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*NANCY LAKE*

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**SAM L. HUDDLESTON & ASSOCIATES**  
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March 20th, 1967

Mr. Phil R. Holdsworth, Commissioner  
Alaska Department of Natural Resources  
State Capital  
Juneau, Alaska

Dear Commissioner Holdsworth:

We are most pleased to transmit herewith the final edition of the Master Plan for the Nancy Lake State Recreation Area.

This exhaustive study includes an analysis of outdoor recreation needs and desires of the Anchorage and Matanuska-Susitna Boroughs to 1980 and the methodology to be employed to fulfill this recreation demand consistent with effective use of the land of the Recreation Area.

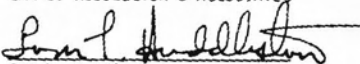
In our opinion, the vision and resourcefulness of the State of Alaska has set the standard for state park planning for the nation. It has been a distinct pleasure to work with the Division of Lands on this project. The enthusiastic cooperation of the Division has helped to make this a most pleasant task.

As has been stated numerous times in various ways, the creation of a Master Plan is only as effective as the ability to follow it through to completion. Now that the trail has been broken and the groundwork laid, the implementation of the proposals recommended herein are of the utmost importance. We are confident that this report will be translated into a plan of action immediately.

Citizens of Alaska should indeed be proud that they live in a state which looks with unblurred vision to tomorrow.

Respectfully submitted,

SAM L. HUDDLESTON & ASSOCIATES

  
Sam L. Huddleston  
Consultant

Hud/jch

The following, constituting a "Planning Advisory Committee," were most helpful in formulation of the Nancy Lake State Recreation Area Plan --

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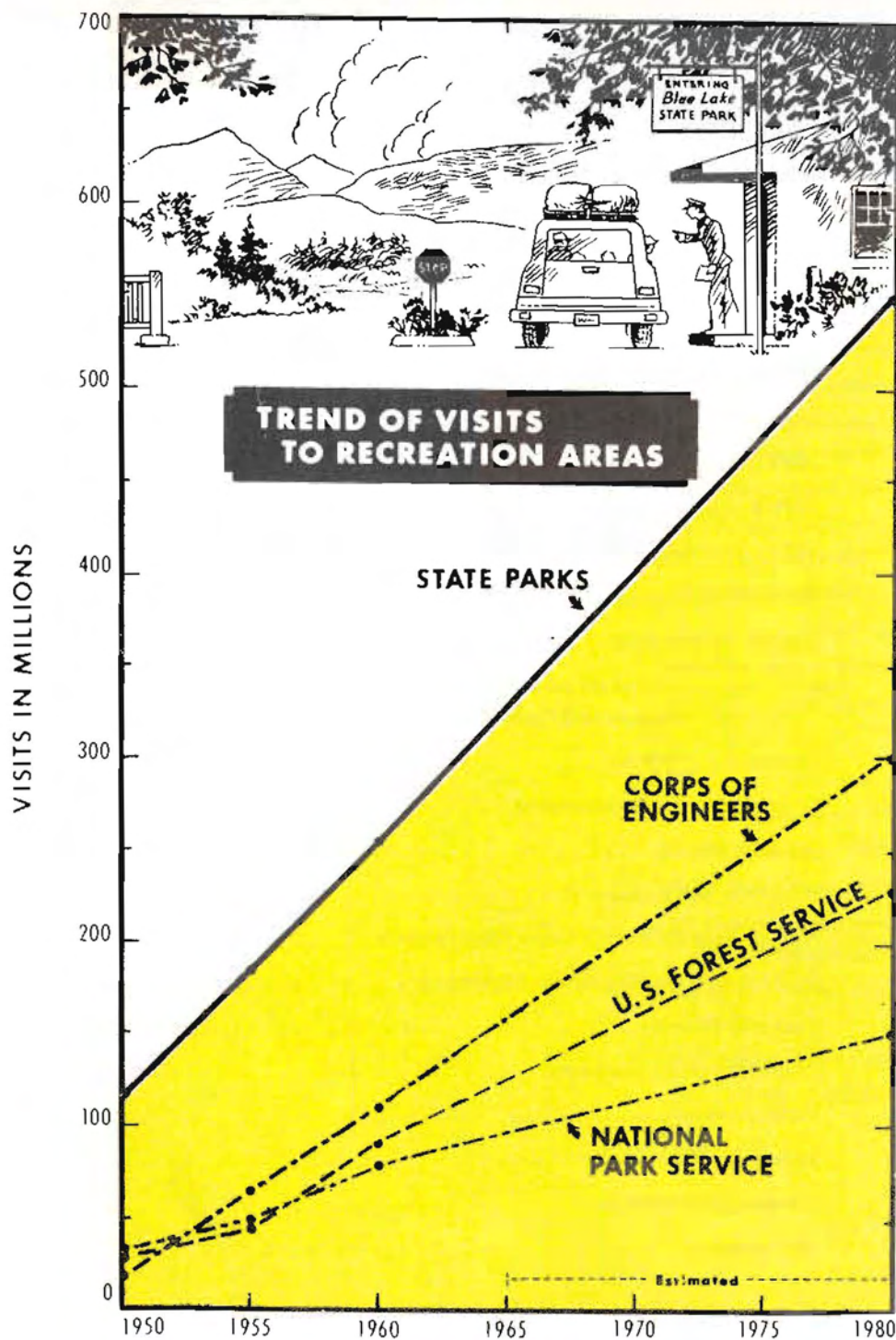
Dale Tubbs - Area Forester -- Alaska Division of Lands

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## HISTORICAL BACKGROUND

The rapidly increasing demand for recreation opportunities in urban areas led Division of Lands personnel to examine State land holdings in the Anchorage Service Area for the possibility of developing a multi-activity family recreation area.

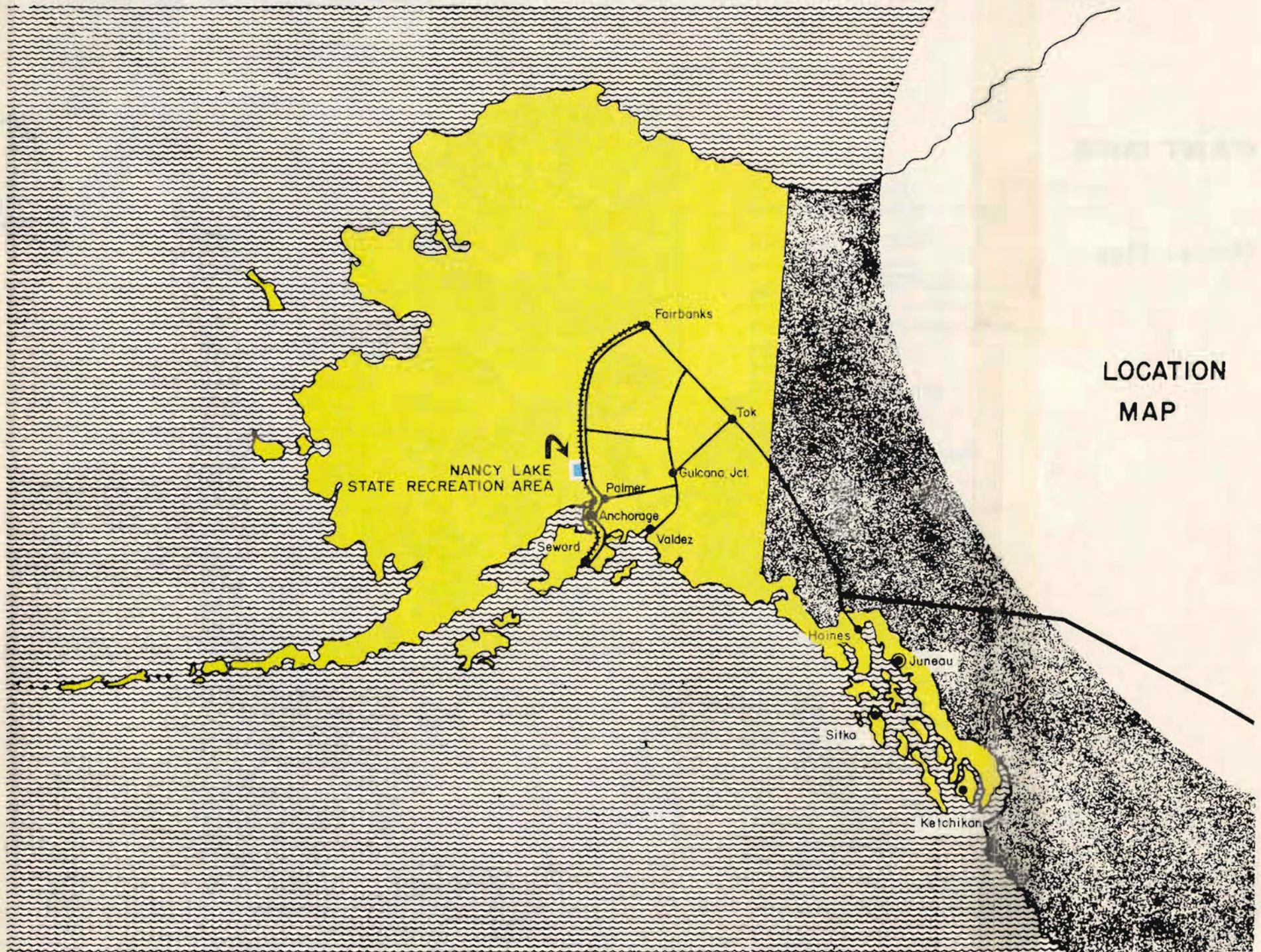
Such an area would be water-oriented and should provide a variety of active recreation opportunities. A year round family type development was indicated in an area large enough to provide many diversified activities-where there would be available quality outdoor recreation experiences for each member of the family during all seasons of the year.

The search rapidly centered on the Noncy Lake - Red Shirt Lake area. This lake area, being the least developed with private holdings and the last available land of its type in the Service Area, appeared to have the desirable elements needed. After considerable study some tentative boundaries were drawn, a possible development layout prepared, and the package was presented to the Matanuska - Susitna Borough for consideration. Their reaction was enthusiastic.

A bill was introduced in the legislature, and upon its passage, the State's first large recreation area became a reality.

Som L. Huddleston and Associates of Denver was retained to prepare a master development plan program and budget for this area. Their report is presented herewith.

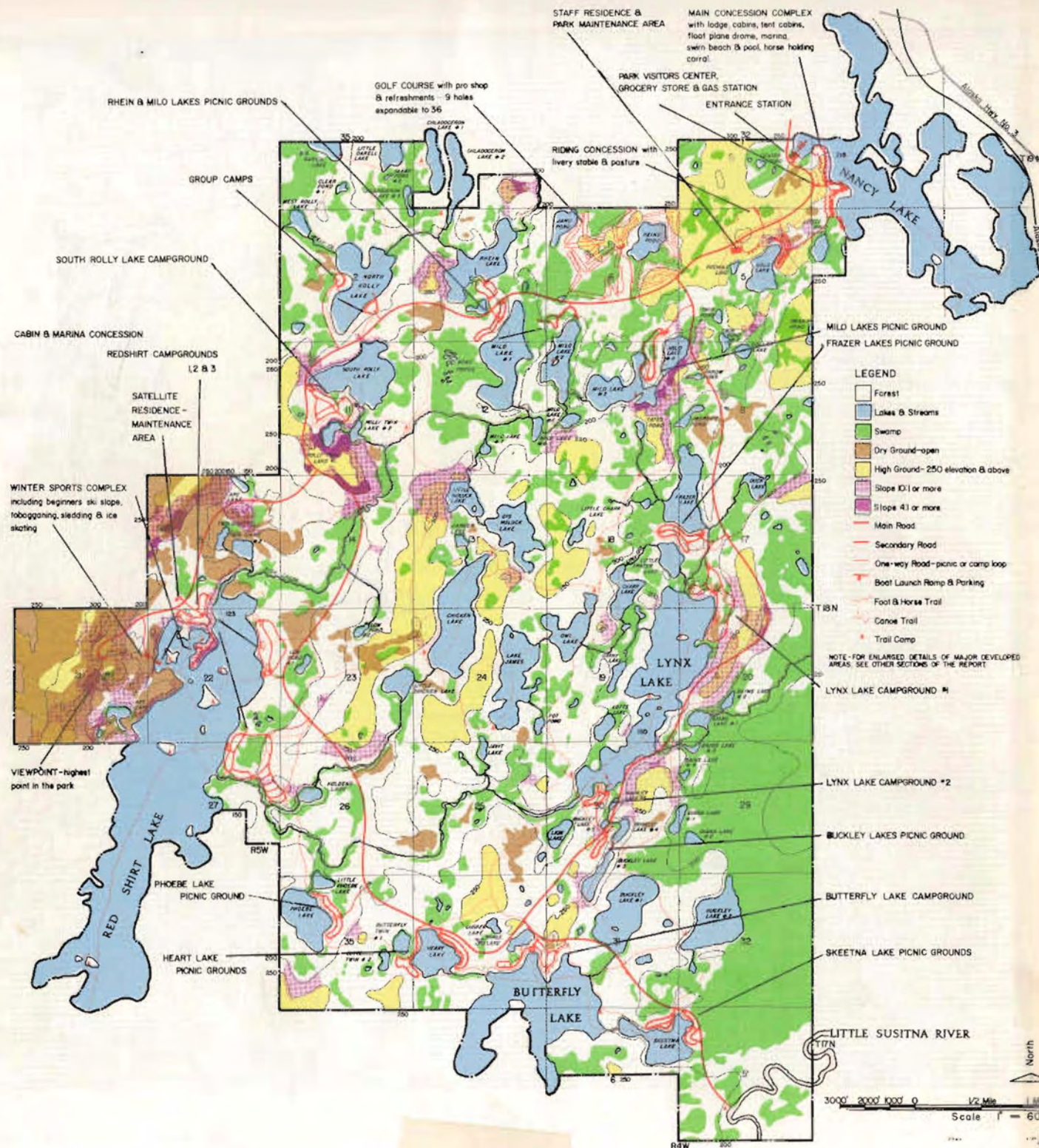






# PART ONE

## Master Plan



## Summary & Tabulation

### LAND\*

Gross area . . . . . 21,127 Acres  
 Water bodies not including streams . . . 24% -- 5,016  
 Wet land (swamp) . . . . . 20% -- 4,335  
 Hillside land too steep for development . . 6% -- 1,219

10,570

10,557 Net Useable Acres

Forested land. . . . . 10,576 Acres  
 Open, dry land. . . . . 1,200 Acres

### WATER

Number of water bodies. . . . . 131  
 Number 5 acres or less . . . . . 64  
 Gross area not including streams . . . . . 5,016 Acres

\*\* Fishery potential rated No. 1 -- 6 lakes . . . 2,254  
 Fishery potential rated No. 2 -- 6 lakes . . . 755  
 Fishery potential rated No. 3 -- 20 lakes . . . 902

3,911

Rated negligible as to fishery potential. . . . . 1,105  
 Streams -- 17 miles -- Little Susitna River (1 mile in park) and several other  
 streams rated No. 1 as to fishery potential. However most streams not assessed  
 as to potential.

### ROADS

Main Road. . . . . 16 miles  
 Red Shirt Complex-Viewpoint spur. . . . . 2.4 miles  
 Little Susitna River spur . . . . . 2.1 miles

20.5 miles

### TRAILS

Foot-horse (combined) . . . . . 25 miles  
 Canoe-maximum if all streams used. . . . . 17 miles

### CONCESSION FACILITIES

Lodge -- up to 160 units  
 Cabin areas -- 3 -- up to 140 units  
 Tent cabin area -- 1 -- up to 150 units  
 Riding concession with stable, corrals  
 Refreshment facilities  
 2 Marinas (in part)  
 Float Plane Drome (in part)  
 Grocery store  
 Gas Station  
 Winter Sports Complex (in part)

### CAMPGROUNDS

7 areas -- 1750 individual camp sites  
 Group camps -- 2 sites reserved

### PICNIC GROUNDS

7 areas -- 2900 individual picnic sites

### SPECIAL FACILITIES

Boat Launch Ramps and Parking -- 16  
 Canoe -- raft take-out -- Little Susitna River  
 Viewpoint  
 Golf Course  
 Trail camps -- number unlimited  
 Swim Beach  
 Winter Sports Complex  
 Marinas -- 2

### ADMINISTRATIVE, MAINTENANCE AND OPERATIONAL FACILITIES

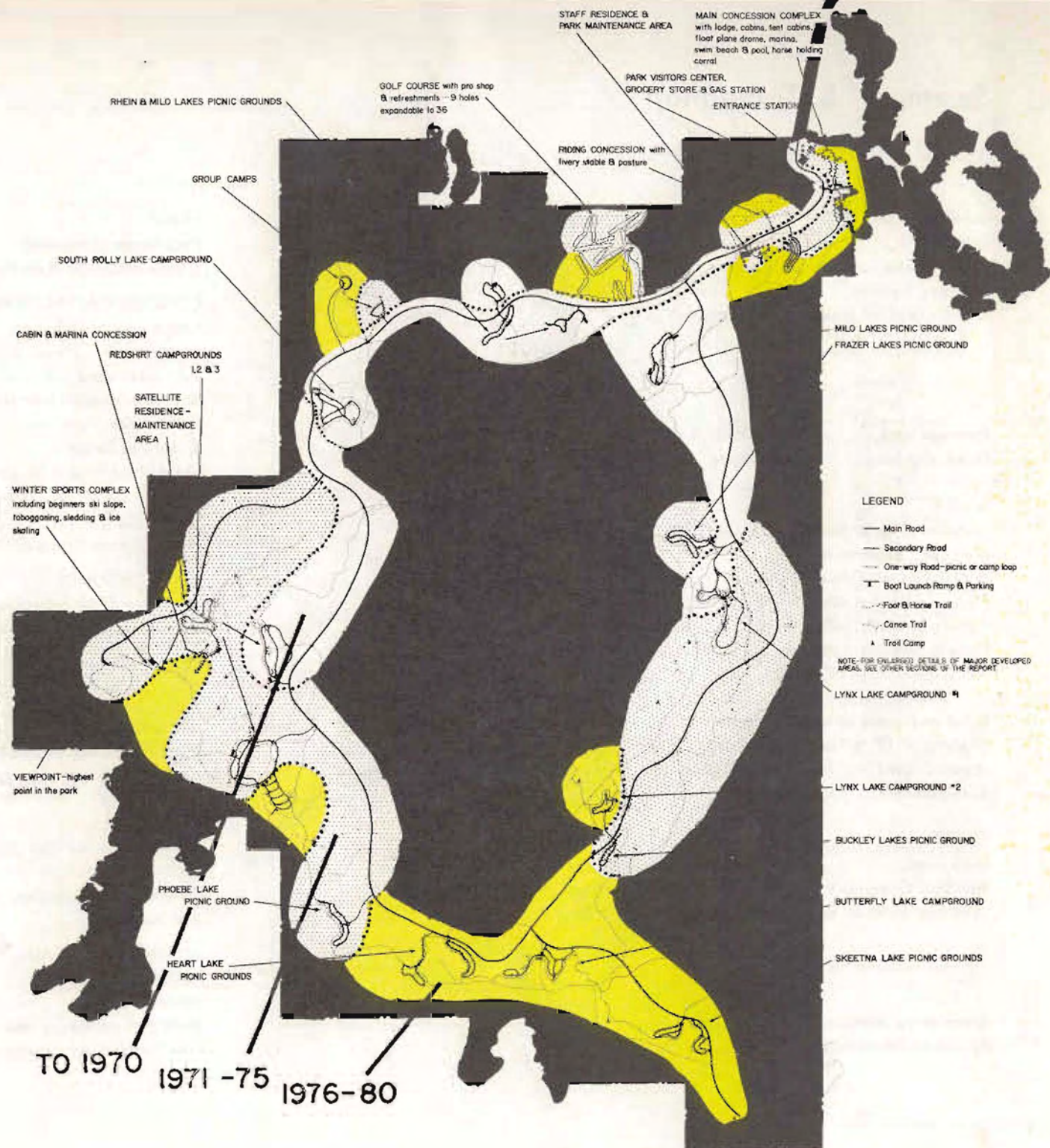
Entrance Station  
 Visitor's Center  
 Main staff residence and maintenance area  
 Satellite staff residence and maintenance area

\* Areas are planimetered, not calculated

\*\* By Alaska Department of Fish and Game



# Development Program



## Summary and Tabulation

Year	*Main Road (miles)	Cost	All Trail (miles)	Cost	Camp Ground (Units)	Cost	Picnic Ground (Units)	Cost	Other Facilities	Cost	Land Acquisition Total Cost	Annual Total	Five Year Totals (including annual construction cost increment)
1966 1967 1968	4.6	436,000	5.7	30,000	250	264,000	535	397,000	*1.4 miles main road access from Alaska Hwy. 3	163,000	26,000	1,316,000	
1969	2.4	238,000	5.7	30,000	240	249,000	200	168,000			16,000		
1970	2.0	194,000	5.7	30,000	155	195,000	285	241,000	1 staff residence and part of maintenance building	54,000		701,000	
1971 1975	7.0	659,000	11.4	60,000	555	577,000	980	722,000	225 units - lodge, cabins, tent cabins with restaurant and pool 50% each of 2 marinas Float plane drome and swim beach (50%) Riding concession, grocery store, 9 hole golf course, gas station and access roads for above facilities. Surfacing all roads constructed to date Entrance station, visitor's center, residence and maintenance building (in part) Group Camp - basic site development	1,758,000 47,000 27,000  511,000 767,000 139,000 21,000	291,000	714,000	2,752,000
1976 1980	4.4	407,000	11.4	60,000	550	553,000	900	644,000	Surfacing all roads constructed 1975-80 260 units - lodge, cabins, tent cabins 50% each of 2 marinas Float plane drome and swim beach (50%) Riding concession (50%) Golf Course - 9 holes Winter sports complex 3 staff residences, complete Maintenance Buildings Group Camp - basic site development	308,000 2,181,000 23,000 27,000 15,000 270,000 84,000 186,000 41,000	120,000		5,858,000
	20.5	1,934,000	40.0	210,000	1,750	1,838,000	2,900	2,172,000					5,411,000
*Includes Primary Electrical										6,622,000	453,000		

Grand Total 14,021,000

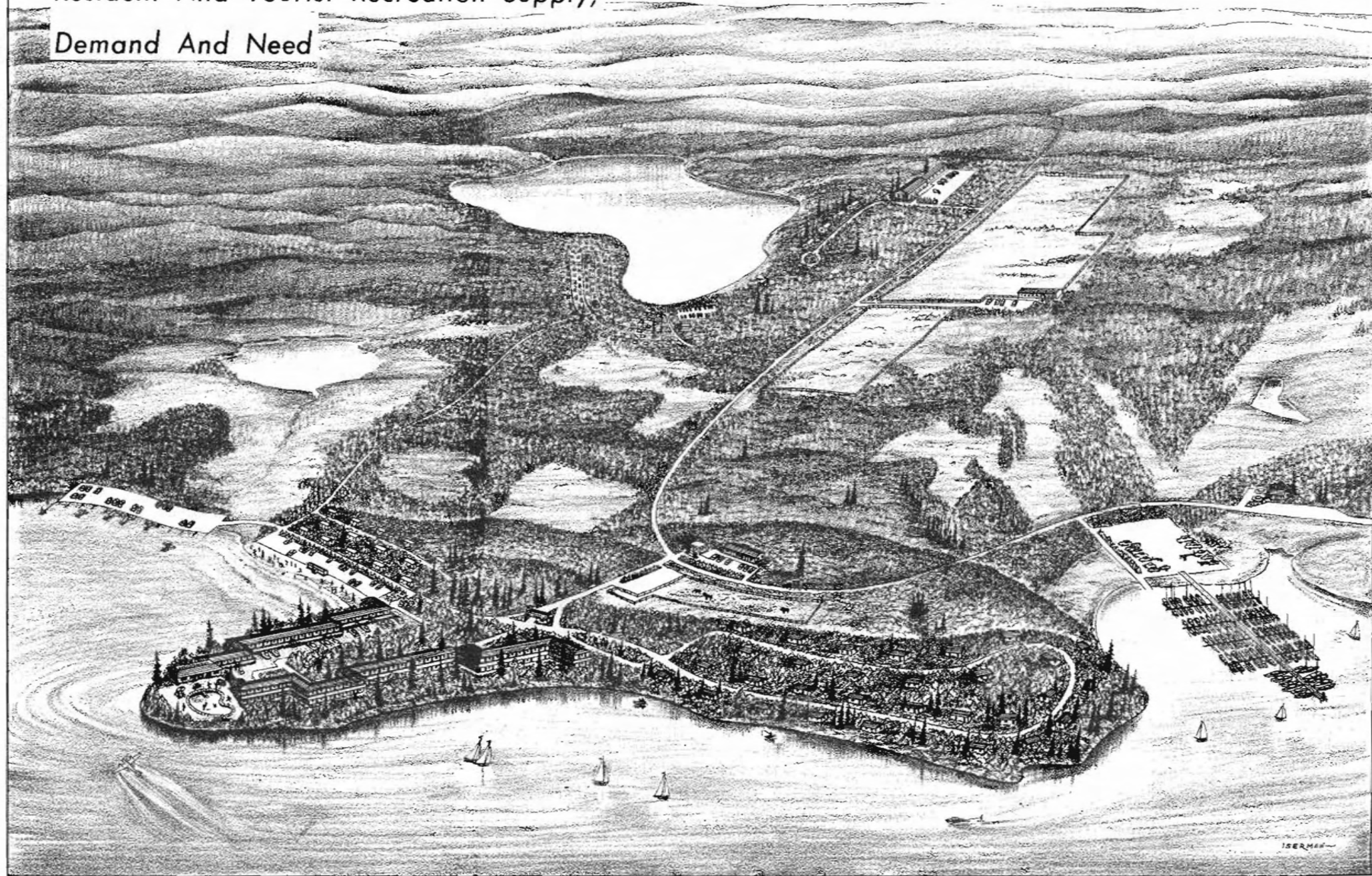


## PART TWO

### Analysis

Resident And Tourist Recreation Supply,

Demand And Need



NANCY LAKE STATE RECREATION AREA  
Artist's View into Park from Entrance Area



## INTRODUCTION

It is a paradox that in Alaska -- with its limited population and tremendous land area -- the outdoor recreation situation is critical. Despite the existence in the State of over 3 million fresh water lakes larger than 20 acres; 10,300 streams and rivers with a total length of 82,000 miles; and 57 million acres of salt water within the 3 mile limit\*, Alaska roads provide access to only 264 lakes, streams and salt water fisheries, all within one mile of a highway.\*\*

This example of the problem -- a problem completely of access -- applies not only to fishing. The same could be said of all water activities including the important ones of boating and swimming. It could be said also of hiking trails, camping, picnicking and so on. Nancy Lake in effect is access -- the opening up of a large, varied and sorely needed recreation opportunity.

