentrations at moorage and storage sites on Butterfly, Lynx, and Red Shirt lakes. The proximity of stored fuel to waterbodies; the inadequacy or non-existence of containment for stored fuels; and in some cases, the storage of fuel within a boat moored on a waterbody substantially increases the potential for releases to aquatic and riparian environments. While the same potential for fuel release to aquatic environments and waterbodies exists where boats are moored on state waters adjacent to private properties; this plan recognizes the modified right to wharfage that exists for riparian property owners and thus only addresses moorage and storage that facilitates access to private property.

This plan identifies areas where storage and moorage can occur to facilitate private access, establishes limits on the type of boats and property that can be stored, and requires fuel storage methods that will reduce the possibility of discharge to aquatic or riparian habitats.

Snowmobile Openings

[3] 11 AAC 12.220 and 11 AAC 18.010

[4] The term “state waters” refers to all surface waters within the Nancy Lake State Recreation Area.

There are two primary issues associated with the use of snowmobiles. The first issue involves the areas that can be opened to the use of snowmobiles while the second issue is the standard that is used to determine adequate snow cover to protect underlying vegetation which triggers an opening of the area south of the Parkway to the use of snowmobiles. Under current regulation [5] vehicles are prohibited in state parks unless allowed by unit specific regulations. At NLSRA, more specific regulations have been adopted but those regulations only allow for the opening of the area south of the Nancy Lake Parkway when snow depth is adequate to protect underlying vegetation.[6] The NLSRA specific regulation lacks flexibility to open specific areas or particular trails when conditions would allow use with only minimal impacts to resources. Given recent snowfall trends, DPOR needs flexibility to open areas or trails.

In recent years, NLSRA has not had sufficient snow depth to protect underlying vegetation in early winter and the area south of the Nancy Lake Parkway has not been open to snowmobiles during the late fall/early winter season. As a result, DPOR has received increased requests to authorize the use of snowmobiles to access private property. To provide this access, DPOR has authorized use of snowmobiles on specific trails or areas when snow conditions wouldn't allow opening the entire area south of the Parkway. Because the practice of authorizing restricted openings on these trails and areas is becoming more common, DPOR determined this issue needed to be addressed in a comprehensive manner. To do this DPOR will identify where restricted openings are appropriate and the criteria used to make the decision to open the trail or area. The standard is based on the depth of frost in the ground, ice on waterbody crossings, and enough snow to minimize impacts to the trail tread.

The standards for opening the area south of the Parkway and the North Rolly Lake snow trail have been viewed as somewhat arbitrary in the past. A new standard has been used in recent years by NLSRA staff to determine when the area has sufficient snow cover to protect the underlying vegetation. This standard is based on the water equivalency of the snow. When the water equivalency of the snow reaches 1.5 (roughly 18 inches of snow) the area south of the parkway and the North Rolly Lake snow trail are opened. This standard is repeatable and easily measured by staff.

Permitting Standards

The 1983 Plan did not identify the compatibility of specific uses and activities for the two land-use zones used in this plan. Nor did it include guidance for staff to use when adjudicating authorizations for many types of uses and activities. As a result, the permitting process is very cumbersome and time consuming for the public and agency staff alike. Ultimately, this plan seeks to provide a fair, efficient, and consistent permitting process.

This plan provides guidance for staff to follow when adjudicating applications for uses and activities within NLSRA and NLSRS.

[5] 11 AAC 12.020
[6] 11 AAC 20.555

Existing Unpermitted Uses

A recent dock survey indicates that hundreds of docks and other structures have been constructed or maintained on state waters within NLSRA. Of these, fewer than 30 received an authorization from DPOR as required by current regulation prior to their placement or construction within NLSRA.[7] Other than docks, common types of structures include: boat launches, decks, gabions, and shoreline revetments among other types. Based on the type and size of many of the docks or structures, many could have been authorized if the owner had applied for an authorization. Others, however, were of a size and type that are incompatible with the purpose of the land as public recreation land and would not have been authorized.
This plan establishes the policy DPOR will follow to address existing unpermitted structures.

Resource Impacts

Normal use of trails and roads has resulted in degradation of these routes and is impacting the adjacent natural habitats. Within the canoe trail system, portages were not originally sited and designed as sustainable trails and as a result these trails are not able to accommodate current use levels without degradation. The portages are incised for much of their length due to compacted or displaced soils. Exposed tree roots are common on these trails. Other segments of the portages are steep fall-line trails that cause sedimentation of waterbodies. Sedimentation and loss of lacustrine habitat is occurring where portage trails transition to water trails.

Impacts associated with hiking trails are similar to the canoe portages and result from poorly sited and developed trails impacting adjacent uplands, wetlands, and waters through erosion and sedimentation. Soil compaction and the exposure of tree roots are common on many of the existing trails. Authorized use of ORV's on Butterfly Lake Trail is resulting in degradation of some segments of the trail tread making it difficult for hikers to travel on these segments. Similar to the canoe trails, impacts to these terra trails occurred because the original trails were not sited and designed as sustainable trails.

Long-term storage of private property, including boats, on state-owned uplands and moorage of boats on state waters has resulted in impacts to riparian habitats at Lynx, Butterfly, and Red Shirt lakes. Impacts result from the repeated dragging of boats across the transition zone (from water to upland and vice versa), shading from stored property, and compaction of soils and loss of vegetation due to repeated use. Additional impacts are occurring to native soils at the storage and moorage area at Butterfly Lake as a result of loading of ORV's on boats. These impacts include soil compaction, rutting, loss of vegetation, and erosion of soil surface.

[7] 11 AAC 12.140

Impacts associated with vehicle use and improper maintenance of Lynx Lake Road is contributing to the sedimentation of adjacent uplands and degradation of the road surface. Improper maintenance of the road has resulted in an incised road surface with improper/inadequate drainage. Use of highway vehicles and ORV's on this road has caused rutting, puddle development, and washboarding of the road surface. Improper disposal of excess road material has occurred on state lands adjacent to the road causing sedimentation and loss of vegetation.

Improperly sited trails and facilities may impact cultural resources. Without site specific evaluation of a trail route or facility site, DPOR will not know if cultural resources are being impacted. Some areas that have a higher possibility of cultural resources are known, however, a comprehensive study of NLSRA and NLSRs have not been completed.

The final resource impact issue addressed in this plan is the degradation of resources related to camping outside of designated and hardened areas. The impacts of this use are similar to trails in that camping repeatedly in an area can lead to soil compaction, soil loss, vegetation loss, and possible impacts to fish, wildlife, and their habitats.

This plan recommends new trails and redevelopment of existing trails to enhance use and minimize resource impacts. All trails will be developed as sustainable trails consistent with the recently adopted DPOR sustainable trails policy. Consistent with existing statutes, a cultural resource survey should be conducted before any construction or improvement project within NLSRA and NLSRS.

Boat and Personal Property Abandonment

Boats and other types of personal property are being stored long term without benefit of a permit or abandoned in violation of current regulations.[8] In addition to an estimated 100 or more boats that are left unattended; other personal property such as fuel cans, batteries, lock boxes, etc are left unattended or abandoned. Commonly, the personal property left at boat storage sites is associated with the use of boats for access to private property; however, some of the boats and personal property may not be associated with private property access and may be left by people that frequently recreate in the area. Other types of personal property found abandoned include docks or dock sections, rafts, inflatable recreation structures, and boats. This type of abandoned property is primarily found on Nancy Lake where high levels of private ownership and recreational use occur.

This plan provides a process to differentiate between property that is properly stored for access to private land and abandoned property.

Recreational Facility Development

When properly sited, designed, and developed, facilities can accommodate use while at the same time minimizing impacts to the surrounding environment or neighboring private property. The type and location of facilities has a great influence on recreational opportunity and levels of use. They can change use patterns within a discrete area or can influence that use over a wide geographic area. DPOR must balance the rights and interests of inholders and other property owners in the area, with the public right to access and to recreate on state land and water. Principles that guide the site work and design of public facilities need to be included in this plan.

This plan identifies the management orientation for NLSRA and NLSRS and recommends facilities that will meet current and future recreational needs within the 20 year planning period.

[8] 11 AAC 12.140 and 11 AAC 18.010

Trails

Similar to facilities, the design use, standard of development, and location of a trail influences the type and level of use that will occur on the trail. A properly sited and developed sustainable trail will facilitate use, reduce maintenance costs, and minimize impacts to the surrounding natural and cultural resources. The majority of existing trails were not originally sited or designed as sustainable trails, and as a result the tread (useable linear surface) is being degraded by current types and levels of uses.

This management plan identifies existing trails that must be upgraded to sustainable trail standards and new trails that are needed to provide a diversity of recreational opportunities.

Chapter 4
Goals and Objectives

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Chapter 4
Goals and Objectives

This chapter provides the goals[1] and objectives[2] for the management of the NLSRA and NLSRS. Goals and objectives are consistent with the enabling statutes and mission statement for NLSRA. They have been developed to, and are intended to address the issues identified in the previous chapter or they represent an opportunity that needs to be addressed. Goals and objectives are arranged under the headings of "Issue Specific Goals and Objectives" and "Area-wide Goals" and are not listed in priority order.

Issue Specific Goals and Objectives

Issue: Access on Lynx Lake Road and Butterfly Lake Trail

Goal:

1. ~~Determine the appropriate types and level of access to private property that should be authorized to occur.~~ Enhance public access on Lynx Lake Road and Butterfly Lake Trail.
2. Enhance public access to the existing canoe trail and future terra trails and facilities in the southern portion of NLSRA.

Objectives:

1-1. ~~Within 5 years of the adoption of this plan, DPOR will conduct a study[3] to determine if DPOR should continue to authorize ORV access to private property, and if so, which property owners should be authorized access and how many permits should be authorized. The results of this study will be the basis for the determination to allow, prohibit, or restrict this use.~~ DPOR will actively monitor vehicle use during snow free periods to determine if that use is having an unacceptable level of impact to natural resources, infrastructure, or facilities. If DPOR determines an unacceptable level of resource degradation is occurring, vehicle use may be restricted or prohibited.

2-1. To enhance recreation opportunities, DPOR will place a high priority on the development of a small trailhead facility at the intersection of the existing

[1] Goal – A statement of basic intent or general condition. Goals are not quantifiable and do not have specific dates for achievement; they are long-term in orientation.
[2] Objective – A concise statement of what we want to achieve, how much we want to achieve, when we want to achieve it, and who is responsible for the work.

Chicken Lake Cross-Park Trail and Lynx Lake Road. It is intended that this trailhead facility be developed within 5 to 10 years of the adoption of this plan.

Issue: Personal Property Storage and Boat Moorage

Goal:

3. Determine the appropriate type and level of personal property storage and boat moorage that should be authorized to occur on state-owned land and water.

4. Minimize or eliminate resource impacts associated with long-term storage and moorage.

Objective:

3-1. ~~Within 5 years of the date of the adoption of this plan,~~ DPOR will actively monitor designated storage and moorage sites to determine if use is being conducted in a manner that is not causing significant impact to the resources. If DPOR determines an unacceptable level of resource degradation is occurring, vehicle use may be restricted or prohibited. ~~conduct a study to determine if DPOR should continue to authorize private property storage and boat moorage on state-owned land and water within NLSRA. The results of this study will be the basis for the determination to allow, prohibit, or restrict this use.~~[4]

4-1. Through this plan, DPOR will establish limits on the amount and type of personal property and boats that can be stored or moored on DPOR managed land and water.

Issue: Snowmobile Openings

Goal:

5. Allow limited or restricted openings of areas, trails, or routes appropriate for the use of snowmobiles.

6. Provide a standard for determining adequate snow cover to protect underlying vegetation at NLSRA and NLSRS.

Objective:

5-1. Through this plan, establish standards that DPOR will follow to allow limited openings of areas, trails, or routes within NLSRA and NLSRS to the use of snowmobiles.

6-1. Through adoption of this plan, establish water equivalency as the standard for determining adequate snow cover to open the area south of the Nancy Lake Parkway to the use of snowmobiles.

Issue: Off Road Vehicle Openings

Goal:

7. Allow limited or restricted openings of areas, trails, or routes to the use ORV's.

Objective:

7-1. Through this plan, establish the standards the DPOR will follow to allow restricted openings of specific trails and routes to the use of ORV's.

Issue: Permitting Standards

Goal:

8. Establish a fair and efficient permitting process that significantly reduces the time required for permit decisions.

Objective:

8-1. DPOR will provide expedited application review and decision for many of the common uses and activities.

8-2. Through this plan, DPOR will identify those uses that are incompatible with the primary function of the land and water as a public recreation area.

Issue: Existing Unpermitted Uses

Goal:

9. Address existing unpermitted structures in a manner that is fair and not an undue burden for people or the agency.

Objective:

9-1. Through this plan, DPOR will establish a process to address existing unpermitted structures in a comprehensive manner.

Issue: Resource Impacts

Goal:

10. Minimize the impacts of trails and facilities on natural and cultural resources while accommodating current and future anticipated uses and levels of use.

11. Foster public/private collaborative relationships that will enhance recreation opportunities for the public while building local support for the recreation area and site.

Objective:

10-1. DPOR should re-develop all existing trails to sustainable standards within the 20 year planning period.

10-2. DPOR should re-develop all facilities that are having a deleterious impact on natural resources within the 20 year planning period.

11-1. DPOR should establish an “adopt a trail” program within 5 years of the adoption of this plan.

Issue: Boat and Personal Property Abandonment

Goal:

12. Significantly reduce or eliminate abandonment of personal property, including boats, within NLSRA and NLSRS.

Objective:

12-1. Through this plan, DPOR will develop an expedited process to identify and remove abandoned property.

Area-wide Goals

Recreation Goals:

13. Provide a maximum diversity of outdoor recreation opportunities based on the natural values of the unit and its ability to sustain use without significant adverse effects to the natural resources.
14. Continue to provide a diversity of outdoor recreation opportunities on a year-round basis.
15. Maintain the quiet natural setting that is currently available on the two existing canoe trails.
16. Maintain a diversity of camping experiences that range from highly developed to primitive.
17. Provide destination oriented recreation opportunities.

Facility Goals:

18. New facilities shall be constructed in areas where they will diversify and enhance access and recreation opportunities and are readily accessible to the public.
19. New camping and public use cabin facilities shall be constructed where multi-modal access exists or is proposed for development.
20. Existing facilities shall be redeveloped to diversify and enhance recreation opportunities and diversify use.
21. Develop facilities that blend into the natural environment, are in keeping with the character of the area, and sited and designed to minimize visual and acoustical impacts to adjacent private property where situated in close proximity.
22. Maintain a system of public use cabins that are accessible by a diversity of methods and offer a diversity of recreational experiences.
23. Facility development will minimize negative impacts to natural and cultural resources.

Trail Goals:

24. Provide a system of sustainable trails that facilitate a diversity of recreation opportunities.
25. Provide trail users with signs at all trailheads that show the appropriate access methods for each trail.
26. Where appropriate, trails should be developed as multi-use trails.
27. New trails will be developed to increase connectivity of trails and to provide destination oriented recreation within NLSRA and should be looped trails.
28. Re-developed existing trails, and route all new trails, to minimize impacts to natural and cultural resources.

Resource Protection Goal:

29. Uses, activities, trails, and facilities will avoid negative impacts to cultural and natural resources to the greatest extent practicable.

Access Goals:

30. Maintain and enhance public access to recreation opportunities where appropriate.
31. Continue to provide reasonable access to private property within NLSRA.

Interpretive Planning Goal:

32. Develop an interpretive plan for NLSRA and NLSRS.

Chapter 5
Area-wide Intent, Guidelines and Standards

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CHAPTER 5
Area-wide Intent, guidelines and standards

Introduction

This chapter will provide the overarching management intent and guidelines for the state-owned land and water within NLSRA and NLSRS. Consistent with the Framework, the area-wide intent and guidelines identified here are used as the basis for allocating lands and resources into land-use zones. The land-use zones are identified in Chapter 6. The management intent provided below is intended to guide DPOR when implementing guidelines and recommendations contained in this and subsequent chapters of this plan. The area-wide intent and guidelines in this chapter coupled with the specific guidelines for uses and activities contained in Chapter 6 and the management and facility recommendations contained in Chapter 7 will guide DPOR management for the NLSRA and NLSRS. Implementation of these guidelines will be dependent upon adequate staffing and funding.

This plan substantially maintains the management orientation found in the 1983 plan with some changes. It recognizes the seasonal recreational use patterns that have occurred over decades in these park system units. Summer recreational opportunities will remain essentially non-motorized except for use of motorboats (internal combustion and electric) and airplanes on specific waterbodies and authorized use of ORVs on the Lynx Lake Road and possibly Butterfly Lake Trail. In winter, the area south of Nancy Lake Parkway will continue to provide multiple recreation opportunities including the use of snowmobiles when snow conditions are sufficient to protect the underlying vegetation. Winter use north of the Nancy Lake Parkway will remain non-motorized with the exception of motorized use on the North Rolly Lake snowmobile trail and on the frozen surface of North Rolly Lake. During the late fall and early winter seasons, the use of ORV's for training sled dogs and use of snowmobiles or ORV's for public access ~~to private property~~ may be allowed via a restricted opening of an area or trail or on the frozen surface of Nancy, Lynx, Butterfly, and Red Shirt lakes. ~~While not a right, this plan recognizes and allows for vehicle access to private property on Lynx, Butterfly, Skeetna, and Delyndia lakes on a short-term basis; however, it also recommends vehicle access be studied in greater detail to determine how access to private property should be addressed on a long-term basis. The same study will address storage of personal property and moorage of boats long-term on state-owned land and water.~~

Applicability to Private Land

Intent and guidelines contained in this plan only apply to state land within NLSRA and NLSRS and *do not apply to private land within NLSRA*. However, the Matanuska Susitna

Borough has designated a Special Use District (SPUD) and adopted Borough Code that affects the use of private land within the SPUD. Borough Code (Chapter 17.04) applies to private land within the exterior boundary of NLSRA. All facilities and uses provided in this plan and determined "compatible" are consistent with Borough Code. Similarly, uses determined "incompatible" in this plan are determined to be inconsistent with Borough Code.

Area-wide Management Intent

Area-wide management intent indicates a desired future condition for both the NLSRA and NLSRS. Consistent with the intensive public use management emphasis provided in the Framework, NLSRA and NLSRS will be managed to provide a diversity of recreational opportunities; however, management intent differs between the two areas. The guidelines and recommendations contained in this plan implement and are consistent with this management intent.

NLSRS Intent

The intent is to modify the natural environment to provide site specific recreational opportunities that facilitate road based camping; interpretation of natural and cultural resources; nature and wildlife observation; opportunities to engage in fishing and water sports on Nancy Lake; and, access to adjacent private property. NLSRS will be managed to:

- Continue to facilitate moderate to high density public recreation.
- Accommodate high levels of recreation use through developed facilities.
- Expand trail based access to wildlife viewing and recreation.
- Continue to be the primary point of public access for recreation on Nancy Lake.
- Continue to serve as the primary access point to adjacent private lands on Nancy Lake that do not have road access.
- Incorporate ADA accessible and barrier free standards into all new and redeveloped facilities.

NLSRA Intent

The intent is to maintain the high quality natural character for the majority of the area while maximizing recreational opportunities that reflect existing seasonal recreation patterns. The area will be managed to emphasize trail based, public use cabin, and campground recreation opportunities. NLSRA will be managed to:

- Limit moderate to high levels of facility development to the area adjacent to Nancy Lake Parkway and South Rolly Lake Campground.
- Provide a low level of facility development in all other areas.

- Expand and enhance non-motorized trail recreation opportunities.
- Expand and enhance public use cabin system.
- Facilitate low level dispersed recreation opportunities in the area south of the Parkway during snow free periods and somewhat higher use levels and densities in the winter when snow conditions allow use of snowmobiles.
- Incorporate ADA accessible and barrier free standards as appropriate into new and redeveloped facilities.
- Continue to provide year-round non-motorized recreation opportunities north of the Parkway with the exception of motorized use on one snow trail and the frozen surface of North Rolly Lake.
- Continue to provide vehicle access to private property via the Lynx Lake Road and Butterfly Lake Trail at current levels consistent with current policies until a study is conducted and any recommended changes to this access are made.
- Facilitate multiple uses on trails where determined appropriate.

Area-Wide Guidelines and Standards

Consistent with the intent for the unit, management guidelines direct the current and future management decisions by DPOR. Management guidelines involve specific courses of action that are consistent with and are necessary to the implementation of the management intent of the unit. Together with the management intent, they represent DPOR's management policy for these two units of the state park system. Certain guidelines necessary to implement the plan will be adopted as regulations subsequent to the adoption of the plan.

In some instances standards are provided where specific criteria must be met for an authorization to be approved by DPOR or for a use to continue. These standards supplement area-wide guidelines and must be followed by DPOR when adjudicating an application for a use within NLSRA and NLSRS. Similar to the guidelines, certain standards necessary to implement the plan may be adopted as regulation subsequent to the adoption of the plan.

The following area-wide guidelines address: access, archaeological and cultural resources, commercial structures, facilities, fish and wildlife management, geocaching, marina, ORV's, permitting, private structures (existing and new), property storage and moorage, public use, roads, trails, and vegetation management. These guidelines will be applied to state land and water within NLSRA and NLSRS.

Access

DPOR will ensure that access to recreation opportunities is maintained at NLSRA and NLSRS. The Nancy Lake Parkway and NLSRS will remain the primary means of access into NLSRA. The lesser known and used Lynx Lake Road will remain a key access route for

property owners and the recreational users that know of its existence. In the near-term, trailheads and access roads to proposed facilities will be developed within the area around the Nancy Lake Parkway with the exception of a trailhead to be developed at the intersection of Chicken Lake Cross-Park Trail and Lynx Lake Road. Long-term, if access to the canoe trail system becomes limited when current and proposed access facilities on the Parkway are at or over capacity, a new access facility may be developed in the area of Lynx or Frazer lakes.

Management Guidelines:

- DPOR will continue to accommodate, and in the case of NLSRS facilitate, access for recreation opportunities; however, the type, level, method, and location of access may change based on continued monitoring of impacts to resources, facilities, and infrastructure by DPOR. If DPOR determines an unacceptable level of resource degradation is occurring, vehicle use may be restricted or prohibited. ~~DPOR will continue to accommodate, and in the case of NLSRS facilitate, access to private inholdings and private land contiguous or adjacent to the NLSRA; however, the type, level, method, and location of private access may change for some private property owners within and adjacent to NLSRA in the area of Butterfly Lake based on the results of a detailed study on access.[1] This study will also address the appropriateness of storing personal property long-term on state land and storage and moorage of boats long-term on state lands and waters.~~
- In the near-term, public use of highway vehicles shall be allowed without authorization on Lynx Lake Road up to the new traffic control device (gate) that will be installed at the new trailhead at the intersection of the Chicken Lake Cross-Park Trail and Lynx Lake Road.[2] Long-term it may become necessary to allow highway vehicle access on all, or a portion of, Lynx Lake Road based on future demands for access to recreational opportunities. The specific indicator and standard that will prompt DPOR to look at increased access in the future are provided below in the "Facilities" section.
- Trailhead facilities should be developed where they enhance access to existing and proposed terra and water trails.
- DPOR will work with the ADNR Southcentral Region Office to establish a public easement on the Lynx Lake Road to ensure access for the public and private property owners is secured.

Archaeological and Cultural Resources

Consistent with AS 41.35.070, if public construction projects are undertaken, the Office of History and Archaeology (OHA) may conduct a site review or more detailed investigation to determine if archaeological or cultural resources are present at a project site.

[1] The access study is discussed in greater detail on page 7 - 8 of Chapter 7 unit specific management guidelines for the "Lakes Unit."

[2] See unit specific management guidelines contained on page 7 - 10 of Chapter 7.

Management Guidelines:

- As part of the project development process, OHA shall be provided an opportunity to review project and site information. Based on this information, OHA may determine that a site review or detailed investigation is necessary prior to commencement of ground disturbing activities related to trail or facility development.
- OHA should be consulted prior to removal of existing structures to determine if the structure qualifies as "historic."

Commercial Structures

Some small commercial structures already exist within NLSRA. Currently these structures are used to operate a canoe rental operation and to store boats. Other small commercial structures such as docks that allow moorage of a boat associated with the use of an upland commercial property or for a fee may be appropriate and may be authorized.

Management Guidelines:

- All commercial activities are subject to permitting requirements of DPOR.
- Commercial structures[3] that facilitate recreation opportunities may be authorized at NLSRA. These structures shall be small in scale and will not interfere with other forms of public recreation.
- Long-term placement and storage of commercial property that facilitates public recreation may be authorized. Commercial property placement and storage is limited to that necessary to conduct the recreation business.
- All commercial property, including structures, will be removed in its entirety when the term of the permit is reached and it is not renewed, or when the commercial permit is revoked.
- Large scale commercial development including structures that provide multiple rooms for overnight accommodation such as hotels, lodges, or other similar structures will not be authorized.
- Commercial uses within NLSRA and NLSRS may result in a conversion of use under the provisions of Land and Water Conservation Fund regulations. If so, the conversion must occur before a permit is issued and the applicant is responsible for paying the costs associated with the conversion.

Facilities

Public facilities will be developed in areas where they are accessible to the public and offer a diversity of recreational opportunities. For the 20 year planning period, it is intended that all

[3] The term "structure" as used in this plan has the same meaning as the definition in 11 AAC 12.340(26). The term "structure" modified by "commercial" refers to structures constructed, built, transported, or maintained within NLSRA and NLSRS as part of a commercial business.

facilities that accommodate moderate to high levels of use and concentrated recreation activities be located at the NLSRS and the area around the Nancy Lake Parkway and South Rolly Lake Campground within NLSRA. Facilities that accommodate low levels of recreational use and dispersed recreation opportunities may be located in other areas.

In the near term (5-10 years), facility development will be focused within the Nancy Lake Parkway Unit. This existing paved road provides the best access to proposed facilities and concentrates this type of use in an area that currently receives moderate to high use levels seasonally. NLSRS similarly has improved access and currently receives moderate to high use levels but it is a small area so opportunities for new facilities are limited. Facility development may occur at other locations within NLSRA but these developments will be small in scale and will facilitate low levels and densities of use with a focus on maintaining the natural character of the area where they are developed.

Long-term (10-20 years), if recreational needs surpass the capacity of current and proposed facilities within the Nancy Lake Parkway Unit, DPOR will re-evaluate the need for more facilities and access into NLSRA. If necessary, facility development may include the development of public facilities (e.g. parking areas, boat launches, trailheads, etc.), roads, or trails in areas that have seen little public facility development in the past.

Management Guidelines:

General

- Facility development will promote low density dispersed recreation opportunities throughout most of the NLSRA, although moderate to high density recreational uses should be accommodated in easily accessible areas in close proximity to the Nancy Lake Parkway and the South Rolly Lake Campground.
- Nancy Lake State Recreation Site facility developments will promote moderate to high density site specific recreational use.
- If DPOR determines that demand for access to the Lynx Lake Loop Canoe Trail is resulting in the Tanaina Lake trailhead being over capacity for significant periods of time during the summer, and thus restricting access to the canoe trail, DPOR will consider redeveloping the existing access at Tanaina Lake or developing a new access site and canoe launch in the area of Lynx or Frazer lakes.
- If the level of recreational use outstrips the ability of existing and proposed facilities to reasonably accommodate the use, DPOR will evaluate the need to develop new or expanded access and facilities in other areas of NLSRA. Because of the existing road, DPOR should first evaluate providing access and recreational opportunities in the area of Lynx Lake Road and Butterfly Lake Trail.
- All facilities will be sited, designed, and constructed in a way that minimizes impacts upon the natural environment. Within the Natural Zone; maintaining the high quality natural setting will be a priority when developing new facilities or improving or redeveloping existing facilities.
- All facilities designed and developed by DPOR will be park-like in appearance and to provide a quality experience for the recreating public. They will be:
    - Designed as a pioneer atmosphere building style and will fit within the natural landscape
    - Developed with materials and colors that compliment the natural environment
    - Utilize a sustainable design
    - Require low maintenance
- Facilities management will focus on addressing negative environmental impacts and enhancement of recreational opportunities at existing facilities. New facilities will be designed and developed as funding and necessary staff becomes available.
- Facilities will be designed and developed with consideration given to surrounding private properties. Where practicable, visual, acoustical, and spatial buffers will be designed to minimize impacts to private property.
- Native vegetation will be utilized to the greatest extent practicable in landscaping around new or redeveloped facilities.

Public Use Cabins and Host Cabins

- New public use cabins should be developed throughout the NLSRA. These new cabins will provide new opportunities that are currently not available or provide existing opportunities in areas where they are currently not available (e.g. barrier free and ADA accessible cabins, non-motorized access only cabin(s), or new cabins on existing or expanded areas of the canoe trail).
- Host cabins that provide housing for summer volunteers shall be provided where determined appropriate. Factors for determining the location of host cabins include: identified need for oversight through on-site presence and the ability to provide increased seasonal maintenance of new or existing facilities such as campgrounds or launch areas. These cabins should be open for public use once the hosts have left for the season.

Campsites

- Existing campsites immediately adjacent to portages should be relocated away from the portages to enhance both the camping and canoeing experience.
- New campsites should be developed on lakes where multi-modal access is provided via new and existing trails; however, the location of these new sites will be carefully considered to ensure that low density and remote opportunities are available at these sites.

Fish and Wildlife Management

Activities that enhance resident fish and wildlife populations for the use and enjoyment of people will be encouraged and should receive expedited review by DPOR. Similarly, activities to reduce invasive or nuisance species will also be encouraged and should receive expedited review by DPOR to ensure plans to address these species are not delayed unnecessarily.

<u>Management Guidelines:</u>

- ADF&G should be consulted prior to the development of new trails and facilities to determine how impacts to fish or wildlife and their habitats could be avoided or minimized.
- Scientific and research activities require an authorization from DPOR prior to the start of the activity.
- Fisheries and wildlife research will be encouraged when in accord with established fisheries and wildlife research principles particularly where the research is pertinent to resource management issues within the recreation area.
- Baseline ecological studies that enhance knowledge of fish and wildlife resources are encouraged. Studies that focus on water quality, identification of salmon spawning and rearing habitats, and water bird nesting and brood rearing habitat will be encouraged.
- Fisheries enhancement and restoration activities will continue.

Geocaching

Geocaching can occur when authorized subject to permit conditions and existing policies and procedures. (Director Policies and Procedures #18000; *Geocaches in State Parks*) In addition to the stipulations on geocaching identified in the existing policies and procedures, geocaches within NLSRA and NLSRS are subject to the following guideline.

Management Guidelines:

- Geocache will not exceed 400 cubic inches.

Marina

Until recently, a commercial marina was in operation on Nancy Lake. This plan allows for a single commercial marina to be constructed on Nancy Lake adjacent to private upland property. A marina may include structures for launching and retrieving boats, mooring boats, and may include fuel services. Private or commercial marinas are prohibited on all other waterbodies.

Management Guidelines:

- The entirety of the marina must be located within the riparian interest of the upland landowner/applicant.
- Information documenting the need for a marina and the design of the necessary structures must be submitted at the time of application.

ORV's

ORV use remains prohibited by general regulations (11 AAC 12.020), except their use may be authorized by the DPOR Director under 11 AAC 18 or allowed ~~without authorization~~ via restricted openings in several specific instances. The exceptions to the general prohibition are:

1. Use of an ORV may be authorized as provided in this plan and regulations specific to NLSRA. DPOR will actively monitor vehicle use during snow free periods to determine that use is having an unacceptable level of impact to natural resources, infrastructure, or facilities. If DPOR determines an unacceptable level of resource degradation is occurring, vehicle use may be restricted or prohibited.

2. Access to private properties ~~can continue to~~ may be authorized ~~consistent with current policies~~ via Lynx Lake Road and possibly on Butterfly Lake Trail. ~~for a period of 5 years or until a detailed study is conducted that analyzes the appropriateness of continued ORV access.[4] Until the study is completed and changes to current policy~~

[4] ~~ORV access is subject to change pending the results of the study proposed above and discussed in greater detail in Chapter 7 on page 7 – 8.~~

~~are made,~~ DPOR ~~will~~ may ~~continue to~~ authorize use of ORV's for access, ~~to private property at current levels~~, however DPOR will actively monitor ORV use during snow free periods to determine if the use is having an unacceptable level of impact to natural resources, infrastructure, or facilities. If DPOR determines an unacceptable level of resource degradation is occurring, DPOR may restrict or prohibit the use."

3. Access to Red Shirt Lake via the East Red Shirt Lake Trail through a special restricted public opening during periods of winter when snow conditions do not allow the use of a snowmobile.
4. Use of an ORV on Nancy Lake Parkway and South Rolly Lake Campground access loop during late fall and early winter periods to train sled dogs may be authorized.
5. Use of ORV's in support of an authorized commercial operation may be authorized.
6. Use of an ORV on the frozen surface of Nancy, Lynx, Butterfly, and Red Shirt lakes will be allowed via a restricted opening~~without authorization~~.
7. Access for management, research, maintenance, and emergency services will be allowed without authorization when conducted by DPOR staff or agents, and may be authorized when conducted by other local, state, or federal agencies or non-government agencies, groups, or individuals.
8. Access to public use cabins by mobility impaired persons may be authorized.

Management Guidelines:

- ORV access may be authorized if it is determined a necessary part of a commercial operation that is authorized within NLSRA and NLSRS. The number of trips where an ORV is used for commercial purposes should be limited to the minimum number necessary to conduct the business.
- Use of an ORV on the frozen surface of a waterbody will be allowed ~~without authorization~~ via resticted opening on Nancy, Lynx, Butterfly, and Red Shirt lakes.

- All ORV's authorized by permit to operate in NLSRA will:
  - Meet the current definition of Off Road Vehicle in 11 AAC 20.990(21).
  - Have a properly functioning factory installed muffler.
  - Affix a decal provided by DPOR in a conspicuous location on the upper visible portion of the left rear fender.
- A copy or the original authorization permitting use of ORV's shall be required to be carried by a member of the party.
- Authorizations shall include a condition that stipulates the permit only authorizes access ~~to private property~~to and from a destination, not recreational use of ORV's.
- Authorizations are valid on state-owned lands only. Access across private church camp property is not guaranteed or authorized by DPOR permit.

Permitting

A timely and efficient permitting process will be implemented by DPOR. The intent is to significantly reduce the time for application review and permit issuance for a majority of common lower intensity uses while allowing a more rigorous review of larger, more complex applications. Three categories of permits – Area-wide Permits, General Permits, and Individual Permits – have been developed and are included in Chapter 6.

Private Structures[5]

Existing Unpermitted Structures

All structures on or within state water that are in place or under active construction at the time of the adoption of the Management plan that do not conform to the standards of the adopted plan are to be considered non-conforming structures. Non-conforming structures that do not conform to the standards for "new structures" are considered incompatible uses. These non-conforming and incompatible structures may be maintained but the extent of nonconformity is not to be increased. Existing unpermitted structures that conform to the guidelines and standards included in the "New Structures" section below may be permitted after the fact by DPOR based on a review of all the required project information. An "After the Fact" permit requires the appropriate application be submitted with all supporting documentation and project information in addition to any applicable application fees.

[5] The term "structure" as used in this plan has the same meaning as the definition in 11 AAC 12.340(26). The term "private structure" ~~modified by "private"~~ refers to structures constructed, built, or transported into NLSRA and NLSRS for private non-commercial use.

Following the adoption of the Management Plan, DPOR will notify all property owners within and contiguous to the NLSRA boundary that new standards have been adopted for docks and other structures.[6] If a non-conforming structure is identified adjacent to a private parcel, DPOR will notify the private property owner of record that a non-conforming structure exists and will specify the nature of the non-conformity. The notice will also state what actions could be taken to bring the structure into conformance with the newly adopted standards for new structures. This notice of non-conformity will constitute the official notice to the property owner by DPOR.

~~The standards described below are to be followed when adjudicating applications for structural modification of non-conforming structures:~~

1. ~~Maintenance and repair of a non-conforming structure may be allowed consistent with a permit issued by DPOR and is subject to the following standards:~~
    - ~~a. The maintenance and repair may not exceed 50% of the square footage of the structure during any consecutive period of 12 months. All maintenance and repair of a structure must occur within the original footprint of the structure; enlarging or expanding the non-conforming structure is prohibited.~~
    - ~~b. A structure that sustains damage up to 50% of the original square footage by natural, accidental, or malicious actions may be repaired or replaced. All work to repair the structure must occur within the footprint of the original structure.~~
    - ~~c. A structure that sustains damage greater than 50% of its original square footage cannot be replaced. All remaining portions of the structure must be removed in its entirety and the site restored to the greatest extent practicable to its natural condition. Any new structure constructed to replace the non-conforming structure must be constructed to conform to the new standards.~~
2. ~~Expansion of non-conforming structures:~~
3. ~~Existing non-conforming structures shall not be expanded beyond the original footprint of the structure.~~
4. ~~Relocation of non-conforming structures:~~
5. ~~Relocation of a non-conforming structure may be allowed by permit issued by DPOR if otherwise consistent with these standards. No portion of a relocated structure shall be left at the original site when the structure is relocated.~~
6. ~~Reduction or modification of non-conforming structures:~~

[6] All landowners must receive an authorization from DPOR prior to constructing a new dock or maintain~~ing~~ an existing dock within NLSRA consistent with existing regulation (11 AAC 12.140). Until the NLSRA Management Plan is adopted DPOR will follow the *Mat-Su Area State Parks "Interim" Dock Policy, September 2008 (Updated May 2, 2012)* when adjudicating applications for dock structures.

~~7. Reduction in the size or modification of a non-conforming structure, other than modifications addressed in a, b, or c of this section, may be authorized consistent with a permit issued by DPOR.~~

Management Guidelines:

- Maintenance and repair of an incompatible non-conforming structure is allowed subject to the following standards:
  - The maintenance and repair may not exceed 50% of the square footage of the structure during any consecutive period of 12 months. All maintenance and repair of a structure must occur within the original footprint of the structure; enlarging or expanding the non-conforming structure is prohibited.
  - A structure that sustains damage up to 50% of the original square footage by natural, accidental, or malicious actions may be repaired or replaced. All work to repair the structure must occur within the footprint of the original structure.
  - A structure that sustains damage greater than 50% of its original square footage cannot be repaired or replaced without conforming to the new standards and acquiring the necessary authorizations.
- Existing non-conforming structures shall not be expanded beyond the original footprint of the structure.
- Relocation of a non-conforming structure may be allowed by permit issued by DPOR if otherwise consistent with these standards. No portion of a relocated structure shall be left at the original site when the structure is relocated.
- Reduction in the size or modification of a non-conforming structure, other than modifications addressed under the first management guideline above, may be authorized consistent with a permit issued by DPOR.

New Structures

DPOR will continue to authorize private non-commercial structures on or within state water that facilitate access to public water from private property within or contiguous to the NLSRA boundary. These uses ~~are considered compatible and~~ may be authorized if ~~they are~~ consistent with the guidelines below and the compatibility conditions provided in chapter 6.~~standards provided below.~~ All structures not conforming to ~~these standards~~ plan guidelines or compatibility conditions are considered incompatible and are not to be authorized.

Management Guidelines:

- Private structures must be authorized by permit prior to being placed or constructed within NLSRA.

- Only structures that facilitate access to navigable water or a water dependant recreational use from private uplands will be permitted within NLSRA. Structures that facilitate non water-dependant uses will not be authorized.
- A person must own land within or contiguous to NLSRA in order to be authorized to place a structure on or within a waterbody within NLSRA.
- To increase the safety for winter recreational use, particularly use of snowmobiles or other motorized vehicles on the frozen surface of a waterbody, a reflective marker must be affixed to any structure, new or existing, that remains in or on a waterbody between October 1 and ice-out of the following year.

Property Storage and Moorage

Storage and moorage associated with reoccurring access and recreational use ~~to private property~~ may continue to be authorized by the Director under 11 AAC 18 at designated sites ~~for private property at owners~~ on Lynx, Butterfly, Skeetna, ~~Delyndia,~~ and Red Shirt lakes. Currently, the size of these existing sites is considered appropriate to meet the needs of the recreating public, however, DPOR may re-evaluate these sites to determine if the needs of the recreating public are being met and may consider expanding these sites if the resources are not being significantly impacted. DPOR will actively monitor these sites to determine if use is having an unacceptable level of impact to natural resources, infrastructure, or facilities. If DPOR determines an unacceptable level of resource degradation is occurring, DPOR may restrict or prohibit the use. No more than 2 boats per person will be authorized for long term moorage or storage.~~for a period of 5 years or until the study identified in the "Access" section above is completed and changes to the current policy are made. Until the study is completed and changes to current policy are made, DPOR will continue to authorize use of ORV's for access to private property at up to the numbers indicated below. This cap will allow DPOR to continue to allow these uses at, and slightly above, current levels until the issue of access is addressed comprehensively based on the results of the access study.~~ An authorization for moorage and storage will include the appropriate Group B Compatibility Conditions identified in Chapter 6. See Map 6 on page 5 - 19 for a depiction of the storage and moorage sites.

Management Guidelines:

- ~~Storage and moorage associated with reoccurring access to private property may be authorized by the Director under 11 AAC 18 at designated sites for private property owners on Lynx, Butterfly, Skeetna, Delyndia, and Red Shirt lakes. See Map 6 on page 5 - 19 for a depiction of the storage and moorage sites.~~
- Storage and moorage associated with reoccurring access to private property may be authorized by the Director under 11 AAC 18 at designated sites on Lynx, Butterfly, Delyndia, and Red Shirt lakes.
- The number of authorizations for storage and moorage on state lands and waters shall be limited to the number that, based on the judgement of DPOR staff, can reasonably fit within designated boat storage areas without causing significant deleterious impacts to the natural resources.
- No more than two (2) boats per person may be authorized for long term storage or moorage.
- Within NLSRA, the only lake where-barges[7] may be moored is Butterfly Lake. The number of barges that may be authorized to moor at this location is limited to not more than eight – the number that existed on June 5, 2009. Additional barges will not be authorized.
- Raft-barges may not be altered or rebuilt larger than what existed on June 5, 2009.
- Raft-barge flotation shall be of materials which will not become waterlogged or sink when punctured. Closed cell (extruded) expanded polystyrene or equivalent material of good quality and manufactured for marine use is recommended. No unexposed foam flotation will be authorized in any future raft upgrades.