## GENERAL

It is critical to the long range effectiveness of the Nancy Lake Master Plan that the number of users be estimated so that facilities in adequate quantity can be provided. In other words, that supply meet demand over the long term.

There is no alternative to reasonable projections of user numbers. Guesswork results in facilities that are inadequate and become overrun, often to the point where the attractiveness of an area is destroyed, a factor critical to the maintenance of good parks. If not overrun, then facilities may be overbuilt, a waste of the public purse.

Although still not an exact science by any means, it is now possible to reasonably anticipate the facilities that are needed in a particular park to meet the needs of a growing population.

Such an estimate must be based, first, on the **total population** that can be expected to use the area at some specific future time and, secondly, on the **extent** to which those particular people engage in the different recreation activities. This estimate for the Nancy Lake Area is limited in time to 1980 for two reasons. First it has been shown to be unrealistic to attempt to project beyond 20 years. Second, most of the basic planning studies on population and socio-economic conditions on which a specific plan such as this must depend for basic data, project only to 1980.

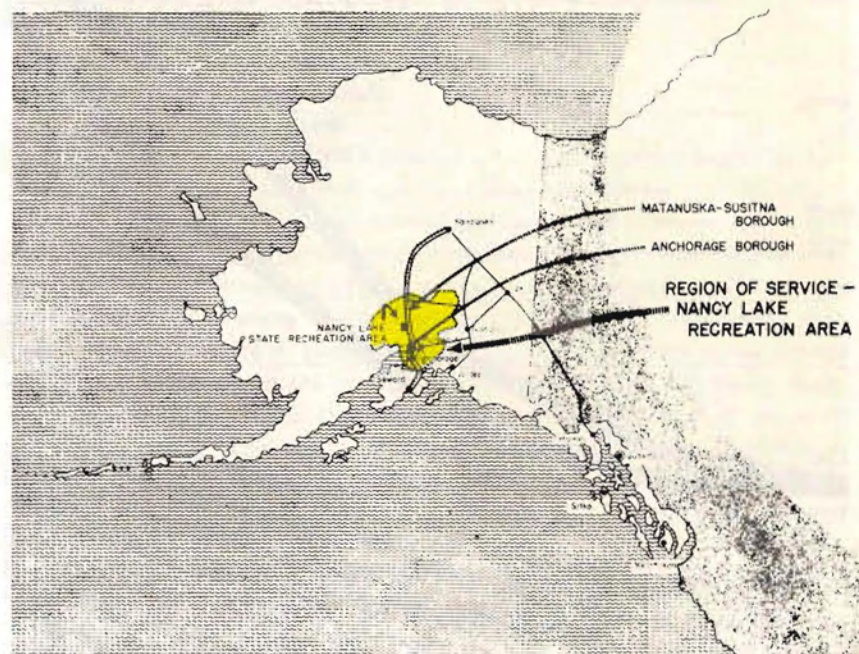
## DEMAND AND NEED -- RESIDENT POPULATION

All of Alaska's people will not use Nancy Lake -- only the segment to which it is most convenient. What is this segment? Obviously the Anchorage Metropoli-

tan Area since it will be only 66 road miles distant -- close enough for a pleasant drive and Sunday picnic. Obviously, also, all of the Matanuska-Susitna Borough which will be even closer -- only 28 miles from Palmer for instance. We cannot anticipate significant use by any other major population segments. Seward is 195 miles away and the other Kenai Peninsula towns even further. Another reason people from the Kenai part of the State will not make much use of Nancy Lake is that they have many equivalent facilities in Chugach National Forest and the Kenai Moose Range, both closer to home. North, Fairbanks will be almost 300 miles distant via Alaska 3, the new (under construction) Fairbanks-Anchorage highway.

Even though there will be some use by residents outside the Anchorage area, this will be balanced off by Anchorage people visiting other parts of the State.

Illustrated on the map following, this user area -- the Anchorage and Matanuska-Susitna Boroughs is designated as the **Region of Service** of Nancy Lake. These two boroughs coincide with election districts 8 and 10 and also with census districts, enabling use of official population tabulations.



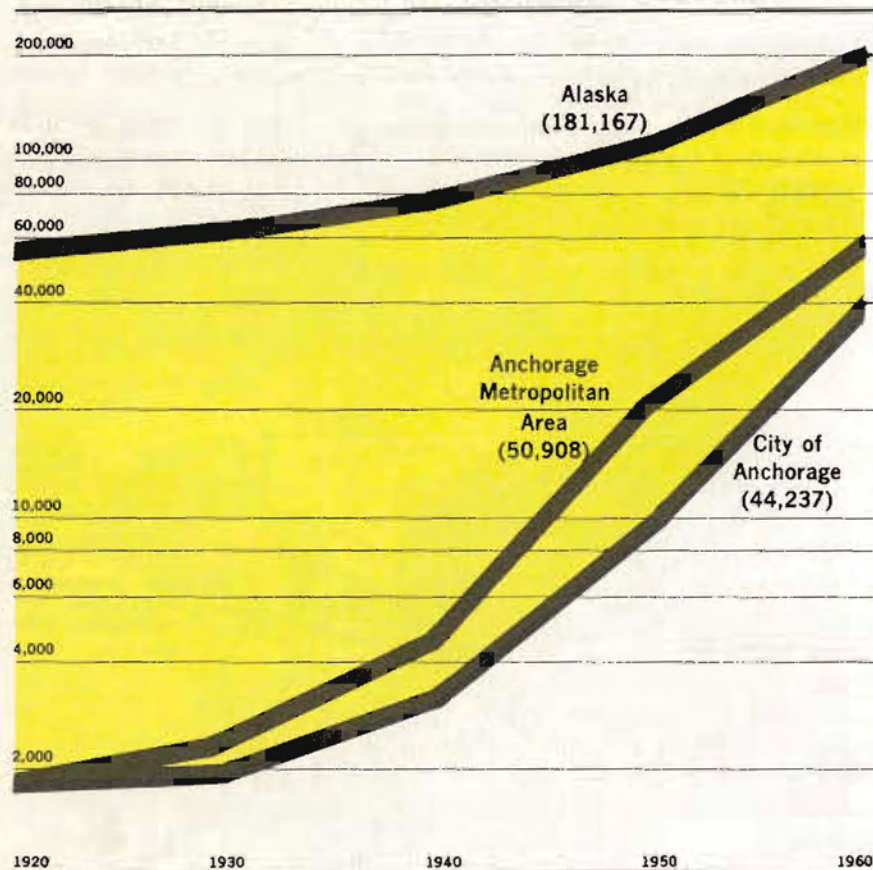
To estimate population of the Region of Service of Nancy Lake in 1980, various projections were examined, not only for the Anchorage area but also for the state as a whole, the latter being used as a rough check on the Anchorage figures. 1980 projections for the Anchorage Metro Area range all the way from

\* U.S. Dept. of Interior: Rampart Project, Alaska, Jan. 1965, Vol. 1, page 180

\*\*Alaska Dept. of Fish and Game: Report to Alaska Outdoor Recreation Council, Nov. 1, 1964, page 11



## CIVILIAN POPULATION GROWTH 1920-1960



112,500 to 400,000. For the Alaska Housing Authority in the report "Land Utilization and Marketability Study" -- Downtown Urban Renewal Project, the consultants, Real Estate Research Corporation, estimated 1980 Anchorage Metro Area population in a range from 180,000 to 195,000.

Comparing this against state projections, specifically the 46% of state population projected to live in Anchorage Metro in 1980, we find ranges from 323,000 to 605,400 including \*ORRRC - 404,500; U.S. Census Bureau - 323,000 to 371,000 and Rogers and Cooley - 373,500 to 407,700. The ORRRC projection was selected as a reasonable estimate for state population as it lies between the extremes of the ranges. 46% of the ORRRC - 404,500 results in an equivalent for Anchorage Metro of 186,000. Feeling this is conservative, the higher figure of 195,000 was orbitrorily selected as the base popouion of Anchorage Metro for purposes of the Nancy Lake demand analysis.

Added to this number was the population of the Motanuska-Susitna Borough - 5,188 in 1960, growing at the statewide average of 2.5% per onnum to a total of 8,500 in 1980. Added also was the projected 1980 traveller population. See Tourism, Need and Demand page 13. Finally, because the recreation porticipation rotes of ORRRC do not count children 12 or under (on the basis they are part of the family group and tag along, not being copable of independent oction in the sense of selecting activities), they were deducted from the total. The result of these computations is a population of 221,500 persons over 12 years of age who will constitute the 1980 Nancy Lake user population.

## SOCIO-ECONOMIC CHARACTERISTICS

However, the simple total number of prospective users that may exist in 1980 is not enough. That total must be tempered by the socio-economic character of the particular population segment **because such characteristics determine how much of what kinds of recreation the individual will participate in.**

**Age**, for instance, is a key characteristic. Obviously, the 70 year old is not likely to water ski.

**Income** is an even greater determinant than age -- the man who cannot afford a boat will not engage in boating.

**Education** influences choice of recreational pursuits and is closely related to income. Generally, high income and educational levels generate more outdoor recreation. The influence of education appears to be greater in activities like swimming, game playing, sightseeing, walking and driving for pleasure. It is less for some activities like fishing, hunting and camping.

**Occupation.** There is an overlopping here because occupation reflects income and education. As might be supposed, professional people with greater income, longer weekends, longer vacations, more freedom from regulation, etc. enjoy

\*Outdoor Resources Recreation Review Commission

the most leisure time for recreation while farm workers, with low pay and long hours enjoy the least.

While income, age, education and occupation are the only factors analyzed in detail for Nancy Lake, other factors deserve passing mention.

**Families with Children** are significant since outdoor activities are increasingly family activities. This is particularly true of recreational type parks like Nancy Lake where there is a wide range of activities and family members can find something of interest to all, or to the individual -- mother swimming, father fishing, children horseback riding, etc.

**Sex** is a factor because men participate in certain sports like hunting, fishing or touch football more than women. But the sexes are about equal in swimming, driving for pleasure, picnicking, camping -- again because these are **family activities** particularly in an area like Nancy Lake. Thus while sex is a population characteristic it is not felt to be important in either motivation or opportunity for outdoor recreation generally. Fifty years ago it would have been given great weight in any analysis.

**Place of Origin** is a factor because choice of recreation activity is partly habit. Also, it is often a matter of skill that, once developed, is not easily discarded to learn something new. However, because Alaskans cannot be easily tagged as to place of origin, unless perhaps the majority are from the northern mid-west, this is not considered an important factor in the Nancy Lake analysis. To be relatively accurate, participation rates would have to be determined by a careful survey of the Region of Service population. But even this would be somewhat misleading because the **opportunity** to participate to the extent desired may not at present exist. The lack of opportunity is in fact a large part of the basis for creation of the Nancy Lake Recreation Area, not only for present residents but also for those of 1980 and the years beyond.

Lacking such detailed data, participation rates developed by ORRRC for the north-central region of the U.S. have been utilized despite the fact that in the ORRRC report Alaska was included in the western region -- all of the U.S. west of the Missouri River. Except for the north Pacific coast this is arid and/or desert country of few streams or water bodies, meager forest cover and a range of climate from extreme cold to semi-tropical.

The north-central region was chosen because of its similarity in climate and land character to the Nancy Lake Region of Service -- a relatively short summer season and heavily wooded, rolling terrain with many lakes and streams. With these similarities, **opportunity** for recreation pursuits tends to become equivalent.

However the north-central participation rates **have not been used as directly applicable to the people of the Nancy Lake Region of Service**. Rather, all the key socio-economic determinants -- age, income, years of education and occupation Index were carefully researched and adjusted so as to relate as closely as possible to the Nancy Lake Region of Service.

Family income, for instance, averaging \$7,305.00 statewide, was adjusted to \$8,873.00 for the Anchorage Metropolitan area, on the basis of statistics in the Land Use and Marketability Study, Downtown Urban Renewal Project, Anchorage. This amount, to get a factor equivalent to the north central states, was then reduced by 25%, (the differential in the cost of living index between Anchorage and Seattle). Age was adjusted to the low 26 (white only) statewide average of 29. Since natives constitute only 10% of the population of south-central Alaska and would constitute a still lesser percentage of park users because of low income and education levels, no separate calculation was made to adjust to this segment of the population.

Years of Education Completed -- in Alaska -- nationally high at 12.1 years for all those over 25 was adjusted upward to 13 years (1 year college) on the basis of the higher level of educational attainment for the south central Alaska region shown in the report, Alaska's Population and Economy, Rogers and Cooley, 1962. Though this was a judgment increase of about eight tenths of a year, it was deemed justified because of the increasing concentration in Anchorage of technical, professional and white collar workers.

The Occupation Index was adjusted directly through U.S. census data to the Anchorage Borough. Similar data did not exist for Matanuska-Susitna so no adjustment could be made, a matter of small consequence because of the relatively small number of people involved.

## EQUIVALENT FACILITIES

After the gross 1980 need for the Anchorage-Matanuska-Susitna Region of Service was derived, there remained one more major adjustment to make. There are many public agencies - state, federal and local - and some private entrepreneurs providing recreation facilities in Alaska. These facilities may or may not be equivalent to those planned for Nancy Lake but personal preference or even just a change of scene dictates that we consider all of them equal even though major differences in **quality** may exist. One of the major complaints of campers, for instance, was the lack of a potable water supply at many campgrounds. Others complained of the lack of swimming facilities or of places to play games. Nancy Lake will be of such size that amenities not justifiable at small roadside areas will be present. Probably, because of these amenities, and because a wider range of activities will be available, Nancy Lake will tend to attract many away from existing facilities.

Equivalent to those of Nancy Lake, as far as the people in the Region of Service are concerned, will be all of the **other** facilities within the Region **plus** certain weekend and vacation type facilities on the Kenai Peninsula. These add up to a rather impressive total as shown on the table on the next page.

For weekend or longer term use, both the Chugach National Forest and the Kenai National Moose Range hold attractions that will be directly competitive with Nancy Lake. As the table illustrates, both have or will have extensive camping, picnicking and hiking trail facilities while the Moose Range plans



large extension of its equestrian trail system. It also will have an impressive system of canoe trails. The programmed facilities of both these federal areas are scheduled for completion by 1980 or shortly thereafter.

The tabulation of all these equivalent facilities that will serve the Nancy Lake Region of Service enables us to subtract them from the estimates of total need in Nancy Lake itself. This factor, along with the others entering into the determination of actual facility needs are shown on the table on page 18.

EXISTING & PROGRAMMED EQUIVALENT FACILITIES

	Swimming	Picnicking	Fishing	Boating Not Canoeing	Ice Skating	Hiking and Nature Walks	Camping	Horseback Riding	Sledding Tobogganing	Water Skiing	Canoeing	Sailing	Lodges Cabins
ALASKA DIVISION OF LANDS Existing Programmed (except Nancy Lake)	1 Area	24 Units	Extensive	3 Ramps	1 Area	15 Miles (Appx)	278 Units			Extensive		Extensive	
MUNICIPAL Existing Programmed	1 Area	34 Units			6 Areas		30 Units		1 Area				
KENAI NAT'L. MOOSE RANGE Existing Programmed	1 Area	27 Units 44 Units	Extensive	5 Ramps		17 Miles	115 Units 246 Units	80 Miles		Extensive	80 Miles 180 Miles	Extensive	
CHUGACH NAT'L. FOREST Existing Programmed		52 Units	Extensive	2 Ramps		80 Miles	281 Units 429 Units			Extensive	1 Area	Extensive	
COMMERCIAL Existing Programmed			Extensive	10 Ramps (Approx.)			105 Units			Extensive		Extensive	300 Rooms (Approx.)
MILITARY Existing Programmed	2 Areas												
BUREAU OF LAND MANAGEMENT Existing Programmed		12 Units		1 Ramp	1 Area	NA	42 Units						

NA - Not Available

## GENERAL FACILITY ANALYSIS

The following includes not only those activities and facilities shown on the table on page 18 but also others that are pertinent but not analyzed due to lack of ORRRC participation rates.

### WATER ACTIVITIES

**Swimming** at Nancy Lake will be a sport for the young and the hardy. Tolerance to cold water seems to decrease in direct proportion to age. Actual extent or capacity of the beach should be very closely related to the swimming pools (undoubtedly heated) that will ultimately be constructed by the City of Anchorage. On the basis of standards adopted by the Anchorage Parks and Recreation Department, 16 swimming pools will be needed in the Region of Service to serve the 1980 resident and tourist populations. For adults, swimming is not generally an all day activity as it is for children. Swimming facilities, therefore, to provide the most public benefit, are best located in urban areas where they are easily accessible to children. Swimming at Nancy Lake should be looked on as an adjunct to other major, adult activity but perhaps as **the prime attraction to children in the company of adults.**

**Fishing**, with practically unlimited potential in Alaska is now distinctly restricted by lack of access to most waters. The situation near the population center of Anchorage is particularly critical. Nancy Lake will be of great benefit because it will make available about \*5,000 acres of lake and 17 miles of stream previously reached mostly by fly-in fishermen.

On behalf of the Nancy Lake Master Plan project, the Alaska Department of Fish and Game conducted a study in the Nancy Lake Area, classifying water bodies as primary, secondary and tertiary as to fishing potential. According to this survey there are 6 lakes of 2,254 acres classified primary; six lakes of 755 acres classified secondary – in effect a very good potential with a stocking and rehabilitation program; 20 lakes of 902 acres classified tertiary – marginal waters that may or may not be important to the fisherman. The report states further that "The balance of, and smaller lakes and ponds, are largely unsuited to cold water fisheries except on a seasonal basis. A certain number of these waters may support summer – only fisheries. The small, shallow ponds are important to production of waterfowl and are utilized by moose and furbearers." Classification of stream fishing potential was as follows, "There are three known stream fisheries: the Little Susitna River, Fish Creek and Rolly Creek. There are two additional streams that appear as capable sport fisheries, and they are Jorger Creek and Lynx Creek." These streams have a length of about 10 miles in the park.

Fishing, boating (of three types) and water skiing, though separated in the analysis, actually overlap and cannot be clearly defined. The analysis of fishing

is academic and made only to show a relationship of total need to water availability in the Nancy Lake Area, demonstrating that it falls far short of supplying the total need of the Region of Service. The need for streamside and lake fishing can only be satisfied by improved roads and trails to open up new resources. The Nancy Lake Plan takes maximum advantage of the fishing potential of the area. The main road loop reaches all four major lakes – Nancy, Red Shirt, Butterfly and Lynx. Boat launch ramps are provided on all these lakes with marinas on Nancy and Red Shirt. Launch ramps are provided at all primary and most secondary fishery lakes and all lakes of any quality are accessible either by road or trail. A spur road is planned to extend to the little Susitna River for a canoe-raft takeout point which would provide a float trip of some 12 miles starting at Houston on Alaska Highway 3. As extensive a canoe trail system as proves feasible on detailed field investigation is planned.

**Boating** analysis like fishing analysis is academic since the total need of the Nancy Lake Region of Service is much greater than can be supplied by even the 4200 \*effective lake acres of the Nancy Lake Area. And, like fishing, additional boating can be supplied only at other existing lakes or by new access to ones not now on roads. Canoeing, sailing and water skiing fall in the same category as boating (which is for the most part motor boating). Nevertheless provision is made in the Plan for these recreations to the extent of **capacity** of the park.



Fishing and Boating

\*See Summary - page 4 and Map - page 21

\*Water bodies 25 acres or larger in size



**Flying**, a very different feature of Nancy Lake - one that could occur only in Alaska - is provision of a float plane drome. The need for this facility is demonstrated by the statistic that one-third of the total U.S. registry of float planes is based on Lake Hood at Anchorage - some 200 planes - while half of the 1200 (1961) civil aircraft in Alaska were based on Lake Hood and Merrill Field (private). However, this is not an accurate total as many planes are based on other lakes in the vicinity and converted to floats and skis. Merrill Field in Anchorage has, according to the 1961 General Plan for Anchorage, an ultimate capacity of 650 to 800 light planes. This Plan states that eventually an additional field will be required. Mostly used for "flying" recreation, many people can be expected to fly to Nancy Lake, combining their flying fun with picnics or whatever may interest them at the area. The ratio of private aircraft to population in Anchorage in 1961 was 81.3 per 10,000, in Alaska 63.2 per 10,000. Land planes will be able to land 2-1/2 miles north of the park entrance road at the settlement of Willow where there is now a good strip. Such arrivals could easily be picked up by the concessionaire.

**Camping** is a major recreation activity in Alaska, partly because of the lack of cabins and lodges but also because it is an activity that puts one on the fishing stream, boating lake or hunting ground. Even though it is a recreation very closely related to all outdoor activities except those requiring a stay of a day or less, camping for itself alone, unrelated to other activities, is an important Alaska activity. The demand therefore for camping facilities is very strong as illustrated by the chart. Nancy Lake, by providing amenities not presently justified in the small campgrounds now existing along highways, in the National Forest or the Kenai Moose Range will be an ideal situation for family camping. These amenities, in addition to the usual table and fire-place, will consist of tap water, flush toilets, laundry facilities, showers, and sanitary disposal stations at central locations. Activities will not be limited, as in most of the other campgrounds, but will cover a wide range of activities of interest to all members of the family. Because so many campers are fishermen or vice versa, **campgrounds were given priority of location on prime fishing lakes.** Actually, picnic grounds and campgrounds require the same kind of terrain. The Nancy Lake Plan relegates the picnic grounds to the shores of lakes having a low fishery potential. See Plan and Description - Typical Campground, pages 41 and 42.

#### CAMPING DEMAND AND NEED -- TOURISTS

This section is concerned solely with demand for camping facilities by tourists. Once the tourist is at Nancy Lake, his activities will be indistinguishable from those of resident users. Consequently, the number of tourists at the park is added to resident numbers for facilities other than camping.