~~The standards described below are to be followed when adjudicating an application for the storage of property or moorage of a boat.~~

~~Standards:~~

~~1) The number of authorizations for storage and moorage on state lands and waters shall be limited as follows:~~

~~i. 30 authorizations for storage and moorage on Delyndia Lake (includes storage and moorage for access to Delyndia and Skeetna lakes).~~

~~ii. 30 authorizations for storage and moorage on Red Shirt Lake (includes storage and moorage for access to Cow Lake).~~

~~iii. 10 authorizations for storage and moorage on Lynx Lake.~~

~~2) No more than one boat per private lot may be authorized for long term storage or moorage.~~

[7] Raft-barges are defined as floating dock-like structures, either motorized or non-motorized, that are not permanently affixed in any location, and are primarily used to transport small vehicles such as ORVs, equipment, or supplies that otherwise would not fit in a conventional boat across water. Raft-barges are typically too large and heavy to remove from the water after each use.

3) ~~The maximum length of a stored boat will not exceed 16 feet in length or 10 feet in width except for canoes which cannot exceed 20 feet in length.~~

4) ~~All boats required to be registered by other law, including barges, will be required to have a current registration displayed on the boat.~~

5) ~~Storage of boat trailers shall be prohibited year-round.~~

6) ~~A NLSRA specific decal will be required to be affixed to the upper visible portion of the bow of the boat.~~

7) ~~All gas containers shall be metal containers approved for marine use with a maximum capacity of 3 US gallons and shall be clearly marked with the owners name, current address, and current telephone number.~~

8) ~~All gas containers are required to be removed from a boat moored on the water at a designated site and stored consistent with subsequent standards on the adjacent uplands.~~

9) ~~Personal property storage is limited to one metal fuel container, oars, engine, battery (if electric trolling motor is used), and personal floatation devices.~~

10) ~~Spill response equipment, including absorbent pads, should be provided at designated storage and moorage areas.~~

11) ~~All personal property, including motors when not in use, must be stored within a single metal container with a volume not to exceed 16 cubic feet or within, or completely under, an authorized boat.~~

Public Use

Opportunities for the public to engage in recreation will be enhanced, particularly where highly developed access currently exists. It is intended that moderate to high levels and densities of use be accommodated in nodes or areas adjacent to the Nancy Lake Parkway and the NLSRS. These areas currently have the highest level of development and are well known to the public. Access to recreation opportunities in the southern portion of NLSRA will be enhanced through development of a new trailhead at the intersection of the Chicken Lake Cross-Park Trail and Lynx Lake Road. Where new facilities are developed and existing facilities are redeveloped in close proximity to private properties, DPOR will consider the impacts of the public use on the adjacent private properties. Impacts of public use should be mitigated through the use of visual and acoustical buffers where practicable.

Management Guidelines:

- Use of the recreation area by a diversity of people with different recreation preferences and levels of ability will be facilitated. Opportunities will range from providing self reliant rustic and remote campsites to ADA accessible, barrier free walkways and public use cabins. Trails will provide a diversity of opportunities to enjoy the natural setting and interpret the diverse history and natural features.

- Impacts from public use will be monitored to determine what management actions are needed to address impacts to resources or private lands.
- A Special Park Use Permit is required for some uses. A written determination consistent with procedures at 11 AAC 18.0259(c)(1-5) will be developed for each activity that requires a permit.
- A prohibition on the continuous or repetitive use of motorized uses between the hours of 11p.m. and 7 a.m. shall remain in effect.
- Interpretation of cultural and natural resources will be encouraged.
- Horses may be allowed on designated trails but only after a determination that their use will not degrade the trail tread or adjacent natural resources. Their use should be closely monitored to determine if their use is degrading the trail.
- Camping shall be restricted to designated campsites only.
- Bikes may be allowed on designated trails.

Roads

No expansions or extensions of existing roads or construction of new roads is intended during the 20 year planning period. However, if the need for access to recreational opportunities exceeds the availability opportunities conceived in this plan, DPOR may consider the development, extension, or expansion of roads if necessary to provide access to recreation opportunities.

Trails

Trail orientated recreation will be enhanced through redevelopment of existing trails and development of new trails. With few exceptions, new trails will be developed as looped trails to increase connectivity of the trail system and where possible will provide destination oriented recreation opportunities. With few exceptions, trails should be designed and developed to support multiple uses. DPOR will balance the redevelopment of existing trails to sustainable trail standards with development of new trails that expand recreation opportunities.

Management Guidelines:

- Terra trails north of the NLP should remain non-motorized but could be considered for multiple-use where appropriate. Snow trails in this area should be restricted to skiing and skijoring with the exception of motorized use on the existing snowmobile corridor and frozen surface of North Rolly Lake.
- Trails (terra, water, and snow) should be developed as looped systems with an emphasis on connectivity. Where possible they should provide destination orientated recreation opportunities such as campsites, picnic area, overlooks, viewing platforms, public use cabins, and shelters.
- The Lynx Lake Loop Canoe and Pioneer Loop canoe trails should be re-developed to a class 3 water trail. The tread of the trail should be sufficiently wide enough to accommodate canoe carts.
- An “Adopt a Trail” program should be started at NLSRA to allow groups or individuals to build and maintain trails, or segments of trails, consistent with Trail Management Objectives and Prescriptions provided by DPOR.
- All new trails and all redeveloped/upgraded trails will be developed as sustainable trails consistent with DPOR Trail Management Policy (DPOR 2009).
- Emphasis will be on providing multiple use opportunities of existing and new trails. However, not all trails will be designed or developed to support multiple uses.
- Trails management will focus on addressing negative environmental impacts and enhancement of recreational opportunities on existing trails. New looped trails and interpretive trails will be designed and developed as funding and necessary staff becomes available.
- Trails will be developed to a standard that will facilitate current and future use by a diversity of recreational enthusiasts.

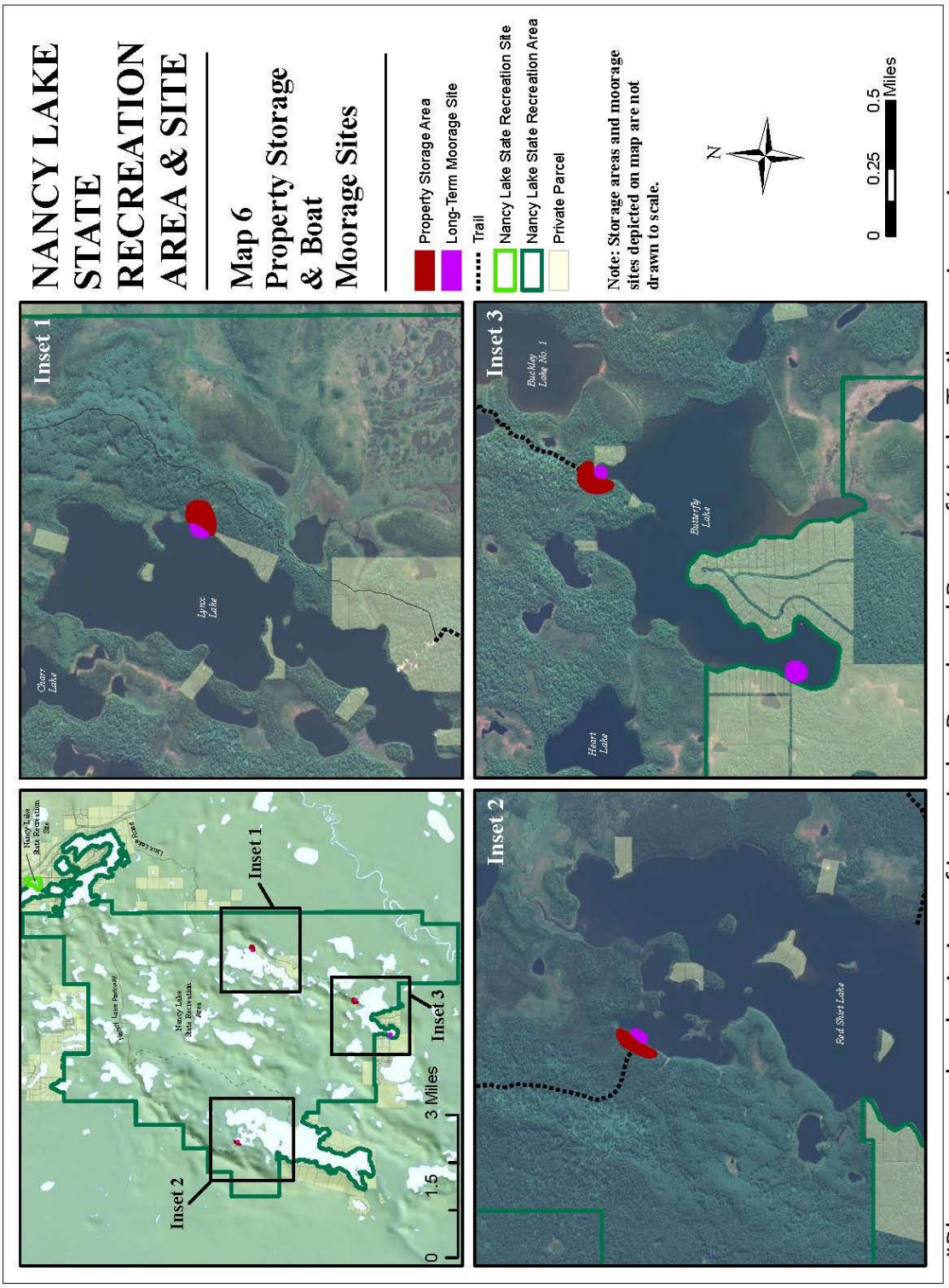
Vegetation Management

Vegetation plays an important role in facility development, fire protection, and aesthetics of an area. DPOR will use native vegetation to the greatest extent practicable around new and redeveloped facilities. Vegetation will be actively managed to reduce the risk of wildfire spread and increase safety for users of these two units of the park system.

Management Guidelines:

- Vegetation will be managed to provide safety to recreating public and defensible space around structures. Hazard trees may be removed around trails and public facilities.
- Vegetation may be manipulated, including the removal of a large number of a single or multiple species of trees and shrubs, to manage forest resources or to control the spread of wildfire or invasive species.
- Native species and plants will be used in landscaping projects to the maximum extent practicable. Non-native species will only be used where their use will minimize or reduce environmental impacts and the spread of the species to adjacent natural areas can be controlled.

Map 6: Property Storage and Boat Moorage Areas



*Please note the depiction of Lynx Lake Road and Butterf/y Lake Trail crossing private property will not be shown on the final plan maps.

Chapter 6
Land Use Zones, Management Guidelines and Compatibility of Uses, and Permit Categories

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Chapter 6
Land Use Zones, Management Guidelines and Compatibility of Uses, and Permit Categories

Introduction

This chapter accomplishes three primary functions. First, it allocates lands and resources into the two land-use zones used in this plan. Second, it provides more detailed management direction for the land-use zones by determining the compatibility of many uses and providing specific management guidelines that will be followed by DPOR. Finally, it establishes three categories of permits that will be used within NLSRA and NLSRS. Taken together, this chapter forms the basis for determining what uses are appropriate within these park system units and how certain uses should be authorized.

Land Use Zones

To further clarify the management intent and to satisfy policies contained in the Alaska State Park System: Statewide Framework (Framework), state land and waters within units of the state park system are classified within one of four land-use zones. The allocation of lands and waters into a land-use zone is based on the area-wide intent, guidelines, and standards contained in Chapter 5.[1] Lands and waters within NLSRA and NLSRS are allocated into either a Natural Zone or a Recreational Development Zone. These are the same two zones used in the 1983 Plan; however, the configuration has been changed to reflect current and proposed use, access, and management intent for these units. A Cultural Zone has not been identified at this time; however, if a survey or field investigation identifies significant archaeological or cultural resources a Cultural Zone may be identified. Identification of a Cultural Zone will necessitate a revision of this plan due to changes in the management orientation associated with this zone. Land-use zones used in this plan are depicted in Map 7 on page 6 - 7. More specific management direction for these land-use zones is discussed in subsequent sections of text and the *Use Compatibility Table* (Table 4) beginning on page 9 of this chapter. The following text describes the land-use zones used in this plan and is taken from the Framework.

[1] The Framework states, "For any given park unit, the location of these zones and amounts of land and resources allocated to each zone will be determined during the preparation of a park management plan or site development plan."

Recreational Development Zone

Purpose and Characteristics

Recreational development zones are established within State Park System units to meet the more intensive recreational needs of the public with convenient and well defined access via roads, railroads, boating anchorages, airstrips, and high standard trails; with more intensively-developed recreational facilities such as campgrounds or picnic areas; with guided activities; and with information centers to orient visitors to the unit's special features.

The landscape within this zone can be modified to support educational and recreational activities and/or to enhance wildlife habitat and scenic qualities. These zones are established where soils, slope, drainage, and vegetation can support more intensive recreational activities. Fire suppression and insect and disease control may be used, where appropriate, within this zone to maintain or enhance recreational use. A recreational development zone may already have been influenced by prior developments and is intended to provide a transition area to absorb heavy human impacts.

Developments and Activities

The highest level of developments and activities is meant to occur in this zone within park units. The developments allowed include -but are not limited to -roads and trails, private vehicle and public transportation routes or access, campgrounds, picnic areas, visitor and interpretive centers, high-standard trails for all ages and abilities, park management facilities and commercial lodges or resorts as provided for within the unit management or site development plan. 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 may be allowed in this zone within specifically designated areas or through management techniques such as time and/or space allocations.

Natural Zone

Purpose and Characteristics

Natural zones are established to provide for moderate-to-low impact and dispersed forms of recreation and to act as buffers between recreational and wilderness zones.

These zones are relatively undeveloped and undisturbed, and are managed to maintain high scenic qualities and to provide visitors with opportunities for significant, natural outdoor experiences. An area's natural landscape character is the dominant feature within this zone. Landscape modification may be allowed to enhance, maintain, or protect the natural setting according to the unit management plan. Use of fire suppression, insect or disease control, or wildlife habitat enhancement as management techniques in natural zones will be defined in the unit management plan.

Developments and Activities

Developments in a natural zone 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 hiking and bicycle 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 this zone. Activities include -but are not limited to -hang-gliding, bicycling, backpacking, fishing, hunting, cross-country skiing, camping, sledding, tobogganing, berry picking and rock climbing. Snowmobiles may be allowed in this zone -within specifically designated areas -depending on resource sensitivities and potential conflicts with other park uses. Other private, motorized off-road vehicle use is generally prohibited within this zone.

Management Guidelines and Compatibility of Uses

In addition to identifying land-use zones to be used within park system units, the Framework identifies guidelines for many activities for each of the land-use zones. It does this by identifying the compatibility for many public use activities generally for the four land-use zones. The Framework directs DPOR to use this general guidance to determine more specific management direction through a plan.[2] This chapter of the plan builds upon the general guidelines identified in the Framework and provides specific guidelines that must be followed by DPOR when determining if a use is allowed or may be authorized, and identifies the compatibility of specific uses for each land-use zone. Table 4, the Use Compatibility Table beginning on page 10 of this chapter identifies the guidelines and compatibility for many uses that are or could occur within NLSRA and NLSRS. This table will be used by DPOR to determine if a use is allowed or could be authorized and what guidelines and conditions must be followed when adjudicating authorizations for certain uses. It is a more specific determination of uses than is provided in the Framework. If inconsistencies exist between the general guidelines of the Framework and the more specific guidelines contained in the Use Compatibility Table, the Use Compatibility Table will control.

~~In the Use Compatibility Table, the terms "compatible" and "incompatible" are used. In cases where the use is indicated as "incompatible;" the use is not compatible with the primary function as public recreation land and is not permittable under 11 AAC 18.025(c). Uses indicated as "incompatible" will be restricted by regulation (AS 41.21.460) and will not be authorized.~~

In the Use Compatibility Table, the terms "compatible," "conditionally compatible", and "incompatible" are used. Where a use is indicated as "compatible;" the use is consistent with the primary function of the land as public recreation land under AS 41.21.450 – 41.21.465.

[2] The Framework states, "Specific developments and activities for a given park unit's land use zones will be directed by a specific state park unit management or site development planning process."

~~Compatible uses are indicated in the tables as either "allowed without authorization" or as a use that requires DPOR authorization.~~ Compatible uses are allowed without authorization~~-~~or are authorized through an Area-wide Permit. ~~Where a use is allowed without authorization, no permit is required to conduct the use; however, the use~~These uses may be restricted to a certain location or time of year or specific design requirements.[3] ~~Restrictions placed upon allowed uses are noted in the guidelines in the table.~~ Restrictions placed upon allowed uses are noted in the guidelines in the table. ~~Where an authorization is required, issuance of a special park use permit is required prior to the use being conducted or a structure being built, placed, or maintained in NLSRA or NLSRS. The type of permit – area-wide, general, or individual – required is indicated for each land-use zone. These categories are discussed in greater detail in the next section of this chapter.~~

In cases where a use is indicated as "conditionally compatible," the use is considered incompatible with the primary function of the land as public recreation land under AS 41.21.450 – 41.21.465 ***unless*** certain conditions are met and the use is authorized by a Special Park Use Permit under 11 AAC 18.010 and 11 AAC 18.025. Where a use is indicated as conditionally compatible and may be authorized under a permit or restricted opening, the conditions that make these uses or activities compatible are provided at the end of this chapter under the heading "Compatibility Conditions." The conditions are grouped for the main types of uses or activities as follows: Group A – New or Seasonal Structures; Group B – Property Storage and Moorage; Group C – Commercial Structures; Group D – Marina; and, Group E – Other Uses and Activities. Where an authorization is required, issuance of a special park use permit is required prior to the use being conducted or a structure being built, placed, or maintained in NLSRA or NLSRS. The type of permit required – area-wide, general, or individual – is indicated for each conditionally compatible use. A restricted opening allows a use to occur without need for individual authorization on certain lands during certain time periods consistent with applicable conditions. Compatibility Condition categories are discussed in greater detail in the last section of this chapter.

In cases where a use is indicated as "incompatible;" the use is not compatible with the primary function as public recreation land and is not permittable under 11 AAC 18.010 and 11 AAC 18.025(c). Uses indicated as "incompatible" will be restricted by regulation (AS 41.21.460) and will not be authorized.

Activities and uses that may constitute a conversion of use under the LWCF grant program are identified in the Use Compatibility Table. DPOR is required to go through a LWCF approval process to document and mitigate for the conversion prior to the conversion action. The person or agency requesting an activity or use that requires a conversion will be responsible for compensating DPOR for all costs incurred through the conversion process.

[3] For instance; use of bicycles is currently prohibited off of roadways and parking areas by general park regulations. Through this planning process the use of bicycles has been determined to be compatible; however, the use will be limited to certain trails during certain times of the year. Please consult general park regulations at Chapters 7, 12, 16, and 18 of the Alaska Administrative Code and specific park regulations contained in Chapter 20 for information on a particular use.

Uses not specifically included in the Use Compatibility Table that are not identical, but are similar, to an included use may be determined compatible and may be authorized by DPOR staff through a determination of compatibility. Uses that are not similar to those included in the matrix may be authorized based on a finding in a determination of compatibility that the use is sufficiently similar to other uses that are authorized that the potential use can be permitted. All such uses that are authorized must be consistent with the enabling statutes, regulations, and the management intent provided in this plan, including the management intent of the individual management units.

Permit Categories

The following text identifies the three permit categories that have been developed for use at NLSRA and NLSRS. These categories have been identified to increase efficiency, transparency, and consistency in the permitting process which will be a benefit to both the public and DPOR. If a use requires authorization within NLSRA and NLSRS, the Use Compatibility Table indicates the category of permit that is required.

Categories

Area-wide Permits
Included in this category are uses that have been determined compatible within the natural or recreational development land-use zones and have been determined to be consistent with the permitting requirements contained in 11 AAC 18.025. These uses are common and have only minimal impacts to the uses of the waterbody or to the natural resources. All uses within this category are seasonal in nature.~~ and are placed after spring break-up or May 1st (whichever occurs first) and are removed by October 1st annually~~. A permit is considered issued for all uses within this category and no additional conditions are provided by DPOR. All uses authorized under an Area-wide Permit must be consistent with ~~Group A compatibility~~ conditions identified in the written determination.

General Permits
Uses indicated in the "General Permit" category have been determined to be a compatible use within the Natural or Recreational Development land-use zones. This category comprises a wide range of uses including many types of private structures, several types of public uses, research activities, and many types of commercial activities to name a few. Upon receipt of a complete application as required by 11 AAC 18.010 and 11 AAC 18.025 and a detailed set of drawings[4] depicting the use; DPOR may issue a permit for these uses consistent with procedures in 11 AAC 18.025. The permit must be

[4] Detailed drawings include: plan and cross-section views of the proposed project. Plan view will depict the subject property, property lines, approximate configuration of the shoreline, and proposed use in relation to the property lines.

countersigned by the property owner or designated agent of the property owner certifying that the information is true and accurate and that the proposed use will be constructed consistent with the application, drawings, and all conditions included in the authorization. It is intended that these uses will be authorized within a short timeframe, not to exceed 30 days. In many cases these uses could be authorized immediately if the applicant provides all required information and countersigns the authorization. A site review is not required to adjudicate these permits; however, nothing precludes DPOR from conducting a site review prior to adjudicating the application. An application may be modified by DPOR to make the use consistent with the General Permit category. All General Permits include Standard Permit Conditions included on all authorization and any additional conditions DPOR determines appropriate for a given use. In several instances, compatibility conditions have been grouped for certain uses and are referred to by the particular group.

Individual Permits

Uses indicated in the "Individual Permit" category include all uses that do not fall within the Area-wide or General permit categories. Typically, these permits are for uses that are large in scale or have an increased potential to impact resources, public use values, public safety, or to cause pollution within NLSRA. All uses not included in the compatibility table fall within this permit category and may be authorized as an individual permit. Coordination with other regulating agencies with jurisdiction is typical with this type for uses in this category. Adjudication of applications for these uses will require a longer review period because of the scale, complexity, and need for coordination with other agencies. All Individual Permits include standard permit conditions included on all authorizations and may include other conditions DPOR determines necessary to allow the permitted activity to occur within NLSRA and NLSRS. These other conditions will be determined for each based on the type of use or activity requested by the applicant.

Issuance of a permit by DPOR does not obviate the need to receive a permit from other local, state, and federal agencies. When a DPOR permit and another agency permit are in conflict, the applicant must abide by the more restrictive permit and condition. ~~In no case shall an individual exceed a permitted use or condition within NLSRA or NLSRS that exceeds a permit issued by DPOR~~ Instances involving the maintenance, construction, or placement of structures in anadromous waterbodies an ADF&G authorization is required.

DPOR may deviate from the permitting table in the issuance of an Individual Permit if the deviation is consistent with the area-wide policies, management objectives, and management intent for the unit; access and use of the area is maintained; impacts to fish and wildlife habitat are minimized; and, the public trust resources will not be unduly impacted. A permit will not be issued for a use that has been determined incompatible in NLSRA. If, subsequent to the adoption of this plan, DPOR determines that a use currently indicated as incompatible in the Use Compatibility Table is in fact compatible, the plan must be amended and the accompanying regulation must be changed to allow that use.

When adjudicating an application for a use, DPOR will act in a fair and equitable manner in approving or denying permit applications of a similar nature. If DPOR decides to authorize a use, staff will incorporate the general conditions and the compatibility conditions into the authorization in addition to any other reasonable conditions deemed necessary. Conditions placed on the permit will conform to the procedures provided in 11 AAC 18.025(e). Decisions will be based on the best available information at the time of application and best professional judgment of the reviewing staff. A written determination consistent with procedures at 11 AAC 18.025(c) will accompany every decision to issue or deny an area-wide, general, or individual permit application.

Map 7: Land-Use Zones

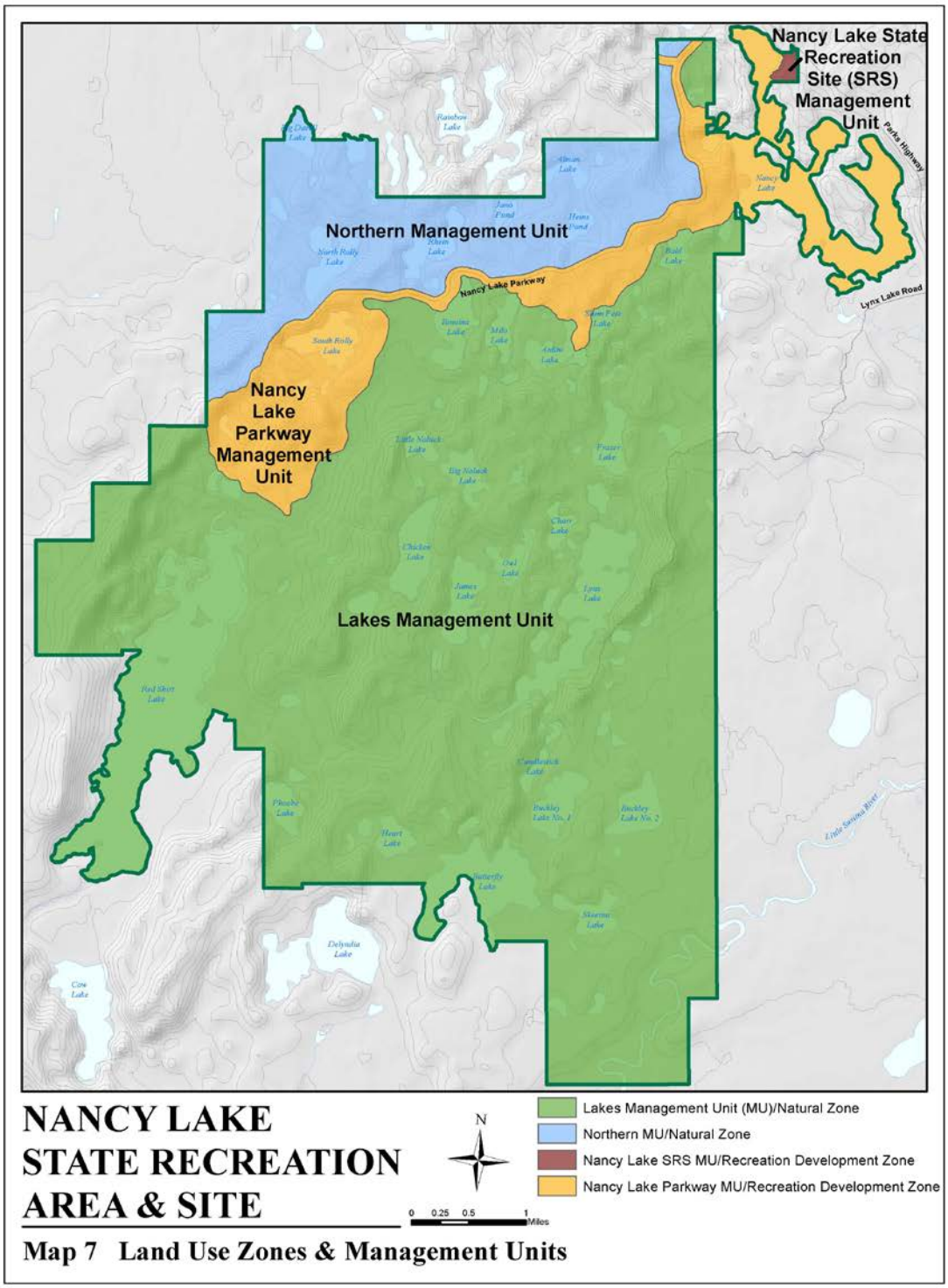

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Table 4: Use Compatibility Table

PRIVATE STRUCTURES

The uses listed below include the majority of uses and activities commonly associated with the improvement of private waterfront land. These structures facilitate access to navigable water or water dependent recreation from the private lands that are within or share a common boundary with NLSRA. When considering whether these uses were compatible, DPOR staff considered how these private structures affected the public's ability to access and use the waterbodies and how much of the public trust resource is impacted by the structure. Only private structures that facilitate access to navigable water or a water dependent recreational use are determined compatible in the following section of the table. Installation of structures identified in this table may require authorization from additional state and federal agencies where they have authority to regulate the use or activity. Examples include: discharges regulated by EPA, the U.S. Army Corps of Engineers and the Alaska Department of Environmental Conservation; fill materials or structures placed in waters of the United States may be regulated by the US Army Corps of Engineers; or, placement of a structure in anadromous waterbodies regulated by ADF&G. These examples are not intended to be an exhaustive list. It is the applicants responsibility to acquire all necessary authorizations prior to installing or constructing a structure within NLSRA.

GUIDELINES FOR PRIVATE STRUCTURES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Boat House (Permanent) A roofed and walled structure constructed or placed on or over a waterbody that is used for storing a plane, boat, or other types of watercraft. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Incompatible. These structures will not be authorized under any circumstances.	Incompatible. These structures will not be authorized under any circumstances.
Boat Launch These include small scale wood, steel, gravel, or concrete structures that facilitate backing a trailer into the waterbody to launch and retrieve a boat or personal water craft. A boat launch differs from a mooring ramp in that the launch facilitates access while the mooring ramp primarily facilitates storage. May be authorized as a General Permit. Authorization of a boat launch is dependent on the characteristics of each site. Due to varying shoreland characteristics (i.e. depth, habitat value, etc.) and adjacent upland characteristics (i.e. steepness, soil type, etc.) not all upland owners will be authorized to construct a boat launch. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A compatibility conditions	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A compatibility conditions.
Boat Lift (Permanent) Permanent boat lifts may be permitted only if they are incorporated into the design of a permanent dock structure. The area of the boat lift will be included in the square footage of the dock structure. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A compatibility conditions.

GUIDELINES FOR PRIVATE STRUCTURES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Decks Includes pile supported or cantilevered structures. These structures have the same effect as a dock in that they occupy an area above the water surface lakeward of the OHWL. However, their primary function is to extend non water dependant uses and other upland uses over the waterbody not to provide access to navigable water. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Incompatible. These structures will not be authorized under any circumstances.	Incompatible. These structures will not be authorized under any circumstances.
Discharge Structure Any pipe, ditch, flume or other structure that discharges surface water, grey water, black water, or any substance directly into the surface waters within NLSRA. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	~~Incompatible. These structures will not be authorized under any circumstances.~~Regulation of point and non-point source discharges is subject to regulation by other state and federal governmental agencies, such as the EPA, the U.S. Army Corps of Engineers, the Department of Environmental Conservation, and ADF&G.	~~Incompatible. These structures will not be authorized under any circumstances.~~Regulation of point and non-point source discharges is subject to regulation by other state and federal governmental agencies, such as the EPA, the U.S. Army Corps of Engineers, the Department of Environmental Conservation, and ADF&G.
Docks - 450 Square Feet or Less Includes floating, cantilevered, post on pad, and pile supported docks up to 450 square feet for any single lot that is within or contiguous to the NLSRA boundary. Only structures that facilitate access to navigable water or a water dependant recreational use from the adjacent private property may be authorized. The gangway or access ramp and dock surface are included in the square footage. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A compatibility conditions.	Incompatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A compatibility conditions.
Geothermal (Small Scale) Includes any open or closed loop system placed in a waterbody or on land within NLSRA that is contiguous to a private upland parcel. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Incompatible. These structures will not be authorized under any circumstances.	Incompatible. These structures will not be authorized under any circumstances.
House Boats Includes all boats where the primary purpose is to provide a permanent or temporary domicile. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 12.140, 11 AAC 18.010)	Incompatible. This type of vehicle/structure will not be authorized under any circumstances.	Incompatible. This type of vehicle/structure will not be authorized under any circumstances.

GUIDELINES FOR PRIVATE STRUCTURES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Hydroelectric Power Development (Small Scale) Includes small scale or "micro hydro" hydroelectric developments that are placed in a waterbody that is within or contiguous to a private upland parcel. The power generated by these developments can only be used at the upland property where the generator is installed. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Incompatible. These structures will not be authorized under any circumstances.	Incompatible. These structures will not be authorized under any circumstances.
Mooring Ramp (Permanent) These structures facilitate storage of boats out of the waterbody while allowing for convenient launching. They are constructed partially on the upland and partially on the shoreland below the OHWL. Permanent mooring ramps are constructed with driven piles. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A compatibility conditions.
Other Buoys Buoys placed for purposes other than mooring may be authorized including caution buoys or buoys placed to mark a hazard. These buoys must be placed within 40' of the OHWL in front of the applicant's private property. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group F compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Red Shirt, Big Darell, Little Darell, Whale, and Skeetna lakes consistent with applicable Group F compatibility conditions.
Shoreline Revetment Shoreline revetments are structures that are placed at the land and water interface for the purpose of protecting the shoreline from natural or human caused erosion. Permits will only be issued where erosion of the shoreline can be demonstrated. Structures will be designed to protect shoreline from erosion while minimizing impacts to fish and wildlife habitat. In no case will vertical revetment structures be authorized. The preferred material for use in shoreline stabilization is natural biodegradable materials. Shoreline revetments should be developed consistent with the *Streambank Revegetation and Protection A Guide for Alaska*; revised 2005. If these measures will not work other stabilization techniques may be authorized. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A compatibility conditions.

GUIDELINES FOR PRIVATE STRUCTURES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Temporary/Seasonal Structures These structures are placed in a waterbody in front of private property after ice-out and removed before October 1st annually. Included are: buoys, seasonal docks 450 square feet or less, boatlifts, rafts up to 100 square feet, water slides, inflatable water trampolines, and mooring ramps. No portion of a seasonal structure remains in the waterbody after freeze-up. No portion of a temporary structure will be placed more than 40' lakeward of the OHWL in front of the applicant's private property. May be authorized as an Area-wide Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A compatibility conditions.
Water Intake Structures Typically includes a submersible pump, screened intake, and a small diameter pipe. The structure is used to supply water to private properties contiguous to waterbodies. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A and E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes consistent with applicable Group A and E compatibility conditions.
Water Skiing Course This type of structure includes a system of surface buoys tethered to an anchor system. An individual or a group must make the application to DPOR for the installation of a course. This use may be authorized only on lakes that allow motorized boat use. May be authorized as a Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group A and E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx, Butterfly, and Red Shirt lakes consistent with applicable Group A and E compatibility conditions.

PUBLIC USES

Included below are the majority of uses and activities that are known to occur or uses that staff thought could possibly occur in NLSRA and NLSRS. They include most outdoor recreational pursuits commonly conducted in the area already (e.g. hiking, canoeing, skiing, among others); uses that are already occurring but are not currently allowed by regulation (e.g. bicycles use on trails, long-term moorage of boats, use of highway vehicles on a frozen waterbody, etc.); and, uses that are not now known to occur but are similar to other allowed types of recreation (e.g. use of hovercraft, airboats, helicopters, etc). When determining a use incompatible, DPOR considered the statutory purposes of NLSRA, the history of a particular use, the impact of that use on the public's ability to access and use the land and water, and the type of recreational opportunities provided in different areas and different seasons.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
ADA Access by Wheelchairs and Power Driven Devices Includes manually operated or electric power-driven wheelchairs, 3 or 4 wheeled scooters, and manually powered mobility aids designed for use by people with mobility impairments. Use on or off existing trails is at the discretion of the individual. Allowed without authorization. (AS 41.21.450 - 41.21.465)	Compatible. Use on or off existing trails is at the discretion of the individual.	Compatible. Use on or off existing trails is at the discretion of the individual.
Airplanes Use of a float equipped airplane is allowed on Nancy, Lynx, Butterfly, and Red Shirt lakes and the Little Susitna River. Use of a ski or tire equipped airplane is allowed on all frozen waterbodies except North Rolly, Big Darell, Little Darell, and Rhein lakes and Jano and Heins ponds to preserve existing non-motorized recreation opportunities. Airplane use for management, medical, and enforcement activities does not require authorization. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 20.545)	Compatible. During ice-free periods, use of float planes is allowed on Nancy, Lynx, Butterfly, and Redshirt lakes and the Little Susitna River without authorization consistent with 11 AAC 20.545. During frozen conditions, use is allowed without authorization on all waterbodies when the surfaces are frozen.	Compatible. During ice-free periods, use of float planes is allowed on Nancy, Lynx, Butterfly, and Redshirt lakes and the Little Susitna River without authorization consistent with 11 AAC 20.545. During frozen conditions, use is allowed without authorization on all waterbodies when the surfaces are frozen except use will not be allowed on North Rolly, Big Darell, Little Darell, and Rhein lakes, and Jano and Heins ponds.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Anchoring and Mooring (Long Term Greater Than 15 Days at the Owner's Upland Private Property) Boats, barges, personal watercraft, and float planes shall be moored at the owner's private property within or contiguous to the NLSRA boundary. All such vehicles shall be moored in a manner that will not impede navigation or affect adjacent riparian interests. Mooring of boats or personal watercraft in other areas is prohibited. Mooring of boats does not include the mooring of a house boat at the owner's private property. Mooring and use of a house boat is prohibited. (AS 41.21.450 - 41.21.465 11 AAC 12.230)	Compatible. Allowed without authorization.	~~Incompatible except for Big Darell, Little Darell, and Skeetna Lakes where the use is allowed without authorization.~~ Compatible. Use is allowed without authorization on Lynx, Butterfly, Skeetna, Whale, Red Shirt, Big Darell, and Little Darell lakes.
Anchoring and Mooring (Short Term up to 15 Days While Recreating at NLSRA and NLSRS) Unless otherwise authorized, boats, personal watercraft, and float planes may only be moored in a waterbody adjacent to a developed or undeveloped area during the time period a person is authorized or allowed to occupy the facility or the area. All such vehicles shall be moored in a manner that will not impede navigation or affect adjacent private riparian interests. (AS 41.21.450 - 41.21.465 11 AAC 12.020)	Compatible. Allowed without authorization.	Compatible. Allowed without authorization.
Archery The use of bow and arrow for target practice will be allowed in a designated area adjacent to the winter parking area at mile 1.7 of the Nancy Lake Parkway, when it is constructed. This use will occur at facilities developed within the high intensity development node on the eastern end of Nancy Lake Parkway. This does not affect the use of archery for lawful hunting consistent with ADF&G harvest regulations. Hunting with bow and arrow is allowed, except within one-quarter mile of a developed facility. (AS 41.21.450 - 41.21.465, 11 AAC 20.540)	Incompatible. Except use will be allowed at the designated target practice area.	Compatible. Use is allowed without authorization consistent with 11 AAC 20.540.
Assembly The number of persons allowed in an assembly is limited to 20 people unless a larger number of people is authorized by permit. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.160, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Berry Picking and Vegetation Gathering Gathering edible resources for personal consumption; gathering dead and downed wood for use in a fire in the park unit; and, disturbing natural objects in a reasonable and customary manner while lawfully trapping is allowed. Gathering dead or burnt wood for personal use off of state park land is prohibited. Allowed without authorization. (AS 41.21.450 - 41.21.465, 11 AAC 12.170, 11 AAC 18.010)	Compatible. Use must occur consistent with 11 AAC 12.170.	Compatible. Use must occur consistent with 11 AAC 12.170.
Bicycles Use will be allowed on designated trails in addition to roads and parking areas during snow free periods when conditions allow the use with minimal impacts to the resources or the tread of the trail. During the fall shoulder season and winter, use of bicycles will be allowed as follows: 1) south of the parkway on trails that are opened to the use of ORVs or snowmobiles during limited openings; 2) south of the parkway when the entire area is open to the use of snowmobiles; and, 3) north of the parkway on groomed surfaces of designated trails maintained for winter activities. Use north of the parkway is restricted to a "fat tire bicycle" with a minimum tire width of 3.5 inches. This will be an expansion of use within NLSRA. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 12.340(12))	Compatible. Use allowed without authorization on designated trails and areas.	Compatible. Use allowed without authorization on designated trails and areas.
Boating (Motorized) Includes all boats that utilize a motor for propulsion such as powerboats and jet boats but excludes house boats. Motorized boats are allowed by regulation on Nancy, Lynx, Butterfly, and Red Shirt lakes and the Little Susitna River[5]. A boat with an electric trolling motor is allowed on South Rolly Lake. Use of a trolling motor will be allowed on Tanaina Lake after amendment of existing regulations or adoption of a new regulation. Personal watercraft use remains prohibited on Red Shirt Lake. Use of an airboat or hovercraft off of the surface of a waterbody (i.e. above the OHWL) is prohibited. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 20.550)	Compatible. Use of a motorized boat is allowed without authorization on Nancy Lake and is limited to use of an electric trolling motor on South Rolly Lake consistent with 11 AAC 20.550. Motorized boats are prohibited and will not be authorized on other waterbodies.	Compatible. Use of a motorized boat is allowed without authorization on Lynx, Butterfly, and Red Shirt lakes and is limited to use of a trolling motor on North Rolly, Rhein, Tanaina, and Big Darell and Little Darell lakes. Motorized boats are prohibited and will not be authorized on other waterbodies.
Boating (Non-motorized) Includes all boats that do not use a motor for propulsion. (AS 41.21.450 – 41.52.465)	Compatible. Allowed without authorization on all waterbodies.	Compatible. Allowed without authorization on all waterbodies.

[5] Motorized use on the Little Susitna River is subject to the requirements of the Recreation Rivers Management Plan.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Camping (Outside of Developed Campground) All camping must occur within designated campsites. Camping in a designated site for 10 days is allowed and longer stays may be authorized by Special Park Use Permit. May be authorized as a General Permit. These sites are available on a first come basis and no fee is required. (AS 41.21.450 - 41.21.465, 11 AAC 12.210 – 11 AAC 12.230, 11 AAC 18.010)	Compatible. Camping is restricted under 11 AAC 12.210 to 11 AAC 12.230. A permit is required under 11 AAC 18.010 for camping in a developed campground for more than 10 consecutive days in a calendar year	Compatible. Camping is restricted under 11 AAC 12.210 to 11 AAC 12.230. A permit is required under 11 AAC 18.010 for camping in a developed campground for more than 10 consecutive days in a calendar year
Camping (Within Developed Campground) All camping must occur within designated campsites. Camping for a fee in a developed campground for up to 15 days is allowed unless longer stay is authorized by Special Park Use Permit. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 05.010, 11 AAC 12.210 -11 AAC 12.230, 11 AAC 12.250, 11 AAC 18.010)	Compatible. Camping is restricted under 11 AAC 12.210 to 11 AAC 12.230. A permit is required under 11 AAC 18.010 for camping in a developed campground for more than 15 consecutive days in a calendar year.	Compatible. Camping is restricted under 11 AAC 12.210 to 11 AAC 12.230. A permit is required under 11 AAC 18.010 for camping in a developed campground for more than 15 consecutive days in a calendar year
Diving Underwater diving is allowed without authorization consistent with regulations. (AS 41.21.450 - 41.21.465, 11 AAC 12.200)	Compatible. Allowed without authorization.	Compatible. Allowed without authorization.
Dredging Includes any dredging within a waterbody or wetland. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Incompatible.	Incompatible
Dog Sledding Use of dog teams as a means of winter access to private property, recreation, and training for competition is allowed without authorization. Use of ORV's for fall dog training may be allowed on Nancy Lake Parkway and South Rolly Lake Campground access loop during the fall shoulder season (roughly mid to late October to late November) when the Nancy Lake Parkway has been closed to vehicle use and snow conditions do not allow use of dogsled in other areas of NLSRA. This use may be allowed through a restricted opening. (AS 41.21.450 - 41.21.465)	Compatible. Dog sledding is allowed without authorization. Sled dog training is conditionally compatible consistent with applicable Group E compatibility conditions.	Compatible. Dog Sledding is allowed without authorization. Sled dog training with an ORV is incompatible and will not be authorized under any circumstances.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Explosives Consistent with 11 AAC 12.195, use of explosives is prohibited unless authorized under 11 AAC 18.010. The use of explosives by private persons is incompatible and is prohibited by this plan. (AS 41.21.450 - 41.21.465, 11 AAC 12.195, 11 AAC 18.010)	Incompatible. This use will not be authorized under any circumstances.	Incompatible. This use will not be authorized under any circumstances.
Fireworks Use of fireworks is prohibited unless authorized under 11 AAC 18.010. Fireworks displays may be authorized for public displays or in conjunction with an organized event or private displays where the impact to the resources is minimized. A person must acquire the appropriate Matanuska Susitna Borough authorization as provided by borough code (8.35.050) prior to application submittal to DPOR. (AS 41.21.450 - 41.21.465, 11 AAC 12.197 & 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.
Fires Consistent with 11 AAC 12.180, campfires are allowed only in portable camp stoves or structures intended for that use (e.g. fire ring, barbeque grill, stove) provided by DPOR unless otherwise authorized by permit unless authorized under 11 AAC 18.010. Allowed without authorization. (AS 41.21.450 - 41.21.465, 11 AAC 12.180)	Compatible. Use must occur consistent with 11 AAC 18.180 unless authorized under 11 AAC 18.010.	Compatible. Use must occur consistent with 11 AAC 18.180 unless authorized under 11 AAC 18.010.
Floating Facilities (Private) Includes floating lodges, fueling barge/dock, or other structures that facilitate an activity that can occur on the adjacent upland. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Incompatible. This use will not be authorized under any circumstances.	Incompatible. This use will not be authorized under any circumstances.
Geocaching Caching items in specific geographical locations on the landscape. Geocaching may be authorized but size of cache and location of caching will be restricted to 400 cubic inches. Caching items in areas with identified cultural resources is prohibited. May be authorized under an area-wide permit authorization. (AS 41.21.450 - 41.21.465, Policy and Procedure 18000, 11 AAC 12.335, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake consistent with applicable Group E compatibility conditions.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Helicopters Use of a float equipped helicopter is allowed on Nancy, Lynx, Butterfly, and Red Shirt lakes and the Little Susitna River. Use of a helicopter is allowed on all frozen waterbodies except North Rolly, Big Darell, Little Darell, and Rhein lakes and Jano and Heins ponds to preserve existing non-motorized recreation opportunities. Helicopter use for management, medical, and enforcement activities does not require authorization. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 20.545)	Compatible. During ice-free periods, use is allowed without authorization consistent with 11 AAC 20.545. During frozen conditions, use is allowed without authorization on all waterbodies when the surfaces are frozen.	Compatible. During ice-free periods, use is allowed without authorization consistent with 11 AAC 20.545. During frozen conditions, use is allowed without authorization on all waterbodies when the surfaces are frozen except use will not be allowed on North Rolly, Big Darell, Little Darell, and Rhein lakes, and Jano and Heins ponds.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Highway Vehicles Includes all vehicles that are registered for use on a state maintained vehicle way or parking area and includes cars, trucks, motorcycles and other highway vehicles. Use is allowed without authorization on Nancy Lake Parkway and parking areas; within South Rolly Lake Campground; at Nancy Lake State Recreation Site; and, on Lynx Lake Road and parking areas up to a traffic control device (gate) on Lynx Lake Road. Highway vehicle use beyond a traffic control gate on Lynx Lake Road may be authorized under 11AAC 18.010. May be authorized as a General Permit. Use of a highway vehicle for access to public use cabins by mobility impaired persons may be authorized under 11 AAC 18.010 at any location. The ability of the road or trail to accommodate highway vehicle use with minimal impacts must be considered in the decision to issues these authorizations. May be authorized as a General Permit. Use of a highway vehicle ~~is allowed without~~ may be authorized ~~authorization~~ on the frozen surface of Nancy, Butterfly, Skeetna, and Lynx lakes when certain conditions are met. Highway vehicle use on the frozen surface of the identified waterbodies remains at the discretion of the operator to determine if ice conditions are sufficient for vehicle use. May be authorized under a restricted opening. Use of highway vehicles may be authorized for cross-country travel at certain times of the year, when very specific conditions exist. They shall only be authorized when frost and snow conditions allow for the use to occur without significant impact to natural or other resources. May be authorized under a restricted opening. Highway vehicle use for management, medical, and enforcement activities does not require authorization. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 18.010)	Compatible. Use is allowed without authorization when conducted consistent with 11 AAC 12.020. Use of a highway vehicle on the frozen surface of Nancy Lake is conditionally compatible and may be allowed by restricted opening consistent with applicable Group E compatibility conditions. Use off of roads and parking areas is conditionally compatible and may be authorized under 11 AAC 18.010 to allow access to public use cabins by mobility impaired persons consistent with applicable Group E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 on Lynx Lake Road and parking areas consistent with applicable Group E compatibility conditions. Use of a highway vehicle on Lynx Lake Road and the frozen surface of Lynx Lake is conditionally compatible and may be allowed by restricted opening consistent with applicable Group E compatibility conditions. Use of a highway vehicle on the Butterfly Lake Winter Trail and the frozen surface of Skeetna and Butterfly Lake is conditionally compatible and may be allowed by restricted opening consistent with applicable Group E compatibility conditions.
Hiking, Non-motorized Boating[6], Skiing, Skijoring, Snowshoeing Includes all pedestrian use on or off of established trails and as access to private property. (AS 41.21.010, AS 41.21.450 - 41.21.465)	Compatible. Allowed without authorization.	Compatible. Allowed without authorization.

[6] Non-motorized boat includes canoes, kayaks, raft, skiff, kiteboard, parasail, windsurfer, and other similar non-motorized vessels.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
House Boats (Private) Includes all boats where the primary purpose is to provide a permanent or temporary domicile. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 18.010, 11 AAC 18.025)	Incompatible. This use will not be authorized under any circumstances.	Incompatible. This use will not be authorized under any circumstances.
Hunting and Fishing Allowed consistent with existing DPOR regulations and ADF&G harvest regulations. (AS 41.21.450 - 41.21.465, 11 AAC 20.540)	Compatible. Allowed without authorization consistent with 11 AAC 20.540 and ADF&G harvest regulations.	Compatible. Allowed without authorization consistent with 11 AAC 20.540 and ADF&G harvest regulations.
Ice Augers and Other Fishing Equipment Includes augers, portable shanties, seats, sleds, and other similar equipment. Allowed without authorization. (AS 41.21.450 - 41.21.465)	Compatible. Allowed without authorization.	Compatible. Allowed without authorization.
Memorials Includes the construction or erecting of any type of permanent or semi-permanent memorial. Use may be authorized if: 1) a memorial is determined by DPOR to serve a historical, recreational or interpretive purpose related to the area or region; or, 2) is part of a developed public facility. The design of any memorial must be consistent with standards identified in Chapter 5 of this plan. The memorial design reviewed and approved by DPOR prior to being erected. All costs associated with the maintenance of a memorial must be borne by the person/organization that builds the memorial. May be authorized under an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.	Conditionally Compatible. May be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.

Off Road Vehicles[7] Includes the use of an off road vehicle (ORV) on existing roads, trails, parking areas, and specified frozen waterbodies. Use may be authorized under 11 AAC 18.010 beyond a traffic control gate on Lynx Lake Road when resource conditions allow. May be authorized as a General Permit. Use may be authorized under 11 AAC 18.010 on Butterfly Lake Trail during snow free periods once permanent access across the Anchorage Church of Christ, Midnight Sun Bible Camp is secured and a sustainable ORV trail is developed. May be authorized as a General Permit. Use of an ORV for training sled dogs may be allowed by restricted opening on Nancy Lake Parkway and South Rolly Lake Campground loop road during the fall shoulder season when snow conditions necessitate closing the Nancy Lake Parkway and South Rolly Campground to vehicle use but there is not enough snow for dog sledding to occur. Use of an ORV on Lynx Lake Road; Butterfly Lake Winter Trail; and, East Red Shirt Lake Trail and use on the frozen surface of Red Shirt, Skeetna, Butterfly, and Lynx lakes may be authorized seasonally when a combination of snow and frost conditions will allow the use to occur with minimal impacts to resources. May be authorized under a restricted opening. Use of an ORV for access to public facilities by mobility impaired persons may be authorized under 11 AAC 18.010. The ability of the road or trail to accommodate off road vehicle use with minimal impacts must be considered in the decision to issues these authorizations. May be authorized as a General Permit. The use of an ORV on the frozen surface of Nancy and Lynx lakes is allowed without authorization during when certain conditions are met. ORV use for management, medical, and enforcement activities does not require authorization. A limited amount of ORV use may be authorized as part of an authorized commercial service. ORV use on the frozen surface of the identified waterbodies remains at the discretion of the operator to determine if ice conditions are sufficient for vehicle use. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 18.010, 11 AAC 18.030, 11 AAC 18.040, 11 AAC 20.990)	Conditionally compatible. May be authorized under 11 AAC 18.010 for access to public use cabins by mobility impaired persons or as part of a commercial operation consistent with applicable Group E conditions. Use on the frozen surface of Nancy Lake is conditionally compatible and may be allowed by restricted opening consistent with applicable Group E compatibility conditions. Use of an ORV for sled dog training is conditionally compatible and may be allowed by a restricted opening consistent with applicable Group E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 beyond a traffic control gate on Lynx Lake Road; for access to public use cabins by mobility impaired persons; or, as part of a commercial operation consistent applicable Group E conditions. ORV access to Red Shirt Lake via the East Red Shirt Lake Trail is conditionally compatible and may be allowed by restricted opening during the fall shoulder season consistent with applicable Group E compatibility conditions. Use of an ORV ~~highway vehicle~~ on Lynx Lake Road; Butterfly Lake Winter Trail; and, the frozen surface of Lynx, Skeetna and Butterfly lakes is conditionally compatible and may be allowed by restricted opening consistent with applicable Group E compatibility conditions.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Organized Events Includes organized events such as athletic events, organized recreational events, competitive recreational events, promotional entertainment events, jamborees, family reunions, or other similar events. It is anticipated that most large organized events that involve large gatherings will occur within the Nancy Lake Parkway Recreation Development Zone or the Nancy Lake State Recreation Site. Some events, including races, may be appropriate in the Natural Area. Adjudicatory staff will consider impacts the event will have on trails, facilities, natural and cultural resources, and other recreational users in determining if a permit should be issued. May be authorized as a General Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.160, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.
Other Power Driven Mobility Device (OPDMD) Any mobility device powered by batteries and used by individuals with mobility impairments for the purpose of locomotion including electronic personal assistance mobility devices such as a 3 or 4 wheeled scooters or a Segway® but does not include the use of a golf cart. Use of OPMDs will be allowed on designated trails in the Recreation Development Zone only. Internal combustion motors are prohibited on all OPDMD's. This does not include manual or power-driven wheelchairs or other power or manually driven mobility devices used by a mobility-impaired person. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 18.010)	Compatible. Allowed without authorization on designated trails.	Incompatible. This use will not be authorized under any circumstances.

[7] Definition of "Off-Road Vehicle" is provided in 11 AAC 20.990(21).

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Personal Property Storage and Boat Moorage (On State-owned land and water long term) Includes storing any personal property within NLSRA and NLSRS such as: camping equipment, vehicles (including motorized and non-motorized boats), fuel, personal floatation devices, motors, and other types of property and boats moored on the surface of state-owned waterbodies adjacent to state uplands. Storage and moorage is prohibited except as may be authorized at ~~specific locations identified on Lynx, Butterfly, and Red Shirt lakes~~ sites that previously existed on Lynx, Butterfly, and Red Shirt Lakes. The amount and type of property that can be stored and the amount and type of boats that can be moored is limited. Currently, the size of these existing sites is considered appropriate to meet the needs of the recreating public, however, DPOR may re-evaluate these sites to determine if the needs of the recreating public are being met and may consider expanding these sites if the resources are not being significantly impacted. The number of Permits will not be limited; however, DPOR will monitor use and impacts to resources and may limit or restrict storage based on impacts to natural resources. ~~Storage and moorage facilitating access to private properties will continue to be authorized for a period of five years or until a detailed study of long-term access determines that changes to the current policy are necessary~~. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010, 11 AAC 12.220)	Incompatible. This use will not be authorized under any circumstances.	Conditionally compatible. May be authorized at designated sites on Lynx, Butterfly, and Red Shirt lakes under 11 AAC 18.010 consistent with ~~Group C~~ Group B compatibility conditions.
Personal Watercraft[8] Includes all vessels that are less than 16 feet, is propelled by a water-jet pump, and is operated by sitting on it rather than in it. Allowed by regulation to be used on Nancy, Lynx, and Butterfly lakes and the Little Susitna River[9]. Current regulations prohibit use on other waterbodies, including those within the canoe trail system where the use would be incompatible with the natural values. (AS 41.21.450 - 41.21.465, 11 AAC 20.550)	Incompatible. Except use of a motorized boat is allowed without authorization on Nancy Lake under 11 AAC 20.550. Motorized boats are prohibited and will not be authorized on other waterbodies.	Incompatible. Except use of a motorized boat is allowed without authorization on Lynx, Butterfly, and Red Shirt lakes and is limited to use of a trolling motor on North Rolly, Rhein, Tanaina, and Big Darell and Little Darell lakes. Motorized boats are prohibited and will not be authorized on other waterbodies.
Pets Pets are allowed in developed and undeveloped areas consistent with 11 AAC 12.130. Allowed without authorization. (AS 41.21.450 - 41.21.465, 11 AAC12.130)	Compatible. Use must occur consistent with 11 AAC 12.130.	Compatible. Use must occur consistent with 11 AAC 12.130.

[8] "Personal watercraft" has the same meaning as provided in 11 AAC 20.990.
[9] Motorized use on the Little Susitna River is subject to the requirements of the Recreation Rivers Management Plan.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Snowmobiles[10] Limited access is allowed via a restricted opening south of the Nancy Lake Parkway on designated trails or areas when snow conditions do not allow opening the entire area based upon a Director finding that a combination of frost depth, ice on water crossings, and snow cover are sufficient to allow use while minimizing degradation of the trail tread and natural resources. Frost depth must be a minimum of ~~six~~ two inches, snow depth must be a minimum of six inches (compressed) or one inch snow-water equivalency, and ice must be present on all water crossings. The area south of the Nancy Lake Parkway and the North Rolly Lake Winter Trail will be opened once the water equivalency of the snow pack equals 1.5 inches. This is roughly equal to a minimum of 18 inches of snow pack based on the water content of snow typical in the area of NLSRA. The use of a snowmobile is allowed without authorization on the frozen surface of Nancy, Lynx, Butterfly, and Red Shirt lakes. Snowmobile use for management, medical, and enforcement activities does not require authorization. Use of a snowmobile on the frozen surface of waterbodies remains subject to the discretion of the operator. (AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 20.555)	Compatible. Use is allowed without authorization consistent with 11 AAC 20.555.	Compatible. Use is allowed without authorization consistent with 11 AAC 20.555.
Trapping ~~Not allowed in the Recreational Development Zone.~~ Allowed consistent with existing NLSRA specific statutes, regulations and ADF&G harvest regulations in the Natural Zone; however, trapping within ~~300 feet of roads or trails and within~~ ¼ mile of a developed facility is prohibited. (AS 41.21.450 - 41.21.465, 11 AAC 20.540)	~~Incompatible. This use will not be authorized under any circumstances.~~ Compatible. Allowed without authorization consistent with 11 AAC 20.540 and ADF&G harvest regulations.	Compatible. Allowed without authorization consistent with 11 AAC 20.540 and ADF&G harvest regulations. ~~Trapping within ¼ mile of a developed facility (e.g. boat launch, public use cabin, etc.) or within 300 feet of a road or trail is prohibited.~~

[10] "Snowmobile" has the same meaning as provided in 11 AAC 20.990.

GUIDELINES FOR PUBLIC USES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Wildlife and Nature Observation Wildlife, wildlife habitat, and landscape features viewed and enjoyed in their natural setting. Includes photography and filming of natural objects and fish and wildlife for personal use. Encouraged throughout area and facilitated in some areas consistent with specific recommendations contained in the plan. (AS 41.21.450 - 41.21.465)	Compatible. Allowed without authorization.	Compatible. Allowed without authorization.

PUBLIC FACILITIES

These are public facilities that currently exist or are recommended for development within NLSRA and NLSRS. These facilities provide new, or enhance existing opportunities for recreation. They will be designed and developed by DPOR in locations that will benefit the public and encourage recreational use of these areas. In some cases, a facility will provide access to private property within, contiguous to, or adjacent to NLSRA and NLSRS. In order to maintain a diversity of opportunities, uses that provide high density/high volume use are only compatible in the Recreational Development Zone.

GUIDELINES for FACILITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Alternative Energy Development Includes geothermal, solar, wind, hydroelectric, or other energy development that involves placement of structures in conjunction with public facilities. Alternative energy development must be integrated into facility design and will not negatively impact recreational opportunities or scenic values. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible.	Compatible.
Boat Launch Developed facility that allows launch and retrieval of boats into a waterbody. Sites may vary from simple clearings to permanent ramps and docks. These facilities will be constructed where determined necessary to facilitate recreational use or access to private property. These structures will not be placed in an area identified by ADF&G as an important spawning area or nesting areas for loons and grebes if ADF&G determines the proposed use will adversely affect these areas. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible.	Compatible.

GUIDELINES for FACILITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Group Camp This type of facility will facilitate use by large groups and may include cabins, campsites, and other types of structures designed to facilitate large gatherings. Shoreline facilities will promote access and use of the waterbody. Terra or water trails may provide access to the canoe trail system and environmental interpretation opportunities. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible within high development node on Nancy Lake Parkway.	Incompatible.
Improved Campsites Includes sites that are "hardened[11]" and may include tent platforms, tent pad, Adirondack type shelters, fire rings, picnic tables, sanitary facilities, and other similar structures. Adirondack type shelters may be available for public use on a reservation system. (AS 41.21.450 - 41.21.465, AS 41.21.020 & 11 AAC 12.245)	Compatible.	Compatible.
Public Docks, Decks, and Viewing Platforms These structures facilitate access and recreational use for people visiting NLSRA and NLSRS. They will be constructed in areas that will provide opportunities for fishing, fish and wildlife observation, or access to waterbodies. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible.	Compatible.
Public Use Cabins Permanent structures available for overnight use by the general public. All public use cabins will be available for public use on a reservation system. (AS 41.21.450 - 41.21.465, AS 41.21.020 & 11 AAC 12.245)	Compatible.	Compatible.

[11] The term "hardened", for the purpose of this plan, means that the site has had some level of development that will allow it to sustain increased use levels with minimal negative impacts to the resources or it provides a level of accommodations that are not available at backcountry or remote campsites.

GUIDELINES for FACILITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Roads Designated, maintained corridors that provide access for registered highway vehicles. Includes all gravel and paved roads. May include signs, bridges, wayside facilities, pull-outs and other facilities and structures. Roads will not be constructed or re-developed in Natural Zones unless the Director of DPOR determines that the road is necessary to provide access for recreation. DPOR will not expend any funds on roads, or portions thereof, which are not accessible by highway vehicles. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible.	Compatible. Construction or redevelopment is limited to that necessary to provide access to recreational facilities or opportunities as they are developed.
Sustainable Trails Includes terra (land), water, and snow trails. Sustainable trails are designed and developed to accommodate use with minimal impacts to the environment and require minimal maintenance. Includes the trail tread and all structures developed as part of the sustainable trail such as boardwalks, bridges, puncheon, step and run, and other structures used in trail design. Non-governmental organizations or individuals may be granted a permit to construct or maintain all or a portion of a sustainable trail if it meets the intent and guidelines presented in this plan and is consistent with DPOR Trail Management Objectives for the specific trail. DPOR will not expend any funds on trails that are not accessible by the recreating public. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible.	Compatible.
Training and Environmental Education Facility The intent is to develop this facility to serve as the state's sustainable trails training facility. When not needed for agency use, it will be available for use by other state and federal agencies and the public as an environmental learning and education center. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible within high development node on Nancy Lake Parkway.	Incompatible.
Visitor Contact Facilities This type of facility may include a small interpretive and information area, enforcement and administrative offices, living quarters, and a recreational vehicle hookup for a volunteer host. (AS 41.21.450 - 41.21.465, AS 41.21.020)	Compatible within high development node on Nancy Lake Parkway.	Incompatible.

MANAGEMENT ACTIVITIES AND AGREEMENTS

Within this group are the uses conducted by DPOR or by other local, state, or federal agencies. In some circumstances, these uses may be conducted by a qualified individual or non-governmental organization with DPOR authorization. A permit is not required for DPOR to conduct these uses within NLSRA or NLSRS, however, a policy, procedure, or guideline may require that a permit be issued by DPOR to DPOR. These uses allow management and understanding of cultural and natural resources within NLSRA and NLSRS. All of the uses included in this part of the table have been determined compatible.

GUIDELINES FOR MANAGEMENT ACTIVITIES AND AGREEMENTS	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Access for Management, Enforcement, and Emergencies The use of ORV's, highway vehicles, motorized boats, aircraft, and other types of motorized and non-motorized vehicles is allowed without authorization by DPOR in all areas of NLSRA and NLSRS. Use of vehicles for medical response, search and rescue, law enforcement, disaster relief, fire suppression, or other official purposes is allowed without authorization. Vehicles may be used for these activities in areas closed to recreational motorized use in this plan. Vehicle access for planned management actions conducted by agencies other than DPOR must obtain authorization prior to the action being conducted. May be authorized under an Individual Permit. (AS 41.21.020, AS 41.21.450 - 41.21.465)	Compatible for DPOR staff or for activities conducted in concert with DPOR and for emergency first responders. Requires DPOR authorization for all non-emergency planned management actions.	Compatible for DPOR staff or for activities conducted in concert with DPOR and for emergency first responders. Requires DPOR authorization for all non-emergency planned management actions.
Archaeological and Historical Study Field based research and study of historical and archeological sites within NLSRA and NLSRS by state agencies is compatible and is allowed without authorization. Federal agencies, regional and local Native corporations, and university researchers may be authorized to conduct archaeological and historical studies. All information gathered through studies will be shared with DPOR, Office of History and Archaeology. Requires Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.175)	Compatible for DPOR staff and contractors. Other types of studies may be conditionally compatible and may be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.	Compatible for DPOR staff and contractors. Other types of studies may be conditionally compatible and may be authorized under 11 AAC 18.010 consistent with applicable Group E compatibility conditions.
Easements and Right-of-Ways A public easement or public right-of-way to access private property may be granted by DPOR consistent with existing statutes under AS 41.21.024. These easements must be open to use by the public. Easements or right-of-ways should not be granted in situations that bifurcate NLSRA or NLSRS lands unless there is a bona-fide public recreation purpose for the authorization. Prior to granting an easement or right-of-way, DPOR must consult with the LWCF Coordinator to determine if the grant constitutes a conversion of use under federal law, regulations, or policies. Applicant is responsible for compensating DPOR for all costs related with the conversion of public recreation lands. (AS 41.21.024, AS 41.21.450 - 41.21.465)	Compatible.	Compatible.

GUIDELINES FOR MANAGEMENT ACTIVITIES AND AGREEMENTS	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Fire Management Use of fire as a management tool to reduce fire fuel loads or to modify vegetation for some other management purpose. Fire management is typically conducted by Division of Forestry staff on behalf of DPOR. (AS 41.21.020, AS 41.21.450 - 41.21.465)	Compatible.	Compatible.
Fire Suppression Suppressing fires by any method deemed appropriate by the incident commander or designated personnel. Suppression will be employed consistent with the Alaska Interagency Wildfire Management Plan and other interagency agreements. Fire suppression is typically conducted by Division of Forestry or Bureau of Land Management or local fire department. (AS 41.21.020, AS 41.21.450 - 41.21.465)	Compatible. Does not require an authorization for suppression activities conducted by an agency actively engaged in suppression of a wildland fire.	Compatible. Does not require an authorization for suppression activities conducted by an agency actively engaged in suppression of a wildland fire.
Maintenance Agreements DPOR may enter into agreement for the maintenance of a facility, or part of one, a road, trail, or other similar development with another local, state, or federal agency, a non governmental agency, or individual. This type of agreement fosters appreciation and custodianship of the resources, facilities, and developments at NLSRA and NLSRS. Requires a signed agreement between the parties. May be authorized under Individual Permit. (AS 41.21.020, AS 41.21.450 - 41.21.465, 11 AAC 12.170, 11 AAC 18.010)	Compatible. Requires a signed agreement between the parties.	Compatible. Requires a signed agreement between the parties.
Motorized Equipment Includes motorized equipment such as chainsaws, chippers, blowers, weed eaters, and other motorized equipment used for maintenance and management. A permit is not required for use of motorized equipment in any area of NLSRA and NLSRS by agency staff or representatives. (AS 41.21.020, AS 41.21.450 - 41.21.465)	Compatible. No restrictions on use.	Compatible. No restrictions on use.

GUIDELINES FOR MANAGEMENT ACTIVITIES AND AGREEMENTS	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Research and Management Studies Collection of public use and ecological data to increase understanding of recreational use and natural, biological, or physical conditions conducted by DPOR staff or supported by DPOR is allowed without authorization. Studies conducted by other researchers may be authorized by Individual Permit. (AS 41.21.020, AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Compatible for DPOR staff and contractors. Other types of studies may be conditionally compatible and may be authorized under 11 AAC 18.010.	Compatible for DPOR staff and contractors. Other types of studies may be conditionally compatible and may be authorized under 11 AAC 18.010.
Resource Extraction Removal of timber, gravel, rocks, sand, plants or other park resources for use by DPOR or for DPOR management purposes within the NLSRA and NLSRS. These resources will be used for projects within the recreation area and site. If the extraction site is a one-time site, it should be reclaimed as soon as practicable with natural vegetation. (AS 41.21.020, AS 41.21.450 - 41.21.465, 11 AAC 12.170)	Compatible for DPOR. Incompatible for all other agencies, non-governmental agencies, or individuals.	Compatible for DPOR. Incompatible for all other agencies, non-governmental agencies, or individuals.
Traffic Control Devices[12] Includes any sign or physical barrier that is placed by DPOR to control access or use of DPOR managed land and water. (AS 41.21.020, AS 41.21.450 - 41.21.465, 11 AAC 12.020, 11 AAC 12.150)	Compatible. Does not require an authorization for agency staff or representatives.	Compatible. Does not require an authorization for agency staff or representatives.
Vegetation Management Cutting and/or removal of vegetation where necessary for management purposes by DPOR staff, Department of Natural Resources staff, DPOR contractors, or recognized representatives acting in an official capacity on behalf of DPOR.[13] Includes hazard tree removal, tree and vegetation removal for facility development, trail maintenance, development of open space areas, or other management activities. Also includes the planting of both native and non-native vegetation on disturbed sites, for aesthetic purposes, or as part of a designed facility. (AS 41.21.020, AS 41.21.450 - 41.21.465)	Compatible for DPOR staff, contractors, or when conducted by DPOR recognized representatives. Incompatible for all others.	Compatible for DPOR staff, contractors, or when conducted by DPOR recognized representatives. Incompatible for all others.

[12] "Traffic control device" has the same meaning as provided in 11 AAC 12.340.
[13] "Recognized representatives" includes those people or groups that have signed a maintenance agreement with DPOR or those people that are identified as volunteers or are acting in an official capacity for DPOR.

GUIDELINES FOR MANAGEMENT ACTIVITIES AND AGREEMENTS	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Waterbody Modification Changing a waterbody to improve use of a boat. Includes alteration of channel or bed morphology and removal of beaver dams and other woody material. Is allowed without authorization for DPOR staff, contractors, and recognized representatives acting in an official capacity on behalf of DPOR. (AS 41.21.020, AS 41.21.450 - 41.21.465)	Compatible for DPOR staff, contractors, or when conducted by DPOR recognized representatives. Incompatible for all others.	Compatible for DPOR staff, contractors, or when conducted by DPOR recognized representatives. Incompatible for all others.

ECONOMIC/COMMERCIAL ACTIVITIES

This type of use is developed or conducted by an individual or business for the purpose of generating revenue. In some instances a commercial use occurs on a waterbody or area of land for a short time during the construction of a structure. In other cases, a structure is constructed, placed, or maintained on DPOR managed land or water to facilitate a commercial use or to provide for full utilization of private property, particularly inholders. A commercial operator that applies to conduct business within NLSRA and NLSRS, or is renewing an existing authorization, will submit a Plan of Operation with the application or reauthorization request to DPOR. The Plan of Operation will indicate: time frame for the commercial activity; specific locations where the activity will occur; methods of access, type of equipment; and, the type and quantities of hazardous materials or fuels used or temporarily stored on DPOR managed land and water. Where a use is determined to be incompatible with the statutory purposes of NLSRA, DPOR considered the history of a particular use in a given area, how the use will impact the public's ability to access and use the land and water, and the type of recreational opportunities provided in different areas and different seasons.

GUIDELINES FOR ECONOMIC/COMMERCIAL ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Alternative Energy Development Includes geothermal, solar, wind, or other energy development that involves placement of structures within the recreation area or site for private or commercial use. (AS 41.21.450 - 41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Commercial Barge Commercial barges facilitate construction and development of private land and the building and placing of structures on DPOR managed land and water. This use may be authorized on ~~designated waterbodies~~ Nancy Lake or other waterbodies where inholdings or properties contiguous with the NLSRA boundary are located ~~for limited time periods~~. To date, it is understood that this type of commercial use only occurs on Nancy Lake and that trend is anticipated to continue for the 20 year life of this plan. Use of a commercial barge may be authorized on other waterbodies where inholders or contiguous landowners are located; however this use is not anticipated to occur within the life of this plan due to limited access to other waterbodies within NLSRA. Commercial barges may be moored at a project site during the time the barge is being used. In no case will long-term or permanent moorage be authorized on any waterbody. ~~Currently, this use only occurs on Nancy Lake~~. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.300, 11 AAC 18.010)	Conditionally compatible on Nancy Lake. May be authorized under 11 AAC 18.010 consistent with applicable Group E conditions. ~~on Nancy Lake~~	Conditionally compatible. May be authorized on waterbodies with inholders or adjacent property owners under 11 AAC 18.010 consistent with applicable Group E conditions.

GUIDELINES FOR ECONOMIC/COMMERCIAL ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Commercial Boat Launch These include large scale structures that facilitate backing a trailer into the waterbody to launch and retrieve a boat or other vessel. Only the minimal amount of structure necessary to provide for launching and retrieving a boat will be authorized for construction or placement below the OHWL. A commercial boat launch may only be authorized on Nancy Lake. May be authorized as an Individual Permit. If the structure is placed above ground it may constitute a conversion of use under federal law, regulation, or policy regarding LWCF. This use may be authorized after LWCF conversion process has been completed. Applicant is responsible for compensating DPOR for all costs related to the conversion of public recreation lands. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake. This type of structure is incompatible and will not be authorized under any circumstances on any other waterbodies.	Incompatible. This type of structure will not be authorized under any circumstances.
Commercial Dock/Marina A single dock or system of docks that facilitate long term mooring of a boat or other watercraft on a waterbody for a fee. A commercial marina may be authorized on Nancy Lake, but is prohibited on other waterbodies. These structures will only be authorized when they are contiguous with the owner's upland private property. May be authorized as an Individual Permit. If the structure is placed above ground it may constitute a conversion of use under federal law, regulation, or policy regarding LWCF. This use may be authorized after LWCF conversion process has been completed. Applicant is responsible for compensating DPOR for all costs related with the conversion of public recreation lands. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC12.300, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010 on Nancy Lake. This type of structure is incompatible and will not be authorized under any circumstances on any other waterbodies.	Incompatible. This type of structure will not be authorized under any circumstances.
Commercial Structures Structures that are necessary to facilitate public recreation by an authorized commercial operator or as part of a concession contract may be authorized. These structures must be small in scale and be constructed in a manner that minimizes impact to public use. The structures can include: concession stands, small point of sale structures or rental stands, storage structures, and other similar types of small structures that are necessary to conduct the commercial business. The business need for these structures must be identified in the application as well as measures the applicant will employ to minimize negative impacts to recreation opportunities. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 12.300, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.

GUIDELINES FOR ECONOMIC/COMMERCIAL ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Commercial Timber Harvest Removal of timber from the park for commercial purposes will only be allowed when consistent with NLSRA vegetation management policies, meets some management objective of the unit, or provides a public benefit. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 12.170, 11 AAC12.300, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Communication/Transmission Structures Towers, antennas, repeaters, dishes, and other structures used for cellular phone, television, satellite, or radio communications. (AS 41.21.450 - 41.21.465, 11 AAC 12.140, 11 AAC 12.170, 11 AAC12.300, 11 AAC 18.010)	Incompatible. These types of structures will not be authorized under any circumstances.	Incompatible. These types of structures will not be authorized under any circumstances.
Connection to Surface Water Any constructed canal, ditch, inland marina, or other excavated area that is developed on land adjacent to NLSRA and connected to the surface waters of NLSRA. (AS 41.21.450 - 41.21.465, 11 AAC 12.170)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Distribution Lines to Private Residence Includes residential telephone/communication, electrical, gas, water, and fiber optic lines. ~~May be authorized as an Individual Permit.~~ (AS 41.21.450 - 41.21.465, AS 41.21.024, 11 AAC 12.140 & 11 AAC 18.010)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Floating Facilities (Commercial) Includes floating lodges, fueling barge/dock, or other structures that facilitate an activity that can occur on the adjacent upland. (AS 41.21.450 - 41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Grazing Grazing of domestic animals for commercial purposes. (AS 41.21.450 - 41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.

GUIDELINES FOR ECONOMIC/COMMERCIAL ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Guiding and Outfitting Includes all commercial activities that occur on state park managed lands such as: backcountry guides, outfitters, tour companies, sport fishing guides, and rental businesses. These and all other commercial operators that provide services to recreationists at NLSRA and NLSRS. Storage of property for commercial businesses may be authorized if part of a commercial operation that facilitates public use and recreation. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC12.300, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
House Boats (Commercial) Includes all boats where the primary purpose is to provide a permanent or temporary domicile whether or not a fee is charged for the occupancy of the house boat. (AS 41.21.450 - 41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Hydroelectric Power Development (Large Scale) Power generation from impounded or natural waterbodies. (AS 41.21.450 - 41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Oil, Gas, and Coal Development Commercial development of oil, gas, and coal resources. Lands and waters identified in AS 41.21.450 – 41.21.470 were withdrawn from the public domain by the Legislature as a special purpose site consistent with Article 8, Section 7 of The Constitution of the State of Alaska. Land within NLSRA is no longer subject to management under Title 38 of the Alaska Statutes, including statutes related to leasing and development of oil and gas resources and cannot be disposed of. (AS 41.21.450 -41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Oil, Gas, and Coal Exploration Exploration includes all activities to determine the extent of resource reserves. Typically involves the installation of access routes and drilling pads and appurtenant structures. It does not include commercial development of the resources. Roads and trails built in support of exploration will only be authorized in Recreation Development Zones. Only helicopter supported exploration activities will be authorized in Natural Zones. May only be authorized where the Mental Health Trust Authority owns the subsurface estate. May be authorized via Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	~~Incompatible~~ Conditionally compatible. May be authorized under 11 AAC 18.010.	~~Incompatible~~ Conditionally compatible. May be authorized under 11 AAC 18.010.

GUIDELINES FOR ECONOMIC/COMMERCIAL ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Other Motorized Vehicle Use Includes motorized equipment used in conjunction with a commercial activity, or moving equipment across NLSRA to private property. Examples include: well drilling vehicles, bull dozers, excavators, snowmobiles, tracked vehicles, and other similar types of vehicles. Commercial vehicles may be authorized to travel across NLSRA and NLSRS on specific routes to adjacent non-state-owned property or to operate on state land and waters while engaged in commercial activity on adjacent private land. All commercial activities occurring on state land and water require a permit from DPOR in addition to any other required permit. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.300, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Other Types of Development Other types of development that have not been contemplated in this document may be appropriate within NLSRA. Developments may only be authorized if the use is compatible with the NLSRA primary function as public recreation land. These types of uses must be consistent with the area-wide and unit specific management intent and must not constitute an easement or other type of disposal of interest. May be authorized as an Individual Permit. (AS 41.21.020, AS 41.21.450 -41.21.465, 11 AAC12.300, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010. Development within this zone must be balanced with the preservation of the scenic and natural values in this zone.
Sand and Gravel Extraction Extraction of common variety materials for commercial purposes. (AS 41.21.450 - 41.21.465, 11 AAC 12.300)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Sanitary Landfills/Refuse/Waste Includes all facilities that accept any type of waste materials. Does not include pit privies or latrines. (AS 41.21.450 -41.21.465, 11 AAC 12.050)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.
Transmission Lines/Pipelines Includes telephone and electrical power lines, oil and gas pipelines, and other necessary related facilities. These types of uses already exist on adjacent lands and are incompatible with the primary function of these recreation lands. (AS 41.21.45 - 41.21.465)	Incompatible. This type of use will not be authorized under any circumstances.	Incompatible. This type of use will not be authorized under any circumstances.

GUIDELINES FOR ECONOMIC/COMMERCIAL ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Wildlife and Nature Photography and Filming Wildlife, wildlife habitat, and landscape features photographed or filmed for commercial purposes. Includes photography of natural objects and fish and wildlife. May be authorized as a General Permit authorization for all individuals that do not need special services or considerations. Requires a DPOR Individual Permit authorization for all other types of filming and photography that require special considerations or services which may include, but is not limited to: repeated helicopter landings or hovering at low attitudes, parking more than one highway vehicle at public turn out areas, construction of temporary structures (e.g. blinds, elevated platforms), etc. (AS 41.21.450 - 41.21.465, 11 AAC 12.300)	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with Category F conditions if authorized by General Permit.	Conditionally compatible. May be authorized under 11 AAC 18.010 consistent with Category F conditions if authorized by General Permit.

FISH, WILDLIFE, AND HABITAT MANAGEMENT ACTIVITIES

This group of uses includes the majority of common activities conducted by ADF&G. All of these uses enhance recreation or understanding of the fish, game, and watchable wildlife within NLSRA and NLSRS. Accordingly, all of the uses listed below are compatible and require an authorization from DPOR.

GUIDELINES FOR FISH, WILDLIFE, AND HABITAT MANAGEMENT ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Ecological Monitoring Activities or studies that address how fish and wildlife and their habitats are changing due to either natural or human causes. Studies conducted by state agencies, non-governmental organizations, or individuals may be authorized. All information gathered through studies will be shared with DPOR. All studies will be in accordance with established research principles and will not negatively impact recreational use. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Disease Prevention and Control Management practices directed at controlling pathogens that threaten fish, wildlife and people. Includes rabies control and parasite control. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Fish and Wildlife Introduction Introduction of non-native species. Will only be considered when necessary for management purposes. In general, introduction of exotic species is discouraged but may be considered on a case-by-case basis. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Fish and Wildlife Inventories Using acceptable management techniques to obtain information on species distributions, harvest, abundance, habitats, and population dynamics. Studies conducted by state agencies, non-governmental organizations, or individuals may be authorized. All information gathered through studies will be shared with DPOR. All studies will be in accordance with established research principles and will not negatively impact recreational use. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.

GUIDELINES FOR FISH, WILDLIFE, AND HABITAT MANAGEMENT ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Fisheries Enhancement Action taken to increase fishery stocks above historical levels, such as building hatcheries and fish passages, artificially incubating fish in streams and fertilizing lakes. Enhancement projects that involve development of structures may be authorized if they will not negatively impact recreational use. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Fisheries Restoration Action taken to restore fish access to spawning and rearing habitat, or actions taken to restore populations to historical levels. Includes fish ladders, fish passages, and lake fertilization. Hatcheries and spawning/incubation channels are not included in this category they are included in Fisheries Enhancement. Restoration projects may be authorized. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Pest Control Relocation, removal, or killing of organisms that threaten human health and property or survival of native fish and wildlife species. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Predator Control Relocation, removal, or killing of predators to favor other wildlife populations, protect re-introduced species, and protect human life and property. Stocking is allowed in NLSRA or NLSRS, but must be coordinated through DPOR. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Stocking Re-establishment of native species within their original breeding range to augment depleted native populations and to maintain desired species. Stocking projects may be authorized. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.

GUIDELINES FOR FISH, WILDLIFE, AND HABITAT MANAGEMENT ACTIVITIES	RECREATIONAL DEVELOPMENT ZONE	NATURAL ZONE
Vegetation Introduction Introduction of non-native species, into the park. The planting of non-native vegetation is generally discouraged, but may be considered on a case-by-case basis if consistent with vegetation management objectives related to fish and wildlife species management. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.170, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.
Wildlife Habitat Manipulation Modification of habitats to increase target wildlife populations. Includes both enhancement and restoration activities, such as prescribed burning and mechanical manipulation. May be authorized if consistent with vegetation management objectives. May be authorized as an Individual Permit. (AS 41.21.450 - 41.21.465, 11 AAC 12.170, 11 AAC 18.010)	Conditionally compatible. May be authorized under 11 AAC 18.010.	Conditionally compatible. May be authorized under 11 AAC 18.010.