Determining the impact of non residents on the park requires careful differentiation among the tourists Alaska attracts. Various they arrive by airline, cruise ship, ferry or highway. Some are **vacationers**, some are **visitors**. Still



Campfire Singalong

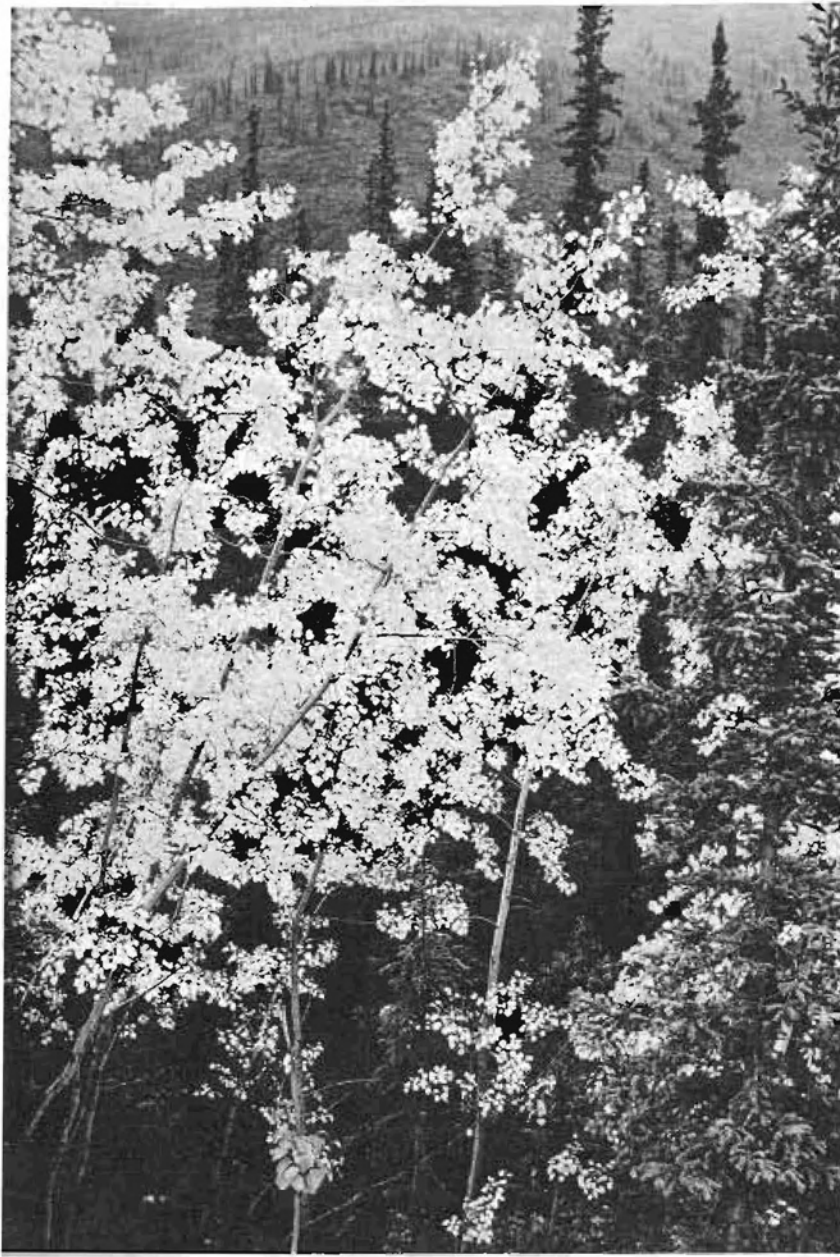
others are business travellers.

We can discount the impact the airline vacationer would have on Nancy Lake because he is ill prepared baggage-wise and in transportation for camping. Additionally, the low airline "size of party" at 1.9 persons indicates a vacationer not oriented toward the family activities of Nancy Lake. Similarly we can exclude cruise ship passengers since they are highly organized for conducted, group tours. Nor would the business traveler have noticeable impact on Nancy Lake.

Our concern is with the highway traveler, and with the ferry passenger who utilizes a car during his stay. Among these we must differentiate further between visitors and vacationers. In the context of this report, **a visitor is one who comes to Alaska to visit an Alaskan. The vacationer on the other hand comes to see Alaska.** Even though the visitor spends 30% of his time visiting his host and the other 70% in seeing something of Alaska he was not included in the user projection because of a very different situation on the travel pattern of Alaska residents as compared to citizens of the lower 48.

Because of Alaska's isolation and its large number of Federal employees who receive bonus leaves home, about as many Alaskans depart as there are visitors arriving. In fact outward bound Alaskans spend more time away from Alaska than visitors spend in the state.

Survey work accomplished by the Alaska Department of Economic Development and Planning in its "Traveler Profiles, 1963-64" points up some very interesting facts regarding the particular highway and ferry vacationers who can be expected to utilize Nancy Lake facilities:



Early Fall Color - Quaking Aspen

- . . . the average highway vacationer spent 9-1/2 days in Alaska out of 39 days away from home.
- . . . people who visited Alaska were ones who liked a traveling vacation with only a few days in each spot.
- . . . over 50% of all highway vacationers were prepared for almost continuous camping.
- . . . 50.8% of Alaska Highway travelers used public campgrounds in the Yukon enroute.
- . . . in 1964 there were 5,411 highway vacationer parties amounting to 17,344 people (3.2 persons per party).
- . . . in 1964 there were 1,718 ferry vacationer parties amounting to 6,509 people (2.6 persons per party).
- . . . of the ferry vacationers, 71.4% used a car as a supplemental method of travel.
- . . . 60% of all highway vacationer parties visited the Anchorage-Valdez area and 20% (probably a segment of the 60%) the Kenai Peninsula.
- . . . of Ferry vacationers 59% visited Anchorage-Valdez and 10% the Kenai Peninsula.

This data indicates that Nancy Lake will attract practically all the highway vacationers who camp and who visit the Anchorage-Seward-Kenai Peninsula area plus all the ferry vacationers who utilize a car in the same region of Alaska. This indicator is not based solely on the number of campers or Nancy Lake's location near Anchorage. For many of these people Nancy Lake will be a destination point, particularly when Alaska Highway 3 is completed between Anchorage and Fairbanks. Connecting the two major cities of the state and with Mt. McKinley National Park midway in between, Alaska Number 3 will also serve Nancy Lake.

Vacationers will of course camp at all other campgrounds. However, for the most part, these are of the roadside, overnight type. The attraction of Nancy Lake that will make it a destination point will be not only its extensive recreation facilities but, perhaps more important to the camper who has traveled all the way from Haines or the whole distance of the Alaska Highway, its shower and laundromat facilities and its store where he can provision up. For many campers it will serve as a convenient central location and base for exploration of all of south central Alaska.

Deriving the number of campers from the 1964 figures of "Traveler Profiles" shows that a demand for 54 campground units for vacationers existed in Nancy Lake in that year. This calculation is based not only on the data mentioned but also on the assumption that use of the park will amount to 75 days per sum-

mer season. The normal 90 day summer season is not applicable to vacationer activity in Alaska as it does not take into account his week of travel at both ends of his Alaska sojourn. The survey, "Alaska Campers, 1964" indicated that the average campground stay of users was two days. This figure, along with the other data, was used to estimate the number of camp units needed in the Nancy Lake area in 1980. It is emphasized that the two day stay is thought to be overly conservative for Nancy Lake campers. In comparison to the campgrounds covered by the 1964 camper survey, Nancy Lake will tend toward a longer stay for reasons previously mentioned. In fact the area will offer sufficient in size, activity and interest for an entire vacation.

The foregoing is the point of beginning for projecting the long range need for camping development of Nancy Lake. Basic to the projection are several projections of future tourists in Alaska. The University of Alaska in its report, "Tourism in Alaska, 1965-1967" states that a conservative estimate of tourists in 1975 would be 450,000 which would be increasing at 18% per annum. This would mean 1,030,000 by 1980. Also, this report states that the lowest 1975 number would be 200,000 if absolutely nothing is done to attract more tourists. This low range would grow to about 275,000 by 1980. The U.S. Department of Commerce has estimated that the number of tourists could reach 650,000 by 1980. The same report showed that Alaska had 75,000 tourists in 1965. Another estimate is that under the most favorable conditions tourism could be developed to a total of 850,000 by 1980.\*

**The Department of Commerce points out that 650,000 tourists would spend 230 million dollars, resulting in 14,000 new workers who would earn 87 million dollars which would serve as the base for an increase in population of 88,000 persons!**

The projections of 1980 tourist numbers and economic benefit are especially striking when compared to a \*\*1953 U.S. National Park Service study which showed that in the year June 1, 1952 to May 31, 1953, 22,500 visitors spent 7 million dollars in Alaska. This report also reveals other comparable factors (illustrated in the table following) that are useful for long range projections.

The important fact of the table, for purposes of this report, is the increase in the number of highway vacationers. The ferry, of course, did not exist at the time of the 1952 or 1960 surveys. The other differences certainly do not indicate that there will be appreciable departures in the future from **the two important tangibles - percent of total campers and the percent of those campers who can be expected to visit the Anchorage area in 1980.**

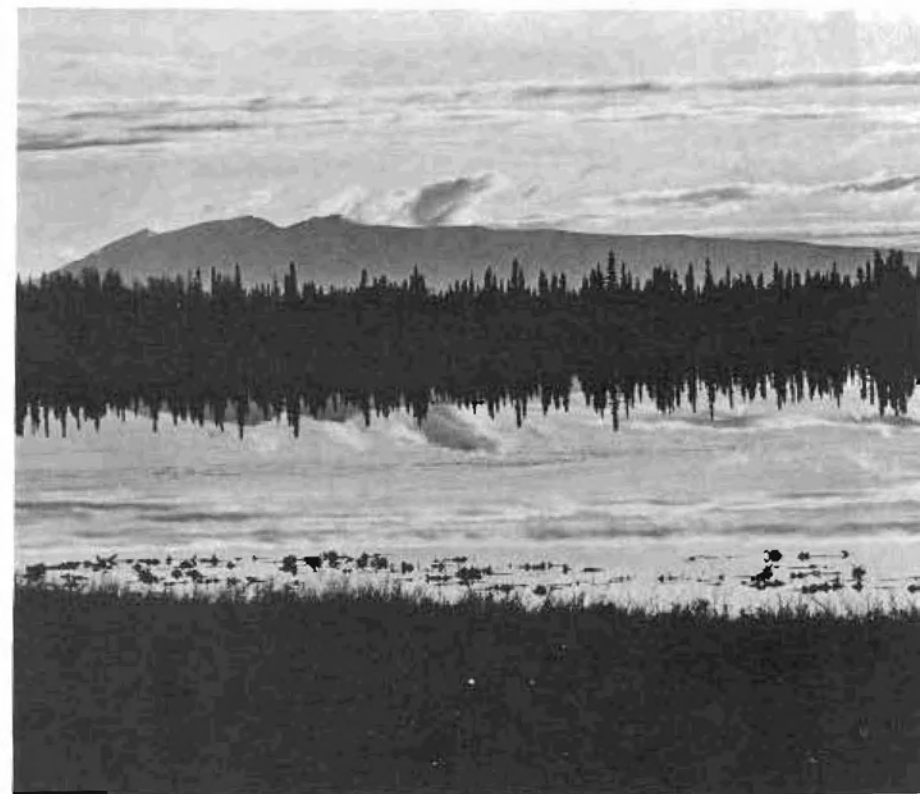
Applying the same formula to secure the number of 1980 Nancy Lake campers as was used to derive the 1964 need, against an overaged projected total of 1980 tourists, (700,000) we have a twenty fold increase in that time - to a to-

\*Transport Requirements for the Growth of Northwest North America - Vol. 2, Sec. V, pg 260.

\*\*Alaska Recreation Survey Vol. 2, pgs 114, 116.

tal of 1100 campsites. This is the **total** projected need of the Nancy Lake Region of Service for vacationers.

However, solely on the basis of judgement and for reasons noted on pages 13 and 14, this total is felt to be about 50% under the 1980 need. A certain madness seems to seize Alaskans at spring break-up and the self-imposed prescription for relief from the cabin fever of winter seems to be the outdoors and camping. Though participation rates for camping must be assumed, it is believed the rate is much higher in Alaska than elsewhere in the country. This situation applies of course only to residents. Other factors at work on both residents and travelers to increase camping is the great growth in leisure time and the increase in popularity of the activity, partly because of the ease of conducting it in the newer trailers, campers and turtlebacks. A further factor is the concentration of recreationists at Nancy Lake that is bound to occur as a result of completion of Alaska Highway 3. For these reasons the number of camp units to be provided in Nancy Lake for both residents and vacationers, was arbitrarily increased to a total 1750.



Nancy Lake Pond Reflects Mt. Susitna



# COMPARISONS - 1952 - 1963-64

	Time Spent in Alaska	Number of Highway Vacationers (Departures)	% Campers	Size of Party	% Visiting Anchorage	Complained Lack of Campsites	Desired Improved Campsites (Includes trailers)
1952	11 days	5,493	55%	2.6	52%	18.4%	26.7%
*1960	13.5 days	N.A.	56.7%	N.A.	80.7%	N.A.	54.3%
1963-64	9-1/2 days	17,344	50%	3.2	60%	N.A.	8%

\*From the **University of Alaska report**, "Tourist Industry in Alaska (1960)" which also makes the following general comments regarding the camping vacationer.

- . . . Campsites and good camping facilities are necessary for increasing the number of highway visitors.
- . . . The United States is becoming more camper minded and Alaska must meet the demand of the camper visitor.
- . . . The state should develop natural recreational areas for campsites and provide camper facilities.
- . . . The importance of campsites is shown by the high percentage that are using the present facilities.

## Group Camps

Facilities for group or organized camps in the Region of Service presently consist of a 40 acre area at Russian Jack Springs Park, City of Anchorage, used by the Girl Scouts, Kings Lake Camp, an area of 260 acres at Wasilla which is used by the Girl and Boy Scouts, YMCA, 4H and various churches. This is a highly organized operation with permanent buildings, a recreation hall, directors' residence and an area for water sports.

Undoubtedly, as time goes on, additional group camp facilities will be needed. Since Nancy Lake will serve ideally for this purpose, two locations have been set aside. See Detail Plan of Group Camps, and description, pages 37 and 38.

**Picnicking**, either a short or long term activity, can suitably be provided in either urban areas or in large, natural parks such as Nancy Lake. Distance is the major factor determining use and the outlying area would receive primarily the all day visitor. His picnic would be associated with any of the other activities that Nancy Lake will provide, but these would be secondary to the picnic itself. Very extensive picnic facilities are indicated in the Nancy Lake Region of Service largely because there is at present a distinct lack of the particular facility. Believing this deficiency will be corrected, especially with more close-in, short term facilities, despite the fact that no specific programs could be shown, Nancy Lake will not attempt to provide for the full shortage that is indicated for 1980. Rather the total demand has been reduced from 3500 to 2900. It is believed this number will be adequate to satisfy the demand of the all-day users of the Region of Service. Also, capacity of the land would seem to have been reached with this number. See Plan and Description, Typical Picnic Ground, pages 41 and 42.

## Playing Games

This activity ranges all the way from shuffleboard (usually for the elderly) through the court games all the way to the major game of golf. Some, such as scratch court basketball and/or softball; the court games of tennis, handball, badminton and volleyball are all short term activities entailing an expenditure of less than a half day. For such short term activities, people will rarely travel any distance. They are therefore urban and more logically municipal or borough responsibilities rather than state. They have no real place in areas such as Nancy Lake. People will travel a great distance to play golf and the game would be a major attraction at Nancy Lake, particularly enhancing the Lodge operation. An 18 hole course is included on the plans, with possible expansion to 36 holes. However, it is pointed out that, according to the usual standard of 18 holes per 50,000 population, four 18 hole courses will be needed in the Region of Service by 1980. One of the three exists at Elmendorf Air Base serving a population of 25,000 military. Two additional courses should be provided by either the boroughs or the City of Anchorage. For Plan and Description of Nancy Lake Golf Course, see pages 35 and 36.

**Hiking Trails and Nature Walks** though separated in the ORRRC studies are here combined because there will be little opportunity for the hiker who prefers miles of distance between himself and others. Trails through the Nancy Lake terrain will be easy and suitable for the less rugged type hiker. Isolated trail camps will be provided for families or organized groups who wish a light, backpacking experience.



**Conoe Trails.** Though adequate conoe trail is supplied by Kenai National Moose Range, conoe trails will be essential in Nancy Lake as a supplemental activity to major recreations; to reach areas not on the road system and to fully capitalize on the potential of the water in the Area.

**Horseback Trails,** despite their nationwide popularity as a major activity, are completely lacking in the Nancy Lake Region of Service. They are extensively provided however in the Kenai National Moose Range. This large gap in the range of activities available in the Region of Service will be made up by the trails and accompanying rental horse concession in Nancy Lake. All trails will serve both equestrians and pedestrians.

**Lodge and Cabin Facilities.** There is insufficient data for projection of need for lodges and cabins in Alaska since residents and travelers alike come prepared to camp because more sophisticated facilities are generally lacking. The commercial resort cabins are for the most part not equipped with sanitary facilities. There are no lodges in the whole of the south central part of Alaska unless the lodge at Mt. McKinley National Park is included.

It would seem that a lodge-cabin complex in Nancy Lake would be as successful as are those in state parks in the lower 48 where they are, literally, reserved years in advance. Lodging facilities are normal adjuncts to state parks. The Nancy Lake plan proposes inclusion of three types of such facilities -- a lodge, cabin areas and tent cabins, the latter a minimum cost shelter that has proven very popular at Grand Teton National Park. The lodge would supply the needs of short term or even overnight visitors off Alaska Highway 3 plus the luxury vacation trade (rooms should not be equipped for cooking). The lodge would have a heated swimming pool. It could be designed to accommodate small conventions in the off season (as is effectively done at the Oklahoma State park lodges). A quality restaurant in the lodge would add a very real attraction, suited to a pleasant afternoon or evenings drive (or float plane flight), from Anchorage. Two cabin areas at Nancy Lake proper and one at Red Shirt would supply the need of families for vacation cabins. The tent cabins would provide a semi-roughing it experience half-way between the tent and cabin. These structures are wall tents in effect -- floored and framed up to window level but canvas roofed. Cooking facilities and cots with all necessary bedding etc. are provided but toilets are of the public comfort station type. Such a facility would, it is believed, fill a very great need in Alaska, namely that of **low cost accommodations.** One of the common complaints of most travelers was the cost of accommodations.

Recent figures are unavailable but according to the 1955 Yearbook on Park and Recreation Progress the five states with the largest capacity in lodges were: Indiana - 1251 persons; Oklahoma - 750 persons; Kentucky - 363 persons, South Dakota - 350 persons and New York - 231 persons. Cabins are provided by all but 12 states with capacities of certain states as follows: New York - 3,094 persons; Oklahoma-1,360 persons; South Dakota-975 persons; Kentucky - 924 persons; Pennsylvania - 796 persons; Ohio - 678 persons and Virginia -

588 persons. Much expansion has of course taken place in the twelve years since this count was made.

## GENERAL CONCESSION OPERATION

At present it is planned that the State construct all facilities but certain of these would be leased to one or several concessionaires. Concession operations are illustrated and described in detail on pages 34 and 35.

## WINTER SPORTS

**Ice skating** can be an important Nancy Lake activity **only if** other winter sports are developed in conjunction with it. Alone, the limited number of participants would not warrant maintaining the park open in the winter. Ice skating is not usually an all day activity and the greater number of participants are children. However, since the opportunity exists to develop an excellent winter sports complex, the Plan proposes that such a complex be located on and adjacent to Red Shirt Lake. It would include not only ice skating but also sledding and tobogganing, cross country skiing, dog sled racing, ski-joring, ice fishing, curling and a beginners ski slope. The pedestrian-equestrian trail system would provide excellent opportunity for the use of snow mobiles. In conjunction with these activities certain limited concession activities would remain open through the winter season. Present winter sports activity in the Region amounts to Intermediate and adult amateur hockey, ice skating, a beginners ski slope and a nordic ski trail system sponsored by the Anchorage Parks and Recreation Department; the Arctic Ski Bowl (military along with civilian) 12 miles from Anchorage and the Mt. Alyeska ski development at Girdwood, 30 miles from Anchorage. See Plan and Description, Red Shirt Complex, pages 39 and 40.



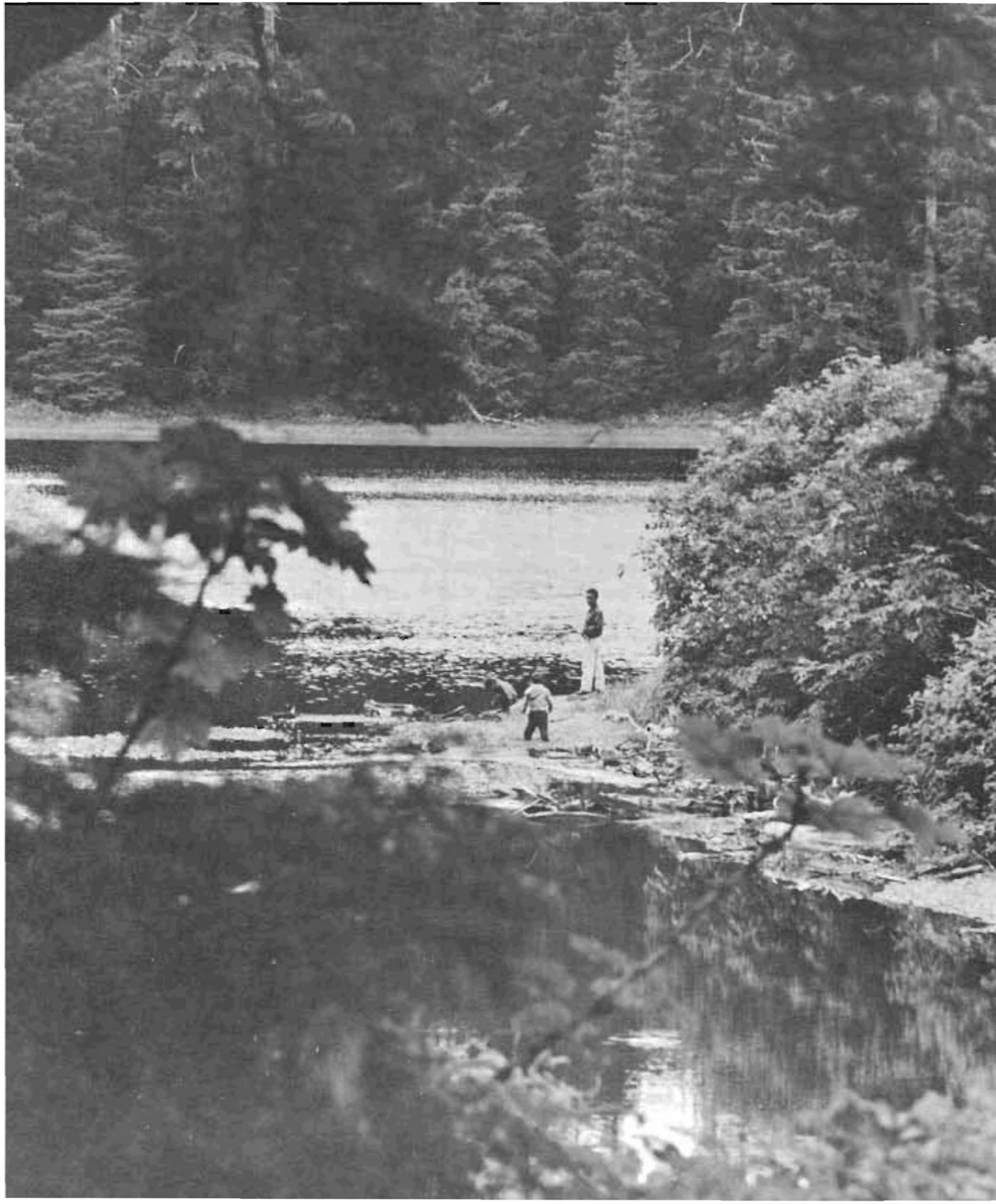
Winter Carnival

FACILITY ANALYSIS TABLE

	Swimming	Picnicking	Fishing	Boating (not canoe or sail)	(4)Ice Skating	Hiking & Nature Walks	(2)Camping	(3)Horseback Riding	(4)Sledding Tobogganning	Water Skiing	Canoeing	Sailing
Annual days per person	4.63	2.34	2.05	1.48	1.0	.81	.40	.32	.27	.21	.07	.05
Total user days -- 3 months summer 1980	1,025,545	518,310	454,075	327,820	135,000	179,415	54,000	70,880	36,450	46,515	15,505	11,075
Total users peak weekend day 1980	21,367	10,798	28,379	6,840	27,000	3,737	3,375	14,760	456	2,907	323	230
Size of party	1	2.7	1	2.2	2.2	2.2	2	2.2	1.5	3	2	2
Total parties	21,367	3,999	28,379	3,109	767	1,699	1,687	671	304	969	161	115
Space requirement per party	1/10 lin. ft. beach	0.1 acres	(1) 100 ft. shore or 1 acre water	6 acres	0.05 acres	.02 trail miles	0.2 acres	.4 trail miles	0.1 acres	6 acres	1/2 mile	5 acres
Total space needed	2,136 lin. ft.	399 acres	27 miles or 25,481 acres	18,654 acres	83 acres	340 trail miles	337 acres	268 trail miles	304	5,814 acres	80 trail miles	575
Less existing equivalent facilities elsewhere in region	500	283 units	(7)Academic (not calculated)	(7)Aca- demic (not calculated)	40 acres	112 trail miles	941 units	00.00	(5)100 acres	(7)Academic (not calculated)	80 trail miles	(7)Academic (not calculated)
Less programmed equivalent facilities elsewhere in region	00.00	200 units	(7)Academic (not calculated)	(7)Aca- demic (not calculated)	20 acres	283 trail miles	675 units	80 trail miles	150 acres	(7)Academic (not calculated)	180 trail miles	(7)Academic (not calculated)
Net facility requirements	1,636 lin. ft. 1/4 mile	(6)3,524 units 352 acres	(7)Academic (not calculated)	(7)Aca- demic (not calculated)	23 acres	00.00 surplus of 55 mi.	71 units +traveler 1100 units  1171 (6)	0.00	23 acres	(7)Academic (not calculated)	(7)Academic (not calculated)	(7)Academic (not calculated)

(1) 10% stream fishermen  
90% boat(2) Residents based on  
1980 population  
of 135,000(3) Combined  
with foot  
trails(4) 5 months  
season --  
resident popu-  
lation only(5) Judgement  
adjustment(6) This total not  
provided in  
Nancy Lake  
See text explanation(7) This statement means that further analysis of the activity would  
be pointless since the imbalance of supply and demand is such  
that it cannot be corrected by Nancy Lake facilities.





## **PART THREE**

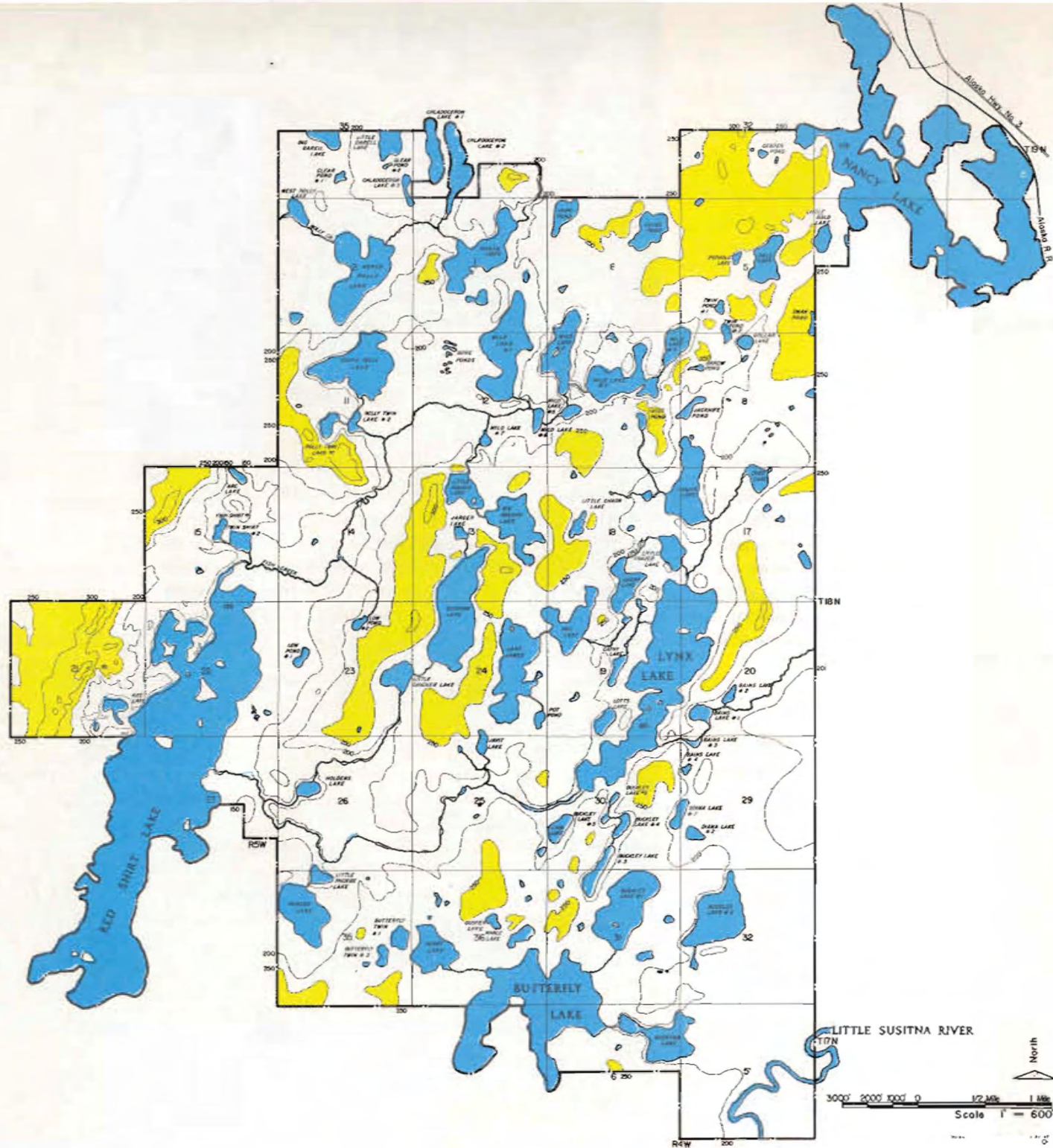
*Analysis*

*Land And Landscape*

#### GENERAL

Equivalent in importance to analysis of the numbers and recreation preferences of Nancy Lake users is analysis of the land so the planning can, without restricting its comprehensiveness, minimize the impact of man's unnatural facilities on the natural scene. **This is the critical factor** in providing future generations with unspoiled, open-space recreation of natural character. The natural character is particularly desired and appropriate in Alaska, a State regarded as the preserver of the last remnant of the unspoiled frontier.







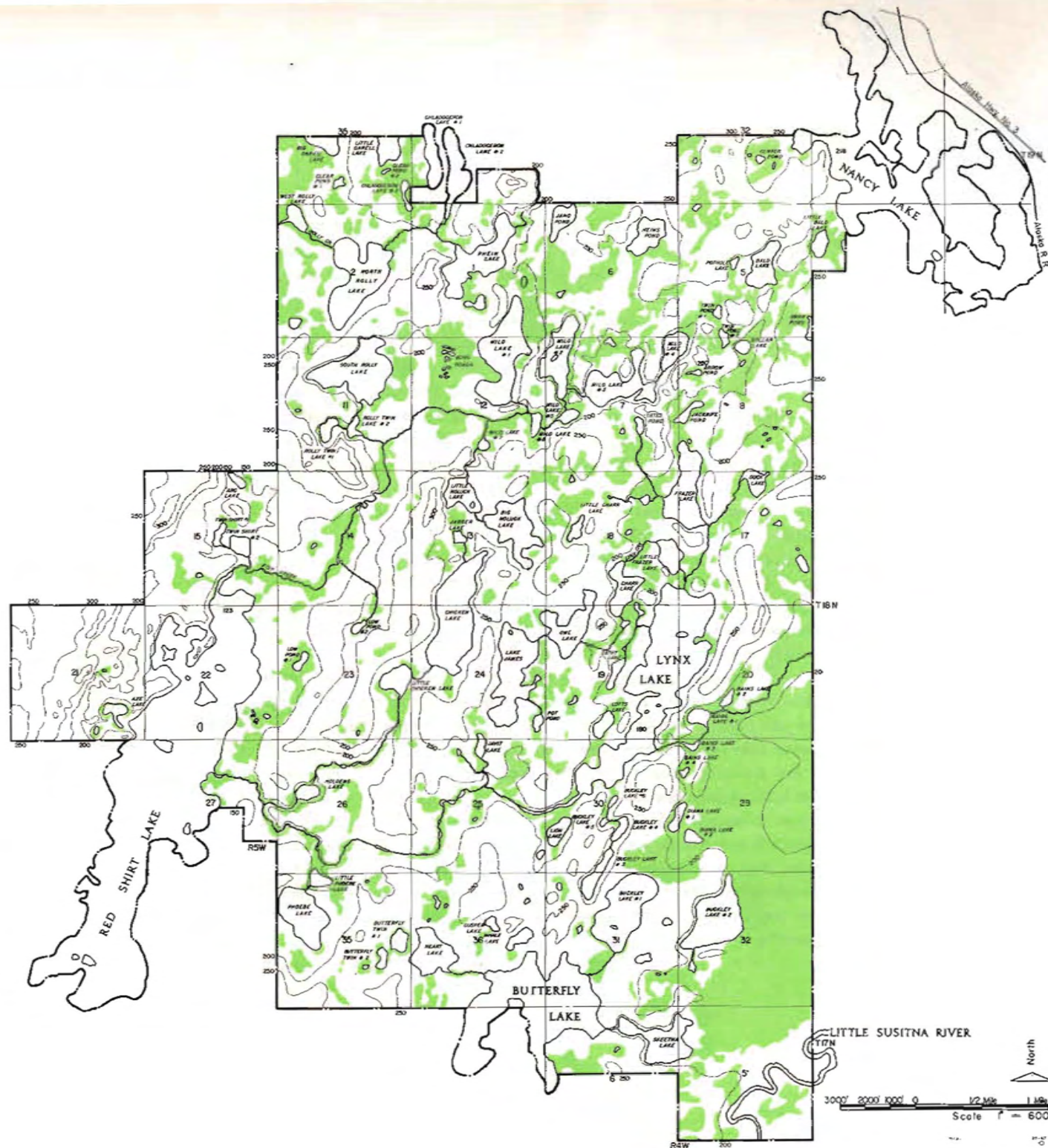
#### ACREAGE, HIGH GROUND (above 250 elev.) WATER

The park presents an extremely attractive scene, pastoral rather than dramatic, of low wooded hills interspersed by many lakes, streams and grassy swamps. The hills are glacial moraines, oriented generally north-northeast, south-southwest with an elevation range from 123 feet to slightly over 400 feet above sea level. The vegetative cover consists of mature spruce-birch forest, heavily and variously undergrown with high grass, Devils Club and berry bushes. Total acreage is some 21,127. This includes all of the water surface but only part of the shoreline of 3 major lakes -- Nancy, Red Shirt and Butterfly. Dominating the physiography (and landscape) of the park are the many lakes. Total water area, excluding streams, is 5,016 acres (24%) or, in effect one acre out of every four. There are 131 bodies of water ranging in size from Nancy Lake - 807 acres, to Red Shirt Lake - 777 acres, Lynx Lake - 350, Butterfly - 320, on down to many patholes of less than one acre. In fact 64 of the total 131 water bodies are 5 acres or less in size.

Many of the lakes should be renamed. The system of using Milo No. 1, Milo No. 2 and ad infinitum is unappealing. It leads to excessively long and confusing names for use areas. It would be most desirable to drop the numbered sequence method and substitute attractive Eskimo or Indian terms or names derived from local natural history.

The only conclusion that can be drawn from this large water potential is that water recreations -- fishing, boating, water skiing, ice skating, ice fishing, float and ski planes, swimming, etc., will be the dominant recreation uses of the Nancy Lake Area. To capitalize on this potential, it follows that a basic criterion of the planning must be that the road system reach all four major lakes so that launching ramps can be provided at each. Using the same precept, it becomes a second basic planning criterion that, because of the magnetism the lakes will exercise on the recreationist, all possible activity areas but especially picnic and camp grounds, and the lodge and cabin areas **must** be located on the shores of lakes. The fishing analysis prepared by the Alaska Game and Fish Department, noted in part on page 12 emphasizes even further these two planning criteria.







### SWAMPS

Physiographically of equal importance to the lakes in the park landscape is the large part of the area in swamp. In 205 distinct areas, swamp occupies almost as much area as water -- 4,335 acres. Like the lakes, they range in size from tiny bags of little significance to narrow shore line strips bordering most streams and lakes on up to a very large one of 1,642 acres (over 2-1/2 square miles). Extending along the eastern boundary for two and one-half miles, this swamp protrudes over a mile into the park at its widest point.

Expensive to traverse with road or to locate even foot or horse trail on, the large swamp segment is especially important because it must be respected -- and **avoided**. Actually the swamp has great aesthetic value -- as an attractive open feature of the landscape. It enables views that would not exist were the terrain wholly wooded. Also it has major value as the habitat of special wildlife -- moose and beaver, for example, that might not otherwise be found in the area--wildlife that will greatly increase the enjoyment of park visitors.

It is interesting that if the water and swamp are deducted from total acreage, there remains only 10,124 acres -- a little less than half of the total suitable for location of "dry land" facilities.







### LAND SLOPE

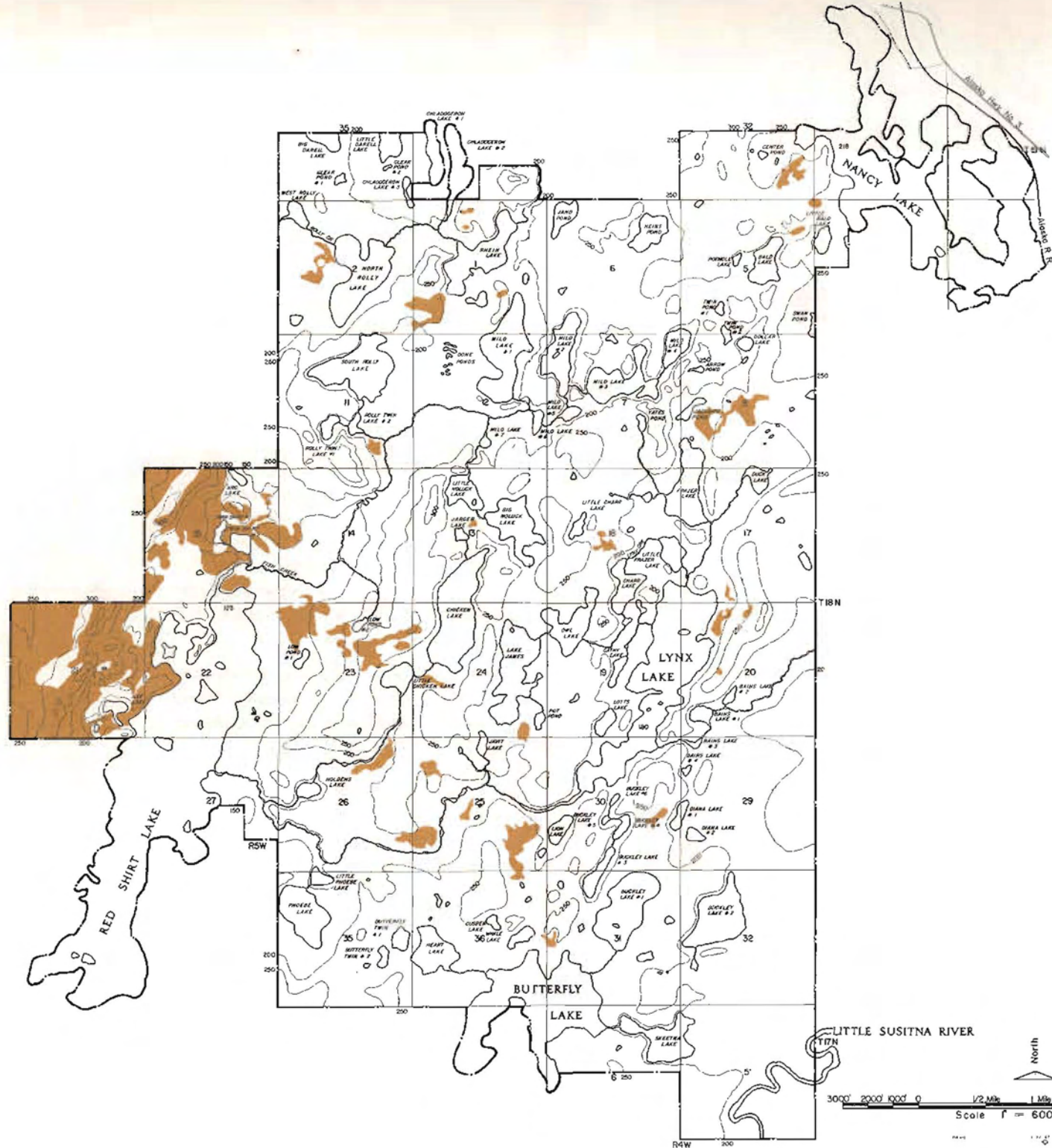
There is still another limitation. It is important to determine "degree of land slope" partly because of erosion factors and partly because construction costs increase in direct relation to steepness of terrain.

Since the Noney Lake topsoil is so shallow (12 inches) as to be highly subject to erosion -- a further planning criterion becomes necessary -- that any facilities that concentrate people to the extent of wearing out the ground surface, but especially picnic and camp grounds, - must be located on terrain with a slope of less than 10:1. (1 foot vertical rise to 10 feet horizontally).

As the map opposite illustrates, the glacial moraines vary tremendously in ratio of side slope, with much area greater than 10:1. The total of slope 10:1 or steeper is 1,219 acres, with 137 acres of this 4:1 or steeper.

While serving to restrict the location of camp and picnic grounds, this particular part of the land analysis series, with its indication of 4:1 or steeper slopes, has the great value of revealing potential area suited to skiing, tobogganing and sledding -- activities where steep slopes are a must.







#### OPEN, DRY AREAS

One final analysis is conducted -- the locating of areas that are open, yet dry, as opposed to swamp. It is particularly important to scan the aerial photographs closely for these because a large open site for a golf course and an open site for the skiing-sliding-tobogganing slopes are needed. Not only will the expense of clearing (with consequent loss of topsoil) be unnecessary but the unnatural clearing of large wooded areas will be avoided also. As the map opposite shows, there are 1200 acres of open dry terrain. 867 acres of this lies on steep slopes west and north-west of Red Shirt Lake - an area that is ideal for the winter sports complex but not far the golf course. (Too far distant from the lodge). By this color coding method which pinpoints some areas and weans away from others, the Land Analysis begins to reveal what areas are useable for what purposes.

It is immediately obvious that the terrain is thoroughly chapped up by the lakes, swamp and steep slopes to the extent that useable areas are quite small as well as widely dispersed. Though this makes for an interesting and varied landscape, it distinctly narrows the choice of sites for almost all activities.



## **PART FOUR**

### *Climate*



## GENERAL

Even more than in other sections of the country, Alaska's climate results in departures from recreation norms.

Eighteen hours of summer daylight in these northern latitudes is bound to extend recreation useage during that season, just as the 5 hour winter daylight restricts outdoor activity at that time of year. The problem this presents to the planning is one largely of winter useage -- the summer takes care of itself. "Cabin fever" is a common complaint of Alaskans during "freezeup", which extends from mid October to April. An average of 60 inches of snow falls in the Matanuska-Susitna Borough in the winter. Planning for winter use requires no special provision except for winter sports, already mentioned above. If lakes

are made accessible for summer use, they will be available for ice fishing in the winter providing only that roads are maintained open. Sight-seeing for pleasure will be possible in winter also, albeit restricted to the short daylight hours, depending, again, on whether the roads are plowed out. Trails will be interchangeable between pedestrians and horses in the summer and snowmobiles in the winter. Skijoring will be possible on opened roads or lakes. Though not pertinent to this Plan per se, it will be most important to the success of winter operation to light all possible winter activity areas against the long hours of darkness. However, during the summer the weather is cool and clear, much like the North-Central States except that the rainy season arrives about two months earlier. An idea of general weather can be obtained from the table below.

GENERAL WEATHER TABLE

Average Temperature		Extreme Temperatures		Growing Season	Average Annual Precipitation	
Jan.	July	Min.	Max.	Days	Inches	Snow-Inches
11°	57°	-36°	92°	110	14*	60

\*Includes melted snow

Figures above are from:

U.S. Dept. of Interior, National Park Service: Alaska Recreation Survey, 1953, Vol. 1, pg. 18

All figures following are Anchorage, Climatology of the U.S. #86-43, which can be considered roughly equivalent to the Nancy Lake locale.

Month	1	2	3	4	5	6	7	8	9	10	11	12	Ann.
Precip. - Anchorage Normal					.52	.98	1.86	2.57	2.50				
Snowfall	10.9	17.0	8.6	5.4	0				1	7.6	12.7	16.4	78.6
Mean No. Days Precip. Greater than 0.10 but less than 0.50	3	4	2	1	1	3	8	6	6	4	4	3	
Greater than 0.50	+	+	0	+	+	+	1	2	1	1	+	+	
Normal Mean Temp.	12.4	18.0	23.3	35.7	45.9	54.5	57.1	55.6	47.8	35.0	22.2	14.3	35.2
Av. Daily Max.	21.1	25.2	31.4	42.7	55.0	63.0	64.9	63.3	54.4	41.2	29.0	20.0	42.6
Av. Daily Min.	5.7	7.6	12.8	26.2	38.1	46.6	49.7	48.3	39.7	27.5	16.3	6.1	27.1
Highest	47	43	47	61	72	83	81	77	73	60	50	43	83
Lowest	-23	-26	-22	2	26	37	39	34	20	-5	-21	-29	-29
Mean No. Days With Temp. Greater than 70 or Less than 32	0	0	0	0	1	5	7	3	+	0	0	0	
	31	28	31	26	3	0	0	0	+	21	28	31	

+ indicates less than 1/2 day, but more than 0 days average per month.



## **PART FIVE**

### *Plans And Description Main Use Areas*



GENERAL

In the broadest sense, the park breaks down into two major zones; one, the intensively developed strip along the major loop road; second, the quiet interior of the loop. Measuring roughly 3 miles by 5 miles, this "quiet" zone will be reserved for the hiker, the horseman, the canoeist, and the back packer or others who wish to get far away from it all. As can be seen on the Plan, trails are planned to cross the area at frequent intervals, connecting into all developed areas so that it will be easy for the casual picnicker or camper to take a short hike. Special parking pullouts are to be provided at all points where a trail crosses the main loop road for the convenience of those who wish only to hike into the interior, "quiet" zone.

The "roadside" zone is a series of individual developments and complexes located to take advantage of terrain, stream or lakeside, views or other features perhaps peculiar to the particular recreation. The main loop road itself is designed to connect these areas - in other words the factor of proper and best land use determined road location rather than vice versa. At the same time the loop road, 16 miles in length, will help to satisfy the need for that prime recreation - driving for pleasure. It is particularly emphasized that the planned dispersion of developments and unit densities in developments is maximum. Picnic and campgrounds and other facilities, in other words, should not expand beyond the areas and capacities shown. **When user capacity based on specified densities is reached, a supplemental site is a must.** "Doubling up" or exceeding densities would be ruinous to the policy of preserving the natural scene. When all master plan facilities shown have been built, Nancy Lake will be "full up" and should not be enlarged as to the number of people it will provide for. At such time development of a completely new park should be started. The above is not a completely rigid recommendation. It may, for example, appear desirable at some time to provide (as has been suggested) a field trial area for retriever type dogs, a shooter's complex and field archery range. These are not **additions per se** to planned facilities and might be added if demand and other factors render them desirable.

A considerable problem exists in the entrance and approach to the park off Alaska 3. Since the boundary of the area does not touch the highway, right-of-way must be secured for the entrance road. This right-of-way should be sufficiently wide to shut off all private access. It should also have sufficient width for scenic control along the road. The entrance to this important state facility should be particularly attractive with an appropriate gate design at the junction of the entrance road and Alaska Highway 3. Also, large, attractive, custom signs notifying drivers that they are approaching the Nancy Lake State Recreation Area should be placed on Alaska Highway 3 at least a mile either side of the entrance.

To increase use of the park, advantage should be taken of the Alaska Railroad that crosses Highway 3 just south of the park entrance. For group campers or skiing groups and so on, a rail siding and parking area should be constructed

at this crossing. This would be useful by contractors during the construction period. However, it should be assured that the siding would not turn into a permanent construction dump.

Schematic, detailed plans are shown and described on the pages following. Similar details have been prepared for all use areas but only the representative ones have been included in this publication.