Compatibility Conditions

The following conditions are provided for all uses or activities indicated as "conditionally compatible" where a general permit is required in the Use Compatibility Table. Conditionally compatible uses that require an individual permit will have conditions determined appropriate based on the adjudication process and may include some conditions provided below as well as others that are not listed. The conditions provided below are considered the minimum to allow the use or activity to occur and are in addition to the standard conditions included on all DPOR Special Park Use Permits. DPOR may add additional stipulations that they deem appropriate or necessary to ensure the use or activity occurs with minimal deleterious impacts to the resources or developed infrastructure. To minimize redundancy, conditions are grouped together for similar types of use and activities.

Group A – New Structures

1. The structure facilitates access to navigable water from the adjacent private upland or a water dependant recreational use.
2. Crib, sheet-pile, or solid filled ~~strucutres~~ structures shall not be permitted.
3. The proposed use shall not cause significant negative impacts to natural resources or unduly interfere with the right of the public to use the waterbody.
4. All structures will be constructed of clean non-polluting materials.
    a. Use of creosote or chromated copper arsenate treated wood will not be permitted.
    b. Floatation for floating docks must be a closed cell expanded polystyrene that is encapsulated or enclosed in a protective material.
5. The surface area of all structures combined on and within a waterbody is limited to not more than 450ft^2 for any single lot that is within or contiguous with the legal boundary of NLSRA.
6. All structures must be located within the riparian interest area[14] of the upland property owner applying for the permit.
7. No fill, other than the permitted structure itself, will be placed on shorelands below the Ordinary High Water Line.
8. Incidental use of a motor vehicle is allowed on the lake bottom for the purpose of launching or retrieving a boat or other authorized structures.
9. No part of the structure shall exceed 10 feet in width or extend more 40 feet into the waterbody beyond Ordinary High Water Line (OHWL).

[14] Riparian Interest Area – For the purpose of this document, riparian interest is defined as the surface area of the water in front of private property, bounded by a projection of the property lines toward the middle of a waterbody where riparian rights can be exercised. Riparian rights include the right to access the waterfront and the modified right to wharfage (i.e. docking a boat).

10. The dock is configured as a straight pier, "L," "T," or "U" configuration. A dock configured with an opening in the middle is prohibited.
11. Any structure remaining in a waterbody after October 1st must have a reflective marker visible from 360 degrees and have a surface area of at least 100 square inches. The reflective marker must be affixed to the furthest lakeward extent of the structure and must be placed between three and five feet above the water surface. The reflective marker may be removed after ice out each year.
12. Structure will be open and not covered with a roof, awning, or other covering except for temporary boatlifts.
13. Temporary and permanent boatlifts may have an awning, covering, or roof structure that is removed in total when the lift is removed by October 1 annually.
14. Permanent boatlifts may have an awning, covering, or roof structure; however, it must be removed in total by October 1 annually.
15. Temporary/Seasonal structures will be removed entirely from the waterbody before by October 1 annually and will not be placed back into the water until after ice out each year.
16. An applicant must obtain necessary permits from ADF&G prior to obtaining an authorization to construct a private boatlaunch.
17. A private boat launch shall not exceed 10 feet in width or extend more than 20 feet into a waterbody.
18. The launch and the fill associated with the launch shall not exceed a depth of 18 inches on shorelands below the OHWL.
19. Erosion control measures must be installed on the uplands to prohibit sedimentation of the waterbody associated with a launch.
20. Variances to these standards will be granted only if one or more of the following extenuating circumstances exists:
    a. Bathymetry of the lake necessitates a longer structure to reach navigable water,
    b. Configuration of existing adjacent structures, or
    c. Some other circumstance that is outside of the control of the applicant.

Group B – Property Storage and Moorage

1) All property storage and moorage must occur within the area identified for such uses by DPOR. Storage and moorage outside of designated areas is an incompatible use and will not be authorized.
2) No more than ~~one boat~~ two boats per ~~private lot~~ person may be authorized for long term storage or moorage.
3) The maximum length of a stored or moored boat will not exceed 16 feet in length or 10 feet in width except for canoes which cannot exceed 20 feet in length.

4) All boats required to be registered by other law, including barges, will be required to have a current DMV registration displayed on the boat.
5) Storage of boat trailers is prohibited year-round.
6) A NLSRA specific decal will be required to be affixed to the upper visible portion of the bow of the boat.
7) All gas containers shall be metal containers approved for marine use with a maximum capacity of 5 US gallons and shall be clearly marked with the owners name, current address, and current telephone number.
8) All gas containers are required to be removed from a boat moored on the water and stored consistent with subsequent condition #11 below. An exception to this is the metal fuel container may be stored in a moored boat if all hoses are disconnected from the tank; it is secured in the boat from easy removal; and, the boat is regularly attended and maintained.
9) Personal property storage is limited to one metal fuel container, oars, engine, battery (if electric trolling motor is used), and personal floatation devices.
10) ~~Spill response equipment, including absorbent pads, should be provided at designated storage and moorage areas.~~ All discharges or spills of fuels or lubricants shall be immediately reported to the DPOR Park Superintendent at the Mat-Su Area Park Office (907-745-3975) ~~and~~ or the NLSRA Ranger at the Nancy Lake Ranger Station (907-496-6273).
11) All personal property, including motors when not in use on a continuing basis, must be removed from the site or stored within a single metal container with a volume not to exceed 16 cubic feet or within, or completely under, a boat authorized for long term storage. Non-conforming containers must be brought into compliance by June 16, 2016.

Group C – Commercial Structures

1. The proposed use does not cause significant negative impacts to natural resources or unduly interfere with the right of the public to use the waterbody.
2. The surface area of all structures combined is limited to not more than 450 square feet for any single lot that is contiguous with the legal boundary of NLSRA.
3. The owners of these docks must have obtained a commercial authorization from DPOR prior to applying for a permit for a commercial structure situated on waterbodies.
4. All structures must be located within the riparian interest[1] of the upland property owner applying for the permit.
5. No part of the structure shall exceed 10 feet in width or extend more than 40 feet into the waterbody beyond the OHWL.
6. The structure facilitates a water dependant use or facilitates access or recreation from the adjacent private land.
7. Variances to these standards will be granted only if one of the following extenuating circumstances exists:
    a. Bathymetry of the lake necessitates a longer structure to reach navigable water,

b. Configuration of existing adjacent structures, or

c. Some other circumstance that is outside of the control of the applicant.

Group D - Marina

1. The marina will not cause significant negative impacts to natural resources or unduly interfere with the right of the public to use the waterbody.
2. One commercial marina with up to 40 slips may be authorized on Nancy Lake. Marinas are not to be authorized on or in other waterbodies.
3. A commercial use must occur within the riparian interest[1] of the upland property owner applying for the permit.
4. Commercial use of the structure will not unduly interfere with public use of the waterbody.
5. The applicant must present plans and other pertinent materials that demonstrate the need for a marina and for the configuration and size of the structures.
6. This use may represent a conversion of use under the provisions of Land and Water Conservation Fund regulations. If so, the conversion must occur before a permit is issued and the applicant is responsible for paying the costs associated with the conversion.

Group E – Other Uses and Activities

1. Buoy must be placed within 40 feet of the owner's upland parcel.
2. Buoy must be clearly marked with the owners name, address, and phone number.
3. Intake structure will be placed in a manner so it will not pose a hazard to navigation or impede use of the waterbody by the public.
4. A water ski course must be placed so it will not prohibit public access or use of the waterbody.
5. All buoys or structures installed as part of a water ski course must be clearly labeled with the person or group that applied for the placement of the structure.
6. All fireworks displays authorized within NLSRA will be conducted in manner that minimizes impacts to the natural resources.
7. Entities authorized to conduct a fireworks display are responsible for all costs that may be incurred as a result of conducting the display.
8. Entities authorized to conduct a fireworks display during snow free periods must notify the DPOR Park Superintendent at the Mat-Su Area Park Office (907-745-3975), the NLSRA Ranger at the Nancy Lake Ranger Station (9074-496-6273), and the Palmer Division of Forestry Mat-Su Office (907-761-6300) at least 5 business days prior to conducting the display.
9. <u>Matanuska Susitna Borough authorization to discharge fireworks is required prior to submittal of an application to DPOR.</u>
10. All containers used for geocaching must be clearly marked with the name of the person or entity authorized to engage in that use.
11. Geocaching of food items is strictly prohibited.

12. A vehicle shall be operated in a manner that minimizes impacts to the natural resources.
13. Only the vehicle providing access for a mobility impaired person may be parked at a public use cabin. This vehicle authorized to provide access to public use cabins may be parked at the cabin while the authorized person is engaged in recreation activities within NLSRA.
14. Vehicle shall be in good operating condition and should not be leaking fluids that will cause impairment of the natural resources.
15. All discharges or spills of fuels or lubricants shall be immediately reported to the DPOR Park Superintendent at the Mat-Su Area Park Office (907-745-3975) and the NLSRA Ranger at the Nancy Lake Ranger Station (907-495-6273).
16. Entities authorized to conduct an organized event are responsible for all costs that may be incurred as a result of conducting the event. This includes the responsibility to rehabilitate trails or facilities impacted by the organized event. At the discretion of DPOR, the authorized entity may complete necessary rehabilitation consistent with standards identified by DPOR. This responsibility may include the reimbursement for DPOR staff or contractors to rehabilitate trails or facilities negatively impacted by the authorized use.
17. Archaeological studies must be conducted by a qualified person as identified under 11 AAC 16.040.
18. Commercial barges must be removed from the waterbody once work is completed.
19. Long-term moorage of a commercial barge, even at the owner's upland parcel, is prohibited.
20. ~~Vehicles used for photography or filming shall not occupy more than 50 of the available parking spots of a parking area.~~
21. Any temporary structure authorized for filming or photography must be removed in its entirety when the permit is terminated. The site occupied by the structure must be restored as nearly as possible to the natural condition that existed prior to the structure being constructed.
22. Memorials placed in the area must have a historical or recreational purpose. Simple plaques, stones, or other type of memorials will not be authorized.

Chapter 7
Unit Specific Intent and Management and Facility Recommendations

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Chapter 7
Unit Specific Intent and Management and Facility Recommendations

Introduction

This chapter of the plan identifies management units and provides unit specific management intent and management and facility recommendations. The management intent and recommendations for each unit build upon plan information, area-wide intent and guidelines, and land-use zone guidelines presented in previous chapters. It makes specific recommendations on how each unit should be managed to meet the area-wide and unit specific intent and guidelines, and what facilities are needed to accommodate current and future recreation.

Management Units

Management units have been identified based on geographic and use similarities, management orientation, and current and proposed future use characteristics, the land use zones, and information presented in previous chapters of this plan. See Map 7 on page 6 - 7 for a map depicting the units. Management of these two state park system units not only needs to be responsive to current types and levels of recreational use but must also provide management direction for the level of development and use that is expected to occur as this plan is implemented over the next 20 years. The management intent and guidelines and the management and facility recommendations provided in this chapter are consistent with the more specific management direction provided for the land-use zones provided in the previous chapter. The unit specific management intent and guidelines build upon the area-wide intent and guidelines provided in Chapter 5.

This chapter provides a brief *unit description* and an overview of the *current uses* for each unit. A table is included that details the *existing facilities and trails* that occur within each unit. Following this background information, the *management intent, facility recommendations*, and *management recommendations* are provided for each unit.

Unit Description
Unit descriptions include a brief overview of the size and location of the unit, how access to the unit is provided, and a detailed description of the natural environment.

Current Uses
Uses that currently occur within the unit are described in greater detail.

Existing Facilities and Trails
Within this section a table identifies the existing facilities that are found in the unit and the amenities available at each one. Trails are listed at the bottom of the table to provide a comprehensive overview of what opportunities currently exist.

Management Intent
The management intent provides a desired future condition for each of the units consistent with the legislative purposes of the NLSRA and the area-wide intent and guidelines.

Management Guidelines
Management guidelines are consistent with the management intent for the unit and are specific courses of action that direct the current and future management decisions by DPOR. They are necessary to implement the intent provided for each unit. Together with the management intent, they represent DPOR's policy for managing the units. Certain guidelines necessary to implement the plan will be adopted as regulation subsequent to the adoption of this plan.

Facility and Trail Recommendations
Facility and trail recommendations are described and a desired outcome of the recommendations is identified for the units. DPOR may develop these recommendations as staffing and funding allows, or facilitate development by a non-governmental group. Locations of facilities and trails provided in this section of the plan are intended to be general in nature. The exact location of a facility or trail is dependent upon more detailed site analysis and design work that is done as part of a specific project.

Lakes Unit (Natural Land Use Zone)

Description

This unit is approximately 17,128 acres in size and consists of all of the area south of the Nancy Lake Parkway Unit. Included in this unit are numerous lakes and ponds; several of which are used as segments of the popular water trail known as the Lynx Lake Loop Canoe Trail. The majority of land within this unit is owned by the State however there are 35 private parcels totaling approximately 314 acres also within the unit. These private lands are found on Lynx, Skeetna, Butterfly, and Red Shirt lakes and the area just north of Delyndia Lake. Numerous private parcels are contiguous or adjacent to the boundary of NLSRA in the area of Nancy, Butterfly, Delyndia, and Red Shirt lakes. See Map 8 on page 7 - 13 for a depiction of this management unit.

The majority of people recreating in this unit access it by trails originating at Nancy Lake Parkway in the north. During snow free periods, hiking access is primarily conducted on two terra trails (Red Shirt Lake Summer Trail and East Red Shirt Lake Trail) that originate on the Parkway. Lynx Lake Loop Canoe Trail access is facilitated at the Tanaina Lake access site just south of the Parkway. Vehicle access to the eastern portion of the NLSRA does occur via the Lynx Lake Road. Lynx Lake Road originates at mile 63.9 of the George Parks Highway and extends south and west from the highway across private and general state land before reaching the eastern boundary of NLSRA. Within NLSRA, Lynx Lake Road continues southwesterly to the Anchorage Church of Christ property on the eastern shore of Lynx Lake. This road is only minimally maintained and public vehicle access ends at a gated turn-around area just within the eastern boundary of NLSRA. A single trail – the Chicken Lake Cross-Park Trail – connects the Lynx Lake Road to the East Red Shirt Lake Trail. Few people currently use this existing trail.

As the name suggests, this unit contains many lakes including all of the lakes traversed as part of the Lynx Lake Loop Canoe Trail. Lakes are the focal point for most of the recreation that occurs in this unit. The size of lakes and waterbodies varies widely from the almost 1,200 acre Red Shirt Lake to small ponds. Three of the four lakes that allow use of an internal combustion motorized boat use in NLSRA are located within this unit, they are: Lynx, Butterfly, and Red Shirt lakes. A segment of the Little Susitna River, a component of the Legislatively Designated State Recreation Rivers, passes through the southeastern portion of the unit. Several waterbodies are identified as anadromous in the *Atlas to the Catalogue of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes*[1]. Several waterbodies including Big Noluck, Little Noluck, Milo, and Tanaina lakes have been stocked previously by ADF&G.[2]

[1] See Map 5 on page 2 - 11 for a depiction of anadromous waterbodies cataloged at the time this plan was produced.

[2] See Table 3 on page 2 - 13 for a listing of waterbodies that are, or have been, stocked by ADF&G.

Adjacent to the lakes are rolling to steep hills and ridges left after retreat of the last glacial period. Over-mature birch and spruce dominates the vegetation on the uplands while black spruce alder and willow are common on the low lying areas and wetlands. Stunning views of the Chugach and Talkeetna mountains to the south and east can be had from the ridge tops, but views can be limited in the summer due to vegetation. Similarly, views of the expansive wetlands and numerous waterbodies adjacent to the ridge can be obscured by vegetation. Nature and wildlife observation opportunities are plentiful from vantage points on ridges within the unit or from the edge of lakes, ponds, and wetlands. Despite the trails and other developed facilities in this unit, it remains relatively natural in character and provides outstanding remote recreational opportunities, particularly during snow free periods.

Current Uses

A variety of recreational opportunities and experiences are available and vary widely between summer and winter. Use levels within this unit could be characterized as low in the summertime, and moderate to high in the winter. In summer, use primarily occurs on the Lynx Lake Loop Canoe Trail which traverses many of the largest lakes in the unit. A relatively short trail, it can be completed in one lone day but may people opt to stay in one of the 18 campsites or 4 public use cabins accessible by this water trail. The portages on this trail are well marked but the portage dock structures and the tread of the trail have been degraded by years of use. Three terra trails – Red Shirt Lake Summer Trail, East Red Shirt Lake Trail, and the Chicken Lake Cross-Park Trail – provide summer hiking opportunities; however, use of these trails is considered low. Some biking does occur on the existing terra trails and Lynx Lake Road, but this use is currently prohibited by regulation. Other summer uses include nature and wildlife viewing and photography, orienteering, bird watching, and hunting.

Moderate to high levels of use occurs south of the Nancy Lake Parkway during the winter. When sufficient snowfall has fallen to protect the underlying vegetation, the area south of the Nancy Lake Parkway is opened to the use of snowmobiles. Snowmobile use is widespread once the area is opened and use occurs on all existing canoe trails and terra trails as well as snow trails between lakes and wetlands. Another popular winter use, dog sledding, has a rich history in the area with local mushers training for both short and long distance races on the many trails that exist here in winter. Other forms of winter recreation occur in this area and include skiing, snowshoeing, skijoring, fat-tire biking, ice fishing, and hiking. More or less all of the winter trails south of the Parkway are multiple use trails where one could expect both motorized and non-motorized uses to be occurring simultaneously.

Eight public use cabins are located in the unit. Four are located in the northern end of Red Shirt Lake, one on James Lake, and three on Lynx Lake. The cabins are used throughout the year with most of the use occurring on Friday through Saturday, however weekday use is common. The James Lake and Lynx Lake public use cabins are accessible via the canoe trail system or by walking on the Lynx Lake Road during snow free periods. The four Red Shirt Lake public use cabins are accessible via hiking on the Red Shirt Lake Summer Trail then canoeing to the cabins after renting a canoe from the concessionaire or by flying on a float

equipped plane. Access methods expand in the winter to include snowmobiles, skiing, skijoring, snowshoeing, dog sledding, and hiking. All of the public use cabins are available for rent via a reservation system.

Camping is a popular activity and is primarily associated with use of the Lynx Lake Loop Canoe Trail during snow free periods but several cabins are accessed via a combination of terra trails and boating. A total of 31 campsites are available for free on a first come-first served basis. Nine camping sites are located on northwestern shore of Lynx Lake, three on eastern shore of Big Noluck Lake, nine on the northwest shore of Red Shirt Lake, two on the northern shore of Skeetna Lake, and a total of eight campsite on the western and eastern shores of Ardaw Lake. Five of these campsites offer raised tent platforms (three at Lynx Lake and two at Skeetna Lake). Bear resistant containers are provided at the Lynx Lake and Red Shirt Lake campsites. All campsites have at least one pit privy.

All but two of the lakes (Lynx and Butterfly) offer non-motorized boating, fishing, photography, and nature and wildlife viewing opportunities in the summer. Winter use of waterbodies includes both snowmobile and non-motorized uses. A popular winter time activity, ice fishing occurs on many lakes. The frozen lakes are also used for skiing, snowshoeing, dog sledding, skijoring, and hiking. ADF&G has previously stocked Tanaina, Milo, Big Noluck, and Little Noluck lakes and the Little Susitna River to enhance fishing opportunities. Like other lakes in NLSRA, the introduction of northern pike into the Susitna drainage has altered natural diversity of fish species within waterbodies, including those in NLSRA. Targeted fish species include trout, grayling, salmon, and pike.

Hiking typically occurs on one of four main terra trails; they are the Red Shirt Lake Summer Trail, East Red Shirt Lake Trail, Chicken Lake Cross-Park Trail, and the Butterfly Lake Trail. These trails have had some level of development and are used as hiking trails with some bicycle use. Of these trails, the Red Shirt Lake Summer Trail receives the highest use levels during snow-free periods. This is because it is the primary route for access to private property on Red Shirt Lake in addition to serving as the primary access public use cabins on the lake. Similarly, the Butterfly Lake Trail sees increased use during snow-free periods because it also serves as a primary route for access to several private properties.

A segment of the Iditarod Trail occurs within this unit. It traverses NLSRA from east to west just south of the parkway and crosses numerous waterbodies. The segment is named "Susitna – Nancy" and is included in the 1977 Bureau of Outdoor Recreation study titled *The Iditarod Trail (Seward Nome Route) and other Alaska Gold Rush Trails*. This segment did not get formally recognized in 1986 Bureau of Land Management, *The Iditarod National Historic Trail Comprehensive Management* Plan. However, this section is recognized as RST 149 – Nancy Lake-Susitna[3] by the Department of Natural Resources. Portions of this trail are used seasonally for snowmobiling, dog sledding, skiing, and other recreational uses.

[3] "RST" is shorthand for "Revised Statute." Revised Statute 2477 is found in section 8 of the Mining Law of 1866. It granted states and territories unrestricted right-of-ways over federal lands that had no existing reservations or private entries. The law remained in effect until Congress repealed it in 1976.

Existing Facilities and Trails

The following table identifies facilities and trails that are currently located in this unit. Trails are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. A fire pit and a pit privy are amenities at all campsites. A wood stove and pit privy are amenities at public use cabins. See the Trail Plan in Appendix C for detailed information on trails.

Facility/Trail	Amenities
Boat Access Sites	
• Red Shirt Lake (Provides access for property owners and recreationists)	Minimally developed launch area Boat storage area Pit privy
• Lynx Lake	Minimally developed launch on east shore
Remote Campsites	
• Lynx Lake	3 tent platforms 6 campsites Bear resistant food storage container
• Eastern Ardaw	4 campsites
• Western Ardaw	4 campsites Bear resistant food storage container
• Big Noluck	3 campsites Bear resistant food storage container
• Red Shirt Lake	9 campsites Bear resistant food storage container Volunteer host cabin
• Skeetna Lake	2 tent platforms Bear resistant food container
Public Use Cabins	
• James Lake	6 person capacity
• Red Shirt Lake #1	7 person capacity
• Red Shirt Lake #2	6 person capacity
• Red Shirt Lake #3	8 person capacity
• Red Shirt Lake #4	8 person capacity
• Lynx Lake #1	4 person capacity

Facility/Trail	Amenities
• Lynx Lake #2	4 person capacity
• Lynx Lake #3	4 person capacity
Trails	
• Lynx Lake Loop Canoe Trail	Located south of the parkway, this water trail connects many waterbodies within the unit. It offers camping and public use cabin opportunities.
• Red Shirt Lake Summer Trail	As the name implies, this trail extends from the Nancy Lake Parkway south to the western shore of Red Shirt Lake. It provides overland access to Red Shirt Lake for property owners and recreating public. Nine campsites and a backcountry host cabin are accessible at the terminus of the trail.
• East Red Shirt Lake Trail	This trail extends south from the Nancy Lake Parkway to the eastern side of Red Shirt Lake. This trail is located on an existing cat trail that existed prior to designation of the NLSRA. It serves as the access route to private property on Red Shirt Lake when conditions do not allow snowmobile use south of the Parkway and as a hiking trail during snow free periods. It intersects the Chicken Lake Cross-Park Trail.
• Chicken Lake Cross-Park Trail	Provides the only east-west terra trail south of the parkway. This trail is mostly located on an existing road bed that was used while a test well was drilled in the area north of James Lake. It originates at the Lynx Lake Road approximately ¾ of a mile inside of the NLSRA boundary and continues generally west and north until it intersect the East Red Shirt Lake Trail. This trail intersects the Lynx Lake Loop Canoe Trail in two places.
• Butterfly Lake Trail	This trail extends generally south and west from the Anchorage Church of Christ Property on the southeast shore of Lynx Lake to a bay on the north east shore of Butterfly Lake. A Public Recreational Easement on the Anchorage Church of Christ property provides access to the Butterfly Lake Trail from the Terminus of the Lynx Lake Road. The trail can also be accessed via the Lynx Lake Canoe Trail.

Management Intent

The Lakes Management Unit will be managed to continue to provide low density dispersed recreation opportunities in a natural setting during snow free periods. In the winter, this area will continue to be managed to provide a wide variety of recreational opportunities to a diversity of recreational users. Facilities will be developed where multi-modal multi-season access will provide enhanced opportunities to a diversity of recreational user groups. Major

trails will be developed to a higher standard to facilitate current and expected future use levels. Camping opportunities will be enhanced and expanded on the canoe trail and terra trail systems. The high quality natural setting of this area will be maintained. Facilities will be developed to blend into the natural landscape and will include visual and acoustic buffers that will minimize their impact on the natural surroundings. New facilities will, to the greatest extent practicable, be located away from private parcels. This will minimize the impacts of increased public use on those private properties.

Management Guidelines

- Vehicle use beyond a traffic control gate on Lynx Lake Road may be authorized by DPOR under 11 AAC 18.010 during snow free periods when resource conditions allow. Public use of an ORV may be authorized under 11 AAC 18.010 on Butterfly Lake Trail during snow free periods once permanent access across the Anchorage Church of Christ, Midnight Sun Bible Camp is secured and a sustainable ORV trail is developed. DPOR will not expend funds on the development of a sustainable trail unless use by the public is secured though acquisition of a permanent easement.

- Due to the lack of developed facilities to accommodate increased use and lack of dedicated enforcement in this area, DPOR will continue to manage public access in this area of NLSRA through a required authorization. All vehicle access beyond a traffic control device installed by DPOR will require an authorization. These authorizations will be open to any person and will be revocable at will by DPOR. ~~DPOR will continue to manage public access in this area of NLSRA through a required authorization. All vehicle access beyond a traffic control device installed by DPOR will require an authorization. These authorizations will be open to any person and will be revocable at will by DPOR.~~ Lynx Lake Road gate will remain at its current location. This gate will be used as a traffic control device to limit public use on Lynx Lake Road when road conditions will not allow vehicle use typically during freeze-up and break-up periods. When conditions allow during snow free periods, the gate will be opened to allow access to the Chicken Lake Cross-Park Trail trailhead.[4]

- DPOR will actively monitor vehicle use during snow free periods to determine if the use is having an unacceptable level of impact to natural resources, infrastructure, or facilities. If DPOR determines an unacceptable level of resource degradation is occurring, vehicle use may be restricted or prohibited. ~~Within a five year period following the adoption of this plan, DPOR shall conduct a detailed study to determine if vehicle access to private properties accessible via Lynx Lake Road and Butterfly Lake Trail should continue to be authorized; and if so, who should be granted access and what type of vehicle access should be authorized (i.e. highway vehicle and/or ORV). This study will determine if DPOR should continue the current policy regarding private access, modify the current access policy (i.e. expansion or restriction), or cease to authorize private access. It will be the basis for future decisions regarding private access on these routes. Vehicle access on Lynx Lake Road and Butterfly Lake Trail by private property owners will continue to be~~

[4] See facilities recommendations below.

~~authorized for a five year period or until the study is completed consistent with current policy, but will be capped at the number permits issued for access in 2012.~~

- An easement has been issued for Lynx Lake Road by DNR South Central Regional Office (SCRO) of the Division of Mining, Land & Water (DMLW). DPOR should work with the SCRO in identifying maintenance needs of Lynx Lake Road in light of anticipated increases in vehicle use. DPOR may pursue a maintenance agreement with the SCRO to facilitate maintenance of the road when the Chicken Lake Cross Park Trailhead is constructed. This guideline is subject to available funding and staff availability.
- ~~Authorizations for vehicle access on Lynx Lake Road and Butterfly Lake Trail shall not be granted to private property owners on Cow Lake.~~
- ~~Authorizations for vehicle access on Lynx Lake Road and Butterfly Lake Trail for property owners on Delyndia Lake shall be limited to no more than six permits. This is the number of authorizations issued to property owners on this lake in 2012 and can only be modified based on the results of the study described above.~~
- Authorizations for ORV use on the East Red Shirt Lake Trail shall be limited to time periods when snow and frost conditions do not allow the use of snowmobiles south of the Nancy Lake Parkway but a combination of snow cover and frost effectively protect the terra trail tread and geoblock hardened sections from degradation.
- The use of an electric trolling motor on boats shall be allowed on Tanaina Lake.
- All trails shall be developed as multiple use trails that are able to accommodate a number of compatible uses.
- When designing terra trails, use of a snow trail on the same alignment shall be considered. Winter uses include short-team dog sledding, skijoring, cross country skiing, snowshoeing, and fat-tire winter biking among others.
- DPOR may restrict or prohibit vehicle access when it determines an unacceptable level of impacts are occurring, or are likely to occur, to natural resources, infrastructure, or facilities as a result of vehicle use.
- Until such time that a maintenance agreement is executed or State maintenance of Lynx Lake Road is performed; DPOR should consult with SCRO regarding placement of a sign indicating Lynx Lake Road is not maintained by the State of Alaska.

Facility and Trail Recommendations:

The following table identifies new facilities as well as existing facilities that need to be rehabilitated, improved, or redeveloped to a higher standard. Although trails are not facilities, they are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. See the Trail Plan in Appendix C for detailed information on trails.

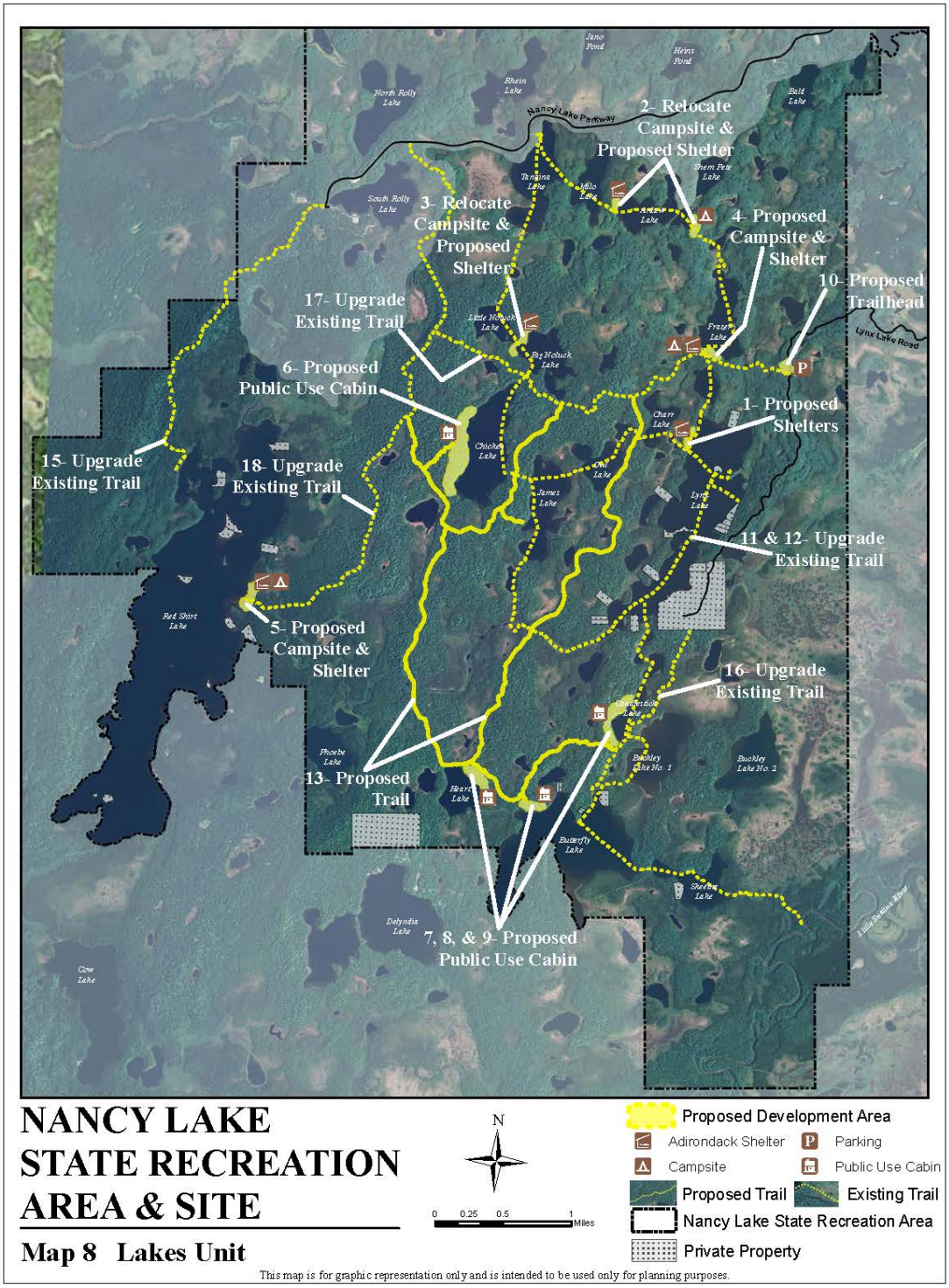
Table 5: Lakes Unit Facility and Trail Recommendations

Ref. No.	Facilities/Trails	Desired Outcome
1	Redevelop up to three of the Lynx Lake campsites as Adirondack type shelters. These shelters will include a picnic table and a fire ring.	Provide new camping opportunities that do not currently exist at NLSRA and extend camping opportunities, particularly during shoulder seasons when camping use is typically low.
2	Relocate Ardaw Lake campsites away from portage trails and design and develop one Adirondack type shelter in the area of the east Ardaw campsites.	Enhance privacy and remote feeling by relocating existing campsites that are next to the portage trails. Also, to provide a new camping opportunity that does not currently exist at NLSRA and extend camping opportunities, particularly during shoulder seasons when camping use is typically low.
3	Relocate Big Noluck campsites away from portage trails and design and develop one of these sites as an Adirondack type shelter.	Enhance privacy and remote feeling by relocating existing campsites that are next to the portage trails. Also, to provide a new camping opportunity that does not currently exist at NLSRA and extend camping opportunities, particularly during shoulder seasons when camping use is typically low.
4	Design and develop a new camping site on the southern shore of Frazer Lake. This site will include one campsite, one Adirondack type shelter, fire rings, a pit privy, and a bear resistant food storage container.	Provide a new camping opportunity that does not currently exist at NLSRA and extend camping opportunities, particularly during shoulder seasons when camping use is typically low.
5	Design and develop up to two new campsites north of the terminus ~~at the end~~ of the East Red Shirt Lake Trail. DPOR should develop the traditional campsite including a pit privy and a bear resistant food storage container initially. If public demand warrants, a second site with an Adirondack type shelter may be developed. ~~This site will include on Adirondack type shelter and one traditional campsite, a pit privy, and a bear resistant food storage container~~.	Provide a new camping opportunity that does not currently exist at NLSRA and extend camping opportunities, particularly during shoulder seasons when camping use is typically low. This campsite development will also provide a destination at the terminus of the East Red Shirt Lake Trail.

Ref. No.	Facilities/Trails	Desired Outcome
6	Design and develop one public use cabin on the northwest shore of Chicken Lake.	Provide new opportunities to use a multimodal accessible public use cabin on the Lynx Lake Loop Canoe Trail.
7	Design and develop one public use cabin on the northwestern shore of Butterfly Lake.	Provide new opportunities to use a multimodal accessible public use cabin on the Lynx Lake Loop Canoe Trail in the southern portion of NLSRA.
8	Design and develop one public use cabin on the northeastern shore of Heart Lake.	Provide new opportunities to use a multimodal accessible public use cabin on the Lynx Lake Loop Canoe Trail in the southern portion of NLSRA.
9	Design and develop one public use cabin on the south or western shore of Candlestick Lake.	Provide new opportunities to use a multimodal accessible public use cabin on the Lynx Lake Loop Canoe Trail in the southern portion of NLSRA.
10	Design and develop a new small trailhead at the Chicken Lake Cross-Park Trail (Oil Well Road) intersection with Lynx Lake Road. The trailhead should include a parking area, interpretive panel, sanitation facilities, a turn-around area, and a traffic control gate.	Increase access to the existing and proposed trails and public use cabins in the southern portion of NLSRA.
11	Redevelop Lynx Lake Loop Canoe Trail to a Class 3 water trail.	Facilitate current and future recreation on the existing water trail and minimize impacts to natural resources. The focus will be on addressing portage segments of the canoe trail.
12	Develop multi-use Class 2 snowmobile trails on existing canoe trail portage segments and terra trails. These snow trails will overlie the terra and water trails where possible.	Facilitate multi-use motorized and non-motorized recreation during the winter.
13	Design and develop new looped terra trails that connect the Chicken Lake Cross-Park Trail and Butterfly Lake Trail to the East Red Shirt Lake Trail. These trails will provide access to the proposed new public use cabins at Heart, Butterfly, Candlestick, and Chicken lakes. These trails will be developed as Class 3 Terra trails designed for bicycle use.	Provide new year-round multiple use recreational opportunities. The looped trails will provide connectivity with existing terra trails and will greatly expand the terra trail system.

Ref. No.	Facilities/Trails	Desired Outcome
14	Design and develop access trails to new camping and public use cabin facilities. These may be developed as Class 2 or 3 terra trails designed for bicycle use.	Provide multi-modal access to new camping sites and Adirondack type shelters.
15	Redevelop the Red Shirt Lake Summer Trail to a higher standard terra trail. Segments of this trail may be developed as a Class 3 or 4 terra trail designed for bicycle use.	Enhance opportunities by upgrading this trail to sustainable standards and allowing multiple uses.
16	Redevelop the Butterfly Lake Trail as a ~~Class 2~~ Class 3 terra trail designed for ORV use if a permanent easement is secured across the Anchorage Church of Christ, Midnight Sun Bible Camp property on Lynx Lake.	Enhance sustainability by upgrading this trail to ORV standards and allowing multiple uses. This recommendation will only be implemented by DPOR if a permanent ~~the~~ public ~~recreational~~ easement is secured ~~remains~~ across ~~on~~ the Anchorage Church of Christ property. DPOR will not expend funds on the development of a sustainable trail unless use by the public is secured though acquisition of a permanent easement. ~~If the existing public easement is removed, DPOR will not expend public funds to upgrade or maintain this trail and the trail may be closed to use.~~
17	Redevelop Chicken Lake Cross-Park Trail as a Class 4 terra trail designed for bicycle use.	Enhance opportunities by upgrading this trail to sustainable standards and allowing multiple uses.
18	Redevelop East Red Shirt Lake Trail to a Class 4 terra trail designed for bicycle use.	Enhance opportunities by upgrading this trail to sustainable standards and allowing multiple uses.

Map 8: Lakes Management Unit



*Please note the depiction of Lynx Lake Road and Butterf/y Lake Trail crossing private property will not be shown on the final plan maps.

1

Nancy Lake Parkway Unit (Recreational Development Zone)

Description

This unit is approximately 2,658 acres in size and is comprised of land and water adjacent to the Nancy Lake Parkway and includes Nancy and South Rolly lakes. The majority of the land in this unit is state-owned with private land totaling only 9 acres. See Map 9 on page 7 - 21 for a depiction of the unit. The Nancy Lake Parkway, a high standard paved park road, provides access to and through this unit. The parkway originates at mile 67.3 of the George Parks Highway and extends 6.5 miles south and west to the South Rolly Lake Campground. Most of the developed facilities in NLSRA are located in this unit including most of the trailheads and parking areas used to access adjacent units. This unit contains the most heavily used waterbody in NLSRA – Nancy Lake, and the largest campground in the state park system – South Rolly Lake Campground.

The surface features include a mixture of flat terrain, rolling hills, wetlands, lakes, and streams. Hills within the unit offer vantage points to view scenery and wildlife. Fishing is a popular recreational activity that occurs on both Nancy and South Rolly lakes, the two largest lakes in this unit. Both Nancy and South Rolly lakes have been previously stocked by ADF&G to enhance fishing opportunities[5] and are indicated as "anadromous" in the *Atlas to the Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes*. Upland vegetation includes over mature paper birch and white spruce trees while black spruce, alder, willow, sedges, and grasses dominate the wetland vegetation.

Current Uses

This unit is one of the most accessible and receives the highest level of use in NLSRA. This use primarily occurs in two areas, Nancy Lake and the South Rolly Lake Campground. Nancy Lake receives high levels of public use from the adjacent NLSRS and from the approximately 300 private parcels that share a boundary with NLSRA on Nancy Lake. Much of the recreational use on Nancy Lake centers on motorized boating and fishing in summer, and ice fishing and winter sports in the winter. The South Rolly Lake Campground lies at the terminus of the Nancy Lake Parkway at the western shore of South Rolly Lake. This campground offers 98 developed campsites, vaulted privies, potable water, a boat rental concessionaire, lake access, and a small creative play area. During the summer, the campground is often at or over capacity, particularly during sunny summer weekends and holidays.

Multiple parking areas located on the parkway facilitate access to adjacent public use cabins, picnic area, waterbodies, and several terra and water trails. Among the trails accessed from the parkway are the popular Lynx Lake Loop and Pioneer Loop canoe trails. Relatively unique in Southcentral Alaska, the water trails in these two looped canoe trails offer an opportunity to boat through relatively undisturbed natural areas where opportunities to view wildlife and natural scenery abound.

[5] See Table 3 on page 2 - 13 for a listing of waterbodies that are, or have been, stocked by ADF&G.

In addition to providing the major access points to the canoe trails, this unit contains 5 of the 13 public use cabins located in NLSRA. Four of these cabins are located on the western shore of Nancy Lake and one is located on the north shore of Bald Lake. The public use cabins are very popular and receive high levels of use throughout the year. In fact, these public use cabins are so popular they are booked almost every weekend and many weekdays throughout the year. They are accessed by a variety of methods including watercraft, snowmobiles, skiing, hiking, snowshoeing, and motorized vehicles on a permitted basis.

Fishing is a popular activity on waterbodies within and adjacent to the unit. Most fishing occurs on Nancy Lake and is facilitated from the numerous private parcels contiguous with the NLSRA boundary. Access to fishing opportunities is provided from parking areas and boat access areas located on the Parkway and the NLSRS. These facilities provide access to several stocked lakes in and adjacent to this area including South Rolly, North Rolly, Rhein, Tanaina, and Nancy lakes. Trout, salmon, grayling, and pike are the primary species targeted.

Hiking opportunities are somewhat limited currently with only two large and several small terra trails and two water trails originating within the unit. The larger trails include the Red Shirt Lake Summer Trail and East Red Shirt Lake Trail while the smaller trails are primarily access trails to a facility. The two water trails accessible from this unit are the Lynx Lake Loop Canoe Trail and the Pioneer Loop Canoe Trail. All of these trails have some level of development and are maintained by DPOR. The East Red Shirt Lake Trail is currently being developed to a higher standard trail to facilitate summer and winter use.