Winter Scene - Moose Cow and Calf



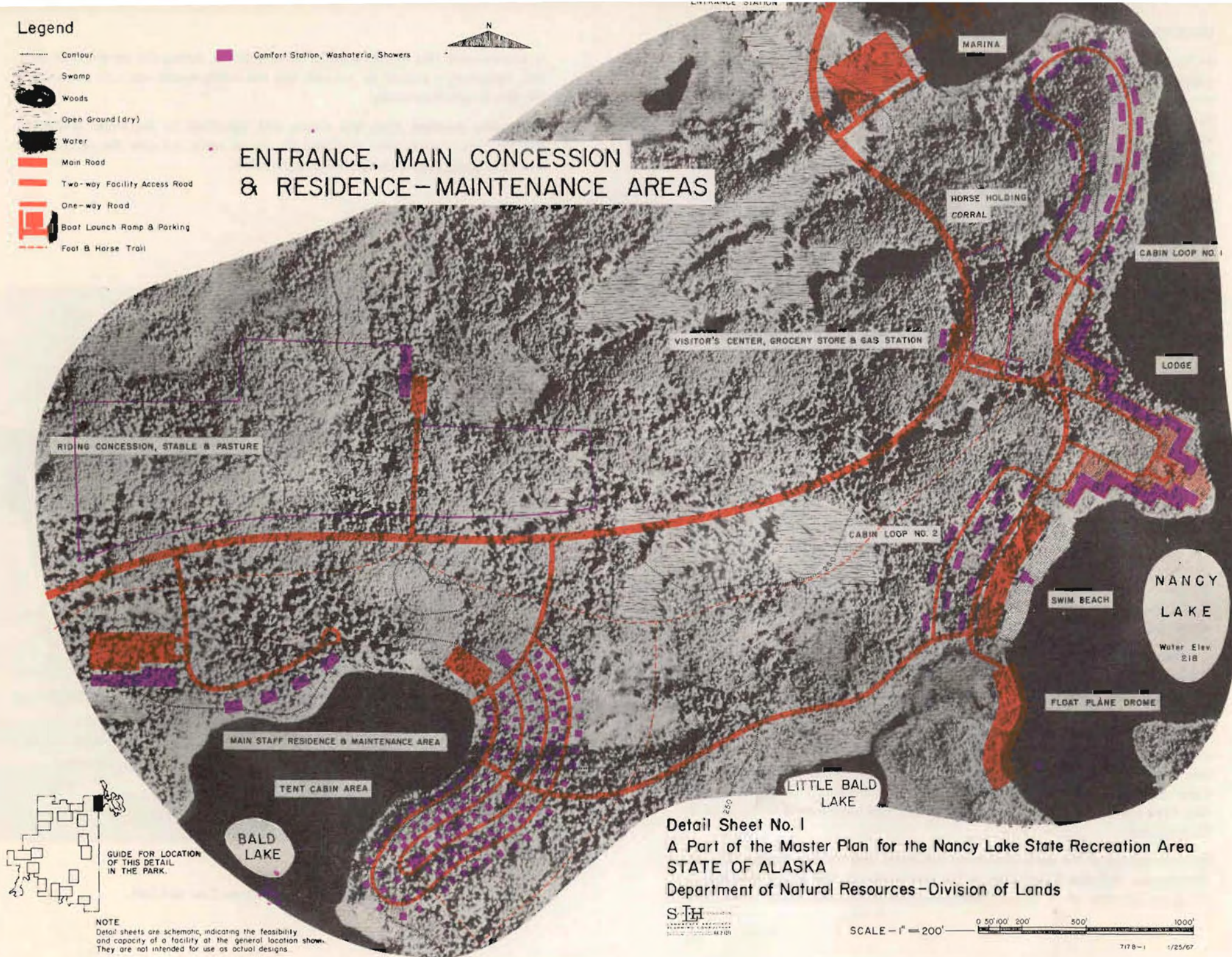
# Legend

- Contour
- Swamp
- Woods
- Open Ground (dry)
- Water
- Main Road
- Two-way Facility Access Road
- One-way Road
- Boat Launch Ramp & Parking
- Foot & Horse Trail

Comfort Station, Washateria, Showers



## ENTRANCE, MAIN CONCESSION & RESIDENCE-MAINTENANCE AREAS



### Detail Sheet No. 1

A Part of the Master Plan for the Nancy Lake State Recreation Area  
STATE OF ALASKA

Department of Natural Resources-Division of Lands

S-T-H  
SOUTHERN TRANSPORTATION  
ENGINEERING CORPORATION  
1000 10TH AVENUE, SUITE 100  
DENVER, COLORADO 80202

SCALE - 1" = 200' 0 50' 100' 200' 500' 1000'

7178-1 1/25/67

### NOTE

Detail sheets are schematic, indicating the feasibility and capacity of a facility at the general location shown. They are not intended for use as actual designs.



GUIDE FOR LOCATION  
OF THIS DETAIL  
IN THE PARK.



ENTRANCE, MAIN CONCESSION COMPLEX AND RESIDENCE --  
MAINTENANCE AREAS

CONCESSION COMPLEX INCLUDES:

**Lodge** -- two story, garden level on the inside court -- ground level lake side, motel type with balconies on the second floor lake side. Includes restaurant and heated swim pool on view terrace at point of peninsula. Capacity-up to 160 units.

**Cabin Loops** -- Housekeeping, vacation type. Units staggered horizontally as well as vertically up slope facing lake so all units have lake view. Capacity -- Loop No. 1, up to 100 units -- Loop No. 2, up to 40 units.

**Tent Cabin Area** -- Low cost, housekeeping, vacation type. Units staggered horizontally as well as vertically up slope for view of Bald Lake. Capacity -- up to 150 units. Includes three washateria-shower-comfort station buildings.

**Marina** -- To provide lease boat slips for owners of private cabins (outside the park boundary) on Nancy Lake; rental boats for park day users and tenants of lodge, cabin areas, tent cabins and campgrounds. Should be designed to expand parallel with growth of lodging facilities, providing one boat for every 4 lodge or cabin units. Would include rental of tackle and sale of boat gas and bait. Capacity -- approximately 150 boats. An adjunct to the marina would be a separate pier at the lodge where the concessionaire would birth a large, sight seeing cruiser and where casual, stop in traffic could tie up for use of the restaurant. Another adjunct would be a launch ramp immediately adjacent for day use boats and for removing or launching marina boats.

**Riding Concession** -- This is in two parts -- a stable building with large pasture on odor free distance from all other facilities and a holding corral on the main road near the lodge. The latter is intended to put the horses on view to encourage their rental. The holding corral location is a design feature - the necessary clearing serving as open foreground for a view of the lodge from the main entrance road. A further purpose of the holding corral is to bring to the lodge-cabin area horses that have been reserved for organized group rides etc. Horses could be rented at the main stable also.

**Float Plane Drome** -- The drome would be used mostly by lodge or cabin renters who would fly rather than drive to Nancy Lake. It might also be used by golfers, by fishermen who would rent a boat or have one in the marina or by charter pilots to put down occasional fishing or vacation parties originating at distant points. Marina type slips off a shore embankment would be provided and airplane gas sold. The drome is located at the opposite end of the Concession Complex from the marina so there is as much separation as can be had between boats and planes. Like the marina, the drome should grow with demand.

**Gas Station - Grocery Store** -- For all park users. The grocery store would cater to the needs of campers, travelers, picnickers and vacationers - featuring cook-out type groceries, charcoal briquettes, and firewood, insecticides and first aid materials.

**Swim Beach** -- The unlimited swimming potential of the park presents a problem since it is hoped that it will not be necessary to set up formal, supervised, swimming beaches on all the lakes where use areas have been located. Not only are proper beaches with bathhouses expensive but the drowning hazard, especially on large open water, is very real. Very close supervision becomes necessary - a further expense. To avoid such a scattering of beaches, a very large beach is planned at Nancy Lake. 600 feet long and 75 feet deep, it would accommodate all swimmers. A small bathhouse to include a refreshment stand, is proposed in connection with the beach. The bathhouse would accommodate day users. Lodge, cabin or campground occupants would change in their lodgings, a further advantage in locating the major swimming facility at Nancy Lake proper.

ENTRANCE AND RESIDENCE -- MAINTENANCE FACILITIES INCLUDE:








**Entrance Station** -- Since a fee (see page 63) will be charged for use of the park, this small facility, located on the entrance road at the boundary, will function as a toll gate. It will serve also as an assignment center for campsites, specifying space according to whether the camper is traveling with a tent, trailer or camper. In this respect the entrance station will avoid having an attendant and/or bulletin board assignment arrangement at each campground. For further detail on the Entrance Station see page 64.

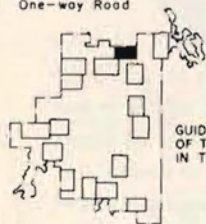
**Visitor Center** -- The Visitor's Center will serve two purposes. It will contain the Administrative Office of the park (see page 65) and will serve as the central public contact and information point. It should contain a small exhibit room to serve as a minor nature interpretive center. The Center is located adjacent the gas station and grocery store so as to form a complex where all the business of the park would be conducted.

**Residence - Maintenance Area** -- A park the size of Nancy Lake is a 24 hour operation. Emergencies of many kinds may arise from forest fires to lost children. Certain key personnel must therefore be available at all times, in fact park supervisors and rangers are generally considered to be on duty 24 hours per day. Residences for certain of the personnel, in the park, are essential. The Maintenance Area would house the tools and equipment necessary to keep the many facilities repaired and in operating order. For further detail see page 65.



## Legend

-  Contour
-  Swamp
-  Woods
-  Open Ground (dry)
-  Water
-  Main Road
-  Two-way Facility Access Road
-  One-way Road



GUIDE FOR LOCATION  
OF THIS DETAIL  
IN THE PARK.

## NOTE

Detail sheets are schematic, indicating the feasibility and capacity of a facility at the general location shown. They are not intended for use as actual designs.

# NANCY LAKE GOLF COURSE

## Detail Sheet No. 2

A Part of the Master Plan for the Nancy Lake State Recreation Area  
STATE OF ALASKA

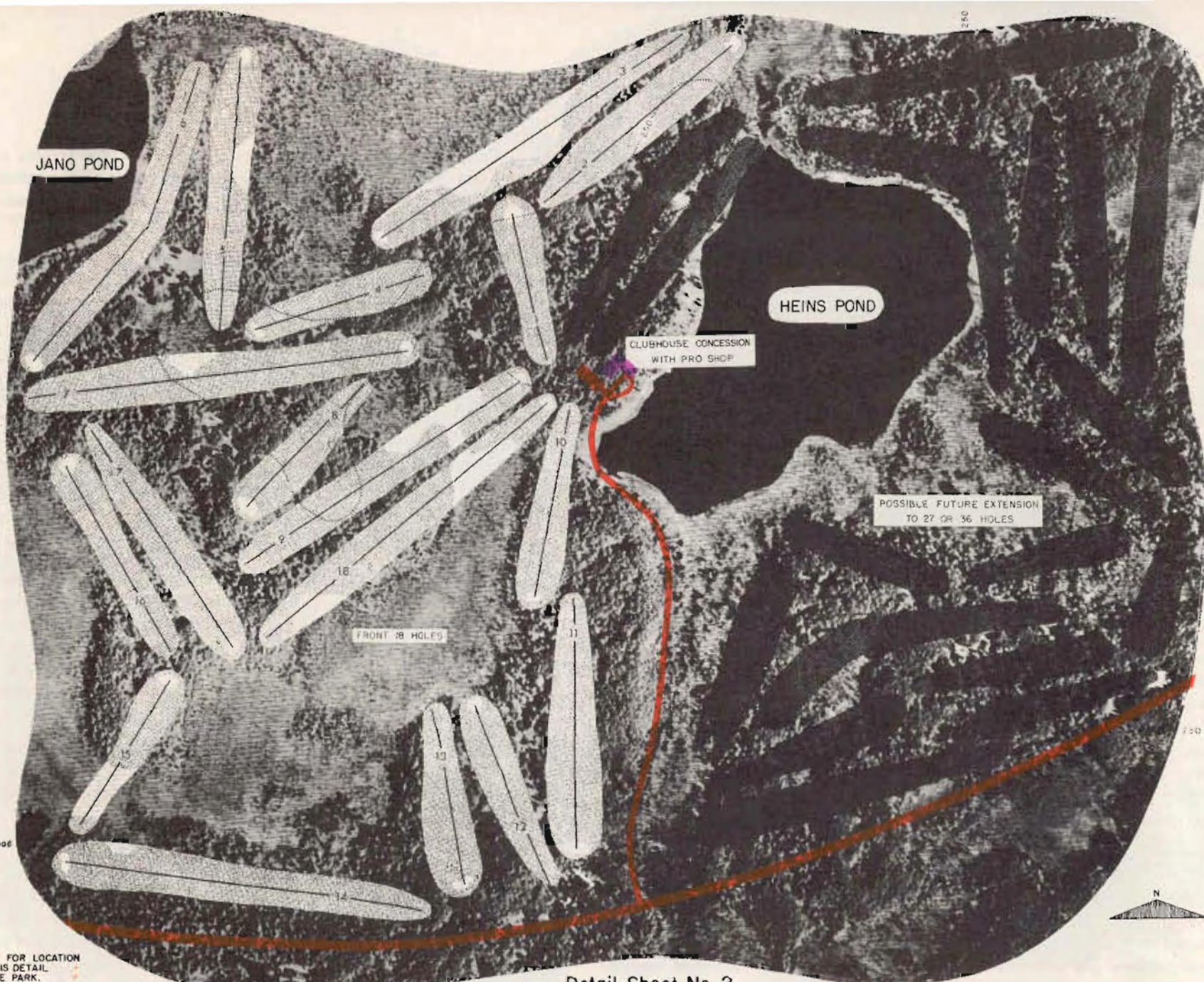
Department of Natural Resources—Division of Lands



SCALE - 1" = 200'

0 30' 100' 200' 500' 1000'

717A-2 1/30/67

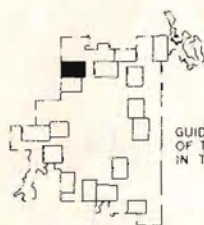




#### NANCY LAKE GOLF COURSE

Since the main users of the golf course will be lodge and cabin tenants (other than day users from the Region of Service), it would be desirable to locate the course close to the lodge and cabin areas. However, such proximity is not any more essential for the golf course than for any other facility since practically 100% of Nancy Lake users will have arrived by car and will have cars available to drive to any facility in the park. An option existed of locating the course adjacent the main entrance road in the area west of the lodge. It would then have usurped the area where the horse stable concession is now located (See page 34). This "closer the lodge" location was rejected for two reasons. First, it would have resulted in a highly "groomed" effect at the entrance to the park - an esthetic impact felt to be not in keeping with the natural scene to be maintained elsewhere. Second, the location selected permits design of the course around two small lakes (Jano and Heins ponds) (none available on the other location) and also provides an excellent, high location for the clubhouse that would result in a fine view south over the park. The course as shown is laid out so that the final rounds of a round of 27 or a round of 36 overlap. In other words holes 27 and 36, 26 and 35, and 25 and 34 are the same.





GUIDE FOR LOCATION  
OF THIS DETAIL  
IN THE PARK.

# Legend

- Contour
- Swamp
- Woods
- Open Ground (dry)
- Water
- Main Road
- Two-way Facility Access Road
- One-way Road
- Boat Launch Ramp & Parking
- Foot & Horse Trail

ADMINISTRATION, CHOW HALL & CAMPS

SWIM BEACH & BOAT DOCK

SWIM BEACH & BOAT DOCK

NORTH ROLLY  
LAKE

ADMINISTRATION, CHOW HALL & CAMPS

SOUTH ROLLY  
LAKE

NORTH ROLLY  
LAKE GROUP CAMPS

NOTE  
Detail sheets are schematic, indicating the feasibility  
and capacity of a facility at the general location shown.  
They are not intended for use as actual designs.

Detail Sheet No. 4

A Part of the Master Plan for the Nancy Lake State Recreation Area  
STATE OF ALASKA

Department of Natural Resources—Division of Lands

S J H  
DESIGNATED AREAS  
0 100 200

SCALE -- 1" = 200' 0 50' 100' 200' 500' 1000'

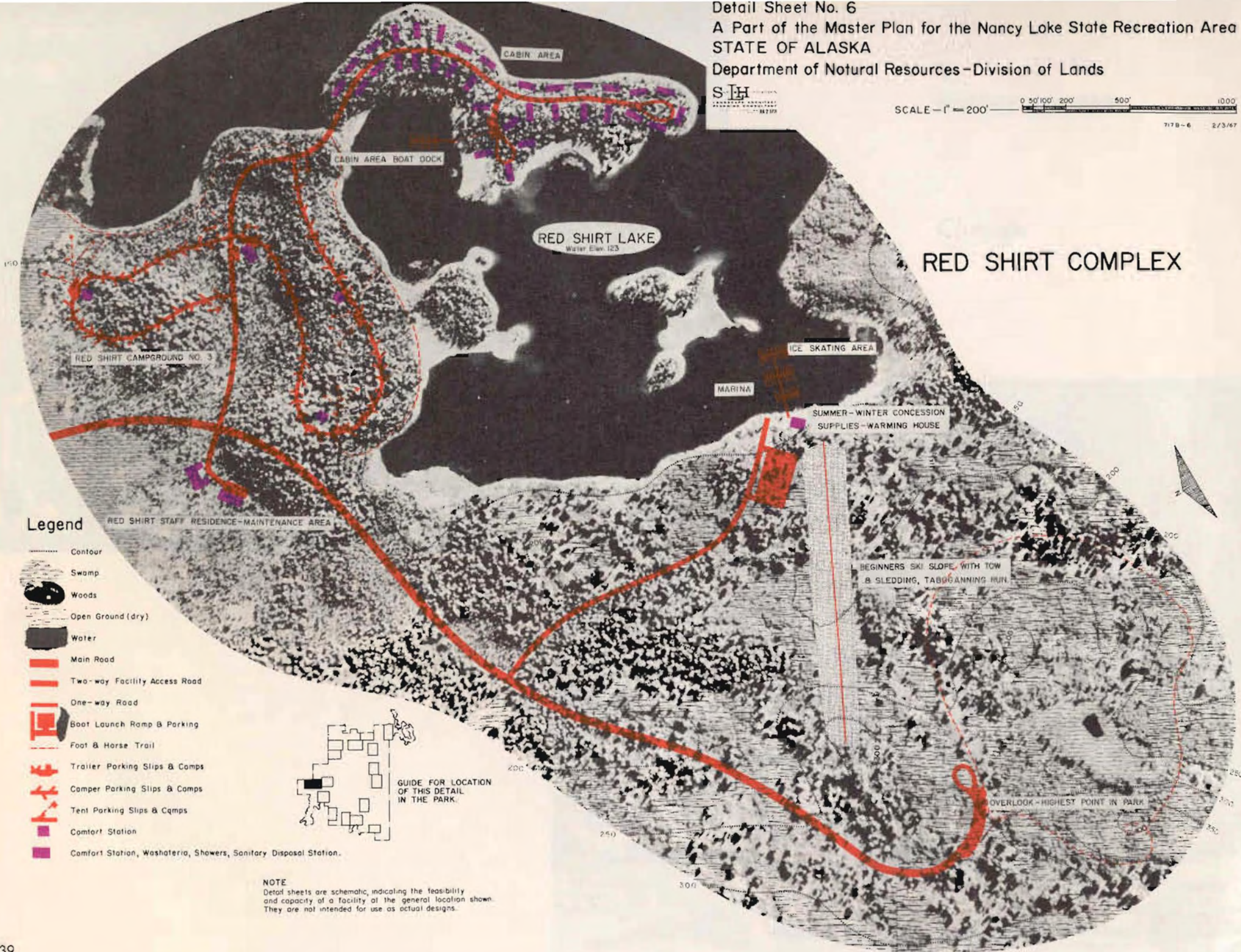
717 B-4 2/1/67

### GROUP CAMPS

The two group camps shown on the detail opposite are schematic, as are all the details. However, the location shown for the use would be excellent. First, the site is away from general public use areas and the group campers could monopolize the northwest corner of the park without interference. In this location about 4 miles of foot-horse trail and 3 miles of canoe trail could be allocated exclusively to Group Camp use. Also the camps would be convenient to the large, interior, quiet area and could use it for hiking, riding or nature study also. Second, on entire lake, North Rolly, which is rated Number 1 as to fishery quality, is assigned to the group camps, assuring unhindered use for boating, swimming and fishing.

It is recommended that the development responsibility of the State be limited to site development, e.g., access roads, water wells, sewage disposal and trail construction while the user groups would have responsibility for the buildings, boat docks and swim beaches etc.





NOTE  
Detail sheets are schematic, indicating the feasibility and capacity of a facility at the general location shown. They are not intended for use as actual designs.



#### RED SHIRT COMPLEX

Red Shirt, the largest lake in the park, will compete with Nancy Lake as an attraction to boaters, fishermen and all other park users. In addition, the slopes above its west shore are ideally suited for winter sports use. For these reasons development on Red Shirt is relatively intense including, in addition to the facilities shown on the detail opposite, two campgrounds on the easterly shore. The cabin area, the marina and the staff residence - maintenance area would function the same as equivalent facilities on Nancy Lake described on page 34. However only one staff residence and a minor maintenance facility are planned at Red Shirt Lake. Concession facilities would be the cabin area; marina; winter sports hill including beginners ski school and the summer-winter refreshment concession serving both the marina and winter sports hill.

Also, this area would serve as the central point for snowmobile trail rides and races in the winter with the concessionaire having the machines available for rental.

It will be most important economically for the concessionaire that all the activity possible be generated during the winter. It is important therefore to maintain the main loop road open beyond the Red Shirt Spur - for casual 'driving for pleasure' as well as the other winter activities.

The spur road that serves all the shoreside and winter facilities continues on up this considerable height, terminating in a parking area from which a trail leads to the highest point in the park. This will serve as an ideal viewpoint since vegetation is low and scattered over the entire slope - an additional reason it is suited to winter sports use - less clearing will be required.

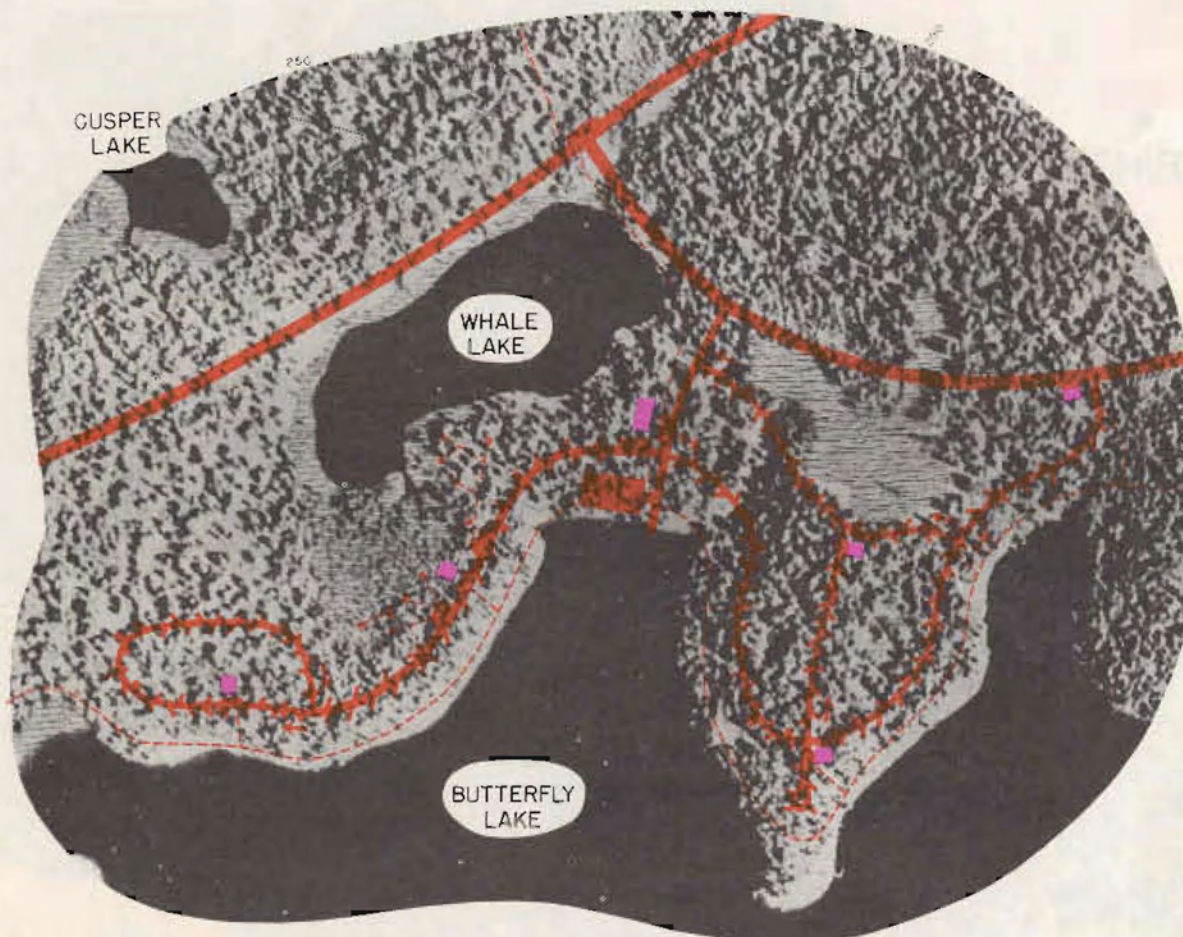




**NOTE**  
Detail sheets are schematic, indicating the feasibility  
and capacity of a facility at the general location shown.  
They are not intended for use as actual designs.

### Legend

- Contour
- Swamp
- Woods
- Open Ground (dry)
- Water
- Main Road
- Two-way Facility Access Road
- One-way Road
- Boat Launch Ramp & Parking
- Foot & Horse Trail
- Trailer Parking Slips & Camps
- Camper Parking Slips & Camps
- Tent Parking Slips & Camps
- Comfort Station
- Comfort Station, Washateria, Showers, Sanitary Disposal Station



Detail Sheet No. 11  
A Part of the Master Plan for the Nancy Lake State Recreation Area  
STATE OF ALASKA  
Department of Natural Resources—Division of Lands

STATE OF ALASKA  
DIVISION OF LANDS  
NANCY LAKE STATE RECREATION AREA  
MASTER PLAN  
DETAIL SHEET NO. 11

SCALE — 1" = 200' — 0 50' 100' 200' 500' 1000'

This campground will provide campsites in a proportion of 50% trailers and 50% single vehicles – e.g. pickup type campers, tent campers, car campers, station wagons. The report Alaska Campers, 1964, proportioned campers into 16% trailer, 35.8% campers, 17.4% tents and 30.8% car. The same report states that 40% of non residents were traveling in campers. The proportion of trailer type parking slips was increased over that found by Alaska Campers for two reasons. First, Nancy Lake will attract a large number of campers trailing boats for fishing, general boating or water skiing. The boat trailer will have to be accommodated. Second, the number of camping trailers is increasing year by year. Careful analysis of the records of the Entrance Station will reveal, as time goes on and the park develops, quite precisely the number of spaces required for the various camping rigs.