Existing Facilities and Trails

The following table identifies facilities and trails that are currently located in this unit. Trails are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. A fire pit and a pit privy are amenities at all campsites. A wood stove and pit privy are amenities at public use cabins. See the Trail Plan in Appendix C for detailed information on trails.

Facility/Trail	Amenities
Boat Access Sites	
• West Nancy Lake	Vehicle parking (4 vehicle capacity) Minimally developed hand carry launch
• Tanaina Lake (Provides access to Lynx Lake Canoe Trail)	Vehicle parking (8 vehicle capacity) Minimally developed hand carry launch Vaulted privy
• Rhein Lake (Provides eastern access to Pioneer Loop Canoe Trail)	Vehicle parking (4 vehicle capacity) Minimally developed hand carry launch
• North Rolly Lake (Provides	Vehicle parking (4 vehicle capacity)

Facility/Trail	Amenities
western access to Pioneer Loop Canoe Trail)	Minimally developed hand carry launch
• South Rolly Lake (Provides lake access for campers and other day use)	Vehicle parking (4 vehicle capacity) Minimally developed hand carry launch Floating dock
Picnic Area • South Rolly Lake Overlook	2 Picnic shelters Parking Vaulted privy
Campground • South Rolly Lake	Campground host RV site 98 road accessible campsites Potable water Vaulted privies
Public Use Cabins • Nancy Lake #1	6 person capacity
• Nancy Lake #2	6 person capacity
• Nancy Lake #3	6 person capacity
• Nancy Lake #4	8 person capacity
• Bald Lake	6 person capacity
Parking Areas • Winter Parking Area	60 vehicle capacity Vaulted privies
• Red Shirt Lake Summer Trail Parking Area	20 vehicle capacity
NLSRA Maintenance Facility	2 Maintenance bays Offices for maintenance and enforcement staff Outdoor storage
Trails	Two major terra trails originate in the unit – the Red Shirt Lake Summer Trail and the East Red Shirt Lake Trail. Two water trails originate in this unit – The Lynx Lake Loop Canoe Trail and Pioneer Loop Canoe Trail.

Management Intent

Management intent will focus on enhancing current recreation opportunities while expanding the diversity of recreational opportunities. This area will remain moderately-to- highly

developed and will continue to facilitate high levels of public recreation in concentrated areas and moderate levels of dispersed use in all other areas. Natural resources will be impacted by facilities and uses. Impacts to cultural resources will be minimized. High density/high use developments will be restricted to areas adjacent to the Parkway. See Map 9 on page 7 - 23 for a depiction of this unit including the high intensity development areas. Existing facilities should be redesigned and new facilities should be developed to accommodate increased use by the public.

Construction of a group camp will be a high priority for NLSRA. The intent is to provide a separate facility to allow large groups to recreate, while maintaining individual campsites at the South Rolly Lake Campground for small groups, families, or individuals.

Another priority is the development of looped trails in the area of the South Rolly Lake Campground. The intent is to provide increased opportunities for trail based recreation at the campground. These trails are described in greater detail in the Trails Plan in Appendix C.

Management Guidelines

- Use of an ORV for sled dog training may be allowed through a restricted opening by the Director under 11 AAC 18 during the fall shoulder season when snow conditions do not allow use of a dog sled. The restricted opening will be strictly limited to the paved surface of the Nancy Lake Parkway and the graveled surface of South Rolly Lake Campground access road.
- Access to the Nancy Lake Parkway Trail shall be provided at the South Rolly Lake overlook site.

Facility and Trail Recommendations

The following table identifies new facilities as well as existing facilities that need to be rehabilitated, improved, or redeveloped to a higher standard. Although trails are not facilities, they are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. See the Trail Plan in Appendix C for detailed information on trails.

Table 6: Nancy Lake Parkway Unit Facility and Trail Recommendations

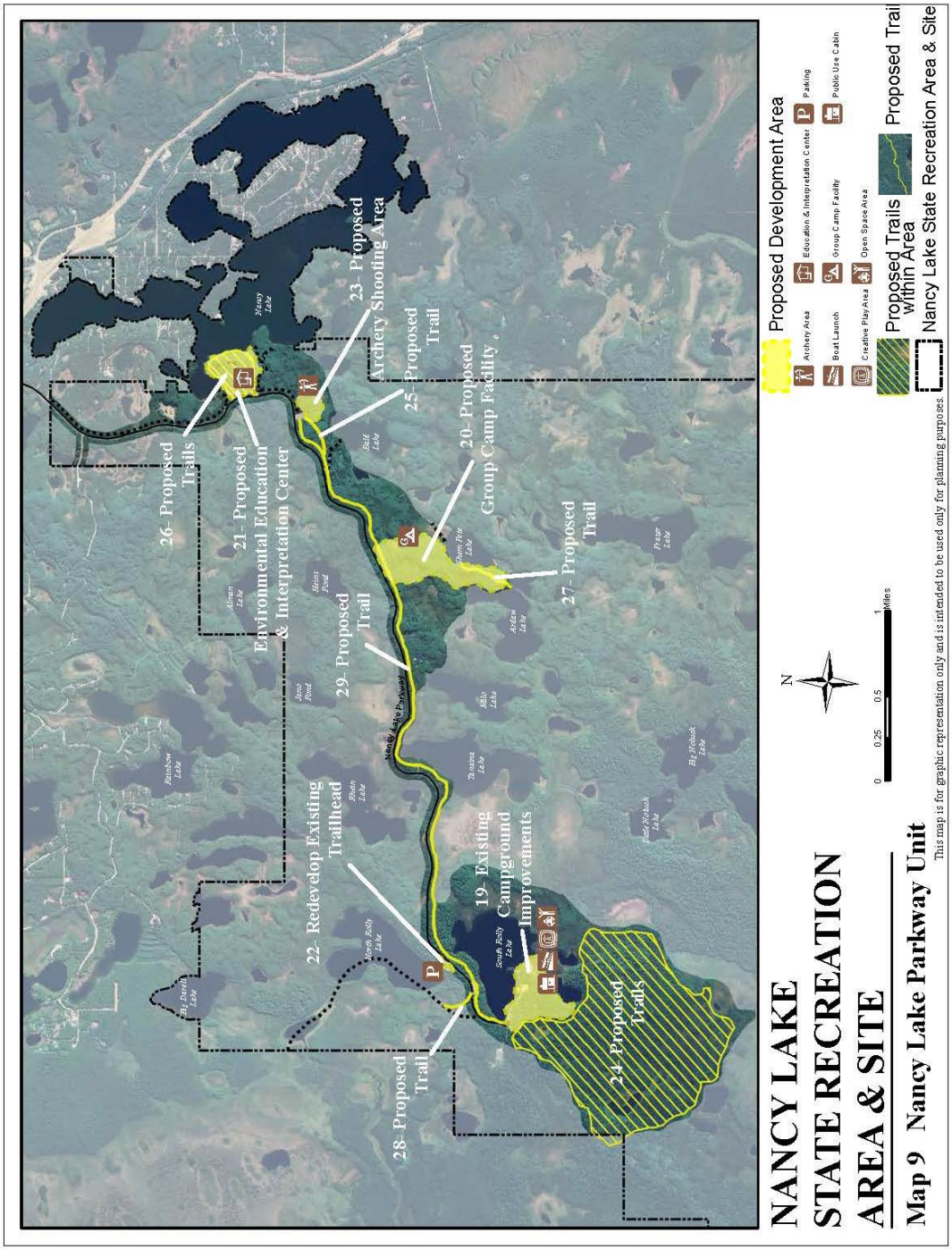
Ref. No.	Facilities/Trails	Desired Outcome
19	South Rolly Lake Campground improvements: • Design and develop an open space area	Enhance recreation opportunities at the campground by providing a relatively large open field where people can engage in recreational activities.
	• Design and develop a creative play area	Enhance recreation by providing an area where campers, particularly children, can engage in creative play while staying within the campground. Simple natural materials

Ref. No.	Facilities/Trails	Desired Outcome
		will be provided to facilitate play.
	• Design and develop up to 4 public use cabins in the area of Rolly Twin Lakes and the South Rolly Campground. At least two of these cabins will be designed as ADA accessible barrier free cabins. The remaining cabins will be developed as barrier free cabins.	More than just new public use cabin opportunities, these cabins will provide both ADA and barrier free opportunities in an accessible portion of NLSRA while maintaining the remote feeling and lake views of other public use cabins. It is intended that these cabins be developed on a loop off of the existing South Rolly Lake Campground access road, or within the campground itself.
	• Improve lake access	Improve the existing boat access site by widening the existing access road and launch to facilitate trailer launching of boats.
20	Design and develop a new group camp facility. The facility should include the following: • access road • up to 25 road accessible tent sites • up to 4 cabins (eight person capacity) • cooking and picnic pavilion (100 person capacity) • large council fire ring and seating area (75 person capacity) • small council fire ring (25 person capacity) • large open space area • floating dock	Provide a new facility to accommodate large group activities. This type of facility does not currently exist in the state's MatSu/Copper River Basin park system. This facility will reduce the burden on existing facilities to accommodate large group use. It will be available on a reservation basis.
21	Design and develop an environmental education and interpretation center. This facility will include the following: • visitor contact station and interpretive center • administrative offices and staff living quarters • meeting space (50 person capacity) • environmental classroom	Provide a facility that will be used as an education and interpretation center. The focus of the contact station would be to provide information on recreational opportunities and interpretation of natural and cultural resources in NLSRA. The meeting facility would serve as the DPOR's primary trails training facility; however, it would be available by reservation for other environmental education opportunities when not used by the agency. The classroom/laboratory would be used to provide hands on environmental education to school aged children and could be used by others conducting studies related to natural

Ref. No.	Facilities/Trails	Desired Outcome
	and basic laboratory (30 person capacity) • machine and tool storage	resources within NLSRA.
22	Redevelop existing pullout at North Rolly Lake to a small trailhead parking area.	Provide a parking facility that will accommodate vehicle parking in a safe manner for people recreating on North Rolly Lake and the Pioneer Loop Canoe Trail.
23	Develop an archery shooting course in the area south and east of the winter parking area.	Provide an area for the development of archery skills.
24	Design and develop a system of looped terra trails that are readily accessible from the South Rolly Lake Campground and the Red Shirt Lake Summer Trail trailhead. These trails should range between Class 1 and Class 5.	Provide a new system of looped trails that will greatly expand trail oriented recreation opportunities. This terra trail system will include a diversity of trails that will be available for hiking and bicycle use. A high standard, ADA accessible, interpretive trail should be developed as part of this system of trails.
25	Develop new Class 4 dog sledding snow trail from the winter parking area to the Nancy Lake Parkway.	Enhance access to the Nancy Lake Parkway and other snow trails for dog sled teams and skijoring uses.
26	Design and develop a short, Class 4 hiker/pedestrian, looped interpretive trail system at the interpretive and education center. A connected trail will lead to the shore of Nancy Lake.	Provide an interpretive trail that is able to be used by a wide spectrum of visitors to NLSRA including school programs and programs offered by ADF&G.
27	Design and develop a new Class 4 or 5 interpretive trail that includes a portage site linking the Shem Pete Lake group camp facility with the Lynx Lake Canoe Trail.	Provide a trail that is accessible to a wide segment of the recreating public and expand opportunities to enter the canoe trail system.
28	Develop a new Class 4 snow trail that connects the Nancy Lake Parkway to the North Rolly Lake motorized snow trail.	Enhance use of the existing trails by large dog sled teams through development of a snow trail that connects the Parkway to area snow trails.

Ref. No.	Facilities/Trails	Desired Outcome
29	Design and develop a new high standard trail on the south side of the Nancy Lake Parkway. This trail is intended to link the South Rolly Lake Campground to the Parks Highway. This trail will be developed as a Class 4 or 5 biking trail that is ADA accessible.	Enhance visitor safety, trail connectivity, and access to recreation opportunities by providing a high standard trail that roughly parallels the Nancy Lake Parkway.

Map 9: Nancy Lake Parkway Management Unit



NLSRS Unit (Recreational Development Zone)

Unit Description

The Nancy Lake State Recreation Site (NLSRS) lies adjacent to the George Parks Highway on the northeast shore of Nancy Lake. The unit is approximately 30 acres in size and is composed of all land and water within the Nancy Lake State Recreation Site. Access to NLSRS is provided at mile 66.5 of the George Parks Highway via Buckingham Palace Road. Buckingham Palace Road continues through this unit and provides access to a number of private residences on the eastern shore of Nancy Lake. See Map 10 on page 7 - 27 for a depiction of the unit.

The majority of the unit is comprised of uplands; however, wetlands and a portion of one stream are present. Uplands are mostly level but do slope rather steeply to Nancy Lake on the western boarder of the site. Wetlands are found along the shore of Nancy Lake, contiguous with Lilly Creek, and in one depression in the northeastern portion of the unit. Lilly Creek enters from the northeast and terminates at Nancy Lake just north of the boat launch. Vegetation ranges from paper birch and white spruce in the uplands to black spruce, alder, willow, shrubs, sedges, and grasses in the wetlands.

Current Uses

The most readily accessible unit, NLSRS contains a high level of development in a compact area. It contains a campground, a picnic area and shelter, and a boat launch. The campground provides 30 sites for vehicle camping and has one spot reserved for a campground host. Originally designed for car and truck camping, the campground now receives increased RV camping. The campground receives high levels of use during the summer season and is at or near capacity on most sunny weekends during the summer and fall. The picnic area and shelter are popular for local residents and the traveling public. Views of Nancy Lake are available from the picnic area, although the views are somewhat obstructed by vegetation. The boat launch provides the only highly developed state maintained access on Nancy Lake. It is used by campground occupants, day users, and local property owners accessing property on Nancy Lake. Similar to the campground, the boat launch parking area is at or over capacity on sunny days during the summer season and most summer holidays. While fishing and wildlife observation does occur at the boat launch, developed facilities specific to this type of recreational opportunity do not currently exist. Overflow boat launch parking does occur on roads within the recreation site. A few social trails[6] access the waterfront from the picnic area and several campsites. One short trail provides access for fish viewing on Lilly Creek just north of the boat launch. These trails are not developed or maintained by DPOR.

[6] "Social trail" means a trail that has been developed by repeated use by people, not sited and designed by agency staff as part of a decision process.

Existing Facilities and Trails

The following table identifies facilities and trails that are currently located in this unit. Trails are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. A fire pit and a pit privy are amenities at all campsites. A wood stove and pit privy are amenities at public use cabins. See the Trail Plan in Appendix C for detailed information on trails.

Facility/Trail	Amenities
Boat launch	Two launch ramps Vehicle parking Vaulted privy
Picnic area	Picnic shelter Picnic sites Parking Vaulted privy
NLSRS Campground	Campground host RV site 30 road accessible campsites Potable water Vaulted privy
Trails	Social trails developed by recreational users

Management Intent

This unit will remain intensively developed and will continue to facilitate high density public recreation. Providing recreational opportunity and access to Nancy Lake and adjacent private land will remain the focus of this unit. Facilities should be re-designed or re-developed to facilitate high levels of use. New facilities should be developed where they will enhance current use or provide new recreational opportunities. The natural and cultural resources of this unit and the adjacent NLSRA should be interpreted at this readily accessible area.

Management Guidelines

- The NLSRS campground will be re-developed to provide enhanced road accessible camping opportunities, enhanced lake access and recreational use, enhanced boat launching capabilities, and increased vehicle parking.
- Facilities will be constructed or redeveloped to afford moderate to high density uses and moderate to high levels of use.
- Boat launch facilities will continue to provide access to recreation opportunities on Nancy Lake and to provide access to adjacent private land.
- Overflow parking should be developed to address high use days during the summer.

- An on-site agency presence should be maintained and facilitated through the development of a host cabin. This cabin will be made available for use by the public when not needed by DPOR.
- Provide ADA accessibility on all existing and proposed facilities.

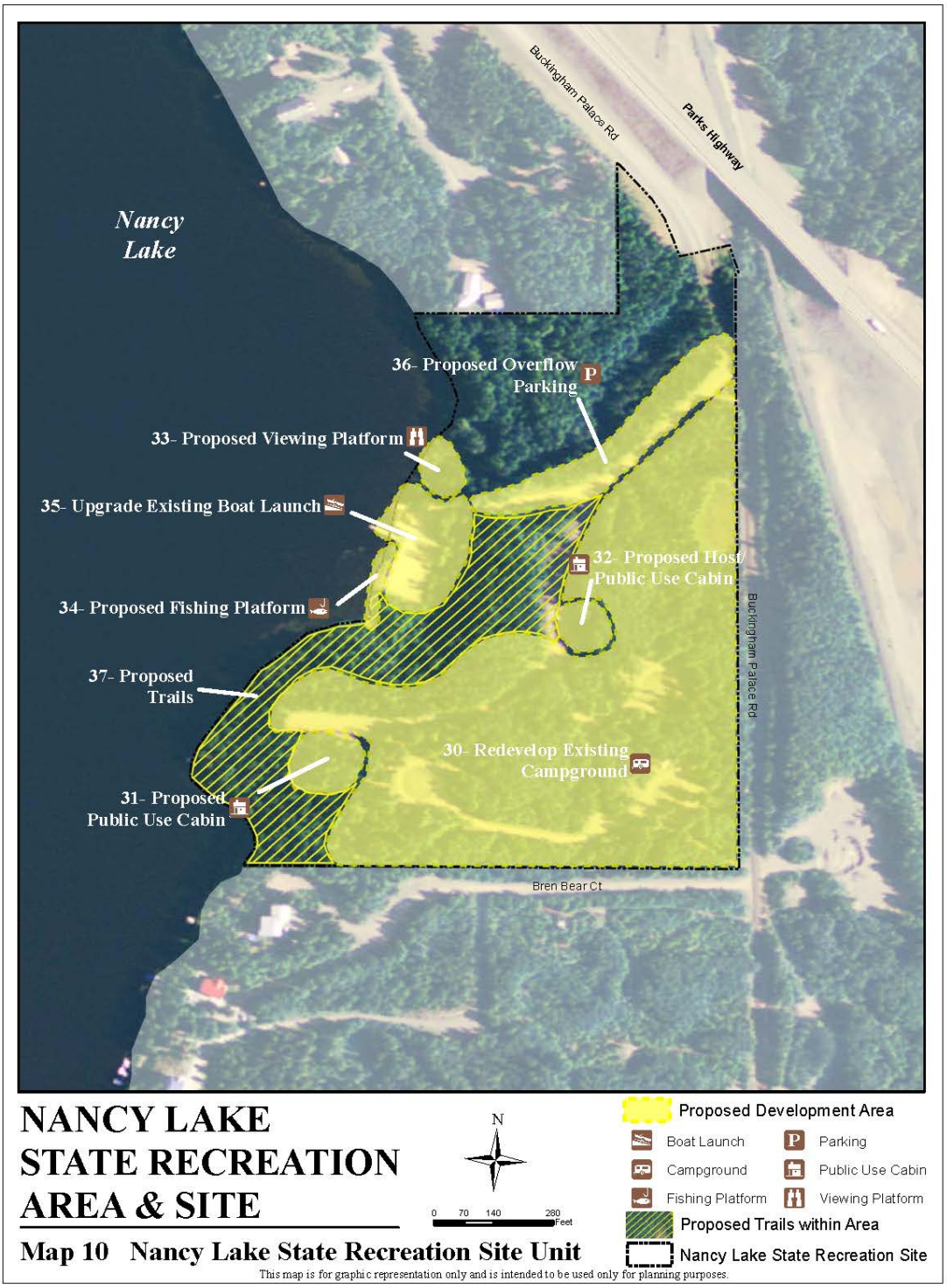
Facility and Trail Recommendations:
The following table identifies new facilities as well as existing facilities that need to be rehabilitated, improved, or redeveloped to a higher standard. Although trails are not facilities, they are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. See the Trail Plan in Appendix C for detailed information on trails.

Table 7: NLSRS Unit Facility and Trail Recommendations

Ref. No.	Facilities/Trails	Desired Outcome
30	Redevelop existing NLSRS campground.	Provide a high quality campground that focuses on providing opportunities for recreational vehicles and other highway vehicles.
31	Design and develop an ADA accessible public use cabin. This cabin ~~will have running potable water and~~ could have electrical service.	Provide an ADA accessible public use cabin in a highly accessible area. The siting and design of this cabin should be considered in the redesign of the Nancy Lake State Recreational Site campground.
32	Design and develop an ADA accessible cabin. This cabin will be used as a DPOR campground host cabin while the campground is open, and will be available for rent as a public use cabin during all other times of the year.	Enhance ability to recruit campground host volunteers by providing a cabin as temporary housing. Provide a new ADA accessible and barriers free public use cabin opportunity that does not currently exist.
33	Design and develop an ADA accessible elevated walkway and fish viewing platform at the outlet of Lilly Creek.	Provide an ADA accessible elevated walkway and platform to enhance opportunities to view salmon spawning in Lilly Creek. It will replace the existing social trail that is currently in existence but not managed by DPOR.
34	Design and develop an ADA accessible elevated walkway and fishing platforms immediately adjacent to Nancy Lake at the boat launch.	Provide an ADA accessible elevated walkway and fishing platforms to enhance access to the shoreline of Nancy Lake and opportunity for shoreline fishing and wildlife observation.
35	Improve the existing boat launch to facilitate launch and retrieval of boats and parking of vehicles.	Enhance launch and retrieval of boats and parking of vehicles and trailers at this existing facility.

Ref. No.	Facilities/Trails	Desired Outcome
36	Improve existing campground roads to accommodate overflow parking associated with the boat launch.	Provide overflow parking on the shoulder of roads to address parking demand on high use days during the summer. Should be considered in the redesign of the Nancy Lake State Recreational Area.
37	Design and develop ADA accessible Class 4 or 5 terra trails to connect the redeveloped campground and picnic areas to the shoreline of Nancy Lake.	Enhance sustainable access to the shoreline of Nancy Lake where new facilities will expand recreational opportunity.

Map 10: Nancy Lake State Recreation Site Management Unit



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Northern Unit (Natural Land Use Zone)

Unit Description

The Northern Unit contains all land and water north of the Nancy Lake Parkway and includes the areas north of Long Lake Road and the adjacent lands east of the Parkway and north of the maintenance facility. There are approximately 2,700 acres of land and water within the unit. There are no private parcels within this unit; however, a number of private parcels do share a boundary with NLSRA on the northern and eastern portions of the unit. Access to this unit primarily occurs from the Nancy Lake Parkway generally to the south of the unit. The Nancy Lake Parkway originates at mile 67.5 of the George Parks Highway and continues generally south and west to the west shore of South Rolly Lake. See Map 11 on page 7 - 33 for a depiction of the unit.

Like other units, the northern unit is a mix of uplands, wetlands, and waterbodies with vegetation that is similar to adjacent areas. The uplands consist of rolling hills and ridges with vegetation that is dominated by over mature white birch and white spruce trees with a dense shrub and grass understory. The wetlands and waterbodies occupy the area between these uplands with black spruce, alder, willow, shrubs, sedges, and grass species dominating the vegetation in these areas. The second water trail, the Pioneer Loop Canoe Trail, is located in this unit and provides a much more rustic and remote canoe trail experience as opposed to the Lynx Lake Loop Canoe Trail to the south.

Current Uses

This unit is unique within NLSRA and NLSRS in that it provides non-motorized recreation opportunities both summer and winter, with the exception of one snow trail that allows connectivity to area trails in winter. This unit receives the lowest level of recreational use of all of the units and use could be characterized as low throughout the year. This is due to the fact that few developed terra trails exist; none of the lakes currently allow use of a motor – internal combustion or electric; and, the use of snowmobiles is prohibited except for use on a single trail. Additionally, there are few developed facilities that are destinations for recreational users.

A fairly extensive looped cross-country ski trail system exists north of the Parkway. However, due to poor design and maintenance and lack of dependable snow pack, this trail receives little use during the winter. Because this snow trail incorporates wetlands segments, portions of the trail are impassible during snow free periods and thus receive very little use.

Summer use primarily consists of fishing activities on North Rolly and Rhein lakes and minimal use of the Pioneer Loop Canoe Trail. Very little summer use occurs on the portions of the ski trail that are located on uplands.

Existing Facilities and Trails

The following table identifies facilities and trails that are currently located in this unit. Trails are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. A fire pit and a pit privy are amenities at all campsites. A wood stove and pit privy are amenities at public use cabins. See the Trail Plan in Appendix C for detailed information on trails.

Facility/Trail	Amenities
Boat launch	
• North Rolly Lake	Vehicle parking at Nancy Lake Parkway Short access trails Hand carry launch
• Rhein Lake	Vehicle parking at Nancy Lake Parkway Short access trails Hand carry launch
Cross Country Ski Trails	Looped snow trails are located throughout much of the area north of the Parkway. The length of the existing trails is approximately 6 miles.
Pioneer Loop Canoe Trail	This trail provides a more rustic water trail experience as opposed to the Lynx Lake Loop Canoe Trail. The portages are longer and water segments are shorter than the Lynx Lake Loop Canoe Trail.
Motorized Snowmobile Trail	A single snow trail connects the trails south of the Parkway with the Willow community trails west and north of NLSRA.

Management Intent

This area will continue to be managed for non-motorized recreation on a year-round basis except for use of snowmobiles on the North Rolly Lake snowmobile trail and the frozen surface of North Rolly Lake. Year-round recreational opportunities should be expanded but the level of facility and trail development should be limited to ensure low use levels and densities.

Management Guidelines

- Snow trails shall be redeveloped to accommodate cross country skiing, skijoring, and fat-tire biking. Stadium type trail development is not appropriate.
- The use of snowmobiles shall continue to be allowed on the North Rolly Lake winter trail and the frozen surface of North Rolly Lake when the area south of the Nancy Lake Parkway is open to the use of snowmobiles.
- Use of an internal combustion motor on boats shall remain prohibited on all waterbodies in this unit.

- Public use cabins should be developed where they would provide new recreational opportunities where they do not currently exist. At least one of these public use cabins should be developed to provide a year-round non-motorized experience.

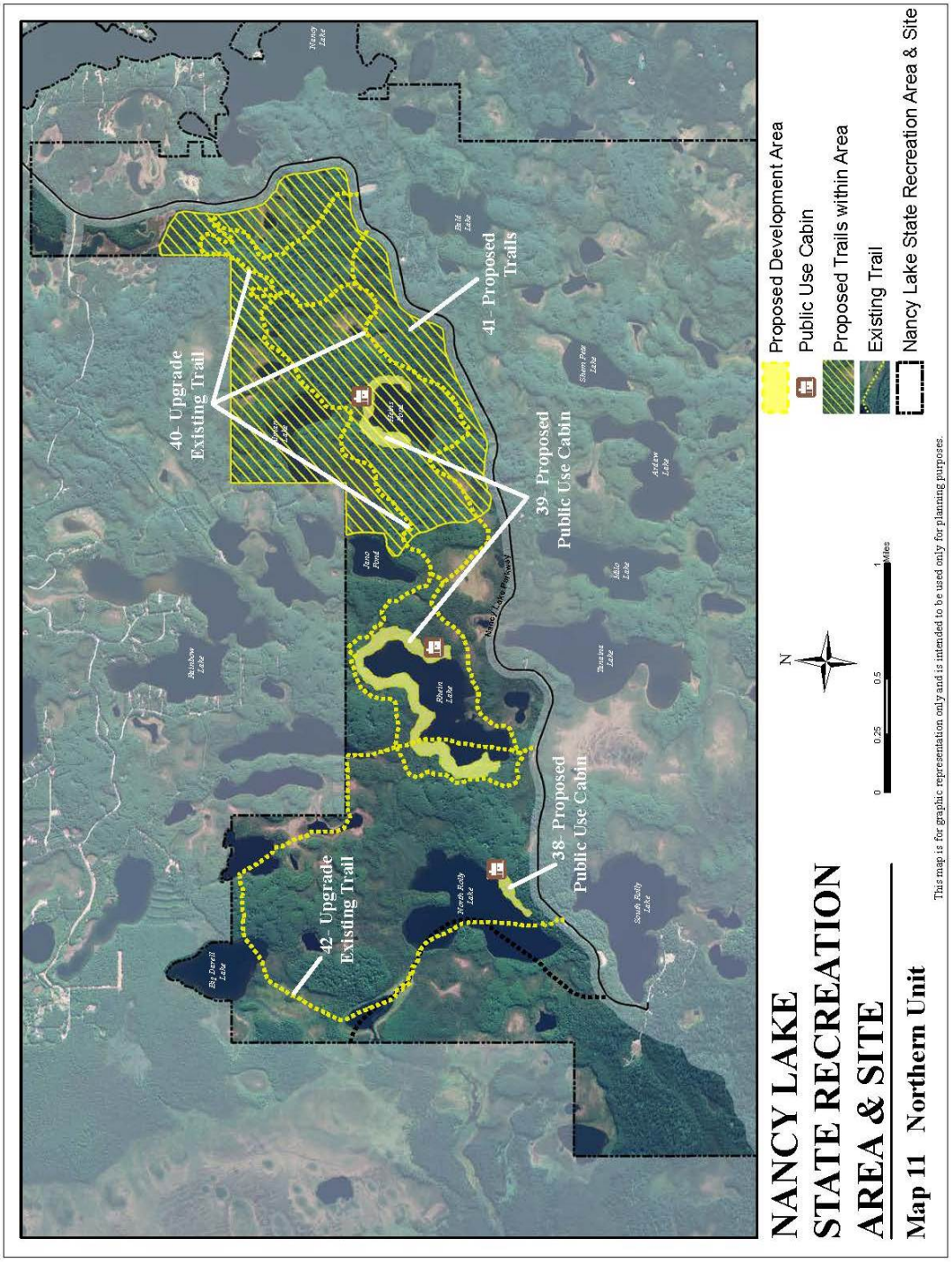
Facility and Trail Recommendations

The following table identifies new facilities as well as existing facilities that need to be rehabilitated, improved, or redeveloped to a higher standard. Although trails are not facilities, they are listed here to provide a comprehensive overview of unit recommendations and allow the reader to see how the proposals tie together. See the Trail Plan in Appendix C for detailed information on trails.

Table 8: Northern Unit Facility and Trail Recommendations

Ref. No.	Facilities/Trails	Desired Outcome
38	Design and develop one new public use cabin on the southeast shore of North Rolly Lake. This includes the design and development of a new parking area and access trail.	Provide a new opportunity for a multimodal accessible public use cabin that is relatively easy to access in the northern portion of NLSRA. This cabin location offers a stunning view of Denali on clear days.
39	Design and develop one new public use cabin on the Rhein Lake or Heins Pond.	Provide a public use cabin that has non-motorized access year-round. This cabin should be close enough to the winter trailhead to allow relatively easy access for people of all abilities.
40	Redevelop the existing snow trails as Class 3 trails to accommodate Nordic skiing, skijoring, classic cross-country skiing, and fat-tire bike use.	Will allow more uses on existing and redeveloped trails where motorized use will not occur. A redeveloped snow trail system should allow users of all skill levels to recreate in this area. New connection trails will diversify and enhance non-motorized winter recreation.
41	Design and develop new terra trails in the eastern portion of the unit. These trails should accommodate both hiking and biking, and possibly equestrian use. Classes of these terra trails should include both Class 2 and Class 3 trails.	These trails will expand hiking and biking opportunities in a non-motorized portion of the NLSRA.
42	Redevelop the Pioneer Loop Canoe Trail as a Class 3 water trail.	Enhance use and access to recreational opportunities in this area of NLSRA.

Map 11: Northern Management Unit



Chapter 8
Implementation

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Chapter 8
Implementation

Implementation of Facility and Trail Recommendations

Facility and trail recommendations included in Chapter 7 of this plan are not implemented automatically when the plan is adopted. The process for a plan recommendation to become a project that is eventually developed involves multiple internal agency steps and may include a legislative process where people can provide input on the project. The following is a brief synopsis of the typical steps from plan recommendation to final development:

1. Facility and trail recommendations included in the plan are prioritized based on needs of the park unit for possible inclusion as a Capital Improvement Project (CIP).
2. Highest priority CIP projects from a unit or area compete with other DPOR projects to be included as a Division CIP.
3. Division CIP requests are identified in the DPOR budget to the legislature.
4. If a CIP project is funded, internal DPOR processes are initiated.
5. Preliminary design work begins as well as field and site work to determine where the facility or trail should be constructed.
6. Cultural historical reviews are conducted, and any limitations of the site are identified.
7. Design changes are made and plans are finalized prior to construction.
8. Construction begins.

Land Acquisition

Certain high value lands both within and contiguous with the boundary of NLSRA are identified for potential acquisition for inclusion into the recreation area. Privately owned land will only be acquired from willing sellers. By statute, lands acquired in the future that are within the boundary of NLSRA will be managed by DPOR as the Nancy Lake State Recreation Area. Lands outside of the boundary of NLSRA that are acquired for potential future inclusion into the recreation area will be managed by DPOR through a Management Right until such time that the lands are included within the boundary of the recreation area. Until such lands are incorporated into the recreation area they will be managed consistent with the management intent of the adjacent area within the plan boundary. Parcels identified

for future acquisition and inclusion into NLSRA are identified in Map 12 on page 8 - 9. Several of the parcels identified for acquisition are subject to an on-going land exchange between the Matanuska Susitna Borough and the State of Alaska, Department of Natural Resources. These lands are identified in Map 12.

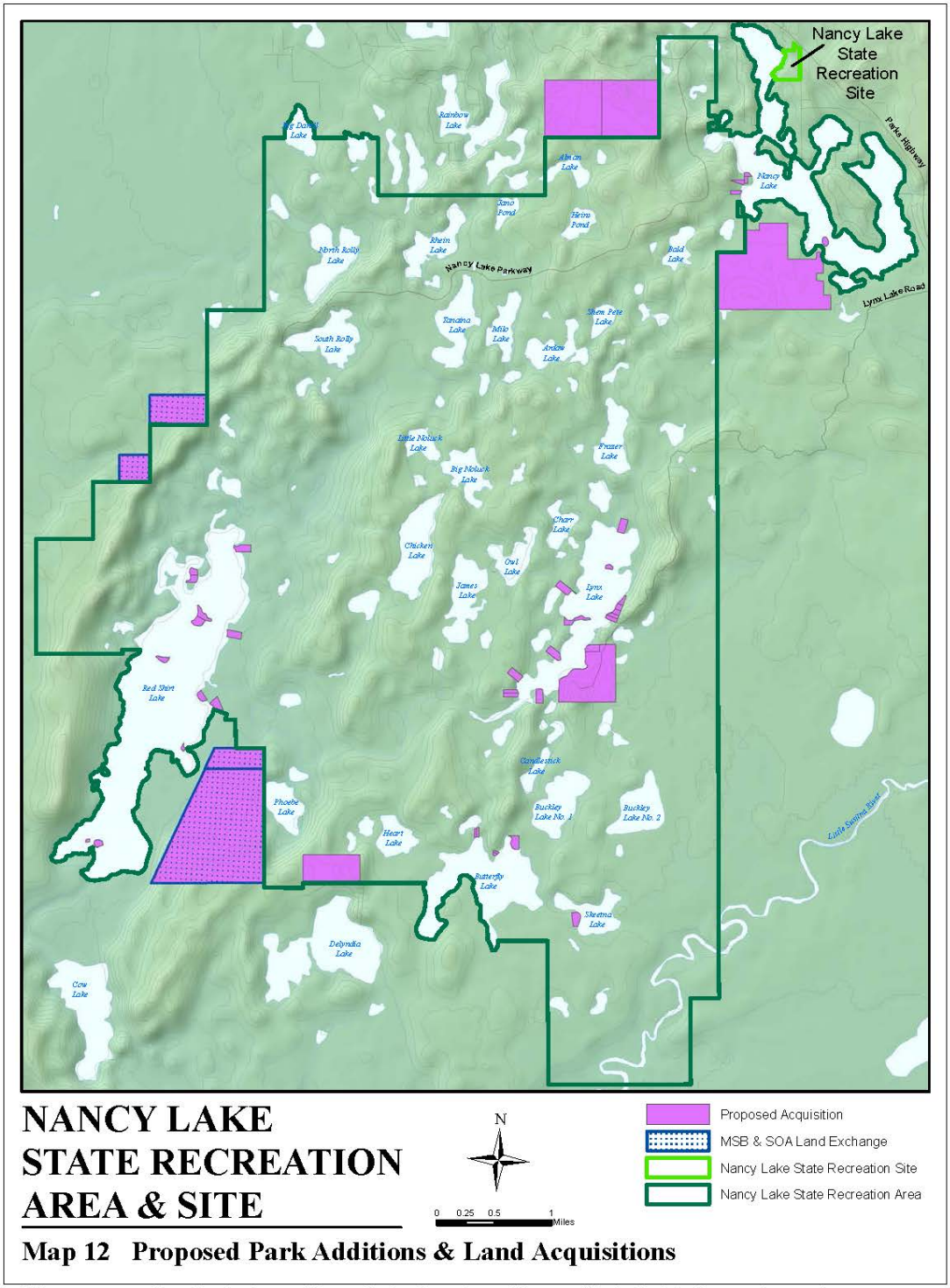
Permitting Authorities

The following table highlights the DPOR and ADF&G jurisdiction and authority to permit activities ***within NLSRA and NLSRS***. Several, but not all, of the common activities and uses are indicated in the table below.

Use or Activity	DPOR	ADF&G
Construction of docks and other structures on or in waterbodies	Permit required	Permit required in all fish bearing waterbodies[1]
Construction of structures on private uplands	No permit required	No permit required
Dredging (removing material) from a waterbody or wetland	Permit required	Permit required in all fish bearing waterbodies
Filling (placing material) into a waterbody or wetland	Permit required	Permit required in all fish bearing waterbodies
Placement of a seasonal or temporary structure within a wetland or waterbody	Permit required	Permit required in all fish bearing waterbodies

[1] See current version of *the Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* and associated Atlas; continuously updated ADF&G publication.

Map 12: Proposed Land Acquisitions



*Please note the depiction of Lynx Lake Road and Butterf/y Lake Trail crossing private property will not be shown on the final plan maps.

1

Plan Review and Modification

Plan Review

It may be necessary to make changes to this plan document from time to time to meet the needs of the recreating public and the managing agency. It is intended that this plan be reviewed on a biennial basis to determine the appropriateness of management and facility recommendations; however, a decision to review this plan may occur at any time at the discretion of the area Superintendent. A plan review may be triggered by a number of factors including:

- scheduled review period;
- written public or agency requests for review that are determined by the DPOR Director to have merit;
- State statutory or policy changes;
- availability of new data;
- availability of new technology; or,
- changing social or economic conditions or recreational needs that place different demands on the recreation area and site or affect the division's capabilities to provide recreation opportunities.

The plan review may include meetings, as determined appropriate, with the local advisory board, interested people or groups, affected agencies, the area superintendent, and other DPOR personnel. The plan review will lead to one of the following actions: a decision to not modify the plan or "no action" or a decision to modify the plan. Depending on the type and complexity of the issue(s) being addressed, a decision to modify the plan could result in a minor change, a plan amendment, or an entire plan revision. The three types of plan modification are discussed in greater detail below.

Modification

The following text identifies the two general types of modifications that can be made to a plan – revision and minor change. The process to make the modification and the appropriate agency personnel to make that decision are identified.

- **<u>Revision</u>**

  There are three types of revisions that can be made – plan revision, amendment, and special exception.

Plan Revision

A "plan revision" provides the opportunity to address management and facility recommendations, management orientation, and allowed or prohibited uses on a comprehensive basis for the entire planning area. For example, the management recommendations for a large portion of the recreation area and site may be changed to accommodate new uses or types of recreation that were previously prohibited, or conversely, to prohibit uses and activities that were previously allowed. Because amendments and special exceptions provide flexibility for the agency to address short term and day to day management concerns, it is anticipated that a full plan revision will only occur after the 20 year "life" of the plan has been achieved. However, a plan revision can occur at any time if determined necessary by the Commissioner of the DNR. This type of modification will require public notice and a public process deemed appropriate by the DPOR and the planner for a plan revision. The authority to order a plan revision rests with the DNR Commissioner.

Amendment

An "amendment" permanently changes the plan by adding to or modifying the basic management orientation, direction, recommendations, or intent for one or more of the plan's units. For example, an amendment might allow a use that was determined incompatible in the plan, make a new determination regarding permitting of uses and structures, or propose a facility in an area where it wasn't previously determined appropriate. These types of changes are anticipated to be very infrequent as they may involve a significant deviation from the plans intent, guidelines, or recommendations. While infrequent, the ability to amend the plan will maintain flexibility in management necessary for short term management of the NLSRA and NLSRS. This type of modification to the plan will require public notice and a public process deemed appropriate for the type of change identified in the amendment. The authority to amend the plan rests with the Director of DPOR.

Special Exception

A "special exception" does not permanently change the provisions of the plan and cannot be used as the basis for classifying land into another land-use zone or determining the compatibility of a use. Instead, it allows a one-time, limited-purpose variance of the plan's provisions, without changing the plan. The exception should only occur 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. A special exception might be made if certain unforeseen circumstances exist, the use or activity is necessary to protect human health and safety, or is necessary for the protection of natural resources. In all cases the impacts of the use or activity must be minimized to the greatest extent practicable. While infrequent, the ability to make special exceptions to the plan will maintain flexibility in management necessary for day to day operation of the NLSRA and NLSRS. The authority to develop the finding rests with the MatSu Copper Basin Park Superintendant.

Procedure for granting a special exception will be as follows:

1. The person or agency requesting the special exception shall prepare a written finding which specifies:
   - The nature of the special exception being requested,
   - The extenuating circumstances which require the special exception,
   - If the special exception is necessary to protect human health and safety,
   - If the special exception is necessary for protection of the natural resources,
   - The alternative course of action to be followed by the applicant,
   - How negative impacts to the state resources will be avoided or minimized to the greatest extent practicable, and
   - How the intent of the plan will be met by the alternative.
2. The Director will review the finding and issue a determination. If warranted by the degree of controversy or the potential impact, the Director may hold public meetings prior to reaching a decision.
3. The decision of the Director will be posted on the DNR Public Notices and Proposed Regulations website.
4. The decision of the Director may be appealed to the Commissioner of the Department of Natural Resources.

- **Minor Change**

  A minor change to a management plan is not considered a revision. A "minor change" is a change that does not modify or add to the plan's basic intent, and that serves only to clarify the plan, make it consistent, facilitate its implementation, or make technical corrections.

Project Phasing

Implementation of the management recommendations should begin immediately upon adoption of the final plan. Facility and trail recommendations are intended to be implemented well; however, some of the larger projects will undoubtedly have to be developed in phases as staffing and funding allow. Because of the uncertainty of the CIP process or other funding processes, it would be impractical to establish a time line for project development and phasing of specific projects in this document. The phasing of specific projects is best handled through the site and design processes.

While this document will not address phasing of specific projects, it will address phasing generally by identifying those facility and trail recommendations that should be developed first to address existing facility and trail needs and to enhance or expand recreation opportunities. The following facility and trail recommendations would greatly enhance recreational opportunities and address congestion and crowding at existing facilities:

- Develop a group camp facility at Shem Pete Lake.
- Develop the Chicken Lake Cross-Park Trailhead.
- Develop terra trails in the area of the South Rolly Lake Campground.
- Develop campsites, shelters, and public use cabins.
- Relocate existing campsites away from canoe portage sites.
- Redevelop the NLSRS campground including overflow parking for the boat launch at Nancy Lake.

Proposed Regulations

Regulations will need to be promulgated to make certain plan recommendations are enforceable by DPOR. It is intended that regulations necessary to implement this plan be developed as soon as practicable after this plan is developed. ~~A list of regulations necessary to implement this plan is provided below. While this list is intended to be comprehensive some regulations may have been inadvertently left off of the list.~~ Additionally, other regulations that are determined necessary for the recreation area and site will be developed and existing regulations may be modified from time to time as determined necessary by DPOR. ~~The list below is not intended to be comprehensive of all regulations for the recreation area or site. Unless indicated, the regulations would be specific to NLSRA under Chapter 20 of the Alaska Administrative Code.~~

- ~~Prohibition of use of storage and moorage outside of designated areas.~~
- ~~Prohibition of building a dock or structure in excess of 450 square feet.~~
- ~~Prohibition of private geothermal or electrical generation structures.~~
- ~~Prohibition of marina construction outside of a single marina could be developed at Nancy Lake.~~
- ~~Allowance of bicycles on designated trails.~~
- ~~Allowance of horses and pack animals on designated trails.~~
- ~~Allowance of the use of a motorized vehicle on the frozen surface of Nancy, Lynx, Butterfly, and Red Shirt lakes.~~
- ~~Ability to allow limited openings of trails south of the Nancy Lake Parkway to the use of snowmobiles if snow cover is not adequate to open the entire area.~~
- ~~Ability to allow use of snowmobiles on the existing trail north of the Nancy Lake Parkway and frozen surface of North Rolly Lake.~~

Recommended Staffing

Adequate staffing of park units is important to provide positive public/staff interactions that foster appreciation and support for state park units; to provide public safety and emergency response to the recreating public; to protect the natural and cultural resources; to maintain facilities so they are safe and clean for residents and visitors alike; and, to supervise seasonal and contract workers and volunteers that are critical to the day to day functions of our park units. Because this plan presents a number of facility and management recommendations it is important to identify the appropriate number of staff and volunteer positions that would be necessary to ensure the significant investments in recreation facilities and trails would be properly maintained and would provide a long-term benefit to the visitors of the area.

Staff Recommendations	Objective	Rationale
One additional field Ranger	Provide enhanced public safety, visitor contacts, and emergency response at NLSRA and NLSRS.	A significant portion of the recreation area and recreation site is underserved by existing law enforcement staff. During snow free periods, routine enforcement at the largest campground in the state park system occupies a majority of a rangers shift. The result is that other areas do not receive the enforcement presence that is warranted. This new ranger could be primarily assigned to the southern portion of the NLSRA but would also provide an enhanced ranger presence at the NLSRS, on Nancy Lake, and the Willow Creek State Recreation Site. This position would also provide shift coverage for the existing ranger position.
Upgrade existing ~~technician~~ park specialist position to a full time position and create a new permanent part-time position	Provide expertise in trail construction, maintain trails on a year-round basis, and maintain current and future facilities.	As existing trails are re-developed and new trails are constructed, it will be increasingly important to ensure these trails are properly maintained to minimize impacts on natural and cultural resources and to provide safe recreational opportunities. These positions will be involved in the planning, layout, and construction of trails. They will supervise volunteer and contract construction and maintenance crews. The upgraded position is needed to provide maintenance, including winter grooming, on a year-round basis. The permanent part-time position will allow multiple projects to be conducted at the same time during the snow free periods when construction and maintenance activities would occur. These positions would also maintain existing facilities to ensure they are clean and safe for visitors.

Staff Recommendations	Objective	Rationale
Permanent part-time Park Interpreter position	Provide educational and interpretive services to day use visitors and to short term guests at campgrounds.	This position would have a unique opportunity to provide interpretive and educational opportunities because of the campgrounds located at NLSRA and NLSRS. These services would provide a positive interaction with the public and would foster support for parks and park programs. If a contact station/educational center is developed, this position could man that station and serve as the front line contact for DPOR. This position would also contribute to the maintenance of facilities to ensure they are clean and safe for visitors.
Two maintenance workers	Provide routine maintenance to facilities and structures.	A properly maintained facility will provide a safe recreational experience over the designed life of the structure. A large investment in facility upgrades and new facilities will require additional maintenance staff to ensure the facilities remain serviceable and safe.
Volunteer Needs		
Continue to recruit volunteers to be stationed at remote and front country areas	Provide an on-site presence and perform necessary maintenance to ensure facilities are clean and safe.	Volunteers remain an invaluable resource that augments existing DPOR staff. Volunteers are relied upon to perform a number of functions including: visitor contacts, fee collection, and facility and trail maintenance. Often, volunteers are the only DPOR representatives that are visible to the public at some facilities. Additionally, they are responsible for maintaining facilities that are well used by residents and visitors alike. Therefore, recruiting quality people to fill these key positions remains a priority of DPOR.

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Appendix A
Glossary

AAC. Alaska Administrative Code that includes state regulations.

ADA (Americans with Disabilities Act of 1990). A federal law prohibiting discrimination against people with disabilities. Requires public entities and public accommodations to provide accessible accommodations for people with disabilities.

ADF&G. The State of Alaska, Department of Fish and Game.

Adjacent parcel. Parcels that lie near the boundary of NLSRA and NLSRS but do not share a common boundary line with the NLSRA and NLSRS.

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

Aircraft. Any motorized device under 12,500 pounds gross weight that is used or intended for flight or movement of people or goods in the air (11 AAC 12.340 and 11 AAC 20.990).

Anadromous Stream. Those water bodies identified by the Department of Fish and Game under 5 AAC 95.011.

AS. Alaska Statutes.

Assembly. The gathering or meeting of a group of people for a common purpose (11 AAC 12.340 and 11 AAC 18.200).

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 floatation 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).

Campground. An area developed and maintained by the division which contains one or more campsites. (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).

Contiguous Parcel. Parcels that are outside of the NLSRA or NLSRS, but share a common boundary with NLSRA or NLSRS.

Developed Facility. Includes a building, boat ramp, campground, picnic area, rest area, visitor information center, swim beach, trailhead, parking area, and a developed ski area (11 AAC 12.340 and 11 AAC 20.990).

DNR or Department. The State of Alaska Department of Natural Resources.

DPOR or Division. The State of Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation.

Director. The Director of the Division of Parks and Outdoor Recreation, Department of Natural Resources, or the Director's authorized agent (11 AAC 12.340).

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

Firearm. Includes a pistol, rifle, shotgun, revolver, mechanical, gas, or air-operated gun (11 AAC 12.340); *and*, Includes a pistol, rifle, shotgun, revolver, or mechanical gas or air-operated gun (11 AAC 20.990).

Goal. A statement of basic intent or general condition. Goals are not quantifiable and do not have specific dates for achievement; they are long-term in orientation.

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.

HLB. The Municipality of Anchorage's Heritage Land Bank.

ILMA. Interagency Land Management Agreement previously known as an "ILMT" or Interagency Land Management Transfer.

Inholding. Private property that is within the boundary of NLSRA.

Legislative Designation. An action by the State Legislature that sets aside a specific area of state land as a Special Purpose Site.

LWCF. Land and Water Conservation Fund. A federal program which provides monies and matching grants to federal, state, and local governments for the acquisition and/or development of land and water for public outdoor recreation use.

May. Same as "should", see Should.

Moor. To hold a boat, etc. in place by ropes, cables or chains to the shore, or by anchors etc. To cause to be held in place; secure.

Mooring. A place where a boat, etc. is or can be moored.

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

MSB. The Matanuska-Susitna Borough.

Multi-Use. A term used to describe multiple uses that can occur in an area or on a trail. For Example, Skiing, Snowmobiling, Dog Mushing, Hunting, Fishing etc.

NLSRA. Nancy Lake State Recreation Area.

NLSRS. Nancy Lake State Recreation Site.

Objective. A concise statement of what we want to achieve, how much we want to achieve, when we want to achieve it, and who is responsible for the work.

Off-Road Vehicle (ORV). A) A motorized vehicle: i) designed or adapted for cross-country operation over irregular terrain, ii) consisting of more than one drive wheel or track, iii) having a gross vehicle weight less than 1,500 pounds or exerting less than eight pounds per square inch ground pressure; and, iv) that is 64 inches wide or less; B) does not include snowmobiles (11 AAC 20.990). May also be referred to as an All-Terrain Vehicle (ATV).

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 less than 16 feet in length, propelled by a water-jet pump or other machinery as its primary source of motor propulsion, and 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 20.990).

RV. Recreational Vehicle, such as a motor home or camper.

SCORP. Statewide Comprehensive Outdoor Recreation Plan.

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.

Snowmobile (snowmachine). A self-propelled vehicle intended for off-road travel on snow, having a maximum width of 50 inches and a curb weight of not more than 1,000 pounds, driven by one or more tracks in contact with the snow, and steered by one or more skis in contact with the snow (11 AAC 20.990).

Social trail. A trail that has been developed by repeated use by people, not sited and designed by agency staff as part of a decision process.

State. The State of Alaska.

State Park. Any land or water managed by the division (11 AAC 12.340 and 11 AAC 18.200); *and,* Any land or water managed by the division of parks and outdoor recreation (11 AAC 20.990).

State Waters. All surface waters within the Nancy Lake 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.

Traffic Control Device. Any physical barrier, including a boulder, ditch, berm, railing, fence, post, or gate (11 AAC 12.340).

Trailhead. The point at which a trail starts.

Vehicle. 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. Vehicle does not include non-motorized sailboats, canoes, kayaks, rafts, sailboards, hang gliders, gliders, or parasails (11 AAC 12.340); *and,* 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, or firearm (11 AAC 12.340); *and,* 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
Nancy Lake State Recreation Area Specific Statutes and Regulations

Alaska Statutes 41.21.450 -41.21.465

Sec. 41.21.450. Purpose of AS 41.21.450 - 41.21.465.

The purpose of AS 41.21.450 - 41.21.465 is to restrict state-owned land and water within the boundaries described in AS 41.21.455 to use as a public recreation area. Under the provisions of AS 38.05.300, state land, water, or land and water containing more than 640 acres may be closed to multiple purpose use only by act of the legislature. Inasmuch as the area described in AS 41.21.455 exceeds 640 acres, AS 41.21.450 - 41.21.465 are intended to except the area described from the provisions of AS 38.05.300.

Sec. 41.21.455. Nancy Lake State Recreation Area established.

(a) The presently state-owned land and water and all that acquired in the future by the state, lying within the following described boundary, are hereby designated as the Nancy Lake 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:

Beginning at the brass capped monument marking the one quarter corner position, common to Section 34 and Section 35, Township 19 North, Range 5 West, Seward Meridian, Alaska, which is the true point of beginning; thence easterly along the 1/4 line of Section 35 to the west shore of an unnamed lake; thence meandering said lake clockwise in a northerly and southerly direction to a point where said meanders intersect the east-west 1/4 line of Section 35; thence easterly along the 1/4 line of Section 35 to the west shore of an unnamed lake; thence meandering said lake clockwise in a northerly and easterly direction to a point where said meanders intersect the east-west 1/4 line of Section 35; thence easterly along the 1/4 line of Section 35 to the 1/4 corner position common to Section 35 and Section 36; thence southerly along the section line common to Sections 35 and 36 to the common corner between Sections 35 and 36, Township 19 North, Range 5 West, Seward Meridian and Sections 1 and 2, Township 18 North, Range 5 West, Seward Meridian; thence easterly along the common line between said Sections 1 and 36 to the common corner of Section 1, Township 18 North, Range 5 West and Section 36, Township 19 North, Range 5 West and Section 31, Township 19 North, Range 4 West and Section 6, Township 18 North, Range 4 West; thence easterly along the common line between said Sections 31 and 6 to the 1/4 corner position common to Sections 31 and 6; thence northerly along the 1/4 line of Section 31 to the C 1/4 corner positions; thence easterly along the 1/4 line of Section 31 and Section 32 to the C 1/4 corner position of Section 32, Township 19 North, Range 4 West; thence

northerly along the 1/4 line of Section 32 and Section 29 to the C-N-S 1/64th corner position of Section 29, Township 19 North, Range 4 West; thence easterly along the N-S 1/64th line of said Section 29 to the N-S 1/64th corner position common to Section 29 and Section 28; thence southerly along the east section line of Section 29 and Section 32 to the S-N-N 1/256th corner position of said Section 32; thence westerly along the S-N-N 1/256th line to the SE-NE-NE 1/256th corner positions; thence southerly along the E-E-E 1/256th line to the NE-SE-NE 1/256th corner position; thence easterly along the N-S-N 1/256th line to the N-S-N 1/256th corner position; thence southerly along the east boundary of Section 32 to the S-N 1/64th corner position of said Section 32; thence westerly along the S-N 1/64th line to the C-E-SE-NE 1/256th corner position; thence southerly along the E-E-E 1/256th line to the north shore of Nancy Lake; thence meandering said lake clockwise in an easterly, northerly, and southerly direction to a point where said meander line intersects the north line of Section Lot 41, Section 33, Township 19 North, Range 4 West; thence easterly along said north line to the NE corner of said Lot 41; thence southerly along the east line of said Lot 41 to the north shore of Nancy Lake; thence meandering said lake in an easterly, northerly, southerly, and westerly direction to a point where said meander line intersects the east line of Section Lot 54, Section 33, Township 19 North, Range 4 West; thence southerly along said east line of said Lot 54 to the east shore of Nancy Lake; thence meandering said lake in an easterly, northerly, southerly, and westerly direction to a point where said meander line intersects the N-N-N 1/256th line of Section 4, Township 18 North, Range 4 West; thence westerly along said N-N-N 1/256th line to the NE-NW-NW 1/256th corner position; thence southerly along the E-W-W 1/256th line to the SE-NW-NW 1/256th corner position; thence easterly along the S-N-N 1/256th line to the C-S-N-NW 1/256th corner position; thence along the W 1/16th line to the C-W 1/16th corner position; thence westerly along the 1/4 line to the 1/4 corner position common to Section 4 and Section 5; thence southerly along the east section line of Sections 5, 8, 17, 20, 29, 32, and 5, to the section corner common to Sections 4, 5, 8, and 9, Township 17 North, Range 4 West; thence westerly along the section line common to Section 5 and Section 8 to the E 1/16th corner position; thence southerly along the E 1/16th line to the SE 1/16th corner position of said Section 8; thence westerly along the S 1/16th line to the C-S 1/16th corner position of Section 7, Township 17 North, Range 4 West; thence northerly along the 1/4 line to the C 1/4 corner position of Section 6, Township 17 North, Range 4 West; thence westerly along the 1/4 line of said Section 6 to the east shore of Butterfly Lake; thence meandering said lake clockwise in a southerly, northerly,and westerly direction to a point on the west shore of Butterfly Lake where said meander line intersects the north section line of Section 1, Township 17 North, Range 5 West; thence westerly along the north section line of Section 1 and Section 2 to the point of intersection with line 9-10 of U.S. Survey No. 4638; thence south to Corner No. 4, Lot 3 of said U.S. Survey No. 4638; thence west along the north line of said Lot 3 to the point of intersection with the north-south section line common to Section 2 and Section 3; thence northerly along the west section line of Sections 2, 35, and 26, to the point of intersection with line 3-4 of U.S. Survey No. 3869, Township 18 North, Range 5 West; thence west along said line 3-4 of U.S. Survey No. 3869 to the point of intersection with the E 1/16th line of Section 27; thence northerly along said E 1/16th line to the point of intersection with line 1-2 of U.S. Survey No. 3869; thence west along said line 1-2 to Corner No. 1 of said U.S. Survey No. 3869; thence N 20 to 06' E along line 2-3 of Lot 31, U.S. Survey No. 3868 for a distance of 268.62 ft. to Corner No. 2 of said

Lot 31; thence N 69 54' W along line 1-2 of said Lot 31, to the east shore of Red Shirt Lake; thence meandering said lake clockwise in a southerly, westerly, easterly, and northerly direction to a point where said meander line intersects line 3-4 of Lot 3, U.S. Survey No. 3868; thence west along said line 3-4 to Corner No. 3 of Lot 3, U.S. Survey No. 3868; thence south along line 2-3 of said Lot 3 to the point of intersection with the east-west section line common to Section 21 and Section 28, Township 18 North, Range 5 West; thence westerly along said section line to the section corner position common to Sections 20, 21, 28, and 29, Township 18 North, Range 5 West; thence northerly along the section line common to Section 20 and Section 21 to the section corner position common to Sections 16, 17, 20, and 21; thence easterly along the section line common to Section 16 and Section 21 to the 1/4 corner position common to said Sections 16 and 21; thence northerly along the 1/4 line of Section 16 to the C 1/4 corner position of said Section 16; thence easterly along the 1/4 line of Section 16 to the 1/4 corner position common to Section 15 and Section 16; thence northerly along the section line common to Section 15 and Section 16 to the section corner position common to Sections 9, 10, 15, and 16; thence easterly along the section line common to Section 10 and Section 15 to the 1/4 corner position common to said Sections 10 and 15; thence northerly along the 1/4 line of Section 10 to the 1/4 corner position common to Section 3 and Section 10; thence easterly along the section line common to Sections 3 and 10 to the section corner position common to Sections 2, 3, 10, and 11; thence northerly along the section line common to Section 2 and Section 3, Township 18 North, Range 5 West, and Section 34 and Section 35, Township 19 North, Range 5 West to the brass capped monument marking the 1/4 corner position common to said Sections 34 and 35 which is the true point of beginning.

(b) Nothing in this section affects the right of an organized borough to extract gravel from land that is located within the recreation area and that has been selected by the borough before April 22, 1970 under former AS 07.10.150 - 07.10.160.

Sec. 41.21.460. Incompatible uses.

The commissioner shall designate by regulation incompatible uses within the boundaries of the Nancy Lake State Recreation Area in accordance with the requirements of AS 41.21.450, and those incompatible uses designated shall be prohibited or restricted, as provided by regulation.

Sec. 41.21.465. Purchase authorized.

The commissioner may acquire, by purchase in the name of the state, title to or interest in real property lying within the boundaries of the Nancy Lake State Recreation Area.

Alaska Administrative Code 11 AAC 20.540 – 11 AAC 20.555

11 AAC 20.540. Use of weapons.

The use and discharge of a bow and arrow or trap for the purpose of lawful hunting or trapping is allowed in the Nancy Lake State Recreation Area, except within one-quarter mile of a developed facility.

11 AAC 20.545. Aircraft.

(a) Except as provided in (b) and (c) of this section, the use of aircraft is allowed in the Nancy Lake State Recreation Area.

(b) The use of float-equipped aircraft in the Nancy Lake State Recreation Area is prohibited on

(1) South Rolly Lake;
(2) Bald Lake;
(3) Tanaina Lake;
(4) Milo Lake;
(5) Ardaw Lake;
(6) Jacknife Pond;
(7) Frazer Lake;
(8) Little Frazer Lake;
(9) Charr Lake;
(10) Owl Lake;
(11) James Lake;
(12) Chicken Lake;
(13) Big Noluck Lake;
(14) Little Noluck Lake;
(15) Milo Pond;
(16) the Echo Ponds;
(17) Candlestick Lake;
(18) Buckley Lake; and
(19) Skeetna Lake.

(c) The use of aircraft for the purpose of practice landing is prohibited in the Nancy Lake State Recreation Area.

11 AAC 20.550. Motorized boats.

(a) The use of motorized boats is allowed in the Nancy Lake State Recreation Area on

(1) Nancy Lake;
(2) Lynx Lake;
(3) Butterfly Lake;
(4) Red Shirt Lake; and
(5) the Little Susitna River.

(b) A person may not use a personal watercraft on Red Shirt Lake.

(c) A person may use an electric trolling motor on South Rolly Lake.

11 AAC 20.555. Snowmobiles.

If the director finds that the snow depth is adequate to protect underlying vegetation, the director shall open Nancy Lake State Recreation Area to the use of snowmobiles south of the Nancy Lake Parkway.

Appendix C
Trail Plan: Nancy Lake State Recreation Area and Nancy Lake State Recreation Site

Appendix D
Nancy Lake State Recreation Area Questionnaire Summary

- Questionnaire was available for public comment from July 7, 2010 through September 13, 2010.
- Notice of the availability of the questionnaire was distributed to over 900 individuals via email or postcard, and a link to the questionnaire was added to the NLSRA planning website
- Questions 1-10 percentages are based on the total number of questionnaires received (151)
- Questions 11-24 percentages are based on total number of respondents for each question (number indicated in parenthesis)
- 46% (72) of respondents did not indicate ownership w/in NLSRA
- 52% (79) of respondents indicated property ownership w/in NLSRA
- Part B percentages are based on the 79 people that indicated they were land owners
- Results for 151 completed questionnaires are tabulated below

<u>Part A: Recreation & Facilities</u>

1. Q: Do you recreate in the NLSRA or have you recreated in here in the past?
   A: 99% of respondents recreate in the NLSRA

2. Why do you choose to recreate at the NLSRA? (check most applicable answer)
   a) Opportunity to escape urban environments (67%)
   b) Own property in area (48%)
   c) Quiet natural setting (40%)
   d) Like the area (36%)
   e) Nearby & convenient (30%)
   f) Groomed Trails (26%)
   g) Water access (25%)
   h) Public Use Cabin System (19%)
   i) Campgrounds & amenities (9%)
   j) Trying new area (5%)

3. When do you typically recreate at NLSRA? (check all that apply)
   a) 88% summer
   b) 87% winter
   c) 62% fall
   d) 52% Spring

4. In what area(s) have you recreated?
   a) Canoe trail (59%)
   b) Nancy Lake Camp (58%)
   c) Nancy Lake Parkway (56%)
   d) Redshirt Lake (56%)
   e) Lynx/Butterfly Lakes (53%)

5. What recreational activities do you engage in? (check all that apply)
   a) Snowmobiling (68%)
   b) Canoeing (66%)
   c) Boating (61%)
   d) Fishing (54%)
   e) Hiking (51%)
   f) Wildlife Viewing (44%)
   g) Skiing (43%)
   h) Photography (34%)
   i) Public Use Cabins (31%)
   j) Snowshoeing (26%)
   k) Remote Camping (25%)
   l) Picnicking (19%)
   m) Hunting (18%)
   n) Biking (18%)
   o) Camping at S. Rolly (14%)
   p) Camping at Nancy Lk. (13%)
   q) Dog Mushing (11%)
   r) Orienteering (3%)
   s) Other (15%) Swimming (3), Skijoring, walking, Ice skating, Jet Skiing, ATV Riding, Geocaching, Dog Activities, Bird Watching, Star Gazing, Cabin Owner (3)

6. What recreational uses or facilities that may or may not be currently available do you feel <u>are appropriate</u> for the NLSRA? (check all that apply)
   a) Hiking (72%)
   b) Cross country skiing (69%)
   c) Camping (69%)
   d) Public Use Cabins (65%)
   e) Snowmobile Riding (64%)
   f) Boating (64%)
   g) Swimming (62%)
   h) Picnic Areas (61%)
   i) Biking (56%)
   j) Group Camping (48%)
   k) Park Organized Activities (44%)
   l) Dog Mushing (44%)
   m) Float Plane Use (42%)
   n) Education & Interpretation Center (38%)
   o) Dog Training (25%)
   p) Horse Riding (25%)
   q) Other (25%) - ATV Access (10), Fishing (2), Non – Motorized Boating (2), Marina, Boat Launch on L. Susitna, Hunting, Skijoring (2), Nude Beach, Boat Storage for Cabin Owners, Geo-caching, Canoeing, Dedicated access to Butterfly Lk from Lynx Lk Rd, Vehicular Access to W bank of Nancy Lake, Ice-skating (2), Shooting, Jet Skiing, Quiet Areas, Birding, Golf Course

7. What recreational uses or facilities that may or may not be currently available do you feel <u>are not appropriate</u> for the NLSRA? (check all that apply)

   a) Horse riding (33%)
   b) Dog training (31%)
   c) Float plane use (29%)
   d) Education & Interpretation center (16%)
   e) Snowmobile Riding (15%)
   f) Dog Mushing (14%)
   g) Park Organized Activities (12%)
   h) Biking (9%)
   i) Group Camping (8%)
   j) Boating (7%)
   k) Swimming (3%)
   l) Picnic Areas (2%)
   m) Public use Cabins (1%)
   n) Camping (1%)
   o) Cross Country Skiing (1%)
   p) Hiking (0%)
   q) Other (22%) – ATV's (15), Jet Skis (5), Motorized Boating (4), RV's, Commercial Beer & Liquor Sales, Boat Traffic/Storage, Vehicular Access, Fireworks, Street Lights, Docks beyond 25' into Lake, Shooting

8. What do you like most about the NLSRA? (check all that apply)

   a) Quiet Natural Setting of the area (62%)
   b) Remote canoeing and camping (57%)
   c) Diversity of recreational opportunities (55%)
   d) Marked trails (37%)
   e) Family Oriented (26%)
   f) Escape urban environments (2%)
   g) Other (11%) – Snowmachine Trails (4), Wildlife Viewing (2), Boating (2), Fishing (3), Jet Skiing, Hunting, No HWY Vehicular Access, Access to Cabin

9. What do you like least about the NLSRA? (check all that apply)

   a) Motorized use in the recreation area* (33%)
   b) Crowding in area of Nancy Lake Parkway (21%)
   c) Lack of developed access (19%)
   d) Lack of development (14%)
   e) Facilities at or above capacity (13%)
   f) Cleanliness of public sanitary facilities (9%)
   g) Other(33%) – ATV Damaged trails (4), Non-enforcement of noise ban after 10PM (4), Lack of ATV Summer Access (2), Lack of plan for boat owner storage at Red Shirt Lk, Unpermitted development of small lakes, Snow cover limitations for snowmachine use, Litter on trails & in Lakes, bureaucratic interference in landowner access, Jet Skis & Waterskiing, Hunting & Trapping, Floatplanes practice landings & takeoffs, Lack of park staff at gate for assistance, Unmaintained canoe trails, Inadequate signage, Boat docks beyond 25' into Lakes, Parking at Nancy Lake Parkway Boat Launch

10. There are currently approximately 42 miles of trails (includes cross country ski trails, canoe trails, summer hiking trails, and access trails), two developed campgrounds, 23 maintained portages and approximately 6 miles of maintained roads in NLSRA. Based on

this information and your experience, how much development is appropriate? (check the one that applies most)

- Keep it near current levels (46%)
- Increase it slightly (26%)
- Increase 50% (9%)
- Reduced (9%)
- Double (7%)
- Triple (7%)

Questions 11-24 (Yes/No) (Many respondents chose not to answer some questions)

11) Would you support a higher level of development in the Nancy Lake Parkway corridor to provide a greater diversity of recreational opportunities? This would focus increased development in an area that has paved access and currently receives high use levels while preserving the interior portion of the recreation area for non-motorized boating and camping opportunities 45% Yes / 55% No (146)

12) Would you support a higher level of development in the areas of Lynx Lake Road and Butterfly Lake Trail to provide a greater diversity of recreational opportunities? This would focus increased development in areas with existing access routes and lakes that allow motorized use, while preserving the interior portion of the recreation area for non-motorized boating and camping opportunities. 41% Yes / 59% No (147)

13) Would you support expanding the cross country skiing trails north of the Nancy Lake Parkway? This would increase non-motorized recreation opportunities during the winter season. 69% Yes / 31% No (143)

14) Would you support development of skate skiing trails? This would be done by locating a new skate ski trail alongside the existing Nordic trails or by the development of new combined trails. 61% Yes / 39% No (143)

15) Would you support the development of new looped snowmobile trails? All of these new trails would be developed south of the Nancy Lake Parkway. 63% Yes / 37% No (148)

16) Would you support developing the canoe trail system (trail tread, boardwalk, and portage sites) to a higher trail standard? This would include improving and widening the tread of the trail, increasing the clearing width, addressing impacts to resources, and increasing trail sustainability. 69% Yes / 31% No (146)

17) Would you support constructing new public use cabins, Adirondack type shelters, or additional remote camping sites in back-country areas (areas accessed by canoe or other trails)? This would allow expansion of the public use cabin system, expand camping opportunities, and introduce new opportunities for overnight accommodation at Adirondack type shelters. 61% Yes / 39% No (145)

18) Would you support constructing new public use cabins, Adirondack type shelters, or additional camping sites in front-country areas such as Nancy Lake Parkway or Lynx Lake Road/Butterfly Lake Trail)? This would allow expansion of the public use cabin system, expand camping opportunities, and introduce new opportunities for overnight accommodation at shelters. At least one of the cabins would be developed as barrier free and will have summertime access that meets ADA Accessibility Guidelines for Buildings and Facilities. 51% Yes / 49% No (144)

19) Would you support development of a looped mountain bike trail system in the area south and west of South Rolly Lake Campground? This would provide an opportunity that does not currently exist in the recreation area and would enhance opportunities for recreation associated with the developed campground at South Rolly Lake and for day use visitors to the recreation area. 68% Yes / 32% No (146)

20) Would you support development of a group camp facility at Shem Pete Lake? This would provide an opportunity for group oriented recreation that does not currently exist in the recreation area. 57% Yes / 43% No (139)

21) Would you support a multi use trail (non-motorized), on the East Red Shirt Lake Trail and Chicken Lake Cross-park Trail? This would provide new recreational opportunities that do not currently exist (bicycle use) and expand use of the primitive and unmaintained Cross-park Trail. 59% Yes / 41% No (140)

22) Would you support the development of equestrian trails in the area of the Nancy Lake Parkway? This would provide new recreational opportunities that do not currently exist. 31% Yes / 69% No (144)

23) Would you support the development of interpretive and nature trails in the area of the South Rolly Lake Campground? This would provide increased opportunities for guests at the campground and for day use visitors to the area. 73% Yes / 27% No (142)

24) Would you support the development of a new multipurpose facility within the Nancy Lake Parkway corridor? This facility could serve as a new park headquarters site and regional training and meeting center for both the park and the public (similar to the Campbell Creek Science Center in Anchorage). When not being used in support of park programs, this facility would be available for use by the public for a fee. 57% Yes / 43% No (148)

Part B: Landowner

A. Ownership and Access

1. Do you own property within[1], contiguous[2], or adjacent[3] to the Recreation Area?
   52% Yes / 48% No *If yes please complete the following questions*

2. Where is your property located?
   Top three areas of land ownership – Nancy Lake, Butterfly Lake & Redshirt Lake Subdivisions. *(Subdivision and/or lake name)*

3. How long have you owned this property? *(17)** Years

4. Do you utilize trails, launches, or boat storage areas in the Recreation Area to access your property? 62% Yes / 38% No

5. Do you utilize the boat launch and parking area of the Recreation Site to access your property? 34% Yes / 66% No

6. How do you access your property in the summer and winter? (check all that apply)
   (79 Landowners)

a) Hiking	33 Summer / 0 Winter
b) Power boating	30 Summer
c) Canoe	35 Summer
d) Plane	17 Summer / 9 Winter
e) Skiing	0 Winter
f) Off Highway Vehicle	22 Summer / 17 Winter
g) Highway Vehicle	36 Summer / 34 Winter
h) Snowmobile	51 Winter
i) Bicycle	9 Summer / 2 Winter

7. How long have you been using those access methods? (19)* Years

[1] Property is entirely or mostly within NLSRA.
[2] Property shares a common boundary with NLSRA.
[3] Property is in close proximity to NLSRA.
* Average

Appendix E
Division of Parks and Outdoor Recreation Trail Management Policy – Effective 3/10/2009

Introduction:

The Alaska Division of Parks and Outdoor Recreation is responsible for approximately 67 trails, comprising more than 650 miles (not including water trails) within 128 units of the State system. These trails are very important to Alaskans. According to a public recreation survey, seven of the top ten favorite activities of Alaskans involve trail usage (SCORP, 2004). This same survey found that the majority of respondents indicated that trail rehabilitation, upgrades, and expansion should be a high priority for the State.

The *Division of Parks and Outdoor Recreation Ten-Year Strategic Plan 2007-2017* reports that the deferred maintenance backlog for park facilities (which includes trail operations) is over $67 million. Funding tends to focus on the high-use front-country areas, where most management and public safety problems occur. For this reason, trail programs tend to receive little attention other than "basic" maintenance, such as removing fallen trees or other minor repairs, and almost no preventive maintenance. Often, trail operations have been viewed as a non-technical element of overall park operations and little emphasis has been placed on formal training for staff involved in trail programs. In most cases, staff has been provided with limited direction and guidelines and few training opportunities. This has proved detrimental as improperly built and maintained trails are in some cases inadequate for their current uses, and can lead to park resource damage.

Purpose:

This Trail Management Policy will provide direction on how the Division will manage, develop, maintain and assess the condition of its trails. It is designed to provide the overarching framework guiding sustainable and responsible trail development and management. To complement this policy the Alaska State Parks Trail Management Handbook has been created to provide greater detail on how to design, construct and maintain trails using standards, guidelines and best management practices.

The five primary goals of this policy and the Alaska State Parks Trail Management Handbook include:

1. Standardize ***sustainable*** trail construction and maintenance techniques.
2. Organize a process to assess, prescribe and prioritize State trail system needs.
3. Promote wise management of Alaska State Park trail resources through proper planning, design and training.
4. Achieve long-term savings in maintenance costs.
5. Provide reference resources to the public, other organizations and park staff to establish, promote and enhance sustainable trail systems throughout the State.

These goals will be carried out through the creation, use and in some cases adoption of the following trail management concepts:

1. Trail Management Objectives (TMO's)
2. Trail Classification System
3. Best Trail Management Practices (BMP's) through use of the adopted "Sustainable Trail Framework"
4. Trail Inventory and Assessment (through GIS / GPS application)
5. Standardized Trail Dictionary

1. Trail Management Objectives

Trail Management Objectives (TMO's) are defined as the documentation of the intended purpose and management strategies of a trail based on the trail vision. TMO's document the Trail Class, Designed Use, Design Parameters, and other trail-specific considerations for both planned and existing trails. TMO's also provide information for subsequent trail planning, management and reporting purposes.

All Alaska State Park's *managed trails*[4] will have TMO's developed based on management plan direction and a trail's specified Designed Use. Absent of a management or trail plan, TMO's will be developed with consideration given to how individual TMO's accommodate the public needs, protect resources and are sustained into the future.

See Section 1 of the **Alaska State Parks Trail Management Handbook** for the Trail Management Objective form and instructions.

[4] *See the Alaska State Parks Trail Management Handbook for a formal definition (Trail Use Strategies and Managed use)*

2. Trail Classification System

A Trail Classification System provides uniform standards for trail nomenclature, maintenance, marking, design, and construction. The Trail Classification System adopted by this policy is a close adaptation of the National Trail Classification System that has been formally adopted by most federal land management agencies, and therefore will be a major step forward in applying consistent terminology and management guidance on trails across Alaska. This system is based on identifying the standardized category (Type and Class) of an existing or planned trail.

Two general types of trails will be referenced in the Alaska State Parks Trail Management Handbook: Standard Terra Trails and Snow Trails. Each trail, regardless of type, is further broken-down into one of five Trail Classes, ranging from least developed (Trail Class 1) to most developed (Trail Class 5). General criteria are supplied to define Trail Classes applicable to all system trails. Trail Classes are further refined through Trail Design Parameters that offer construction specifications by the type of trail use, such as hiking, biking, all-terrain vehicle, and snowmobile trails. Trail Design Parameters provide guidance for the assessment, survey and design, construction, repair and maintenance of trails, based on the Trail Class and Designed Use of the trail.

See Sections 2 and 3 of the **Alaska State Parks Trail Management Handbook** for Trail Classification Criteria and Design Parameter Matrices.

3. Best Management Practices (BMP's) for Trails through use of a "Sustainable Trail Design Framework"

A Sustainable Trail is most simply defined as a trail that conforms to its terrain and environment, is capable of handling its intended use without serious degradation, and requires minimal maintenance.

Trail sustainability is designed around the following four design fundamentals:

- Integrated Water Control
- Curvilinear Layout
- Grade Control
- Full Bench Construction

The foundation of sustainable trail construction focuses on initial trail design to prevent future resource degradation and human impacts. While initial construction costs are typically higher, overall life-cycle costs will be reduced with lower maintenance costs as well as minimizing resource degradation in the future. Integral to sustainability is proper trail

planning – a sound plan is the core for any successful trail project. Additionally, a Sustainable Trail integrates well into its environment; it does not destroy the feel, aesthetics or ecological integrity of the environment.

The Division adopts these core fundamental sustainable trail design concepts and will integrate them into its trails program. While some elements may be difficult or impossible to fully implement without major expense, all reasonable measures shall be implemented whenever feasible. This policy mandates that the "Sustainable Trail Design Framework" be incorporated as follows:

- **New Trails** – All new Division trails will be built using the "Sustainable Trail Design Framework" as part of their design standard. No new trails will be constructed without adherence to this standard.
- **Existing Trails** – As trails are repaired, re-routed or otherwise upgraded, they will be built to sustainable levels when feasible.

See Section 4 of the **Alaska State Parks Trail Management Handbook** for reference to the adopted "Sustainable Trail Design Framework".

4. Trail Inventory and Assessment System

Before trail maintenance and repair strategies can be fully developed, an assessment of trails and their condition will be made based on the TMO's developed for each trail. While TMO's provide a vision for *future* trail conditions, Trail Assessments will offer an accurate snapshot of *existing* conditions and what is needed to meet sustainable standards. Differences identified between a TMO and Trail Assessment will expose those areas where shortfalls and gaps exist. Corrective measures and rehabilitation efforts to address identified shortfalls shall utilize sustainable trail concepts and best practices. Information derived from assessments and evaluated against sustainable standards and guidelines will also aid in the determination of how a trail may be best managed given its current state.

It will be Division policy to collect an inventory and assessment of all managed trails to determine the condition and immediate need of park trail systems. Alaska's Minimum State Mapping Standards will be applied for the creation of mapping documents, as listed in the Alaska State Parks Trail Management Handbook. It is also mandated that all data collected will conform to the newly developed Interagency Trail Data Standards. Universal trail data standards will enable national, regional, state, and trail-level managers and the public to use mutually understood terminology for recording, retrieving and applying spatial and tabular information. Data standards will make it easier for trail information to be accessed, exchanged and used by more than one individual, agency or group. Any data collected for the Division shall be exchangeable and functional for other partner agencies and public use.

See Section 5 of the **Alaska State Parks Trail Management Handbook** for the Trail Assessment Procedures and Guidelines, Alaska's Minimum State Mapping Standards and the (soon to be adopted) Interagency Trail Data Standards.

5. Trail Terminology

A major goal of this policy is to clarify and implement consistent terminology to provide for effective communication and common understanding. Terminology referenced in this policy has been obtained from many sources including the US Forest Service (in collaboration with the National Park Service, the US Fish and Wildlife Service, and the Bureau of Land Management) and non-profit organizations such as Alaska Trails. It is the policy of the Division to utilize a standardized trail dictionary. Use of a standardized trail dictionary will allow management to become more uniform in the implementation of sustainable trail design practices and carry a common, consistent voice in the trails community.

Appendix C
Trail Plan: Nancy Lake State Recreation Area and Nancy Lake State Recreation Site

Introduction

Background

The 1983 Plan for NLSRA and NLSRS indicated that hiking trails were the most requested facility and that trail development was a high priority of that plan. As a result, a number of new trails were proposed; however, few of these trails were developed between 1983 and today. Similar to the 1983 Plan, this plan continues to place an emphasis on trail development as a cost effective means to diversify, expand, and enhance recreation opportunities. This plan conceives a looped system of trails that will accommodate a diversity of uses and provide access to areas that have previously seen little public use due to lack of access or developed facilities. These new trails will be developed to minimize impact on the natural environment and minimize maintenance costs consistent with a recently adopted trail policy.

In March 2009 the Division of Parks and Outdoor Recreation (DPOR) finalized a Trail Management Policy[1] that provides direction on how the Division will manage, develop, maintain, and assess the condition of state park trails. The policy provides goals and trail management concepts for sustainable and responsible trail development and management. This trail plan was developed consistent with the concepts in the Trail Management Policy and will serve as the framework for management and trail development within NLSRA and NLSRS. The use of sustainable trail design will result in a number of long-term benefits including a reduction of long-term maintenance costs and reduced impacts to the adjacent natural habitats. The DPOR Trail Management Policy includes terminology and concepts that are similar to those commonly found in other trail plans and guidance documents. This consistency enhances agency, organization, and public understanding of trail recommendations in this plan and should result in enhanced coordination with partners interested in trail development within NLSRA and NLSRS.

Comprehensive mapping of existing trails at NLSRA took place in the summer of 2011. The result was the mapping of approximately 36.3 miles of trail that are used during snow free periods. These trails included the three primary hiking trails, the two canoe trail loops, and a number of short access trails. Only existing and proposed trails that are, or will be, actively managed by DPOR are identified in this trail plan.

[1] See Appendix E

This trail plan addresses the three types of trails – Terra (land), Water (includes waterbodies and portages), and Snow. NLSRA currently has three terra trails that receive some level of active management from DPOR – Red Shirt Lake Summer Trail, East Red Shirt Lake Summer Trail, and the Chicken Lake Cross-Park Trail. Portages associated with the water trails (canoe trails) receive periodic maintenance. Only minimal maintenance of snow trails has occurred, and includes grooming of cross-country ski trails and some clearing of vegetation.

Why Develop A Trail Plan?