The campgrounds are designed on a one way loop system with a minimum of two way road. This enables a wide distribution of campsites with parking immediately adjacent. All parking would be back-in for ease of unloading and because all pickup camper doors are at the rear. All sites would be equipped with a table-bench combination, a trash receptacle and a prefabricated steel fire-place. A small number of off-the-road tent sites would be provided for those persons who wish an increased degree of privacy. Since more and more trailers are being equipped with sanitary facilities, **the tent and car units would be located nearest the comfort stations.** Though the usual standard is that comfort stations be located not over 300 feet from campsites, it is believed this standard has been outmoded by the increasingly modern sanitary equipment of trailers and campers and, for that matter, portable toilets for tents. In addition to comfort stations which would be equipped with flush toilets and urinals **only**, the campgrounds would have a central sanitary facility that would constitute a comfort station **plus showers, coin operated laundromat and a sanitary disposal station** where campers and travelers would dump their waste storage tanks and take on a fresh supply of water.

Near each campground a boat launch ramp with parking area is planned. This parking area should be sized to park cars and boat trailers equal to 25% of the campground units plus one boat for every 20 acres of water in the particular lake. In the case of Red Shirt Lake (800 acres), for instance, this would work out to a total of 250 car trailer parking spaces at the three boat launch parking areas. Construction at some future time to provide scattered tie up points along the shore adjacent campsites may be demanded and possibly appear desirable. Dedicated fishermen and boaters who are camping may not wish to remove their boats from the water each day, which they will be required to do unless a pier or tie up point on the shore is provided. Scattered shore side piers or tie up points are not recommended however. Rather, campsites should be located at least 100 feet **back of the shore** so that a wide shoreline strip is available to all. A series of small piers or tieup points adjacent camps located close to the water's edge would of course become the private preserve of the adjacent camper as long as he occupied the campsite.

Average density, e.g. spacing of campsites in all campgrounds would be 75 feet. There would be no attempt to maintain this distance as an exact figure. It would vary with the vegetation as that foliage could be utilized for screening one site from another, or with the topography, or alignment of the roadway so that each campsite had a high degree of privacy.

Tap water would be available at comfort stations and a small fire ring for informal gatherings might be located at these central points. Electric outlets would be provided at **designated** trailer and camper spaces.

#### Tabulation of Campgrounds with number of campsites.

South Rolly Lake . . . .	.250	Butterfly Lake . . . .	.270
Red Shirt No. 1 . . . .	.240	*Lynx Lake No. 1 . . . .	.300
*Red Shirt No. 2 . . . .	.465	Lynx Lake No. 2 . . . .	.90
Red Shirt No. 3 . . . .	.135		

1750 total

\*Streamside as well as lakeshore.

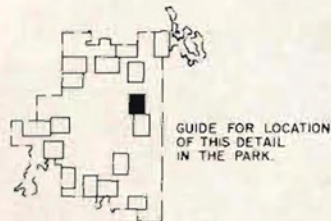


State Bird - Willow Ptarmigan - A Nancy Lake Resident

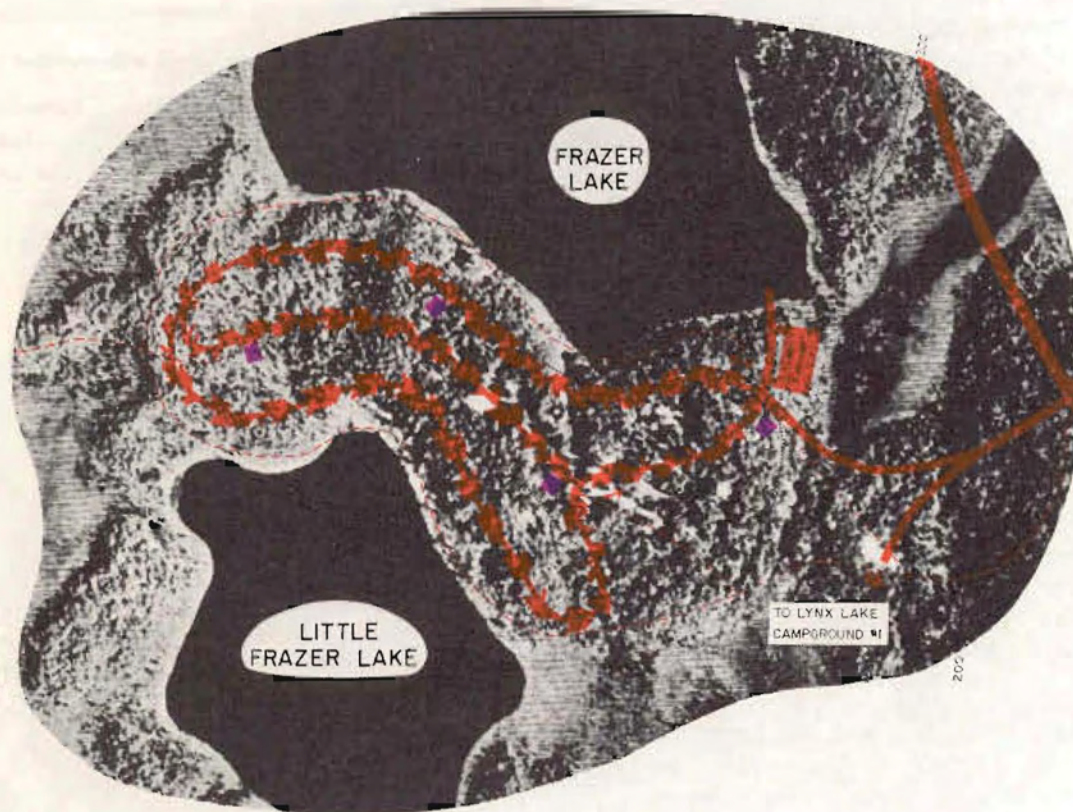


## Legend

- Contour
- Swamp
- Woods
- Open Ground (dry)
- Water
- Main Road
- Two-way Facility Access Road
- One-way Road
- Boat Launch Ramp & Parking
- Foot & Horse Trail
- Picnic Unit Parking Slips
- Comfort Station



**NOTE**  
Detail sheets are schematic, indicating the feasibility and capacity of a facility at the general location shown. They are not intended for use as actual designs.



## FRAZER LAKES PICNIC GROUND

Detail Sheet No. 15

A Part of the Master Plan for the Nancy Lake State Recreation Area  
STATE OF ALASKA

Department of Natural Resources—Division of Lands

S L H  
48.270'

SCALE — 1" = 200' — 0 50' 100' 200' 500' 1000'

7172-15 9/2/67

#### TYPICAL PICNIC GROUND

Picnic grounds would follow the same development pattern as campgrounds, e.g., one way loops whenever possible. However, picnic sites would generally be clustered in groups of five or six in areas where underbrush and some trees would be selectively removed. An uncleared area would then be left for screen privacy and another cluster developed. This pattern of development would result in a feeling of privacy because only a few neighbors would be seen. Parking slips would be grouped in direct convenient relation to the cluster with the individual picnic tables located as much as 100 feet from the road. An occasional single or group of two and three units should be included as terrain and vegetation permit. Average density, e.g., spacing, of units throughout the picnic ground would be 50 feet. As in the case of campsites, this would selectively vary according to the degree of privacy that could be secured through careful adaptation of site to vegetation, terrain, etc. Also, near comfort stations, special, large clusters should be constructed to serve church, lodge and other groups. Bus parking should be provided at this location. These clusters could vary upward to accommodate several hundred persons and would be made available only on a reservation basis. Portable tables could be used to supplement a minimal permanent installation. Each picnic unit would include a table-bench combination, charcoal brazier and trash disposal unit. As in the case of the campgrounds, lake frontage would not be infringed on for the benefit of individual picnickers. Trails along the lake shore, originating at each comfort station would lead off to hiking trails and thence into the "quiet" area of the park. Some picnic areas would be equipped with launch ramps, others not, since many picnickers would not also be fishing or boating. Parking should be provided in a ratio of 1-1/4 cars to each picnic unit since many families will picnic together utilizing more than one car and an occasional picnicker will be towing a boat trailer. In calculating the capacity of launch-ramp parking areas, it was assumed that every tenth picnicker would be towing a boat.

#### Tabulation of picnic grounds with number of units

Rhein-Milo Lakes . . . . .	730	Buckley Lakes . . . . .	200
Phoebe Lake . . . . .	340	Frazer Lakes . . . . .	370
Heart Lake . . . . .	490	Milo Lakes . . . . .	370
Skeetna Lake . . . . .	400		
			2900 total



## **PART SIX**



*Development Program And First Five Year Budget Including Acquisition Schedule*

## GENERAL

The Development Program correlates the physical (master) plan with cost and time factors. In effect it outlines what should be built when and what it will cost. Also, in proposing **actions to implement** the plan, it sets up a series of logical, interlocking and interdependent relationships intended to culminate in complete development of the Nancy Lake State Recreation Area at some future point in time.

The Development Program attempts to set up realistic guidelines, rather than an immutable schedule. It should be adjusted and refined annually as step one of the annual budget making process.

The following dates are particularly important to the Program --

1968 -- the beginning year when, in fact, **the need for some** facilities already exists.

1970 -- the scheduled completion date of Alaska Highway 3 (Anchorage to Fairbanks) which will put the need at the door of the park.

1980 -- the theoretical target date for estimating demand and need -- a date when **all** the facilities shown on the Plan should be completed if use and population projections are correct.

To compensate for the lack of facilities, in the face of an existing demand (as previously demonstrated) -- in effect to catch up -- the Program is assigned a theoretical 1966 beginning date. For Program and Budget purposes, the years 1966, 1967 and 1968 are compressed into one year. The net effect of this will be a 15 year total program - 1966 - 1980 - with the first 5 year budget, 1966-1970, culminating the same year as scheduled completion of Alaska Highway 3. Similarly, the total number of picnic and camp units has been divided by fifteen (years) to secure the annual increment needed to keep up with demand. Since the picnic and camp grounds are spaced out along the main loop road, they are used as steps in the general progression around the loop to completion. There would, for instance, be no logic in jumping ahead to develop the Red Shirt Complex when all the facilities in that Complex are duplicated at Nancy Lake **except** the Winter Sports Complex and the Viewpoint. The former is important to the concessionaire. The latter is not as critically needed as are picnic and camp grounds and water access.

Major concession operations such as the lodge are scheduled to start during the 1970 - 1975 period because a sizeable proportion of the **attractions** e.g., facilities, would be in existence so the concessionaire has assurance of patronage and profit. For that matter, a history of attendance over a period of time will assist both the State and the concessionaire in designing a better facility. Completion of Highway 3 is certainly a must before the major investment of the lodge will be justifiable.

For purposes of the Budget and Program, foot-horse and canoe trail outside developed areas and exclusive of the Group Camps and the Viewpoint are lumped and, since there is a total of 14 camp and picnic grounds, 1/14 the cost of trail is assigned to each. Group Camp and Viewpoint trails are included with totals for those facilities.

The construction costs used for the various elements of the Program and Budget are based on unit costs\* as follows:

Road items -- includes all signs and markers, barriers, drainage structures, etc., but does not include curb and/or gutter. Figures derived from the Division of Lands and various records of highway bids, Anchorage area, Alaska Department of Highways.

Main 22' surface- - - -	\$10.00 l.f.- - - - -	\$13.75 surfaced
Secondary 20' surface	9.00 l.f.- - - - -	12.50 surfaced
Where parking - - -	18.00 l.f.- - - - -	25.00 surfaced
developed adjacent for		
picnicking or camping		
One way road		
picnicking- - - - -	15.00 l.f.- - - - -	25.00 surfaced
camping - - - - -	12.50 l.f.- - - - -	16.50 surfaced
Trail -- includes all signs, markers and any structures required		
4' wide foot and horse- - - - -		1.00
Canoe 4' portages and stream clearing only		1.00

Buildings -- To arrive at these figures, average rates for equivalent construction in the U.S. were used with a 50% increment added for Anchorage. Authoritative publications state that Anchorage costs are 152% of a U.S. average of 100. Since these costs do not include site development or utilities, 10% has been added to the adjusted Anchorage unit cost to cover these elements. Likewise 10% has been added for transportation to the Nancy Lake site and 10% for contingencies. All figures have been rounded off. The cost of equipment and furnishings has not been included in any figures. All listings are square foot costs unless otherwise indicated.

Lodge . . . . .	\$	28.00
Restaurant portion . . . . .		40.00
Cabins. . . . .		21.00
Comfort Stations (Includes also Washateria, Showers, Loundramat, Sanitary Disposal unit, no heat). . . . .		31.00
Grocery Store, Visitor Center, Concession Buildings, Golf Club House, Group Camp Administration Buildings, etc. . . . .		32.00
Tent Cabins and Group Camp Units . . . . .		14.00
Residences . . . . .		27.00
Maintenance Buildings. . . . .		14.00

\*1% per annum has been added after 1968 to cover the projection of historic cost increases:



Picnic Unit -- includes selective clearing; minor site grading; table-bench combination (stock, commercial); commercial, steel charcoal brozier; trash disposal unit -- each . . . . . 350.00

Camp unit -- Includes selective clearing; minor site grading; stock commercial table-bench combination; stock, commercial steel fireplace unit; trash disposal unit, some electrical outlets -- each . . . . . 350.00

Golf Course -- Includes selective clearing; grading, construction of bunkers and traps; seeding greens and fairways; all appurtenances and etc., includes irrigation system for greens and fairways -- per hole . . . . . \$30,000.00

Lunch ramps (not including parking) for ramp 12' x 52' (figure furnished by Alaska Dept. of Public Works) . . . . . \$6.00 sq. ft. of float

Parking Areas. . . . . \$4.00 sq. yd. \$5.50 surfaced

Beaches including clearing, grading, sand as required, guard towers, diving tower, safety booms. . . . . 754 sq. yd.

Acquisition costs -- as furnished by Alaska Division of Lands

Primary Underground Electrical System in Main Loop Road, Red Shirt Spur and Little Susitna Spur to Skeetno Lake Picnic Ground estimated @\$8.00 l.f. for the consultant by Merrick and Co., Consulting Engineers, Denver, Colo.

Annual need for camp units . . . . . 116. By 3 years -- 1966, 67, 68 . . . . . 348 total.

Annual need for picnic units . . . . . 193. By 3 years -- 1966, 67, 68 . . . . . 579 total.

Abbreviations mean as follows:

lf -- lineal foot

sq -- square foot

sy -- square yard

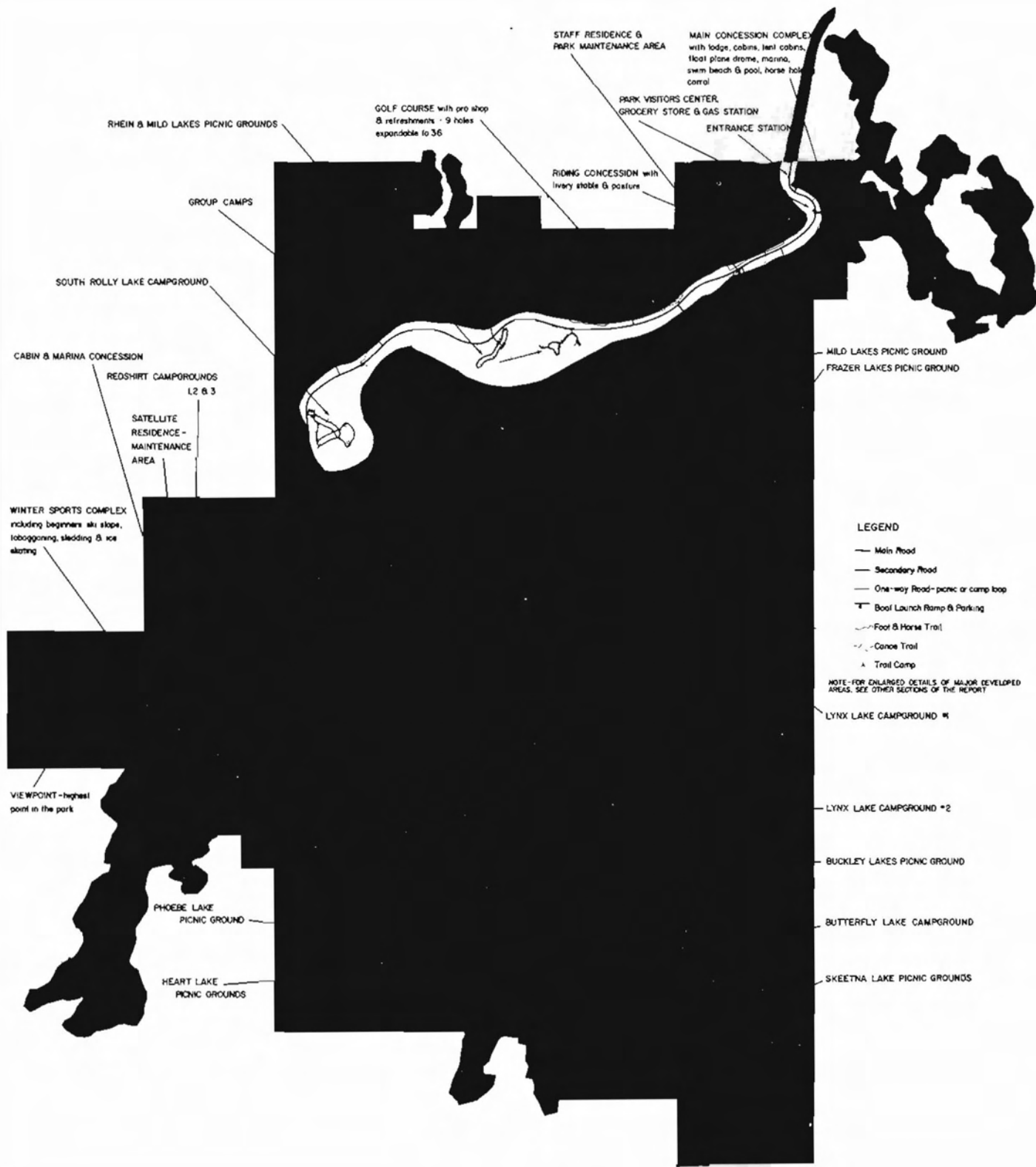
A -- Acre

ROW -- right of way



Arctic Parka Ground Squirrel - Common Denizen of Nancy Lake





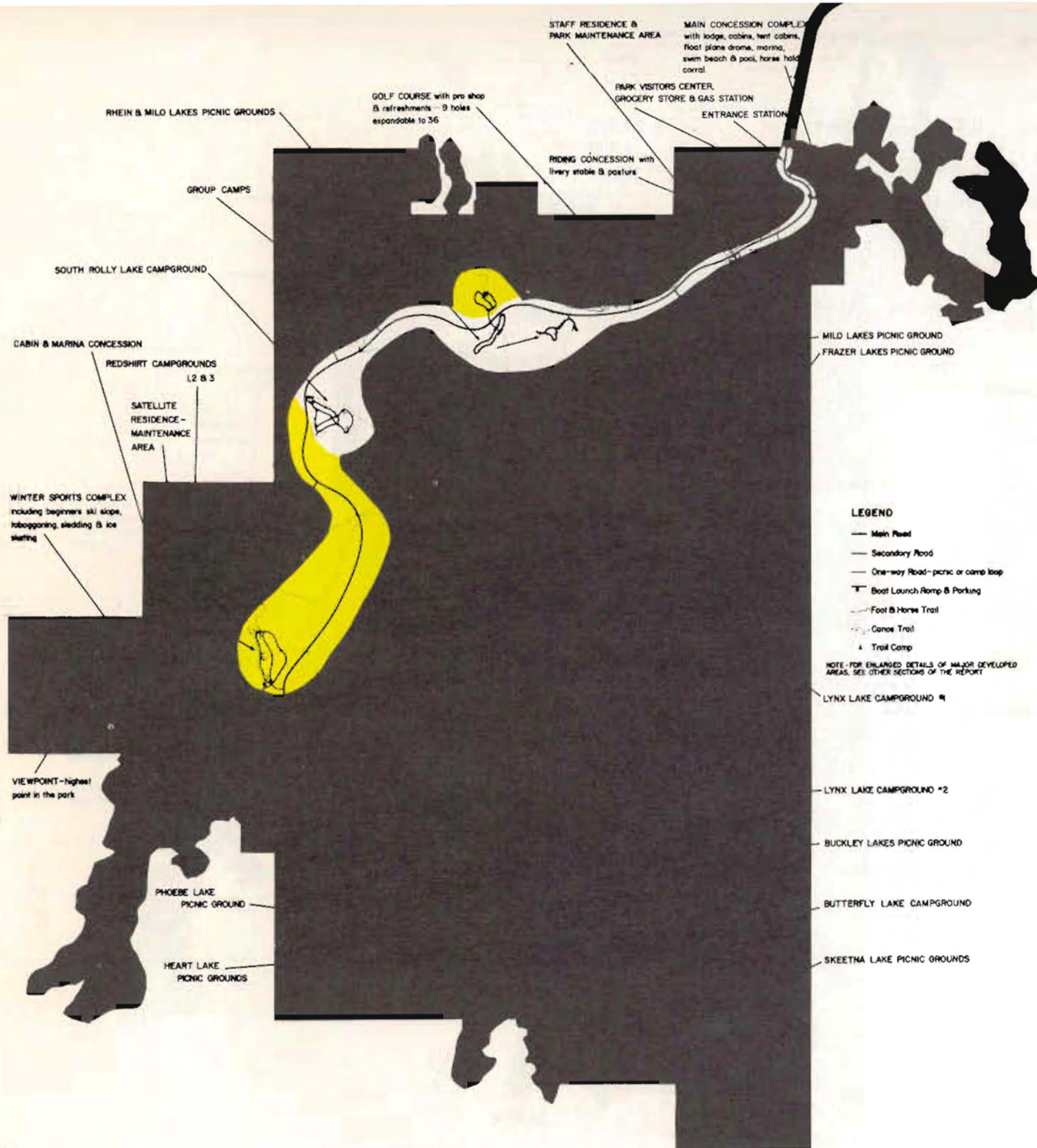
Budget

1968

## 3RD YEAR BUDGET -- 1968 -- INCLUDES THEORETICAL (1966-1967)

	Item Cost	Sub- Total	Yearly Total
<b>Entrance Road</b> - Alaska Hwy. 3 to Boundary 7,400 l.f. . . . .	\$ 74,000		
Primary Electrical - 7400 l.f. . . . .	5,900		
R.O.W. acquisition 60 acres (7,400' x 300') @\$500.00 . . . . .	30,000		
Railroad spur for construction dump and later passenger siding by Alaska Railroad . . . . .	00		
		163,200	
<b>Main Loop Road</b>			
Boundary to South Rolly Lake Campground -- 24,200 l.f. . . . .	242,000		
Primary Electrical -- 24,200 l.f. . . . .	193,600		
		435,600	
<b>South Rolly Lake Campground</b>			
Secondary access road -- 500 l.f. . . . .	4,500		
One way camp loop road -- 7,700 l.f. . . . .	96,250		
6 Comfort Stations -- 900 s.f. . . . .	27,900		
1 Washateria-Shower-Sanitary Disposal Station Building -- 600 Sq. . . .	18,600		
Trail in and adjacent Campground -- 7,900 l.f. . . . .	7,900		
Lunch Ramp. . . . .	3,500		
Parking -- 4,500 s.y. . . . .	18,000		
Camp Units -- 250. . . . .	87,500		
		264,150	
<b>Rhein and Milo Lakes Picnic Grounds (in part)</b>			
Includes easterly section on Milo Lake #2 and westerly section south of Main Loop Road on Milo Lake #1			
Secondary access road - 500 l.f. . . . .	4,500		
2 way road with picnic parking -- 1,500 l.f. . . . .	27,000		
One way picnic loop road -- 5,600 l.f. . . . .	84,000		
Comfort stations -- 8 -- 2,400 s.f. . . . .	74,400		
Launch Ramps -- 2 -- . . . . .	7,000		
Launch ramp parking -- 3,300 s.y. . . . .	13,200		
Picnic Units -- 535 . . . . .	87,250		
		397,350	
<b>Other</b>			
Proportionate amount foot, horse and canoe trail -- 1/7th . . . . .	30,000		
		30,000	
<b>Land Acquisition</b>			
Tracts 23, 59, 70, 71, 72, 73 . . . . .	26,014		
		26,014	
			\$1,316,314