Development of trails recommended included in this plan will help DPOR fulfill the dominant management objective of recreation areas: "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." This objective will be met by allowing multiple-use of trails and by incorporating sustainable design standards to new and redeveloped trails. This trail plan provides a road map for DPOR to follow when redeveloping existing trails to sustainable standards and when developing new trails. It provides the desired future condition for trails, not an inventory of the current state of a trail. Because this plan uses terms and concepts that are adapted from national and statewide trail processes DPOR will be able to partner with local and federal agencies and non-agency groups to develop trails that are consistent with the purposes and intent of NLSRA and NLSRS. This relationship will encourage stewardship of the area by the public and foster positive relationships with supporters of outdoor recreation. Finally, including specific trail recommendations in this plan allows DPOR to pursue funding for development of trails.

Trail Sustainability

The 2009 DPOR Trail Management Policy defines a sustainable trail as: a trail that conforms to its terrain and environment, is capable of handling its intended use without serious degradation, and requires minimal maintenance. These trails are sited properly within the natural environment and are designed to accommodate uses with minimal degradation of the trail tread or impacts to the adjacent natural resources. While the initial development costs may be higher, a sustainable trail will cost less to maintain long term. Fundamental sustainable trail design incorporates integrated water control, curvilinear layout, grade control, and full bench construction.

The following guidelines will be considered and integrated when building or improving trails within NLSRA and NLSRS. At times, certain circumstances may make the use of some of these guidelines difficult or impossible to fully implement. In these cases reasonable measures should be taken while maintaining the spirit of the guidelines. Some segments of

the existing trails do not yet meet the sustainable standards. Where this is the case, a higher level of maintenance is required to keep the trail tread in reasonably good condition while minimizing impacts on natural resources.

Trail Sustainability Guidelines:

The Six Essential Elements of Sustainable Trails[2]

1. *The Half Rule*: Trail grade should not exceed ½ the sideslope that the trail traverses, if so, it becomes a Fall-line Trail.
2. *The 10% Average Guideline*: The average trail grade, or overall trail grade should not exceed 10% along the alignment of the trail. In many cases, keeping trail grades at about 10% will assure longer term sustainability, and this should be an objective for all trail projects, unless specifically designed at greater grades.
3. *Maximum Sustainable Grade*: A defined maximum tread grade that can be constructed along the trail. Typically restricted to runs of less than 50 feet, and no more than 5% of total length of the trail. Determining the Maximum Sustainable Grade for a trail involves many variables that are specific to a region or trail section. For example, soils that have a very high organic content will be less stable than those that are composed of weathered granite. Variables influencing the Maximum Sustainable Grade include:
   - Soil type
   - Presence of surface rock or bedrock
   - Annual rainfall / intensity
   - Type and spacing of integrated water control features
   - Types of users
   - Numbers of users
   - Desired level of difficulty
4. *Grade Reversals*: A spot at which a climbing trail levels out and then changes direction, dropping subtly a short distance (6-12 feet) before rising again. Ideally, Grade Reversals are incorporated into a trail's initial design as part of its Curvilinear Layout. Water control features such as Rolling Grade Dips and Knicks can be integrated into an existing trail as a maintenance item. Water bars are not recommended due to their higher maintenance requirements.
5. *Outslope*: As the trail contours across a hillside, the downhill or outer edge of the tread should tilt slightly downhill and away from the uphill trail edge. Under typical circumstances, this "Outslope" should be less than 5%. Anything greater will usually lead to tread creep and user discomfort. Outslope is influenced by the forces of compaction, displacement, and erosion, which collectively reduce the effectiveness of

[2] Derived from Alaska Trails Curriculum

the design element. Even on trails that are constructed with proper outslope, it will often deform through time and routine maintenance is needed to restore a trail tread to its designed outslope with these forces in mind. The integration of Grade Reversals and Rolling Grade Dips insure that water is managed along the trail if outslope is compromised.

6. *Durable Tread Surface*: Surfacing should take into consideration special characteristics of the soils such as the presence of permafrost, organic/muskeg soils, volcanic ash, saturated soils, or some other environmental challenge. Many trails in Alaska are not sustainable due to flat terrain or the soil characteristics noted above. In these cases tread surfaces require trail hardening to ensure sustainability. Trail hardening includes techniques such as gravel capping, boardwalk and planking decking, the use of geotextile surfaces and other means to provide a sustainable tread.

Avoid Flat Terrain Trails when Possible

The premise of Trail Sustainability is built around integrated water control. Flat terrain (<3% surface slope) represents a great challenge since often when trails are constructed in these situations, there is no provision for drainage – the trail tread becomes the lowest point and thus collects water. These situations include: valley floors, glacial plains, deltas, and wetlands. This is especially problematic in Alaska where many historic trails which were originally intended for winter use were built across wetlands, but are now being used in the summer.

Common Trail Practices or Structures to Avoid when Possible

- Fall-Line Trails (exceeding the half rule)
- Waterbars (difficult to properly construct, high-maintenance)
- Culverts – installing too small of diameter (difficult to maintain, fish passage issues)
- Grades too steep for sustainability (exceeding 10% average grade)
- Improper bridge location
- Lack of Grade Control along alignment (highly variable grades)
- Improper trail location (or non-curvilinear layout)
- Improper outslope (entrenched tread, <3% or >7%, poorly maintained)
- Failure to identify critical control points during layout
- Improper or failure to acquire proper permits (poor planning)
- Construction in a flood zone (poor planning)
- Construction in a sensitive habitat (poor planning)
- Construction on flat terrain (valley bottoms, ridgelines, etc.)

Visitor Experience

Many elements contribute to a visitor's experience while traveling on a trail. Every effort shall be made throughout the trail planning and construction process to consider the visitor's experience. It is important to keep trails interesting, appreciated, and respected to engender stewardship among users. Understanding core values is the key to being able to provide a good visitor experience. There are basic values associated with safety and convenience and recreational values associated with fitness and various transportation methods. Human values are important to recognize, understand and consider. These values include how trails and their surroundings are perceived, and how their shape affects people. An individual perception of how safe and appropriate the trail is to use must be balanced with the reality that a certain amount of risk is also a trail attractor in the context of the trail's designed and managed uses.

Trail Design and Development

There are a number of different philosophies and thought processes that need to be considered during the development and design phase for any functional trail. This plan puts forth new direction in the way trails will be designed and managed. Below you will find trail direction by different categories.

<u>Trail Design Process</u>
Achieving a sustainable trail begins with establishing an integrated design process, which relies on a multidisciplinary team working collaboratively from the pre-design phase through construction to ensure that a site is developed in keeping with the spirit of the trail design. A typical design process entails finding the really interesting features that currently exist along a proposed trail alignment. These features become positive control points that are incorporated into the trail design, effectively connecting all the interesting features in a linear fashion.

<u>Trail Layout</u>
While destination trails will be incorporated into NLSRA and NLSRA this plan will focus on a looped trail system. Where appropriate, construction of trails that connect other loops should be incorporated in future trail design to create more loop options within the existing trail infrastructure. Connectivity of looped trails diversifies recreation opportunities within NLSRA and NLSRS; however, destination opportunities will also be considered and incorporated into the design.

<u>Re-Vegetation</u>
Native and/or self-sustaining plant materials should be used for re-vegetation of disturbed areas. Re-vegetation can be used to provide screening and help to stabilize slopes. Construction techniques to preserve vegetation and trail routing techniques should be used to minimize visual intrusion. Where possible, plants that are removed from the trail corridor for clearance should be transplanted to other locations where re-vegetation is necessary.

Clearing

Clearing widths and heights shall conform to the trail class and design parameter specifications assigned to a particular trail or trail segment. Deviations to the design parameters may occur only when the deviation is documented in the trail management objective form for a particular trail or trail segment. Additional clearing may be done to remove fire or falling hazard trees adjacent to developed areas or to improve views particularly when associated with a destination incorporated into the trail.

Natural Considerations

Trails should have a natural flow and rhythm that avoids long, straight alignments. Where natural hazards are present, special trail construction techniques or locations should be used to mitigate the hazard to trail users.

Historic and Cultural Resource Considerations

Like natural resources, cultural resources must be considered when planning and constructing trails. Cultural resource identification and evaluation should occur early in any trail project and possible impacts assessed. As needed and in consultation with the Office of History and Archaeology, special trail routing and construction techniques should be used to avoid or reduce adverse impacts to cultural resources.

Environmentally Sensitive Sites

Special location or construction methods may be necessary to reduce impacts and minimize disturbance in environmentally sensitive areas. Examples of environmentally sensitive sites include: wetlands, highly visible hillsides, significant vegetation areas, threatened and endangered species habitat, highly erodible soils, unstable slopes, and ridgelines. Techniques, such as site specific trail routing, erosion control measures, site specific adjustment of construction standards, and site specific construction practices should be implemented to minimize environmental, visual or construction impacts. Construction methods that should reduce impacts include installing retaining walls to reduce cut and fill slopes on a visually prominent hillside, hand construction of the trail, or stabilizing a hazard that is located within or adjacent to a trail corridor.

Special care should be taken in areas close to streams or wetlands. Trails that cross or are located adjacent to wetlands should be designed for minimal impact. Boardwalks or other techniques may be necessary to impose minimal construction impacts. Wildlife needs should also be considered when setting trails near wetlands. Consider decommissioning underutilized trails in sensitive areas to minimize erosion of sediment into streams. Connectivity between drainage ditches and streams should be minimized to reduce sediment delivery potential.

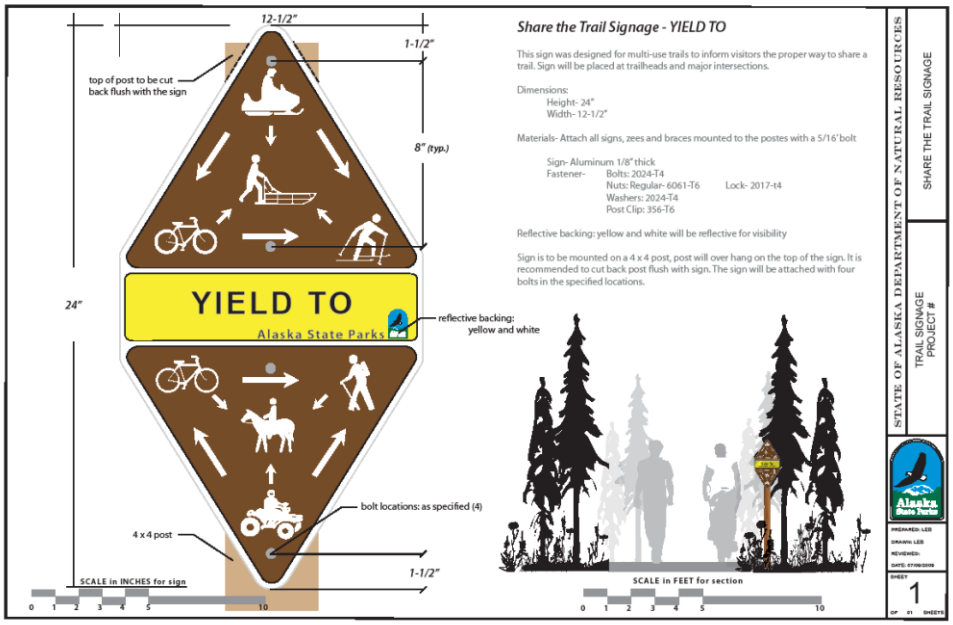
Climatic Trail Use Opportunities

Locate the trails for both summer and winter activities, where possible, given the terrain and climatic considerations. Identify snow retention areas for possible cross-country ski trails. In open areas, place trail alignment to take advantage of wind protection and shaded canyon areas.

Signage

Generally, all trail signage should be kept to a minimum and include only that needed to convey necessary information consistent with the intent for each trail or segment of trail. Highly developed trails will typically include more directional signage and interpretive information while minimally developed trails will typically have the minimal signage needed to provide safety or directional information. Yield hierarchy signs (see sample figure C - 1) should be placed at all major access points of multiple use trails where it is clearly visible and where it does not impede trail use or present a hazard to trail users.

Figure C - 1: Yield Hierarchy Sign Example



Trail Closures

Closing trails to use is an important management tool that will be utilized as needed. Trails may be temporarily closed throughout the year due to construction or trail restoration projects, because of increased wildlife activity, to protect trail tread from damage during wet or spring break up conditions, or for other hazardous conditions that may threaten visitor safety and natural resources. Trail conditions will be closely monitored by staff and when appropriate, closures will be lifted. Trail closures and openings will be public noticed and well signed.

Concepts of Sustainable Trail Development

Trail Type

The type of trail is identified by the predominant surface the trail will be developed on. There are three types of trails – Terra (ground), Water (waterbody and portages), and Snow. A trail or trail segment can only be assigned as a single trail type. This is not to say that two types of trails, or segments, cannot exist on the same route. Where this occurs, each trail type will be identified as a separate route and will be given a separate name. An example of this is where a multi-use snow trail is developed on the same route as a water trail portage.

Trail Classifications

The trail classification system provides uniform principles for trail classification, maintenance, marking, design, and construction. DPOR's Trail Management Policy is adapted from, and closely resembles, the National Trail Classification System. The trail classification is the expression of the intended design and management standards for an entire trail or specific segment of a trail. The following table (Table C - 1) illustrates the similarities and differences between trail classes in general terms. Specific design parameters are provided for each type of trail and under the Trail Design Parameters section below.

Table C - 1: General Trail Criteria

General Trail Criteria					
Trail Attributes	**Trail Class 1** Minimal/ Undeveloped	**Trail Class 2** Simple/Minor Development	**Trail Class 3** Developed/Improved	**Trail Class 4** Highly Developed	**Trail Class 5** Fully Developed
Tread & Traffic Flow	-Tread intermittent & often indistinct -May require route finding -Native materials only	-Tread discernible & continuous, but narrow and rough -Few or no allowances constructed for passing -Native materials	-Tread obvious & continuous -Width accommodates unhindered one-lane travel, occasional allowances constructed for passing -Typically native materials	-Tread wide & relatively smooth with few irregularities -Width may consistently accommodate two-lane travel -Native or imported materials -May be hardened	-Width generally accommodates two-lane and two-directional travel, or provides frequent passing turnarounds -Commonly hardened with asphalt or other imported material
Obstacles	-Obstacles common -Narrow passages; brush, steep grades, rocks and logs present	-Obstacles occasionally present -Blockages cleared to define route and protect resources -Vegetation may encroach into trailway	-Obstacles infrequent -Vegetation cleared outside of trailway	-Few or no obstacles exist -Grades typically <12% -Vegetation cleared outside of trailway	-No obstacles -Grades typically <8%
Constructed Features & Trail Elements	-Minimal to non-existent -Drainage is functional -No constructed bridges or foot crossings	-Structures are of limited size, scale and number -Drainage is functional -Structures adequate to protect trail infrastructure and resources -Primitive foot crossings and fords	-Trail structures (walls, steps, drainage, raised trail) may be common & substantial -Trail bridges as needed for resources protection and appropriate access -Generally native materials	-Structures frequent and substantial -Substantial trail bridges are appropriate at water crossings -Trailside amenities may be present	-Structures frequent or continuous; may include curbs, handrails, trailside amenities and boardwalks -Drainage structures frequent; may include culverts and road-like designs
Signs	-Minimum required -Generally limited to regulation and resource protection -No destination signs present	-Minimum required for basic direction -Generally limited to regulation and resource protection -Typically very few or no destination signs present	-Regulation, resource protection, user reassurance -Directional signs at junctions, or when confusion is likely -Informational and interpretative signs may be present	-Wide variety of signs likely and present -Informational signs likely -Interpretive signs possible	Wide variety of signage is present -Information and interpretive signs likely
Typical Recreation Environs & Experience	-Natural, unmodified -Primitive setting	-Natural, essentially unmodified -Primitive to Semi-primitive	-Natural, primarily unmodified -Semi-primitive to roaded natural setting -Transition	-May be modified -Typically roaded natural to rural setting -Transition, rarely present in wilderness	-Can be highly modified -Typically rural to urban setting -Commonly associated with visitor centers or high-use recreation sites -Not present in wilderness

General Trail Criteria					
Trail Attributes	**Trail Class 1** Minimal/ Undeveloped	**Trail Class 2** Simple/Minor Development	**Trail Class 3** Developed/Improved	**Trail Class 4** Highly Developed	**Trail Class 5** Fully Developed
Trail Management Typically managed to accommodate:	-Low level use -Highly skilled users, comfortable off trail -Users with high degree of orienteering skill -Some travel modes & ability levels may be impractical or impossible -Water trail users require high level of navigation/orientation and paddling skills	-Low-to-moderate use levels -Mid-to-highly skilled users, capable of traveling over awkward conditions/ obstacles -Users with moderate orienteering skill -Trail suitable for many user types but challenging and involves advanced skills -Water trails: moderate to high level of navigation/orientation and paddling/piloting skills required	-Moderate to heavy use -Users with intermediate skill level and experience -Users with minimal orienteering skills -Moderately easy travel by managed use types -Random potential for accessible use -Water trails: Basic to moderate navigation and paddling/piloting skills required	-Very heavy use -Users with minimal skills and experience -Users with minimal to no orienteering skills -Easy/ comfortable travel by managed use types -Maybe or has the potential to be made accessible -Water trails: Basic navigation and paddling/piloting skills required	-Intensive use -Users with limited trail skills and experience -Trail typically meets agency requirements for accessibility
Maintenance Indicators & Intensity	-Resource protection or safety commensurate with targeted recreational experience -Infrequent or no scheduled maintenance, usually in response to reports of unusual resource problems requiring repair	-Resource protection or safety commensurate with targeted recreational experience -Maintenance scheduled to preserve trail facility & route location or in response to reports of unusual resource problems	-User convenience -Resource protection or safety commensurate with targeted recreational experience -Trail cleared to make available for use early in use season and to preserve trail integrity -Maintenance typically in response to trail or resource damage or significant obstacles to managed use type and experience level	-User comfort and ease -Resource protection or safety commensurate with targeted recreational experience -Trail cleared to make available for use at earliest opportunity in use season -Maintenance typically performed at least annually	-User comfort and ease -Targeted high level of accessibility to key recreational opportunities -Safety commensurate with targeted recreational experience -Maintenance performed at least annually or as needed to meet posted conditions, major damage or safety concerns typically corrected or posted within 24 hours of notice
Additional Criteria	-Typically not managed for Pack and Saddle and Motorized Trails				-Not managed for Pack and Saddle stock, Watercraft or Motorized use.

Trail Design Parameters

The following text describes the major concepts used in sustainable trail design. Within a sustainable trail system the designed use controls the design and maintenance parameters of the trail. That is, it is what the use trail is designed to accommodate. Managed uses are those uses that are allowed by the agency and actively managed for on a trail, but they do not drive the design of a trail or segment of trail. Under this system, a trail or segment of trail may be designed to accommodate a particular use, but other uses may be allowed to occur on the same trail or segment of trail. Similarly, a trail may be designed to accommodate a particular use, even though that use is only allowed by authorization, while allowing other types of use without authorization to occur at the same time.

Designed Use

Designed Use is the intended use that controls the desired design of the trail and determines the subsequent maintenance parameters for a trail. There can only be one Designed Use per trail or trail segment. Seven different designed uses are applied in this plan. They are:

1. Bicycle
2. Off-Road Vehicle
3. Hiker/Pedestrian
4. Equestrian (Pack and Saddle)
5. Non-Motorized Watercraft
6. Dog Sledding
7. Skijoring

Managed Use

Managed Use is a term that is used to describe the modes of travel that are actively managed and appropriate on a trail considering the design of the trail. There can be many managed uses per trail or trail segment. Managed Use is applied to indicate a management decision or intent to accommodate or encourage a specific type of use but it does not necessarily mean that other uses are prohibited.

Design Parameters

Design parameters provide guidance for the assessment, survey, design, construction, repair and maintenance of trails. While the five trail classes apply, the specific design parameters vary under each trail class depending on the designed use. Site-specific circumstances may demand some exceptions or variances to the Design Parameters based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable trail class. Trail design parameters used in this plan are provided in Tables C - 2 through C - 12.

Trail Management Objectives

Trail Management Objectives (TMOs) are the mechanisms that link the Trail Classification System and direction given in this plan to on-the-ground trail management. TMOs synthesize and document in one form the management intention for the trail while providing basic reference information for any subsequent trail planning, management, condition surveys, and reporting. A TMO is required for each trail or trail segment as a pre-requisite for completing trail condition assessment surveys and subsequent prescriptions for work needed to meet standard. Each TMO is approved by management staff to ensure that the objectives for the trail are consistent with this plan and anticipated future land management actions. After approval, the TMOs provide the mechanism for trail maintenance staff and volunteers to know how to maintain and bring a particular trail or trail segment up to standard as needed.

Segmentation of Trails

Segmentation refers to applying different use or design standards to portions of a trail. There are a couple of ways a single trail may be designed to accommodate different uses on different segments of the same trail. For instance, the first segment of a trail may be designed to accommodate bicycle uses and managed for both biking and hiking uses. Beyond that first segment of trail the use of bicycles may be prohibited, and thus, the trail will be designed and managed for hiking. Trails that have been segmented by designed use are indicated in the Trail Recommendation tables under the *Design Considerations* heading.

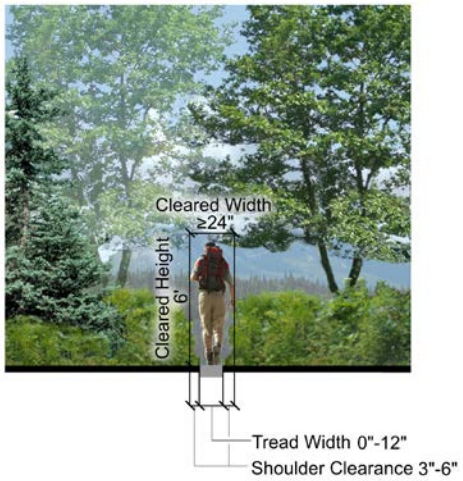
Trail Design Parameters

Terra Trails

Table C - 2: Hiker/Pedestrian Design Parameters

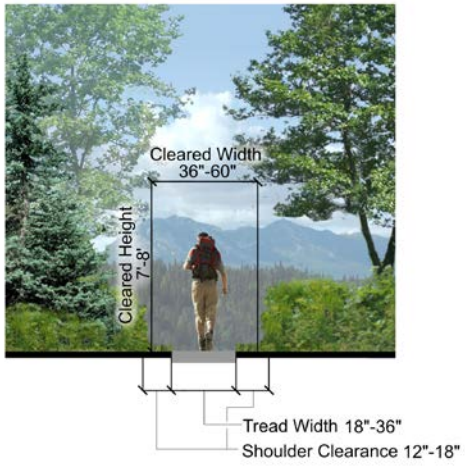
Designed Use HIKER/PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	**Single Lane**	0” – 12”	6” – 18”	18” – 36”	24” – 60”	36” – 72”
	Double Lane	36”	36”	36” – 60”	48” – 72”	72” – 120”
	Structures (Minimum Width)	18”	18”	18”	36”	36”
Design Surface	**Type**	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough	Native with improved sections of borrow or imported material, and routine grading Minor roughness	Likely imported material, and routine grading Uniform, firm, and stable
	Protrusions	≤ 24” Likely common and continuous	≤ 6” May be common and continuous	≤ 3” May be common, not continuous	≤ 3” Uncommon, not continuous	No protrusions
	Obstacles (Maximum Height)	24”	14”	10”	8”	No obstacles
Design Grade	**Target Grade**	5% – 25%	5% – 18%	3% – 12%	2% – 10%	2% – 5%
	Short Pitch Maximum	40%	35%	25%	15%	5% – 12%
	Maximum Pitch Density	20% – 40% of trail	20% – 30% of trail	10% – 20% of trail	5% – 20% of trail	0% – 5% of trail
Design Cross Slope	**Target Cross Slope**	Natural side slope	5% – 20%	5% – 10%	3% – 7%	2% – 3% (or crowned)
	Maximum Cross Slope	Natural side slope	25%	15%	10%	3%
Design Clearing	**Height**	6’	6’ – 7’	7’ – 8’	8’ – 10’	8’ – 10’
	Width	≥ 24” Some vegetation may encroach into clearing area	24” – 48” Some light vegetation may encroach into clearing area	36” – 60”	48” – 72”	60” – 72”
	Shoulder Clearance	3” – 6”	6” – 12”	12” – 18”	12” – 18”	12” – 24”
Design Turn	**Radius**	No minimum	2’ – 3’	3’ – 6’	4’ – 8’	6’ – 8’

Class 1

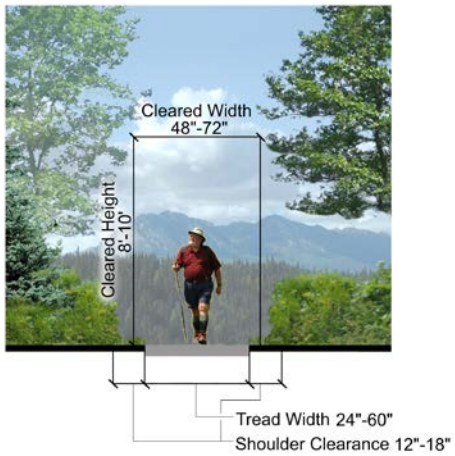


Class 2

Class 3



Class 4



Class 5

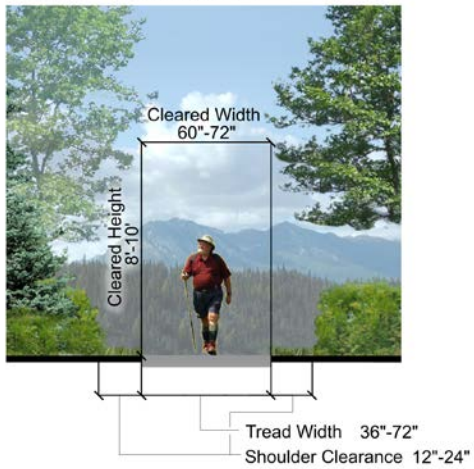
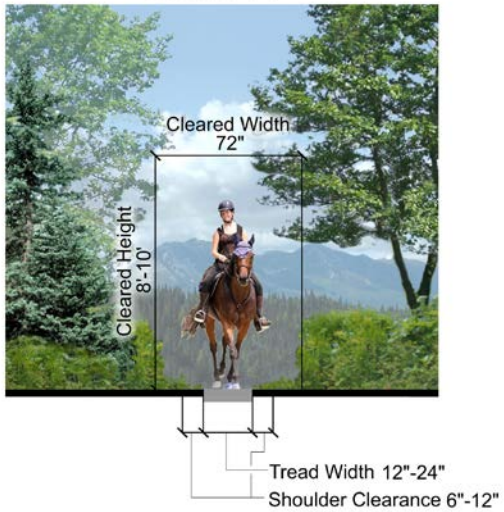


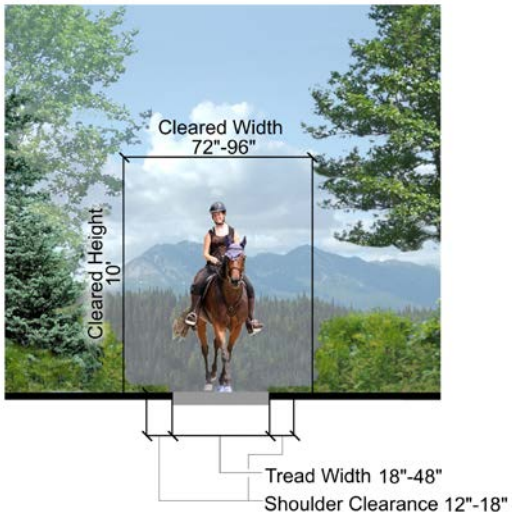
Table C - 3: Pack and Saddle Design Parameters

Designed Use PACK AND SADDLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	**Single Lane**	Typically not designed or actively managed for equestrians, although use may be allowed	12” – 24” May be up to 48” along steep side slopes 48” – 60” or greater along precipices	18” – 48” 48” – 60” or greater along precipices	24” – 96” 48” – 60” or greater along precipices	Typically not designed or actively managed for equestrians, although use may be allowed
	Double Lane		60”	60” – 84”	84” – 120”	
	Structures (Minimum Width)		Other than bridges: 36” Bridges without handrails: 60” Bridges with handrails: 84” clear width	Other than bridges: 36” Bridges without handrails: 60” Bridges with handrails: 84” clear width	Other than bridges: 36” Bridges without handrails: 60” Bridges with handrails: 84” clear width	
Design Surface	**Type**		Native, with limited grading May be frequently rough	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough	Native, with improved sections of borrow or imported material and routine grading Minor roughness	
	Protrusions		≤ 6” May be common and continuous	≤ 3” May be common, not continuous	≤ 3” Uncommon, not continuous	
	Obstacles (Maximum Height)		12”	6”	3”	
Design Grade	**Target Grade**		5% – 20%	3% – 12%	2% – 10%	
	Short Pitch Maximum		30%	20%	15%	
	Maximum Pitch Density		15% – 20% of trail	5% – 15% of trail	5% – 10% of trail	
Design Clearing	**Height**		8’ – 10’	10’	10’ – 12’	
	Width		72” Some light vegetation may encroach into clearing area	72” – 96”	96”	
	Shoulder Clearance		6” – 12” Pack clearance: 36” x 36”	12” – 18” Pack clearance: 36” x 36”	12” – 18” Pack clearance: 36” x 36”	
Design Turn	**Radius**		4’ – 5’	5’ – 8’	6’ – 10’	

Class 2



Class 3



Class 4

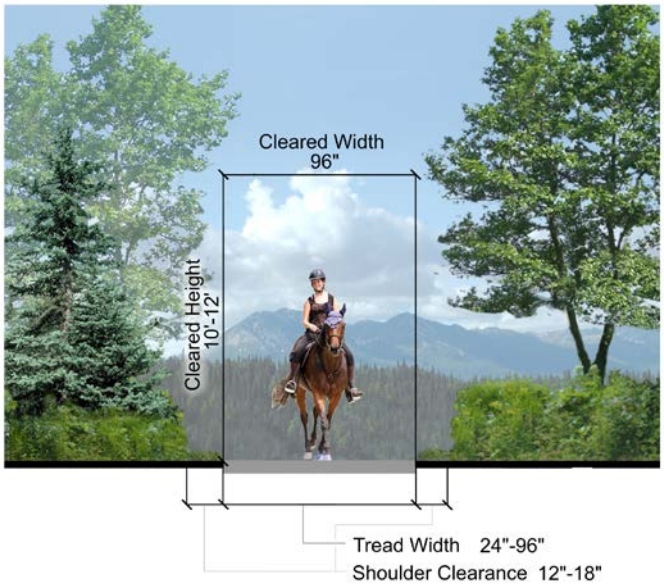


Table C - 4: Bicycle Design Parameters

Designed Use BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	**Single Lane**	6” – 12”	12” – 24”	18” – 36”	24” – 48”	36” – 60”
	Double Lane	36” – 48”	36” – 48”	36” – 48”	48” – 84”	72” – 120”
	Structures (Minimum Width)	18”	18”	36”	48”	60”
Design Surface	**Type**	Native, ungraded May be continuously rough Sections of soft or unstable tread on grades < 5% may be common and continuous	Native, with limited grading May be continuously rough Sections of soft or unstable tread on grades < 5% may be common	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough Sections of soft or unstable tread on grades < 5% may be present, but not common	Native, with improved sections of borrow or imported materials and routine grading Stable, with minor roughness	Likely imported material and routine grading Uniform, firm, and stable
	Protrusions	≤ 24” Likely common and continuous	≤ 6” May be common and continuous	≤ 3” May be common, but not continuous	≤ 3” Uncommon and not continuous	No protrusions
	Obstacles (Maximum Height)	24”	12”	10”	8”	No obstacles
Design Grade	**Target Grade**	5% – 20%	5% – 12%	3% – 10%	2% – 8%	2% – 5%
	Short Pitch Maximum	30% 50% on downhill segments only	25% 35% on downhill segments only	15%	10%	8%
	Maximum Pitch Density	20% – 30% of trail	10% – 30% of trail	10% – 20% of trail	5% – 10% of trail	0% – 5% of trail
Design Cross Slope	**Target Cross Slope**	5% – 10%	5% – 8%	3% – 8%	3% – 5%	2% – 3%
	Maximum Cross Slope	10%	10%	8%	5%	5%
Design Clearing	**Height**	6’	6’ – 8’	8’	8’ - 9’	8’ - 9’
	Width	24” – 36” Some vegetation may encroach into clearing area	36” – 48” Some light vegetation may encroach into clearing area	60” – 72”	72” – 96”	72” – 96”
	Shoulder Clearance	0” – 12”	6” – 12”	6” – 12”	6” – 18”	12” – 18”
Design Turn	**Radius**	2’ – 3’	3’ – 6’	4’ – 8’	8’ – 10’	8’ - 12’

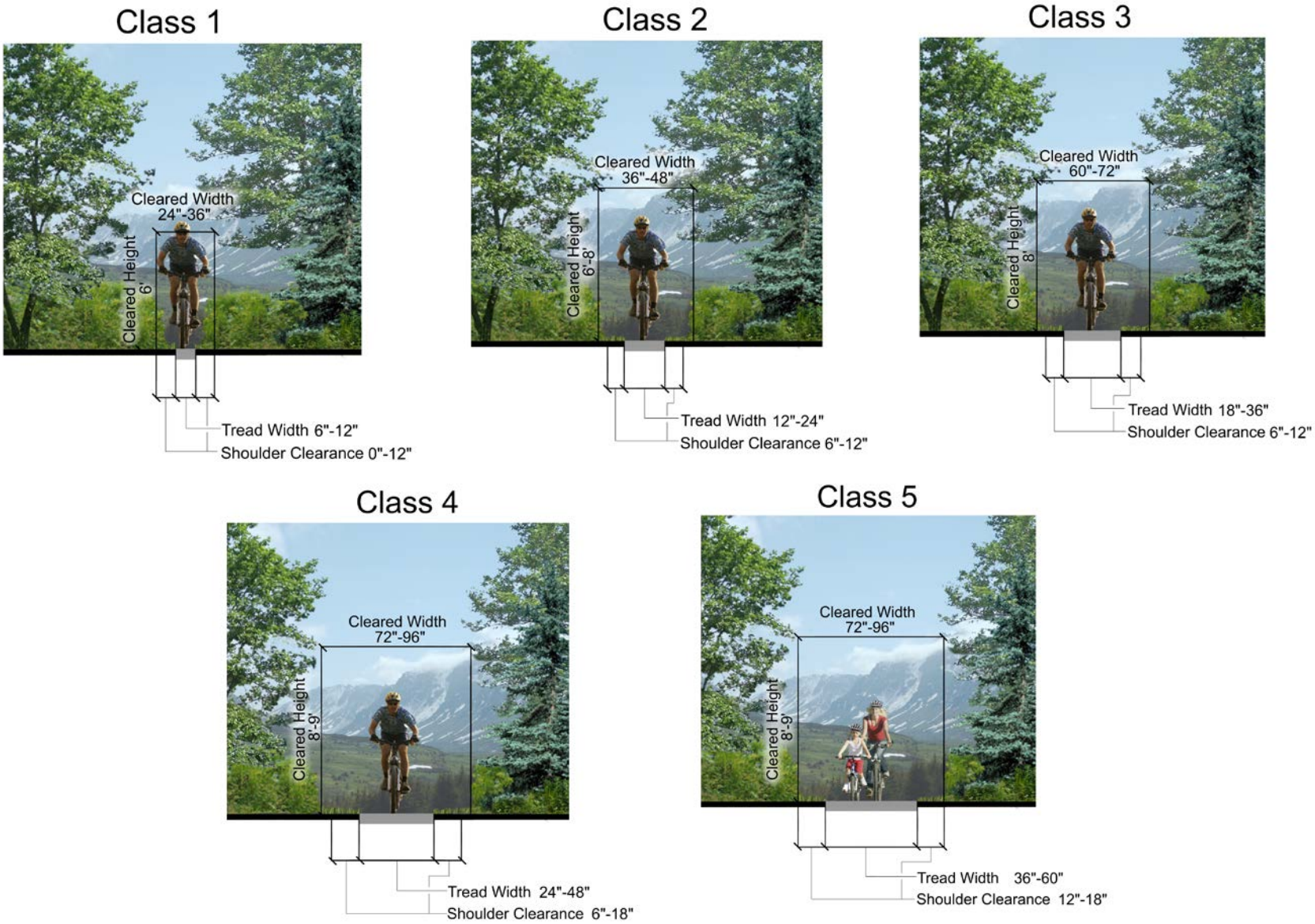
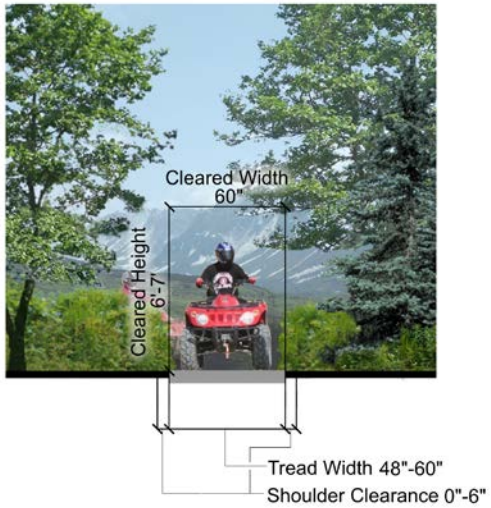

Class 1
Cleared Width
24"-36"
Cleared Height
6'
Tread Width 6"-12"
Shoulder Clearance 0"-12"
Class 2
Cleared Width
36"-48"
Cleared Height
6'-8'
Tread Width 12"-24"
Shoulder Clearance 6"-12"
Class 3
Cleared Width
60"-72"
Cleared Height
8'
Tread Width 18"-36"
Shoulder Clearance 6"-12"
Class 4
Cleared Width
72"-96"
Cleared Height
8'-9'
Tread Width 24"-48"
Shoulder Clearance 6"-18"
Class 5
Cleared Width
72"-96"
Cleared Height
8'-9'
Tread Width 36"-60"
Shoulder Clearance 12"-18"

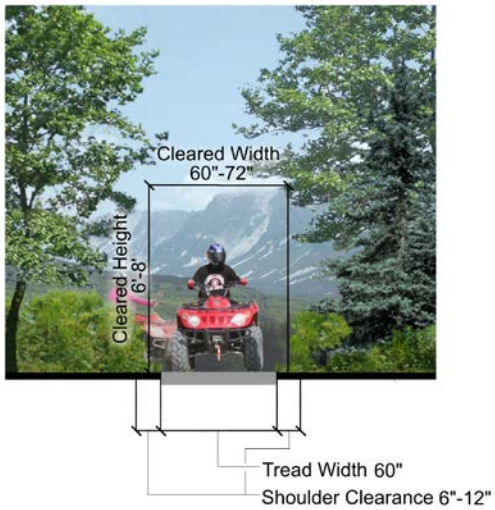
Table C - 5: All-Terrain Vehicle Design Parameters

Designed Use ALL-TERRAIN VEHICLE		**Trail Class 1**	**Trail Class 2**	**Trail Class 3**	**Trail Class 4**	**Trail Class 5**
Design Tread Width	**Single Lane**	Typically not designed or actively managed for ATVs, although use may be allowed	48” – 60”	60”	60” – 72”	Typically not designed or actively managed for ATVs, although use may be allowed
	Double Lane		96”	96” – 108”	96” – 120”	
	Structures (Minimum Width)		60”	60”	60”	
Design Surface	**Type**		Native, with limited grading May be continuously rough Sections of soft or unstable tread on grades < 5% may be common and continuous	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough Sections of soft or unstable tread on grades < 5% may be present	Native, with imported materials for tread stabilization likely and routine grading Minor roughness Sections of soft tread uncommon	
	Protrusions		≤ 6” May be common and continuous	≤ 3” May be common, but not continuous	≤ 3” Uncommon and not continuous	
	Obstacles (Maximum Height)		12” May be common or placed for increased challenge	6” May be common and left for increased challenge	3” Uncommon	
Design Grade	**Target Grade**		10% – 25%	5% – 15%	3% – 10%	
	Short Pitch Maximum		35%	25%	15%	
	Maximum Pitch Density		20% – 40% of trail	15% – 30% of trail	10% – 20% of trail	
Design Cross Slope	**Target Cross Slope**		5% – 10%	3% – 8%	3% – 5%	
	Maximum Cross Slope		15%	10%	8%	
Design Clearing	**Height**		6’ – 7’	6’ – 8’	8’ – 10’	
	Width (On steep side hills, increase clearing on uphill side by 6” – 12”)		60” Some light vegetation may encroach into clearing area	60” – 72”	72” - 96”	
	Shoulder Clearance		0” – 6”	6” – 12”	12” – 18”	
Design Turn	**Radius**		6’ – 8’	8’ – 10’	8’ – 12’	

Class 2



Class 3



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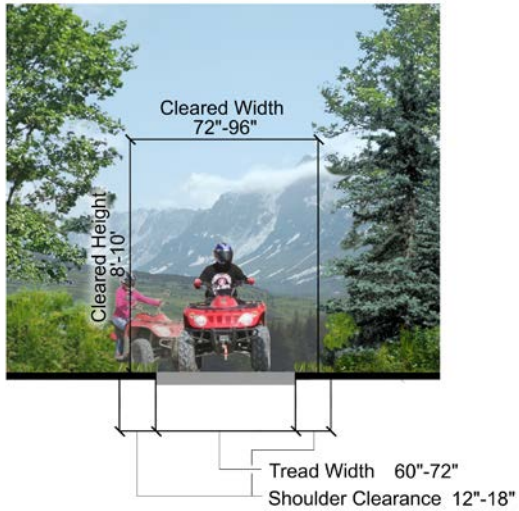


Water Trails

Table C - 6: Non-Motorized Watercraft Design Parameters – Water Segments

Designed Use **NON-MOTORIZED WATERCRAFT***		**Trail Class 1**	**Trail Class 2**	**Trail Class 3**	**Trail Class 4**	**Trail Class 5**
Design Tread Width	**Structures**	Water route shown on maps and used to access other trails or portages, but with no trail structures, facilities, signs, or recurring maintenance needs along route. Signs and/or parking facilities at initial access points only, and likely associated with other trails or sites.	Few markers or route designators. Low profile structures or facilities occasionally present; primarily to reduce beach and bank impacts. Structures typically consist of native material hardening of portage/water entry points. Signs and/or parking facilities at initial access points only, and likely associated with other trails or sites.	Buoys or markers possible to identify route Typically, facilities provide for improved access and to reduce beach and bank impacts. Well-developed parking and launch facilities at primary access points, but facilities and structures rare along the trail. Interpretive and informational displays typically present at primary access points	Buoys or markers are high profile and may be inter-visible and or route is readily followed. Highly developed launch facilities, docks, and amenities typically proved for user convenience. Well-marked approaches to facilities and portages. Interpretative displays, maps, information kiosks and signs typically present at access points and along route	Typically not designed or actively managed for watercraft, although use may be allowed
Design Surface	**Protrusions**	May be common and continuous	May be common and continuous	May be common, but not continuous	Uncommon and not continuous	
	Obstacles	May be common or placed for increased challenge	May be common or placed for increased challenge	May be common and left for increased challenge	Uncommon	
Design Clearing		In densely vegetated areas, users will commonly need to lift vessels over logs, shoals, or matted vegetation.	Path is typically narrow, shallow, and may occasionally require user to lift over obstacles or break path through some vegetation and duck under overhanging branches	Path is typically cleared wide enough for ready passage and maneuvering of at least one vessel, and usually two-way vessel passage, with only occasional low overhanging vegetation	Path is consistently cleared wide enough for unhindered, easy passage of two or more vessels.	

Class 1

Class 2

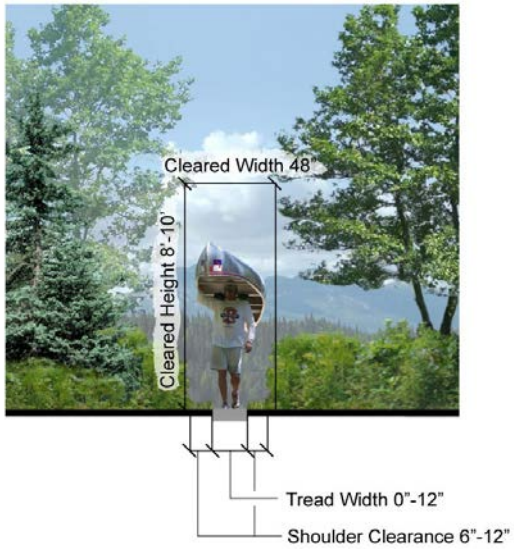
Class 3

Class 4

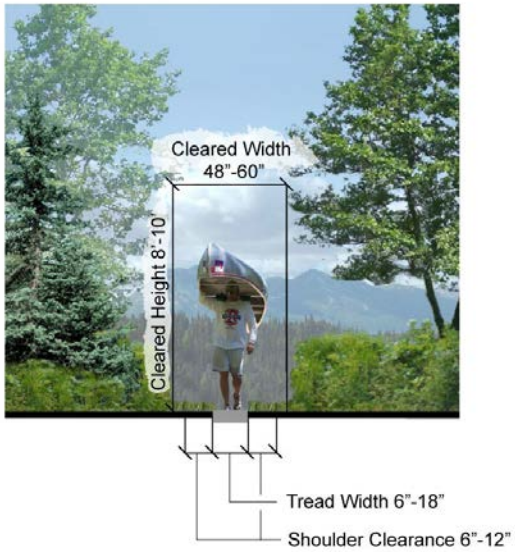
Table C - 7: Non-Motorized Watercraft Design Parameters – Terra Segments (Portages)

Designed Use Water Trail Portage		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	**Single Lane**	0” – 12”	6” – 18”	18” – 36”	24” – 60”	36” – 72”
	Structures (Minimum Width)	18”	18”	18”	36”	36”
Design Surface	**Type**	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough	Native with improved sections of borrow or imported material, and routine grading Minor roughness	Likely imported material, and routine grading Uniform, firm, and stable
	Protrusions	≤ 24” Likely common and continuous	≤ 6” May be common and continuous	≤ 3” May be common, not continuous	≤ 3” Uncommon, not continuous	No protrusions
	Obstacles (Maximum Height)	24”	14”	10”	8”	No obstacles
Design Grade	**Target Grade**	5% – 25%	5% – 18%	3% – 12%	2% – 10%	2% – 5%
	Short Pitch Maximum	40%	35%	25%	15%	5% – 12%
	Maximum Pitch Density	20% – 40% of trail	20% – 30% of trail	10% – 20% of trail	5% – 20% of trail	0% – 5% of trail
Design Cross Slope	**Target Cross Slope**	Natural side slope	5% – 20%	5% – 10%	3% – 7%	2% – 3% (or crowned)
	Maximum Cross Slope	Natural side slope	25%	15%	10%	3%
Design Clearing	**Height**	8’ – 10’	8’ – 10’	8’ – 10’	8’ – 10’	8’ – 10’
	Width	48” Some vegetation may encroach into clearing area	48” – 60” Some light vegetation may encroach into clearing area	60” – 72”	72” – 96”	84” – 120”
	Shoulder Clearance	6” – 12”	6” – 12”	12” – 18”	12” – 18”	12” – 24”
Design Turn	**Radius**	8’ – 10’	8’ – 10’	10’ – 12’	12’ – 14’	12’ – 16’

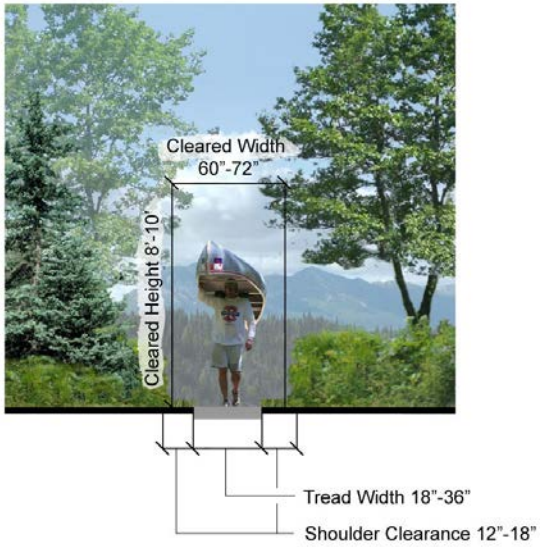
Class 1



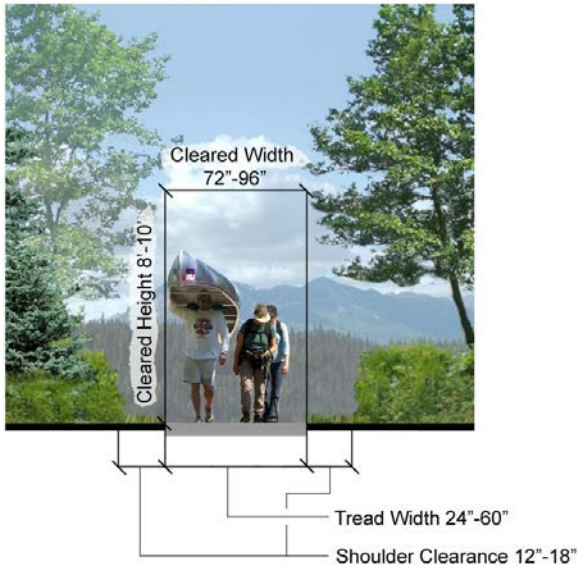
Class 2



Class 3



Class 4



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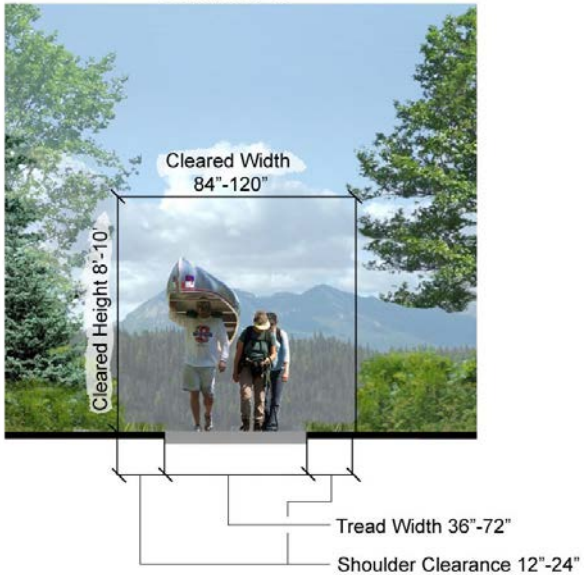
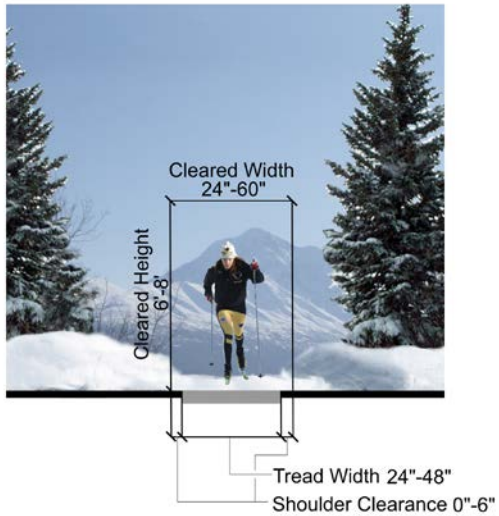


Snow Trails

Table C - 8: Cross-Country Ski (Diagonal/Classical) Design Parameters

Designed Use CROSS-COUNTRY SKI (Diagonal/Classic ski)		**Trail Class 1**	**Trail Class 2**	**Trail Class 3**	**Trail Class 4**	**Trail Class 5**
Design Groomed Width	**Single Lane**	Typically not designed or actively managed for cross-country skiing, although use may be allowed	24” – 48” Typically not groomed	72” – 96” Or width of grooming equipment	96” – 120” Or width of grooming equipment	Typically not designed or actively managed for cross-country skiing, although use may be allowed
	Double Lane		72” – 96”	96” – 144”	144” – 192”	
	Structures (Minimum Width)		36”	36”	36”	
Design Grooming and Surface	**Type**		Generally no machine grooming	May receive occasional machine grooming for snow compaction and track setting	Regular machine grooming for snow compaction and track setting	
	Protrusions		No protrusions	No protrusions	No protrusions	
	Obstacles (Maximum Height)		12” Uncommon	8” Uncommon (no obstacles if machine groomed)	No obstacles	
Design Grade	**Target Grade**		5% – 15%	2% – 10%	0% – 8%	
	Short Pitch Maximum		25%	20%	12%	
	Maximum Pitch Density		10% – 20% of trail	5% – 15% of trail	0% – 10% of trail	
Design Cross Slope	**Target Cross Slope**		0% – 10%	0% – 5%	0% – 5%	
	Maximum Cross Slope (For up to 50’)		20%	15%	10%	
Design Clearing	**Height** (Above normal maximum snow level)		6’ – 8’	8’ Or height of grooming equipment	8’ – 10’	
	Width		24” – 60” Light vegetation may encroach into clearing area	72” – 120” Light vegetation may encroach into clearing area	96” – 168” Widen clearing at turns or if increased sight distance needed	
	Shoulder Clearance		0” – 6”	0” - 12”	0” – 24”	
Design Turn	**Radius**		8’ – 10’	15’ – 20’ Or to accommodate grooming equipment	≥ 25’	

Class 2



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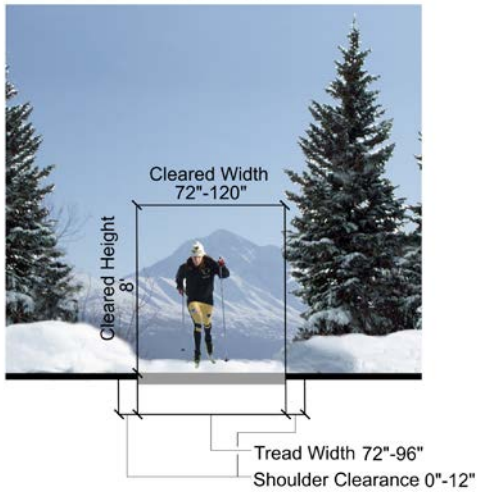

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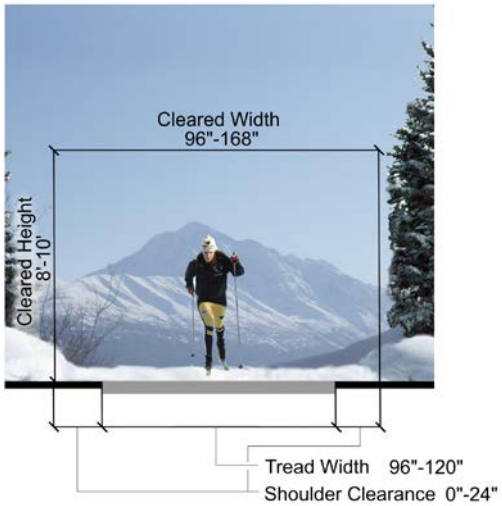
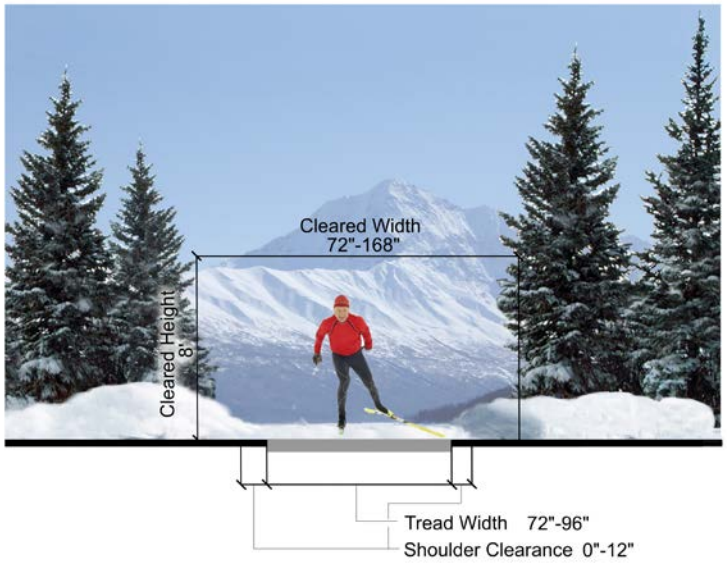


Table C - 9: Nordic Ski (Skate) Design Parameters

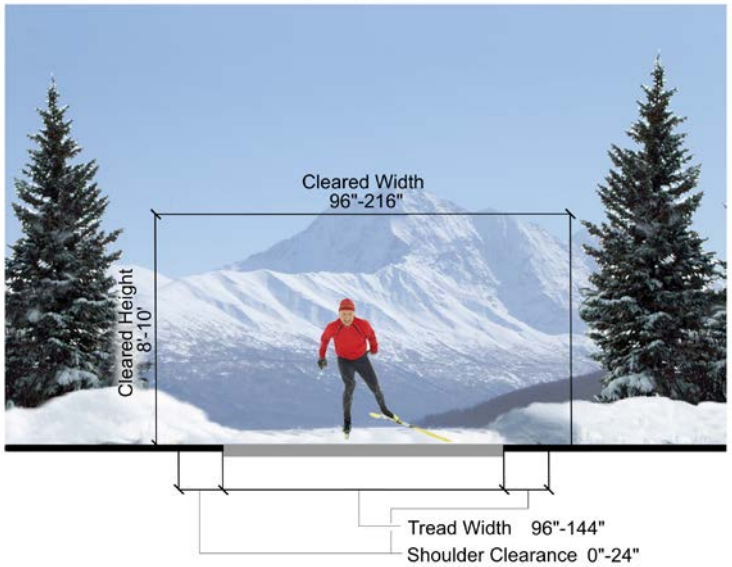
Designed Use NORDIC SKI (Skate Ski)		**Trail Class 1**	**Trail Class 2**	**Trail Class 3**	**Trail Class 4**	**Trail Class 5**
Design Groomed Width	**Single Lane**	Typically not designed or actively managed for skate skiing, although use may be allowed	Typically not designed or actively managed for skate skiing, although use may be allowed	72” – 96” Or width of grooming equipment	96” – 144” Or width of grooming equipment	144” - 192” Or width of grooming equipment
	Double Lane[3]			96” – 144”	144” – 192”	168” - 288”
	Structures (Minimum Width)			36”	36”	36”
Design Grooming and Surface	**Type**			May receive occasional machine grooming for snow compaction and track setting	Smooth compaction using implements designed for creating skate lanes.	Smooth compaction using implements designed for creating skate lanes.
	Protrusions			No protrusions	No protrusions	No protrusions
	Obstacles (Maximum Height)			8” Uncommon (no obstacles if machine groomed)	No obstacles	No obstacles
Design Grade	**Target Grade**			2% – 10%	0% – 8%	0% – 6%
	Short Pitch Maximum			20%	20%	20%
	Maximum Pitch Density			5% – 15% of trail	5% - 10% of trail	5 - 8% of trail
Design Cross Slope	**Target Cross Slope**			0% – 5%	0% – 5%	0% – 5%
	Maximum Cross Slope (For up to 50’)			15%	12% Minimum cross-slope (crowned or one side) should be 2% to promote drainage	10% Minimum cross-slope (crowned or one side) should be 2% to promote drainage
Design Clearing	**Height** (Above normal maximum snow level)			8’ Or height of grooming equipment	8’ – 10’ Or height of grooming equipment	At least 10’ Or height of grooming equipment
	Width			72” – 168” Light vegetation may encroach into clearing area	96” – 216” Widen clearing at turns or if increased sight distance needed	96” – 312” Widen clearing at turns or if increased sight distance needed
	Shoulder Clearance			0” - 12”	0” – 24”	0” – 24”
Design Turn	**Radius**			15’ – 20’ Or to accommodate grooming equipment	≥ 25’ Or to accommodate grooming equipment	25’ - 30’ Or to accommodate grooming equipment

[3] Double lane may accommodate a combination of diagonal and skate ski lanes with room to pass.

Class 3



Class 4



Class 5

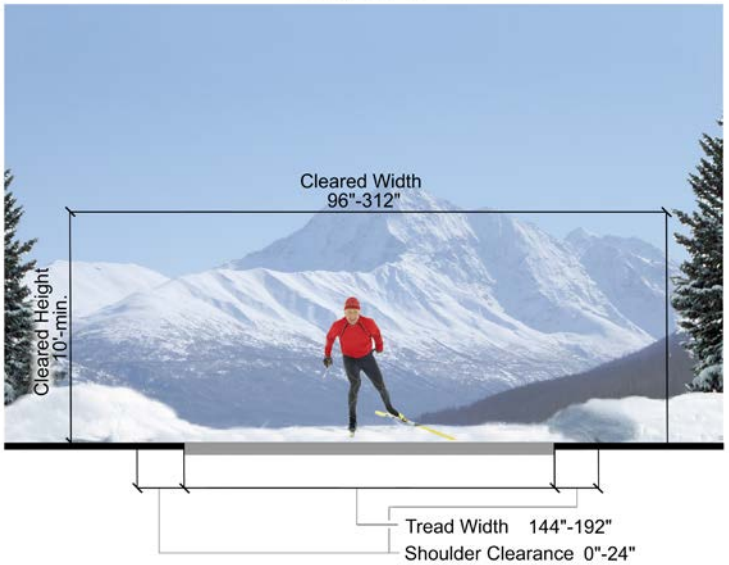
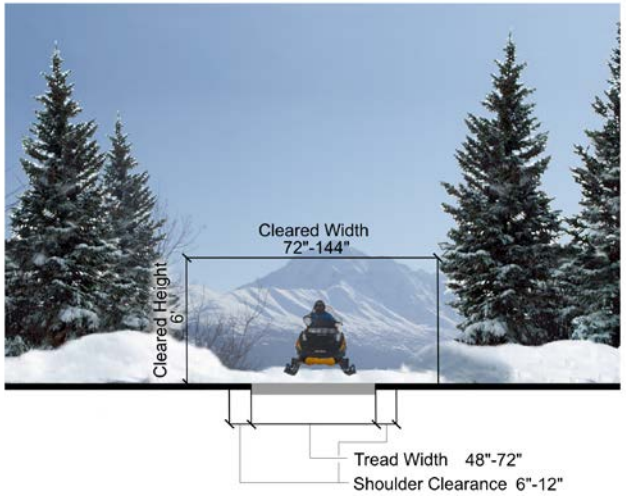


Table C - 10: Snowmobile Design Parameters

Designed Use SNOWMOBILE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	**Single Lane**	Typically not designed or actively managed for snowmobiles, although use may be allowed	48” – 72” Typically not groomed	72” – 96” Or width of grooming equipment. On turns with tight radius, increase groomed width to ≥ 10’	96” – 120” Or width of grooming equipment. On turns with tight radius, increase groomed width to ≥ 12’	Typically not designed or actively managed for snowmobiles, although use may be allowed
	Double Lane		120” Typically not groomed	120” – 144”	144” – 240”	
	Structures (Minimum Width)		72”	144”	216”	
Design Surface	**Type**		Generally no machine grooming Commonly rough and bumpy	May receive occasional machine grooming for snow compaction and conditioning Frequently rough and bumpy	Regular machine grooming for snow compaction and conditioning Commonly smooth	
	Protrusions		No protrusions	No protrusions	No protrusions	
	Obstacles (Maximum Height)		12” Uncommon	6” Uncommon (no obstacles if machine groomed)	No obstacles	
Design Grade	**Target Grade**		0% – 12%	0% – 10%	0% – 8%	
	Short Pitch Maximum		35%	25%	20%	
	Maximum Pitch Density		15% – 30% of trail	10% – 20% of trail	5% – 10% of trail	
Design Cross Slope	**Target Cross Slope**		0% – 10%	0% – 5%	0%	
	Maximum Cross Slope		15%	10%	5%	
Design Clearing	**Height** (Above normal maximum snow level)		6’	6’ – 8’ Provide sufficient clearance for grooming equipment	8’ – 12’ Provide sufficient clearance for grooming equipment	
	Width		72” – 144” Some light vegetation may encroach into clearing area	96” – 168” Light vegetation may encroach into clearing area	120” – 264” Widen clearing at turns or if increased sight distance needed	
	Shoulder Clearance		6” – 12”	12” – 18”	12” – 24”	
Design Turn	**Radius**		8’ – 10’	15’ – 20’ Or to accommodate grooming equipment	25’ – 50’	

Class 2



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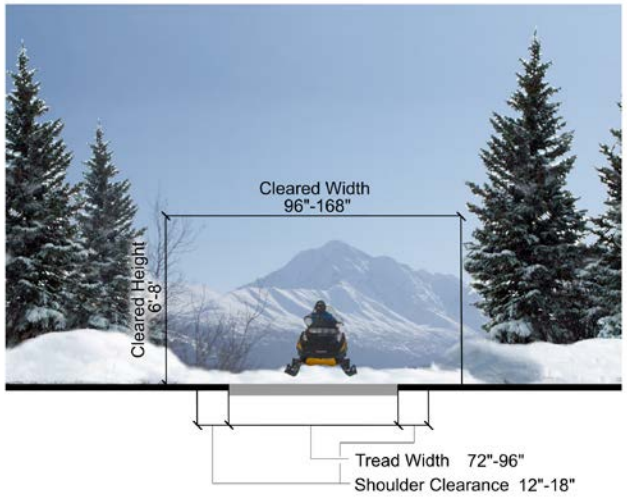


Class 4

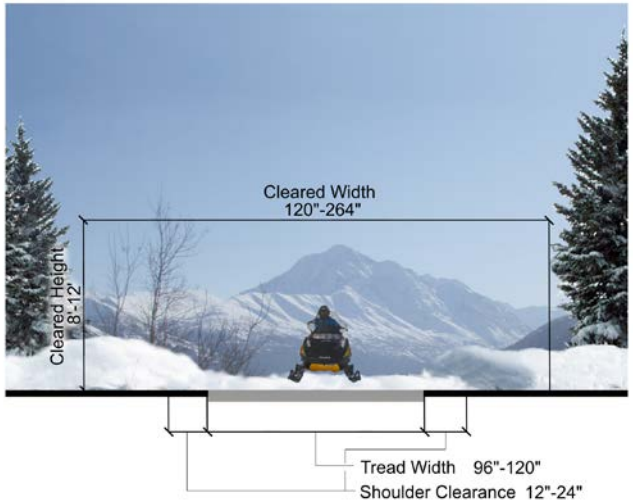
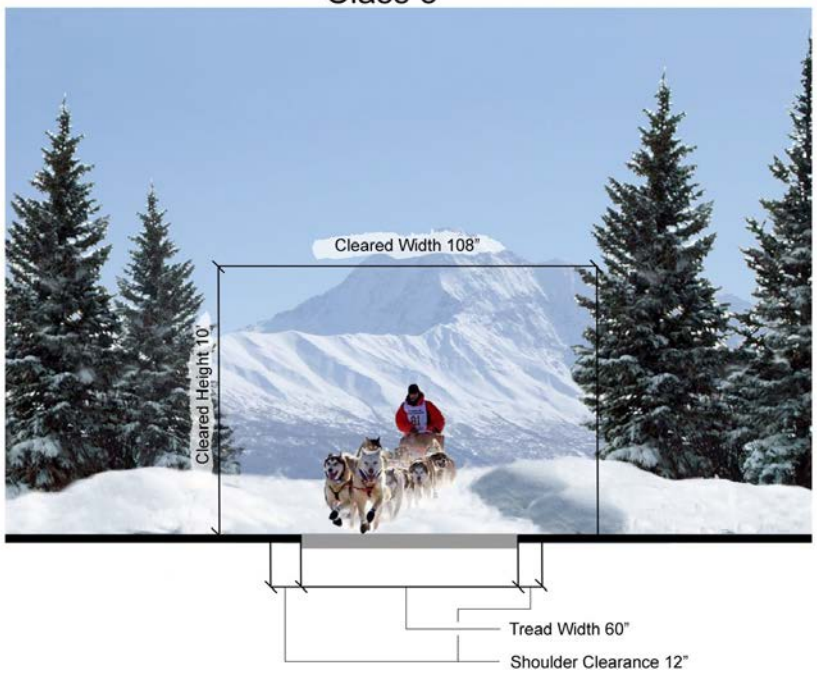


Table C - 11: Dog Sledding Design Parameters

Designed Use Dog Sledding		**Trail Class 1**	**Trail Class 2**	**Trail Class 3**	**Trail Class 4**	**Trail Class 5**
Design Tread Width		Typically not designed or actively managed for snowmobiles, although use may be allowed	Typically not designed or actively managed for snowmobiles, although use may be allowed	5' minimum (or width of grooming equipment).	8' – 10', but typically managed to accommodate two-way passage.	Typically not designed or actively managed for snowmobiles, although use may be allowed
Design Surface	**Type**			Groomed or compacted using implements and/or tracklayer/grooming equipment. May include wider pull-off sections.	Regular machine grooming for snow compaction and conditioning. Wider trail may allow teams to pass.	
	Obstacles (Max. Height) Caused by use, lack of grooming, melt, or surface/subsurface protrusions)			Generally smooth, dips, bumps, or ruts to 12" uncommon and widely spaced. Surface obstructions not present.	Consistently smooth. Small rolling bumps, dips, and rises. Surface obstructions not present.	
Design Grade	**Target Grade** (>90% of trail)			Up to 15%	Up to 10%	
	Short Pitch Maximum (up to 200' length)			20%	15%	
	Maximum Pitch Density			<5% of trail	<5% of trail	
Design Cross Slope	**Target Cross Slope**			<5%	<5%	
	Maximum Cross Slope			15%	10%	
Design Clearing	**Height** (Above normal maximum snow level)			>10' minimum or height of grooming machinery	10' minimum or height of grooming machinery	
	Width			9' minimum. <1' outside of groomed edge. Light vegetation may encroach into clearing area Understory vegetation and lower tree limbs will be cleared to a height of 6' at trail intersections or perpendicular corners to enhance sight distances at these locations.	15'-20' minimum. >2' outside of groomed edges. Understory vegetation and lower tree limbs will be cleared to a height of 6' at trail intersections or perpendicular corners to enhance provide 250' minimum sight distances at these locations.	
Design Turn	**Radius** (Use climbing turn versus switchbacks)			50' – 100'	100' minimum	

Class 3



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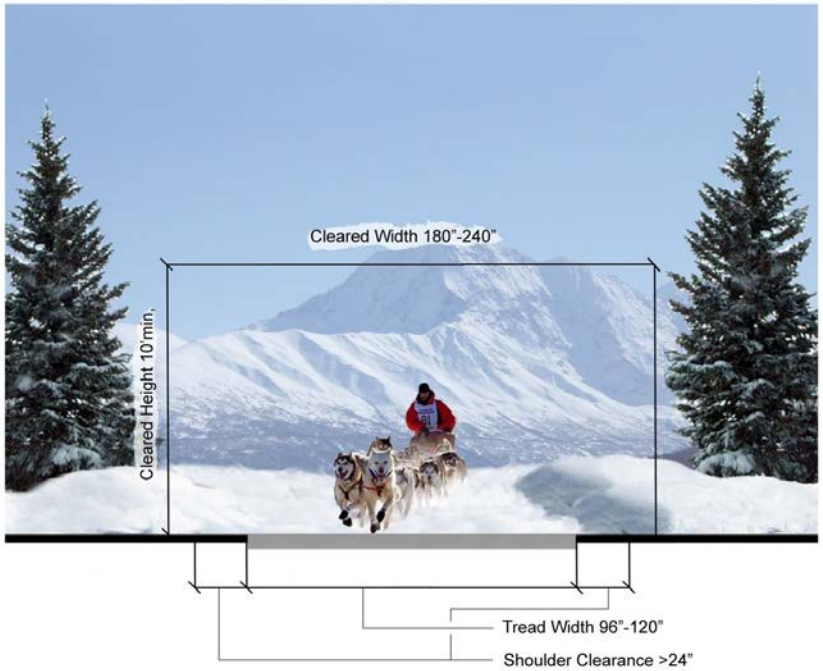
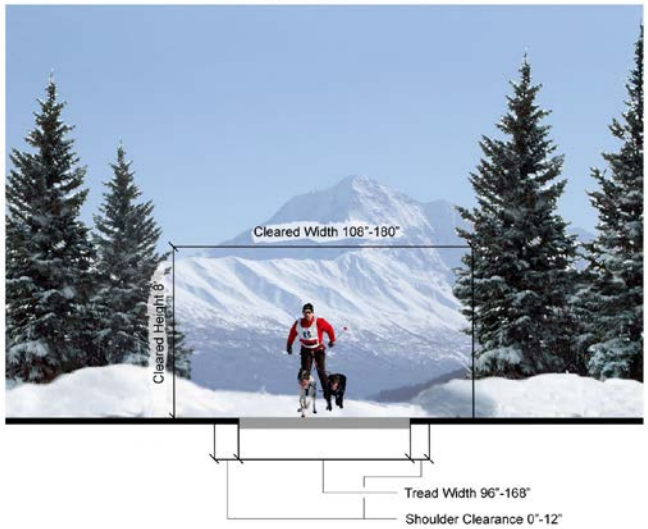


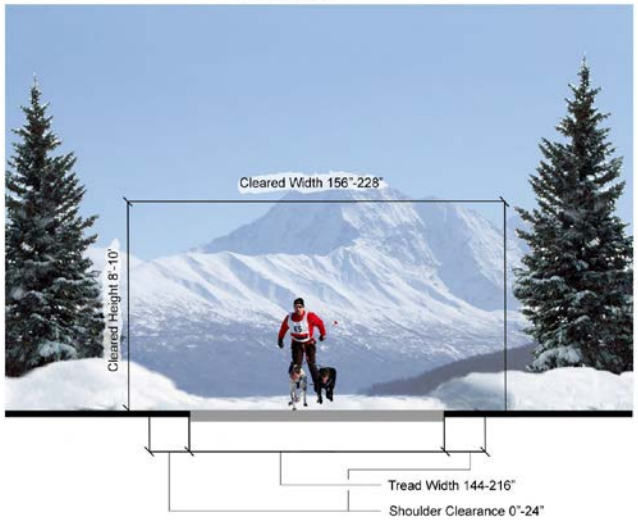
Table C - 12: Skijoring Design Parameters

Designed Use Skijoring		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Groomed Width		Typically not designed or actively managed for skate skiing, although use may be allowed	Typically not designed or actively managed for skate skiing, although use may be allowed	8' – 14' May be wider to accommodate width of grooming equipment.	12' -18' May be wider to accommodate width of grooming equipment.	16' -24'
Design Grooming and Surface	**Type**			May receive occasional machine grooming for snow compaction and track setting.	Smooth compaction using implements designed for creating skate lanes.	Smooth compaction using implements designed for creating skate lanes.
	Protrusions			No protrusions	No protrusions	No protrusions
	Obstacles (Maximum Height)			8" Uncommon (no obstacles if machine groomed)	No obstacles	No obstacles
Design Grade	**Target Grade**			<10%	<8%	6-8%
	Short Pitch Maximum			<20%	15%	12%
	Maximum Pitch Density			<10% of trail	<5% of trail	<5% of trail overall; up to 8% for short stretches (50' max.)
Design Cross Slope	**Target Cross Slope**			<5%	<5%	<5%
	Maximum Cross Slope (For up to 50')			15%	12% Minimum cross-slope (crowned or one side) should be 2% to promote drainage.	8% Minimum cross-slope (crowned or one side) should be 2% to promote drainage.
Design Clearing	**Height** (Above normal maximum snow level)			8' Or height of grooming equipment.	8' – 10' from top of anticipated snowpack or height of grooming equipment.	At least 10' from top of anticipated snowpack or height of grooming equipment.
	Width			>1' outside groomed edge.	Minimum of 1' outside groomed edge.	Minimum 2' outside groomed edge.
	Shoulder Clearance			0" - 12"	0" – 24"	0" – 24"
Design Turn	**Radius**			50' or the minimum needed to accommodate grooming equipment.	75' or the minimum needed to accommodate grooming equipment.	75' or the minimum needed to accommodate grooming equipment.

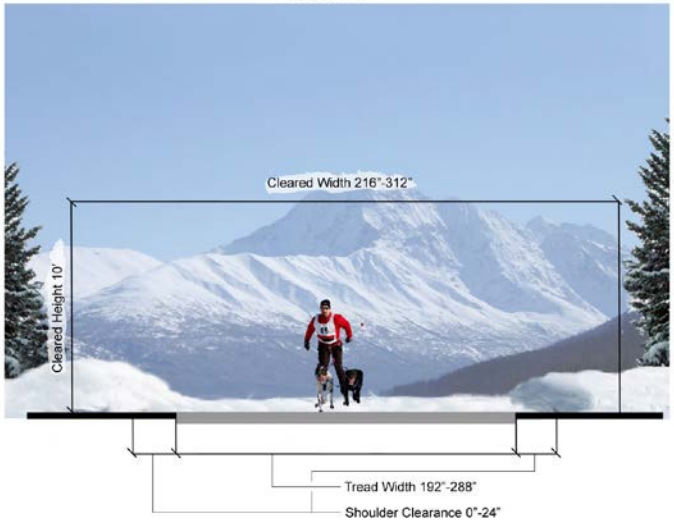
Class 3



Class 4



Class 5



Trail Recommendations

The following trail recommendations provide greater detail on the trails discussed in Chapter 7 of this plan. Trail recommendations are provided in a tabular format and are grouped by the type of trail – terra, water, and snow. The tables identify the *reference number;* the plan *map reference*; the *trail* name (if existing); the *designed use*, the *managed uses*; the *trail class*; and, any *design considerations* known at the time of development of this plan. The reference number corresponds to the number used in the unit specific recommendations in Chapter 7 and similarly, the map references the appropriate map in that same chapter.

Terra Trails

Ref. No.	Map Ref.	Trail	Designed Use	Managed Use	Trail Class	Design Considerations
13	Map 8, Page 7-13	New unnamed looped multi-use trails in southern area of NLSRA	Bicycle	Biking/Hiking	Class 3	Trail design should accommodate a broad range of biking and hiking abilities.
14	Map 8, Page 7-13	New unnamed access trails that access public use cabins and camping facilities	Bicycle	Biking/Hiking	Class 2 or Class 3	Because use of the access trails will be less than that of the main trails, these trails may be developed as a lower class trail.
15	Map 8, Page 7-13	Red Shirt Lake Summer Trail	Bicycle	Biking/Hiking	Class 3 and Class 4	The portion of this trail from the South Rolly Lake Campground to the area north and west of Arc Lake should be developed as a Class 4 trail. It is anticipated this portion of the trail will receive elevated levels of use as part of the new looped biking and hiking trails to the east. The remaining portion of this trail should be developed as a Class 3 trail. All segments of this trail should be designed to have good sight distances while reducing speeds of bicycles.

Ref. No.	Map Ref.	Trail	Designed Use	Managed Use	Trail Class	Design Considerations
16	Map 8, Page 7-13	Butterfly Lake Trail	ORV	ORV/Biking/ Hiking	Class 2	The width of this trail should be the minimum necessary to accommodate use of Off-Road Vehicles. Note: Only portions of this trail on state owned land will be upgraded by DPOR. DPOR will not expend funds on the development of a sustainable trail unless use by the public is secured though acquisition of a permanent easement. ~~No state funds will be expended on upgrading this trail if the public recreational easement is removed from the Anchorage Church of Christ property. If the easement is removed, the trail may be closed to pubic use or removed and the tread restored to a natural state. The width of this trail should be the minimum necessary to accommodate use of Off-Road Vehicles.~~
17	Map 8, Page 7-13	Chicken Lake Cross-Park Trail	Bicycle	Biking/Hiking	Class 4	Because this trail is anticipated to have moderate to high levels of biking and hiking, all segments of this trail should be designed to have good sight distances while reducing speeds of bicycles.
18	Map 8, Page 7-13	East Red Shirt Lake Trail	Bicycle	Biking/Hiking	Class 3 and Class 4	The segment of this trail that originates from the Parkway to the intersection of the new trail east of Chicken Lake should be developed a s Class 4 trail in anticipation of moderate to high levels of biking and hiking use. The remaining segment should be developed as a Class 3 trail. All segments of this trail should be designed to have good sight distances while reducing speeds of bicycles.
24	Map 9, Page 7-23	New unnamed looped trails in the area south of South Rolly Lake	Bicycle	ADA Accessibility/ Biking/Hiking	Class 1, 2, 3, 4, and 5	These trails should be developed to provide a wide range of recreation opportunities. At least one of these trails should be developed as a Class 4 or 5 ADA accessible multi-use interpretive trail that connects to the East Red Shirt Lake Trail. The majority of new looped trails should accommodate bicycle and hiking use and shod be developed as Class 3 trails. Some trails, may be designed and managed as Class 1 or 2 single track bicycle trails, but these should not be the main trail type. Beginner to advanced riding abilities should be accommodated.

Ref. No.	Map Ref.	Trail	Designed Use	Managed Use	Trail Class	Design Considerations
26	Map 9, Page 7-23	New unnamed ADA accessible interpretive trail at the proposed interpretive and education center	Hiker/ Pedestrian	ADA Accessibility/ Hiking	Class 4 and Class 5	The main trail developed on the top of the bluff should be developed as a Class 5 trail. The Nancy Lake connection trail should be developed as a Class 4 trail. All segments of these trails should be developed as ADA accessible trails.
27	Map 9, Page 7-23	New unnamed ADA accessible interpretive and portage trail at the proposed group camp facility	Biking	ADA Accessibility/ Biking/Hiking	Class 5	This trail should accommodate wheelchair, bicycle, hiking, and canoe portage use.
29	Map 9, Page 7-23	New unnamed ADA accessible trail on the south side of the Nancy Lake Parkway	Biking	ADA Accessibility/ Biking/Hiking	Class 4 or Class 5	This trail should accommodate wheelchair, bicycle, and hiking use.
37	Map 10, Page 7-29	New unnamed ADA accessible terra trails that connect the campground and picnic area to the Nancy lake shoreline facilities	Biking	ADA Accessibility/ Hiking	Class 4 or Class 5	This trail should accommodate and hiking use in addition to wheelchair use.
41	Map 11, Page 7-35	New unnamed looped trails North of the winter parking area on the Nancy Lake Parkway	Equestrian	Equestrian/ Biking/Hiking	Class 2 and Class 3	These trails should only be developed in the upland area across the road (north) from the winter parking area in the eastern portion of the Northern Unit.

Water Trails

Ref. No.	Map Ref.	Trail	Designed Use	Managed Use	Trail Class	Design Considerations
11	Map 8, Page 7-13	Lynx Lake Loop Canoe Trail	Non-motorized Watercraft	Non-motorized Watercraft/ Kayak	Class 3	Should consider turn radius and slope for snowmobiles where snow trails overlie portage segments. Boat access sites on portages should be designed to minimize impacts to waterbody while not interfering with wintertime uses.

Ref. No.	Map Ref.	Trail	Designed Use	Managed Use	Trail Class	Design Considerations
42	Map 11, Page 7-35	Pioneer Loop Canoe Trail	Non-motorized Watercraft	Non-motorized Watercraft/ Kayak	Class 3	To maintain the more rustic and natural character of this water trail should be maintained tread width and clearing width should be minimal.

Snow Trails

Ref. No.	Map Ref.	Trail	Designed Use	Managed Use	Trail Class	Design Considerations
12	Map 8, Page 7-13	Existing unnamed trails on segments of the existing water trails.	Snowmobile	Snowmobile/ Dog Sledding	Class 2	Trail design should accommodate a broad range of motorized and non-motorized winter uses. To enhance safety of wintertime users, particular attention should be paid to sight distances at trail intersections or perpendicular corners.
25	Map 9, Page 7-23	New unnamed connection trail between the winter parking area and the Nancy Lake Parkway.	Dog Sledding	Dog Sledding	Class 4	Turn radius should accommodate use of large dog teams when designing this trail. To enhance safety of wintertime users, particular attention should be paid to sight distances at trail intersections or perpendicular corners.
28	Map 9, Page 7-23	New unnamed connection trail between the Nancy Lake Parkway and the North Rolly Lake motorized snow trail.	Dog Sledding	Dog Sledding	Class 4	Turn radius should accommodate use of large dog teams when designing this trail. To enhance safety of wintertime users, particular attention should be paid to sight distances at trail intersections or perpendicular corners.
40	Map 11, Page 7-35	Portions of the existing	Skijoring	Skijoring/ Nordic Skiing/ Classic cross-country Skiing/ Fat Tire Bike	Class 3	Outer loop should be designed as a Class 3 Skijoring trail. Inner, or connecting, trails should be developed as Class 3 Skijoring trails, but the width of these trails should be kept to a minimum.