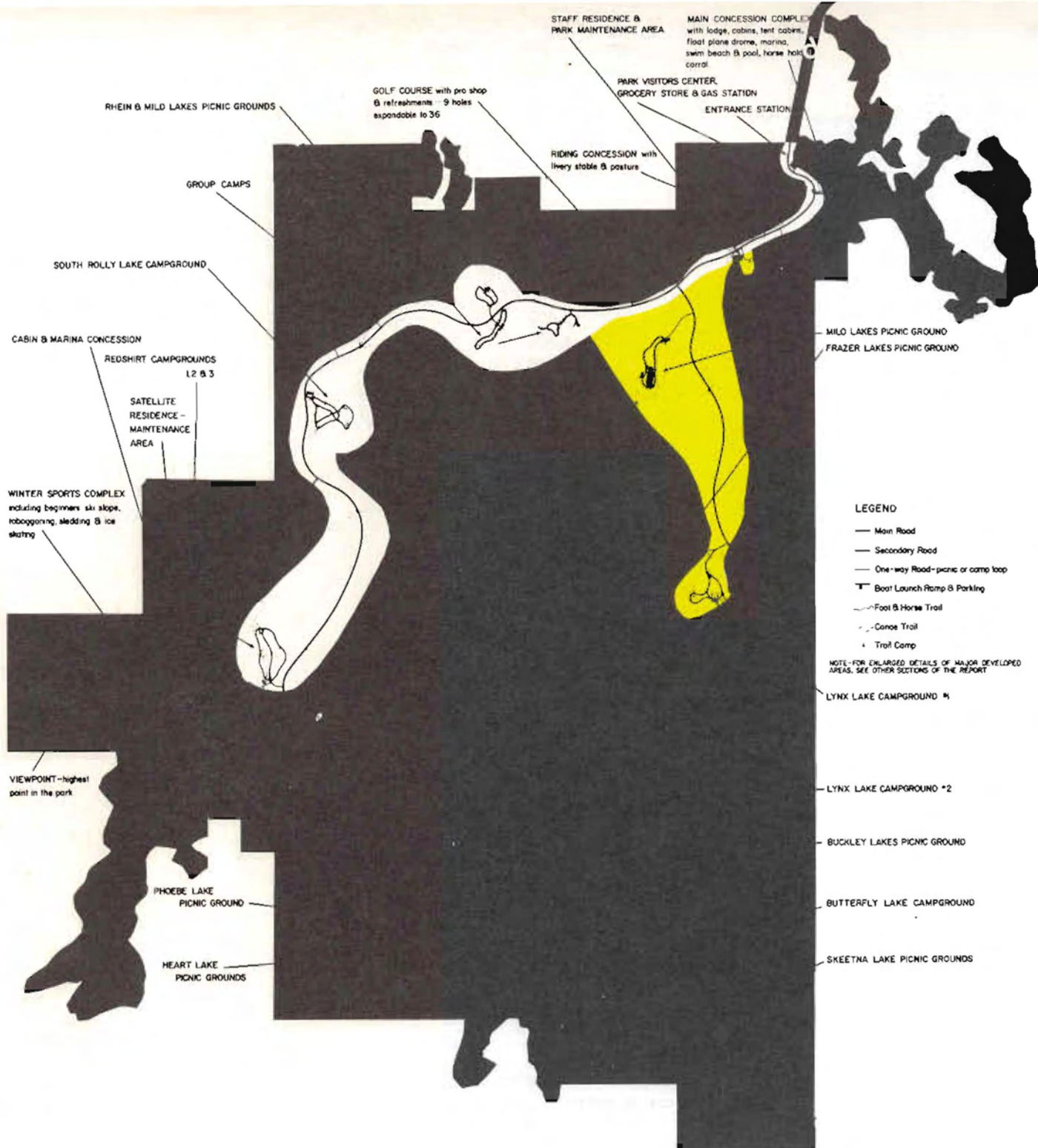


Budget

1969

	Item Cost	Sub- Total	Yearly Total
<b>Main Loop Road Extension</b>			
South Rolly Lake Campground to Red Shirt Campground No. 1 - 13,200 l.f.	\$132,000		
Primary Electrical - 13,200 l.f.	105,600		
			237,600
<b>Red Shirt Campground No. 1</b>			
Secondary access road -- 600 l.f.	5,400		
One-way camp loop road - 7,300 l.f.	91,250		
5 Comfort stations - 750 s.f.	23,250		
1 Washateria-Shower-Sanitary Disposal Station Building - 600 s.f.	18,600		
Trail in and adjacent campground - 4,800 l.f.	4,800		
1 Launch Ramp	3,500		
1 Launch Ramp Parking - 4,500 s.y.	18,000		
Comp Units - 240	84,000		
			248,800
<b>Other</b>			
Proportioned amount foot-horse and canoe trail -- 1/14th.	15,000		
			15,000
<b>Rhein and Milo Lakes Picnic Ground (in part) (northwest section on Rhein Lake)</b>			
Secondary access road - 300 l.f.	27,000		
One-way picnic road - 3,100 l.f.	46,500		
2 Comfort Stations - 500 s.f.	15,500		
1 launch ramp.	3,500		
Parking - 1,350 s.y.	5,400		
Picnic units - 200	70,000		
			167,900
<b>Other</b>			
Proportioned amount of foot-horse and canoe trail -- 1/14th	15,000		
			15,000
<b>Land Acquisition</b>			
Tracts 20, 24, 45, 46, 47.	15,963		
			15,963
			700,263
	- 1% annual construction cost increment		7,000
			\$707,263



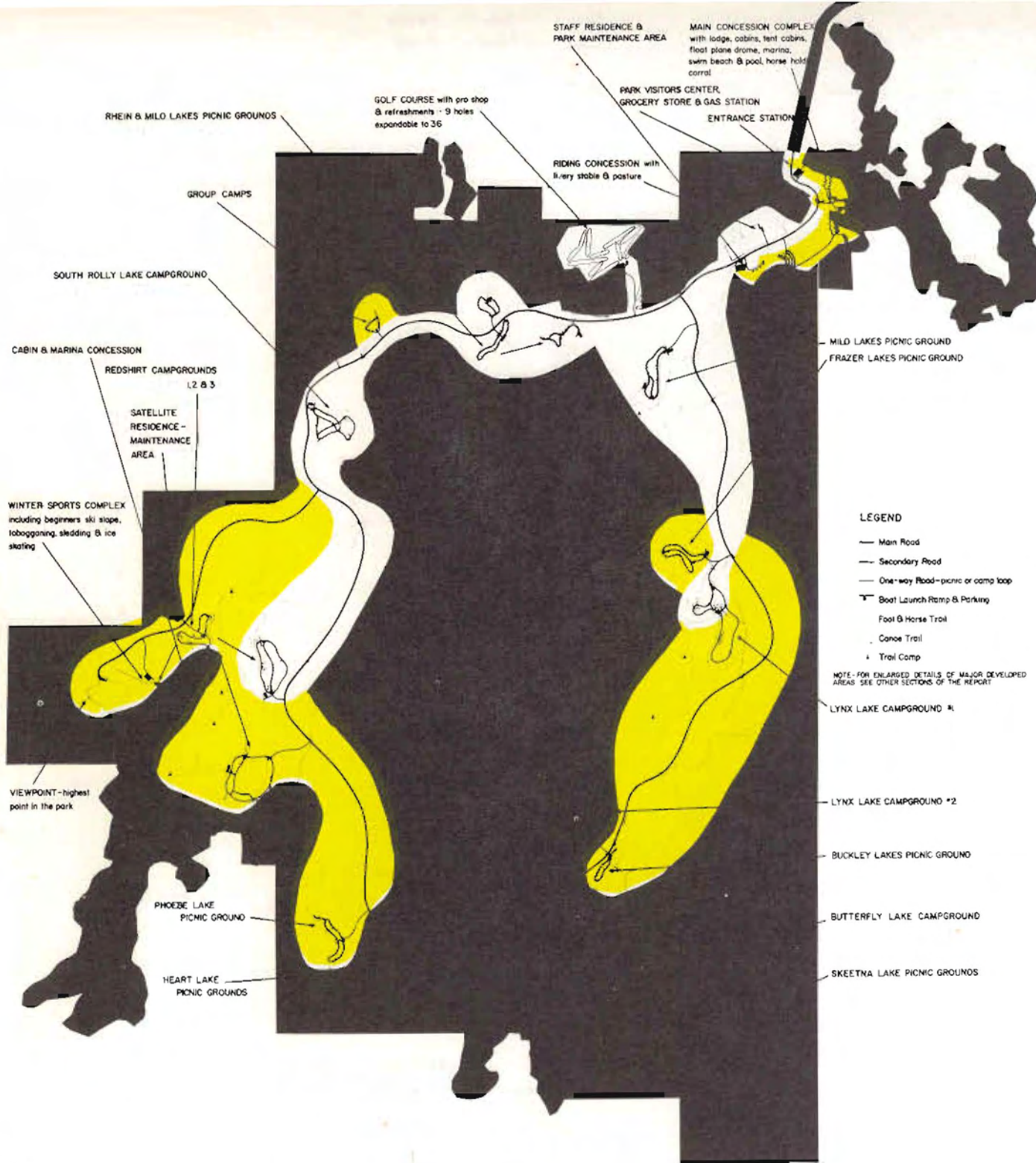


Budget

1970

	Item Cost	Sub- Total	Yearly Total
<b>Main Loop Road Extension</b>			
East leg junction southerly to Lynx Lake Campground No. 1 - 10,800 l.f. . .	\$108,000		
Primary Electrical -- 10,800 l.f. . . . .	86,400		
		194,000	
<b>Lynx Lake Campground No. 1 (in part)</b> <b>(two northerly loops only)</b>			
Secondary access road - 1,300 l.f. . . . .	10,700		
One-way camp road - 4,600 l.f. . . . .	57,500		
2 comfort stations - 500 s.f. . . . .	15,500		
1 washateria, showers and sanitary disposal station (estimated for fully developed campground) 7,500 s.f. . . . .	21,700		
1 Launch ramp . . . . .	3,500		
Parking - 5,670 s.y. . . . .	22,680		
Trail in and adjacent campground - 9,000 l.f. . . . .	9,000		
Camp units - 155. . . . .	54,250		
		194,830	
<b>Other</b>			
Proportioned amount foot-horse and canoe trail -- 1/14th. . . . .	15,000		
		15,000	
<b>Milo Lakes Picnic Ground (in part)</b> <b>(outside loop only)</b>			
Secondary access road - 1,600 l.f. . . . .	14,400		
One-way picnic road - 4,600 l.f. . . . .	69,000		
5 comfort stations - 1,600 s.f. . . . .	49,600		
1 launch ramp . . . . .	3,500		
Parking - 1,175 s.y. . . . .	4,700		
Picnic units - 285 . . . . .	99,750		
		240,950	
<b>Other</b>			
Proportioned amount foot-horse and canoe trail -- 1/14th. . . . .	15,000		
		15,000	
<b>Residence - Maintenance Area</b>			
Secondary access road - 700 l.f. . . . .	6,300		
1 Residence - 1,250 s.f. . . . .	33,750		
Shop - garage building in part - 1,000 s.f. . . . .	14,000		
		54,050	
		\$713,830	
Plus annual construction cost increment 2% . . . . .		14,276	
		728,106	
Total first 5 year program . . . . .			\$2,751,683





## Development Program 1971-75



LONG RANGE DEVELOPMENT PROGRAM - SECOND 5 YEARS - 1971-1975 (inc.) (Rounded to nearest \$1,000)

	Item Cost	Sub- Total	5-Year Total
<b>Concession Elements</b>			
(50% of all elements except as shown otherwise) (all figures to nearest thousand)			
Lodge -- 80 units @ 400 s.f., restaurant and pool . . . . .	\$956,000		
Cabin loops -- 70 units @ 600 s.f. . . . .	672,000		
Tent cabins -- 75 units @ 120 s.f. . . . .	130,000		
Marina inc. launch ramp & parking, 75 boats. . . . .	31,000		
Floot Plane Drome inc. parking -- 6 planes . . . . .	6,000		
Swim beach -- 5,000 s.y., including parking, bathhouse - refreshment building. . . . .	21,000		
Riding concession. . . . .	15,000		
Grocery Store with parking (100%) -- 2,000 s.f. . . . .	68,000		
9 holes of golf course with Club and Storage building (100%) . . . . .	313,000		
Gas Station (100%) . . . . .	15,000		
Red Shirt Marina inc. boat launch and parking -- 50 boats . . . . .	16,000		
Access roads (100%) -- 7,900 l.f. . . . .	71,000		
		2,314,000	
<b>Camp Grounds</b>			
Complete Lynx Lake No. 1 -- 145 units . . . . .	158,000		
Red Shirt No. 3 -- 135 units. . . . .	105,000		
Red Shirt No. 2, Lakeside loop only -- 275 units . . . . .	314,000		
		577,000	
<b>Picnic Grounds</b>			
Complete Milo Lakes -- 70 units . . . . .	56,000		
Frazer Lake -- 370 units . . . . .	275,000		
Buckley Lakes -- 200 units . . . . .	137,000		
Phoebe Lake -- 340 units . . . . .	254,000		
		722,000	

continued next page



**Main Road and Trail Extensions**

West leg of loop -- Red Shirt Campground No. 1 to Phoebe Lake	
Picnic Ground -- 9,000 l.f. . . . .	90,000
Primary Electrical -- 9,000 l.f. . . . .	72,000
East leg of Loop -- Lynx Lake Campground No. 1 to Lynx Lake	
Campground No. 2 Buckley Lakes Picnic Ground -- 15,000 l.f. . . . .	150,000
Primary Electrical -- 15,000 l.f. . . . .	120,000
Red Shirt Complex leg complete -- e.g., from junction with loop to	
Viewpoint Parking Area and Viewpoint Area trails -- 12,600 l.f. . . . .	126,000
Primary Electrical -- 12,600 l.f. . . . .	101,000
Secondary access road to Red Shirt Marina -- 1,800 l.f. . . . .	16,000
Secondary access road to Red Shirt Campground No. 3 -- 1,400 l.f. . . . .	13,000
50% of balance of foot-horse and canoe trail -- 4/14ths . . . . .	60,000
Surfacing all roads constructed through 1974 . . . . .	767,000

1,515,000

**Other**

Entrance station -- 100 s.f. . . . .	3,000
Visitors Center -- 1,000 s.f. . . . .	32,000
1 Residence -- 1,250 s.f. . . . .	34,000
Shop -- garage maintenance building, 5,000 s.f. . . . .	70,000
Access road to one Group Camp plus 50% of Group Camp Trails . . . . .	21,000

160,000

**Land Acquisition**

Tracts -- Redshirt Area - 5, 10, 11, 12, 13, 37, 38, 40, 41, 42, 43, 44 . . . .	72,490
Nancy Lake Area - 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64,	
65, 66, 67, 68, 69 . . . . .	66,272
Lynx Lake -	
Buckley Lakes Area - 17, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34,	
35, 36 and one unnumbered improvement. . . . .	152,288

291,000

5,579,000

Plus annual construction cost increment -- 5% 279,000

Total cost - Second 5 Year Development Program -- \$5,858,000

LONG RANGE DEVELOPMENT PROGRAM - 3RD AND FINAL 5 YEARS - 1976-1980 (inc.)  
(Rounded to nearest \$1,000)

	Item Cost	Sub- Total	5 Year Total
<b>Concession Elements -- All remaining portion</b>			
Lodge . . . . .	\$ 956,000		
Cabin loops - 70 units @600 s.f. . . . .	672,000		
Tent cabins - 75 units @120 . . . . .	123,000		
Marina - 75 boats . . . . .	14,000		
Float Plane Drome . . . . .	6,000		
Swim Beach . . . . .	21,000		
Riding Concession . . . . .	15,000		
9 holes of Golf Course . . . . .	270,000		
Red Shirt Marina - 50 boats . . . . .	9,000		
Red Shirt Cabins - 34 @600 s.f. . . . .	430,000		
Winter Sports Complex including summer-winter refreshment bldg. - 1,800 s.f. . . . .	84,000		
		2,600,000	
<b>Camp Grounds</b>			
Red Shirt No. 2 - complete streamside (southerly) loops - 190 units . . . .	170,000		
Butterfly Lake - 270 units . . . . .	275,000		
Lynx Lake No. 2 - 90 units . . . . .	108,000		
		553,000	
<b>Picnic Grounds</b>			
Heart Lake - 495 units . . . . .	366,000		
Skeetna Lake - 405 units . . . . .	278,000		
		644,000	

continued next page



**Main Road and Trail Extensions**

Connect remaining leg of loop Phoebe Lake Picnic Ground to Lynx	
Lake Campground No. 2 - Buckley Lakes Picnic Ground - 12,000 l.f. . . .	120,000
Primary Electrical - 12,000 l.f. . . . .	96,000
Little Susitna Spur Road - Main loop to Little Susitna River	
including canoe-roft takeout - 11,400 l.f. . . . .	120,000
Primary Electrical to Skeetna Lake Picnic Ground - 8,700 l.f. . . . .	71,000
Surfacing balance of all roads and parking areas constructed . . . . .	308,000
Trail - remaining balance - 4/14ths . . . . .	60,000
	775,000

**Land Acquisition**

Tracts: Nancy Lake Area - 1 . . . . .	4,600
Red Shirt Area - 2, 3, 4, 6, 7, 8, 9, 39, 48, 49, 50 . . . . .	48,545
Butterfly-Skeetna Area - 14, 15, 16, 18, 19, 22 . . . . .	66,461
Big Noluck Lake - 21 . . . . .	280
	120,000

**Other**

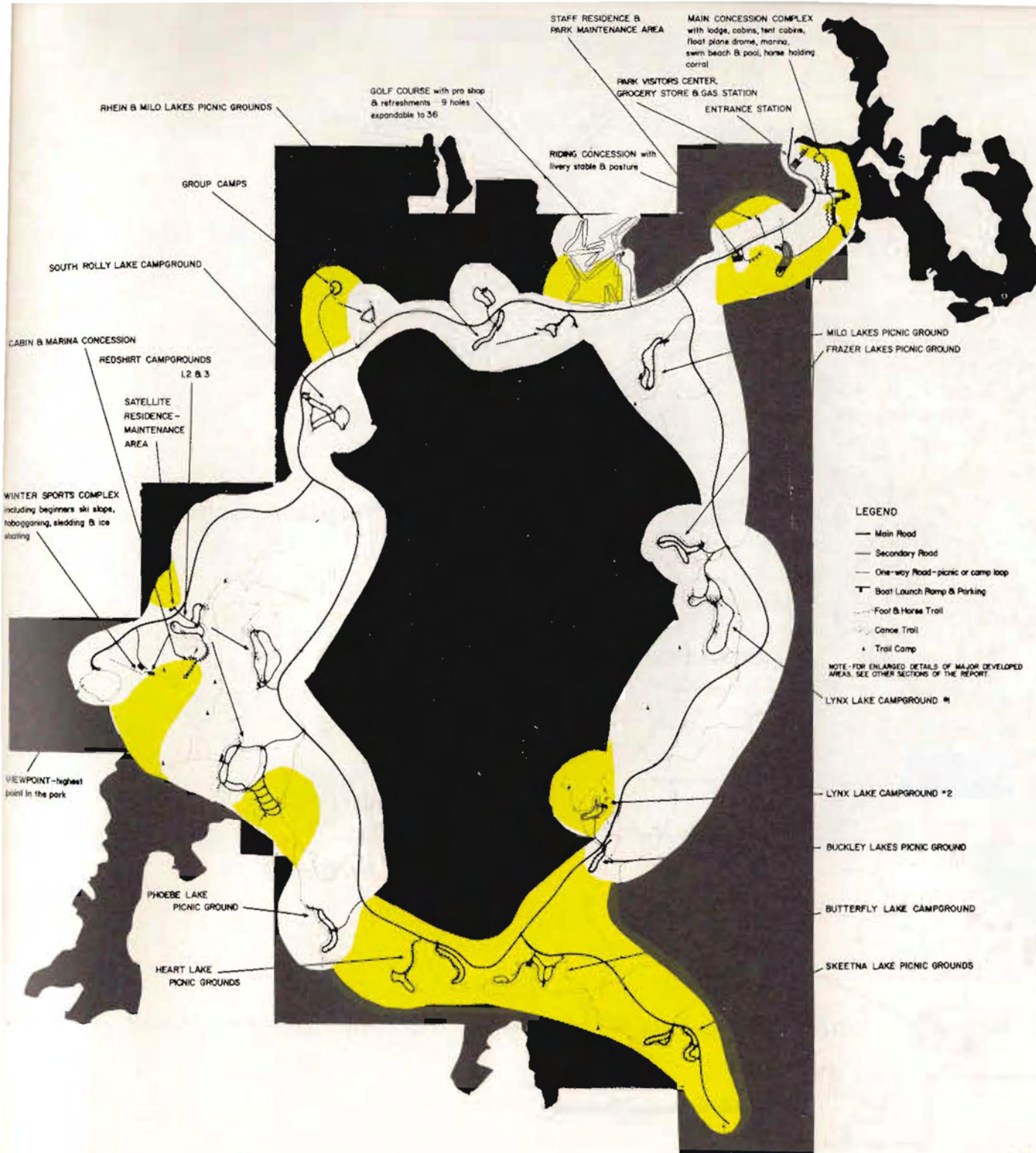
2 Main area residences, 1 Red Shirt residence . . . . .	102,000
Main shop, garage, maintenance building - 5,000 s.f. plus satellite	
garage-shop Red Shirt - 1,000 s.f. . . . .	84,000
Access road to second Group Camp plus 50% of Group Camp Trails . . . .	41,000
	227,000

\$4,919,000

Plus annual construction cost increment - 10% 492,000

Total cost - second five year development program 5,411,000

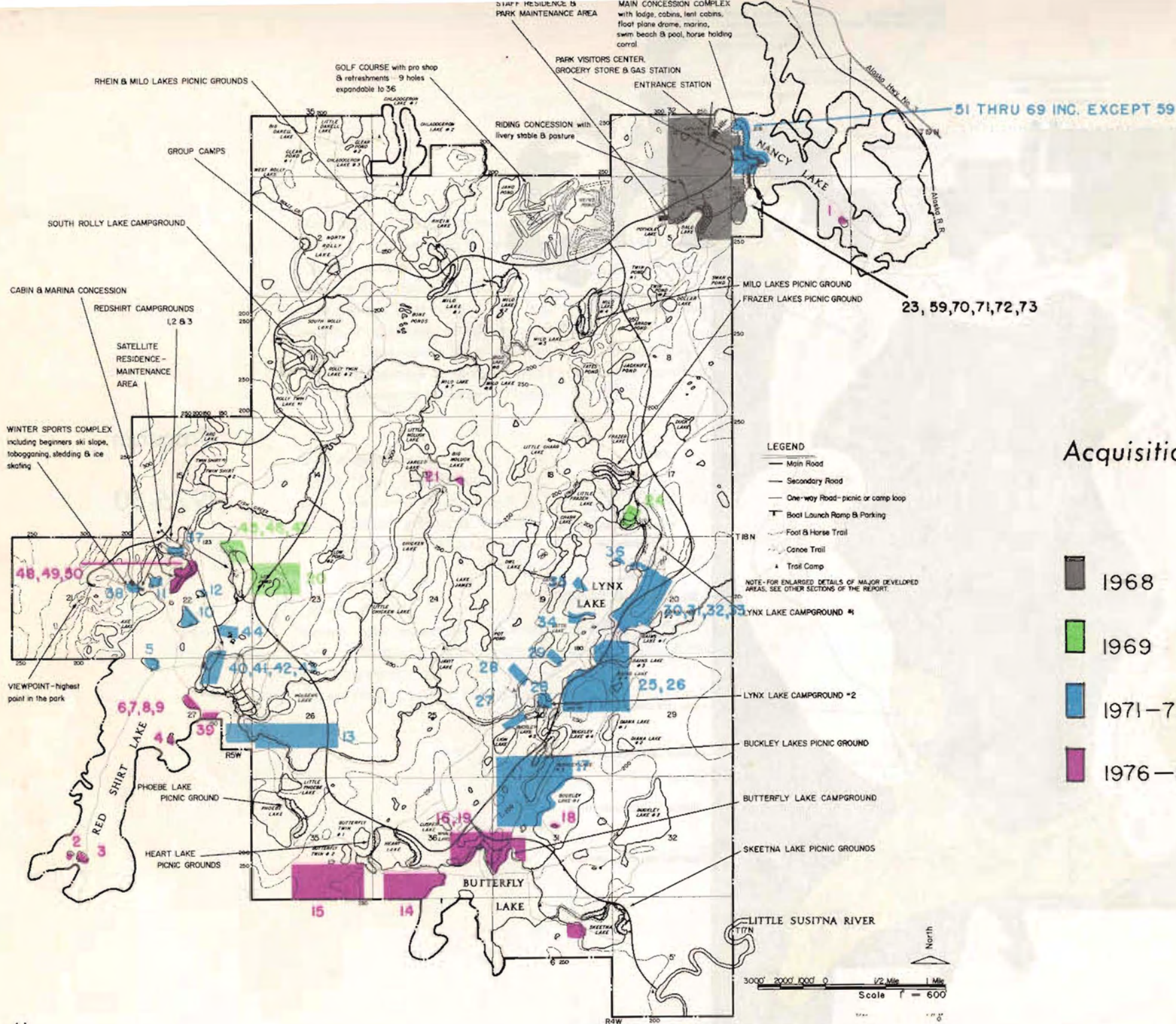
GRAND TOTAL COST . . . . . 14,021,000



Program

1976-80





## Acquisition Schedule





## **PART SEVEN**

*Recommendations On Policies; Maintenance And Operation Including Fees And Charges;  
And Fiscal Summary*



## GENERAL

Policies, M and O (Maintenance and Operation) and F and C (Fees and Charges) are inextricably bound up together. They are not easily categorized and should be looked on as parts of the overall management concept. For instance, it is a matter of **Policy how much fee** will be charged or even **whether** one will be charged at all. If a fee is charged, a change comes over the Operation – the user expects and, in fact, is entitled to receive a better degree of service than if that service had no direct charge. This then bears on the **quality** of M and O.

Whether a fee is charged or not is academic to this report. Fee charging at parks throughout the country is now accepted as necessary policy and the question is not **whether** but, rather, **how much**.

The State of Alaska has the unique opportunity at the Nancy Lake Recreation Area to conduct some trail breaking that could be extremely rewarding to itself and to the balance of the country. This would be in the matter of **Management** (a better term than Maintenance and Operation) of the Area.

Most of the State Parks, either through lack of continuity in planning or in development, have not ended up as efficiently functioning **units**. Nancy Lake is a virgin situation that offers the opportunity to avoid this trap - by establishing and assuring **continuity** and an interlocking, functioning relationship of Plan Program-Management.

**Continuity** in development, as a basis for effective management, especially in view of a development program of 13 years, is of the first importance. As a matter of **Policy** this leads into the ramifications of that subject, with specific recommendations that the following be adopted as basic guidelines:

### GUIDELINE POLICIES

1. That the Master Plan for the Nancy Lake State Recreation Area be certified as an accepted and approved Plan (by whatever State or Departmental action is necessary), **subject to "revision only when so approved by:**

A Nancy Lake Advisory Committee to be appointed by the Governor, with legislative sanction.

2. That the Master Plan includes not only the physical layout but also all written recommendations of the Master Plan document.
3. That Fees and Charges be considered a supplement to tax appropriations as a source of recreation revenue and **not** the primary source of funds.
4. That the Master Plan including all budget and development program cost estimates be updated annually.

\*This would not apply of course to revisions **in detail** but, rather to those of general concept.

The long range value of the Advisory Committee would be to put a rein on the short range view that too often comes about because of a lack of continuity in administration. In the long range development of Nancy Lake there is an ultimate view that must be faced as a sort of unavoidable, inevitable fact. A conflict exists in the planning, design and development of a park like Nancy Lake because on the one hand we are attempting to preserve open space and the natural scene (this is a large part of what people come to the area for) while with the other hand we are introducing man's creations – which, being unnatural, are an intrusive limitation on the natural open space. We know this of course but proceed with the process anyway because we must if we are going to use the land for our purposes. The great and central problem is one of **limitation of use** – at what point will we have gone over the narrow line that preserves the natural just enough for it to still be enjoyed as such? Conversely, what facility or installation or bit of clearing will make it more of man than of nature? What proportion is right? Our cities are 99% man, our woods 99% nature, our cultivated fields lie somewhere in between.

The **Demand Analysis**, Part 2, estimated future numbers of people whose recreation needs must be met. This, in effect is the "man" side of the equation or problem posed above. **Physiography**, Part 3, pointed to the limitations the land imposes because of its particular or even peculiar characteristics. This is the "nature" side of the equation.

The third side of the equation is **the solution side which might be called the "design factor."** It attempts to amalgamate the needs of man with the characteristics of nature so that the natural environment is made useful to man yet is sufficiently preserved to retain its character.

Another way of stating this is to point out that at some point density of people could destroy the very values for which the park was created.

The Advisory Committee should continually monitor this, as a matter of Policy, so the quality of the basic scenic resource is never lost.

### MANAGEMENT PROBLEMS, POLICIES AND RECOMMENDATIONS

As in all areas where water activities are the prime use, there are bound to be conflicts between, A) fishermen of three types, 1) the still fisherman on the shore, 2) the still fisherman in a boat, 3) the trolling fisherman; B) the water skier, C) the paddler in a canoe or rowboat, D) the bather on the beach, E) the joyrider, and in Alaska, a new dimension, F) the float plane plus G) the sailboater.

Rules and regulations to reduce hazardous encounters and to permit each recreationist to enjoy his activity with a minimum of interference will be necessary. Nevertheless, the heavily oriented water use to be expected at the Nancy Lake Area can only result in a major management and enforcement problem.

Some of the use zoning that will be needed has already been accomplished in the planning since campers and picnickers are segregated to different lakes. Campers are more likely to be fishermen,\*\* in fact it is estimated that one-third of campers go boating, two-thirds go swimming and three-fourths go fishing." Not only are campers segregated by lake but the camper lakes have a higher fishery quality - all campgrounds except the one on Butterfly Lake (which is No. 2 rated) are on top fishing potential lakes while picnic grounds are on lakes rated "3" and "4" for the most part. In the Rhein Milo Picnic Ground, Milo #1 is rated "1" and Rhein Lake is rated "2", Frazer Lake at the picnic ground of that name is rated "2". This "built in" separation was intended to be used to confine the kind of boating that disturbs fishermen - joyriding or speed boating and water skiing - to the picnic lakes, Milo #1, Rhein and Frazer Lakes excepted. These three are equipped with launch ramps and should be reserved for the fishing picnicker. All of the other picnic lakes with launch ramps range from a third to three-fourths of a mile in maximum distance across - plenty large enough for water skiing or joyriding.

Another factor of the built-in zoning is that float planes would have no reason to land on the picnic lakes and could literally, be **ruled** off them. Float planes should be permitted only on Nancy, Butterfly and Red Shirt - because of the owners of lakefront cabins - outside the park boundary on those lakes. An additional reason at Nancy Lake would of course be the lodge - cabin concession and other concession attractions. On these three lakes, landing and taxi zones should be marked by buoys so as to separate the water users.

Since it will be impractical to zone joyriders and waterskiers off Nancy, Red Shirt and Butterfly because of the private ownership of lake shore cabins outside the park boundary, zones for these activities, particularly boating, will have to be designated and incorporated in regulations. This can best be done by a detailed analysis of the particular lake, taking into account location of the lakeshore cabins; best fishing locations; necessary float plane landing and taxi zones in view of wind direction, approaches and so on. Sail boating opportunities should not be last sight of in the zoning process. For many of the same reasons as discussed above, it is essential that all privately held islands be acquired. The management problem on conflicting water uses will be compounded in direct relation to the existence of such inholdings - with their planes and boats.

A problem is bound to be encountered with the private holdings as the main road is pushed on into the park. People with inholdings scheduled for acquisition will want access rights to the park road - even if for only the short time until their property is purchased. Others, lying just across the boundary or perhaps near the entrance road will see the park road as a godsend if only they can hook onto it. **It should be a firm policy to deny all such requests.** Effective management of the Nancy Lake Area will be lost if access to park roads is granted willy-nilly as if they were streets with private frontage.

\*Charles Rombold -- AIPE Management Aid #34

No particularly large or unique management problems other than the above seem to be posed. A problem somewhat unique to the Area, only because of its size, is trail system in the interior "quiet zone." This remote area is similar to such areas in many national parks. Large animal hazards may exist in it and stream hazards may occur on canoe trails, particularly to visitors from out of state. A policy of requiring registration of destination and length of absence should be required of all those who trek into the area if such hazards are in fact present.

#### M & O STAFF AND EMPLOYEES

Rangers (enforcement, guidance, protection and public relations) and laborers (housekeeping and cleanup) are the largest personnel costs in most park budgets. However, many new tools and management techniques are available to keep these particular costs at a minimum. The M & O recommendations herein are based on full development of the park, e.g., 1980, and at that time even more advanced methods will of course be available. Management plans should be flexible enough to take advantage of such advances.

It is a **must** that the Nancy Lake Area be set up for complete radio control, using the Entrance Station as the **control center**. All users would check through this point - either to pay the entrance fee (see page 67) or to have a season pass validated. Because outdoorsmen (fishermen in particular) may arrive at any time of the day or night, the Entrance Station would have to be manned around the clock. Other reasons for three shifts would be the long summer daylight - permitting 18 hours of golf for instance, or very real break for those on shift as are many air force personnel at Elmsdorf. One fortunate factor of the long daylight would be to spread the time of arrival and departure of vehicles so that concentrations would be more dispersed than in most state or national parks.

Since radio, the obvious communications medium, should be manned at least 16 hours, (with 24 preferable), its location in the Entrance Station, where 24 hour personnel could operate it, is logical. At certain times, weekends for instance, or when a particular event brings about a surge of vehicles, assistance would have to be available to the Entrance Station attendant-radio operator.

The radio system would include not only all patrol and maintenance vehicles but also telephone type units at all comfort stations; all washroom-shower buildings; key concession offices; staff residences and maintenance buildings and remote points such as the Little Susitna River canoe-raft takeout and the Viewpoint. In these locations its use would be dual - for emergency purposes such as reporting of a fire or boat accident by a park visitor as well as the conducting of normal business between men in the field and the control center.

The Entrance Station would also contain a **master control board** showing occupancy of all camp units. The arriving visitor, on paying his fee, would be given a receipted entry ticket and a set of rules and regulations with a map of the park. His assigned unit would be marked on the map, as explained earlier (see



page 42 ). He would be assigned by type of vehicle and its sanitary equipment-- those fully self sustaining in this respect being sent to parking slips farthest from comfort stations while tent, station wagon, or plain car campers with no sanitary facilities would be assigned the slips closest to comfort stations. This control arrangement would have to be available for periods of maximum use even though it might not be used at certain times -- mid-week for instance or early or late season. The same control might be necessary at times on picnic units. Space should be left for such installation if it should become necessary.

The Entrance Station would not be an information center. Those who wished to discuss something or otherwise act to hold up traffic would be sent to the Visitors Center, a few hundred yards up the road. The Center would contain the office of the Park Superintendent, whose secretary would function as receptionist and general visitor information source. The same building would house a small, self-guided, interpretive center to assist the visitor in becoming fully informed on all facilities and natural attributes of the park. In most cases it would not be necessary that he discuss his need with anyone personally. Also included in the Visitor Center would be the office of the Chief Ranger and a small conference room for staff meetings.

The Chief Ranger would have a staff of 6 temporary (seasonal) rangers. So that one ranger would be on duty at all times, one man would work one shift and two men 2 shifts with an additional man for relief. The Chief Ranger and one of his men would be qualified helicopter pilots, **a helicopter to be a normal complement of their equipment.** At least one daily patrol would be performed in it. By eliminating the need for patrol boots on **at least** the four major lakes, and for a ranger (at least on standby) for the remote quiet area, the helicopter would cut the ranger force by at least half. Capable of landing dry or wet and equipped with a light boat; strap-on-stretcher and first aid kit; and portable pump with hose and bull horn, it could control boat use on the lakes; spot and possible herd dangerous large animals; conduct rescue missions and fight small fires. Its presence on a landing pad at the visitors center would serve as a warning to rules violators as well as a measure of assurance of protection to those many out-of-staters who are concerned over the presence of dangerous animals in the Alaska bush.

The second large force is that needed for housekeeping. Even though the picnic and campgrounds are planned so that refuse cans will be located at the roadside, these cans still must be emptied frequently and any litter picked up. Comfort stations must be cleaned very often as must the washateria-shower buildings. Parking lots in particular and roadways generally must be swept occasionally. Special areas such as boat launch ramps, the Viewpoint, the Swim Beach, the Morinas and Float Plane Drome must be picked up occasionally. During the winter the road to the Red Shirt Winter Sports area and the Main Loop Road would be maintained open.

Besides the daily housekeeping chores there will be normal problems with

electrical and plumbing installations; with vandalism; and the need for painting, patching and general repair of signs and buildings will be continuous.

The basic force to handle this segment of M and O would start with a Working Maintenance Foreman. All his help except for an Assistant Foreman would be seasonal. The two foremen would be capable of handling most electrical, plumbing, painting, heavy equipment or carpentry in the off season. During the summer season their force would include an electrician, plumber, carpenter, pointer, mechanic and heavy equipment operator. Laborers on the housekeeping detail would consist of 1 man per each 100 picnic or camp units -- a total of 46 men. This number of "local" attendants would assure thorough cleaning of comfort stations and washateria-shower buildings once a day and litter pick up and emptying of trash cans at camp and picnic units at least every other day. These people would work over the weekend so as to concentrate activity during and immediately after the period of peak use. Four additional "local" attendants would pick up areas other than camp and picnic grounds -- morinas, Viewpoint, etc. One of them would be equipped with a working scooter with tool box for cleanup of trail camps.

All trees from construction clearing operations should be salvaged and stacked at some central location for eventual sawing up and sale by the concessionaire. As discussed earlier, picnickers are generally satisfied with a charcoal brazier (with which picnic units would be equipped) but campers must have wood fire. It seems even though they may be traveling in a fully equipped trailer or camper. Since the park would be the concessionaire's source of wood, he should be required to sell it for little more than a handling charge.

Trash disposal would be accomplished by a newly developed incinerator trailer. This is a forced air, butane furnace on wheels. Trash is thrown into it and converted very quickly into a fine ash. It is clean, quiet and other than a mild, low roar has no objectionable sound. Priced at \$15,000.00 per unit they would pay for themselves quickly by eliminating long hauls to dumps, sanitary fills and sanitation problems at dump sites.

Two of these units towed by dump trucks (to receive the ash from the hopper in the trailer plus noncombustible bottles, etc.) with a driver and two men working, could empty all cans in picnic and camp grounds plus those at other locations on a schedule of at least once every other day. The task of this team would be to travel down the picnic, camp or other road, remove the filled plastic can liner and throw it in the incinerator. The "local" attendant would previously have emptied any litter into the plastic lined refuse cans and separated out the bottles etc. After the incinerator unit had passed the "local" attendant would place a new liner in the can.

The golf course will of course require a rather specialized maintenance crew. Because of the nature of golf course maintenance and the need for intimate knowledge of the particular course -- knowledge that cannot be acquired by seasonal workers, it is recommended that a Golf Course Foreman with an As-

sistant Foreman be employed as permanent staff at such time as the first 18 holes are completed. These men would be supplemented by 5 seasonal helpers for the 18 holes or 3 for the first 9 to be constructed.

Lodge, cabin, tent cabin and certain other refuse, though the concessionaires responsibility, must be considered in refuse disposal. Miscellaneous light refuse from the cabin areas, lodge and tent cabins could be handled by the incinerator units which the concessionaire could lease for the purpose. They would be available to him for instance during two shifts of the day. Heavy, wet, restaurant garbage should be handled by heavy duty kitchen disposals and thence into the sewage system.

It is suggested that as many employees as possible be natives-for local color and the benefit of out-of-state visitors-but, more important, to furnish needed jobs for those people. It is noted, for instance that "50-75% of the adult, native work force is permanently unemployed except for sporadic summer jobs."

In summary, the following is a list of permanent staff and seasonal employees that would be needed to maintain and operate the area, excepting concessionaire operations.

	Gross Pay (if seasonal - 90 days - 540 hrs.)
Superintendent . . . . .	\$ 17,500
Secretary - receptionist - visitor information . . . . .	6,000
Radio operator -- Entrance station attendant - 4 seasonal @\$4.50. . . . .	9,720
On call, part time assistance and relief - 1 . . . . .	1,215
Chief Ranger (qualified helicopter pilot). . . . .	15,000
6 seasonal rangers including a qualified helicopter pilot @\$5.00 . . . . .	16,200
Maintenance Foreman (working) . . . . .	12,000
Assistant Maintenance Foreman (qualified heavy equipment operator) . . . . .	10,000
Electrician )	
Plumber )	
Carpenter ) seasonal @\$7.00. . . . .	18,900
Painter )	
Mechanic )	
50 "local" attendants - seasonal @\$4.00 . . . . .	108,000
12 lifeguards (swim beach) seasonal @\$4.00. . . . .	25,920
Golf Course Foreman (working). . . . .	12,000
Assistant Golf Course Foreman (working). . . . .	10,000
5 golf course helpers, seasonal @\$4.50 . . . . .	12,150
	\$240,170
Division level administration 10%. . . . .	24,000
	\$264,000

BASIC M & O EQUIPMENT

	Cost
2 man helicopter . . . . .	30,000
Superintendent vehicle -- station wagon. . . . .	4,000
Chief Rangers vehicle - station wagon. . . . .	4,000
2 Ranger automobiles. . . . .	7,750
Shortwave Radio station and all appurtenances . . . . .	7,500
Fire truck with suction hose. . . . .	20,000
Motor patrol and snow plow . . . . .	25,000
7 pickup trucks - one for each trade; foreman and assistant firemon @\$4,000 equipped . . . . .	28,000
2 incinerator trailers. . . . .	30,000
Light bulldozer . . . . .	7,500
Ford tractor with all attachments - post hole auger, trenching backhoe, etc.. . . . .	7,500
Emergency inboard patrol boat on trailer . . . . .	6,000
Work boat for canoe trail maintenance . . . . .	6,000
Fogging equipment . . . . .	5,000
Full set golf course maintenance equipment . . . . .	15,000
Street sweeper . . . . .	6,000

(Note - road maintenance service should be arranged with State Highway Department)

Portable welding outfit . . . . .	1,500
Concrete mixer . . . . .	2,500
1 Stake body truck . . . . .	5,000
1 Dump truck . . . . .	5,000
Carpenter shop - equipment. . . . .	1,500
Mechanic, plumber, painter shops equipment @\$750 each . . . . .	2,250
	\$227,000

MAINTENANCE BUILDINGS - SPACE REQUIREMENTS

Gorage and vehicle storage. . . . .	7,500
Shops and foreman's office -- carpenter, paint, plumbing, mechanic . . . . .	3,000
Golf course equipment gorage . . . . .	750
Helicopter hanger . . . . .	500

Space should be designed into each washateria-shower building and at every other comfort station for small hand tools -- rakes, shovels, etc. Space should be included at each comfort station for 300 feet of garden hose for emergency fire use. A vandal proof storage closet is all that is necessary in these buildings for these purposes.

\*Rampart Project, Alaska - U.S. Dept. of Interior - Vol. 1



## STAFF - HOUSING REQUIREMENTS - MINIMUM RESIDENCES

Superintendent  
Chief Ranger  
Maintenance Foreman  
Assistant Maintenance Foreman  
Golf Course Foreman

## FEES AND CHARGES

The single access point of Nancy Lake assures practically 100% control over users. True, a few could come in "over the fence" via float plane or by boat across one of the lakes on the boundary, or even on foot but the total of these would be insignificant.

The most direct, the least costly in overhead and the **least objectionable** method (to the user) would be collection of one fee at the entrance point. The problem that arises is one of differentiating among users and "selling" a minimum number of "pockoges."

Concession charges would be collected at the point of sale or service by the concessionaire but the lodge or cabin patron should still pay a single entrance fee. A season ticket in the form of a decal is essential. This would permit repeat users to avoid stopping at the Entrance Station on every visit. They could be waved on through. It is recommended that the season decal be one charge which would permit use of all facilities other than those that are concessionaire operated. It is also recommended that the daily entrance charge be directly related to the vehicle being used.

Tabulated, these charges would be:

Season Decal -- Would permit entry of any vehicle carrying it whether with or without a boat or camping trailer and would permit unlimited use of picnic grounds, camp grounds and launch ramps. . . . . \$10.00

Daily Entry Charges -- Vehicles without boat, camping trailer or camping equipment (Party of picnickers, sightseers, swimmers, hikers or concessionaire customers) . . . . . \* .75  
Same type party with boat . . . . . 1.25

Camping party in car, camper or with camping trailer but without a boat . . . . . 1.50

Each additional day . . . . . 1.00

Same type party with boat . . . . . 2.00

Each additional day . . . . . 1.50

Greens fee -- collected at the golf course . . . . . \$3.00 nine holes  
\$5.00 eighteen holes

\*Rebated by the concessionaire if a short term customer only -- e.g., dining room, etc.

## CONCESSIONAIRE OPERATIONS

Simple, "high bid" concessionaire contracts should, as a matter of policy, be avoided. The National Park Service has operated on a basis of negotiation of such contracts for many years, finding this method to be best suited to the major concession operations it sanctions in the national parks. The basic purpose of course of concessions is to provide a needed public service.

Having a concessionaire operate such services removes the public agency from the private enterprise field. At the same time it enables the public agency to control the amount of profit, assuring that gouging does not occur and that the public receives its money's worth in all concession purchases.

Under his contract the concessionaire, subject to State approval, would establish charges for:

1. Occupancy of the lodge, cabins or tent camps and all charges related thereto.
  - a. Lodge patrons only would be permitted use of the lodge pool.
2. Restaurant.
3. Horse rental and guided or group trail rides.
4. Marina operations including boat rental, slip leasing, boat gas, supplies and equipment.
5. Cruiser rides -- Nancy Lake.
6. Float plane slip leasing, gas and service.
7. Bothouse basket rental and all elements of the Swim Beach refreshment stand (mostly coin operated machines).
8. Grocery store -- could include fish handling, freezing and packing.
9. Gas Station.
10. Golf Course -- pro shop, golf cart rental but not greens fees.
11. Winter Sports Complex -- warming house, refreshment stand, ski school, ice skates, skis, sleds, toboggans, snow mobiles -- rental.

The Entrance Station would not be manned of course during the winter except, possibly, for major events when it might be used as a ticket booth. The concessionaire should be permitted to make an overall entrance charge for admittance to the Winter Sports Complex. If there is considerable interest in ice fishing, the concessionaire should be enabled to rent fishing huts which he would set up on the ice of any lake that is accessible. Or the huts could be stored (during the winter only) in boat launch ramp parking areas and towed out to locations specified by fishermen. Park maintenance people would plough snow for concessionaire's winter access.

## FISCAL SUMMARY (APPROXIMATION)

Concessionaire -- Lodge, Cabins, Tent Cabins -- based on 80% occupancy  
-- 75 day season averaged overall rate per person per day -- total of  
450 units, 1800 persons -- lodging only @\$10.00 day . . . . . \$1,080,000

Restaurant -- lodge patrons only plus 10% drop-in trade -- 480 persons  
@\$9.00 per day . . . . . 324,000

Riding Concession -- average 100 hours rental per day -- 75 day  
season @\$2.50 . . . . . 18,750

Marinas -- average 200 hours boat rental per day -- 75 day season  
@\$3.00 . . . . . 45,000

### Grocery Store and Gas Station

Based on total campground, cabin, tent camp units of 1940 - 50% of  
occupancy (to compensate for grocery stock carried in) for 75  
day season expenditure of \$1.50 per person per day -- average party  
size of 4. . . . . 436,500

All other sources . . . . . 200,000

Gross sales rounded to nearest 10,000 . . . . . \$2,100,000

Profit 15% . . . . . \$ 315,000

## INCOME SUMMARY (Rounded to nearest \$1,000)

5% concessionaire profit to State of Alaska . . . . . \$ 105,000

### \*Income from entry charges

(1) Campers (52,500 parties) all for two day stay.

25% with boat -- 13,125 @\$3.50 . . . . . 46,000

75% without boat -- 39,375 @\$2.50 . . . . . 98,000

(2) Picnics (95,700 parties) 10% with boats -- 9570 @\$1.25 . . . . . 12,000

90% without boats -- 27,100 @\$.75 . . . . . 65,000

Greens fees -- 100 - 18 hole rounds per day -- 175 day

season -- @\$5.00 . . . . . 39,000

Total receipts \$ 365,000

\*It is assumed that 10% or less would purchase the season decol. This number  
would not alter these approximations sufficient to warrant calculation.

(1) Based on 80% occupancy of all units for 75 day season.

(2) Based on 100% occupancy of all units Saturdays and Sundays; 10% occu-  
pancy week days for 11 week season.

## SUMMARY

\*Annual costs (Rounded to nearest \$1,000)

75% Payroll . . . . . \$ 264,000

2% Services - contractual . . . . . 7,000

7.5% Commodities . . . . . 26,000

8.5% Current charges and obligations . . . . . 30,000

7% Properties . . . . . 25,000

Total. . . . . \$ 352,000

Receipts . . . . . 365,000

Total operating profit. . . . . \$ 13,000

\*AIPE - Bulletin #36 - Budgeting



THE CONSULTANT WISHES TO PARTICULARLY THANK THE FOLLOWING LISTED AGENCIES FOR THEIR DIRECT ASSISTANCE:

Alaska Department of Fish and Game

Alaska Department of Public Works -- Division of Buildings

Alaska Department of Economic Development and Planning

Alaska State Highway Department

U. S. Department of Agriculture

Soil Conservation Service -- Palmer, Alaska

Forest Service -- Regional Office, Juneau, Alaska

U. S. Department of Interior

National Park Service -- Cooperative Activities Branch

Bureau of Land Management -- Anchorage, Alaska

Fish and Wildlife Service -- Bureau of Sport Fisheries and Wildlife --  
Kenai, Alaska

The consultant is obligated to the Alaska Department of Economic Development & Planning, Trovel Division for the photos on pages 12, 13, 19, 42 and 62 and to Mr. Peter Martin, Alaska Division of Lands, Anchorage for the photos on pages 14, 15, 17, 29, 31, 32, 45 and 48.

IN ADDITION TO THOSE DIRECTLY QUOTED, THE FOLLOWING PUBLICATIONS SERVED AS IMPORTANT REFERENCES FOR THE REPORT:

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