

Volume 8



1966-1967

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STATE OF ALASKA

Walter J. Hickel, Governor

ANNUAL REPORT OF PROGRESS, 1966 - 1967

FEDERAL AID IN FISH RESTORATION PROJECT F-5-R-8

SPORT FISH INVESTIGATIONS OF ALASKA

ALASKA DEPARTMENT OF FISH AND GAME  
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## INTRODUCTION

This report of progress consists of findings and work accomplished under the State of Alaska Federal Aid In Fish Restoration Project F-5-R-8, "Sport Fish Investigations of Alaska."

The project during this report period is composed of 20 separate studies. Some are specific to certain areas, species or fisheries, while others deal with a common need for information. Each job has been developed to meet the needs of various aspects of the State's recreational fishery resource. Seven jobs are designed to pursue the cataloging and inventory of the numerous State waters. These are divided into logical utilization areas and are jobs of a continuing nature. It will be many years before an index of the potential recreational fishing waters is completed. Six jobs are directed toward specific sport fish studies. These include special efforts toward the anadromous Dolly Varden of Southeastern Alaska, silver salmon in Resurrection Bay, king salmon stocks on the lower Kenai Peninsula, king and other salmon stocks in Upper Cook Inlet, and Arctic grayling and sheefish in Interior Alaska. Special reports have been prepared on specific phases of the Dolly Varden life history and appear in the Department's special "Research Report" series.

The Statewide access evaluation remains one of the most important jobs conducted under this Federal Aid Program. It provides the Department with a tool to recommend withdrawal of suitable access sites on potential recreational fisheries throughout the State.

The remaining jobs include creel census efforts on specific fisheries in high use areas of the State, an egg-take program directed toward locating suitable indigenous stocks, perfecting advanced techniques in taking, handling and rearing species that are not normally associated with standard fish cultural practices, and continuation of the evaluation of the Fire Lake System.

The material contained in this report is often fragmentary in nature. The findings, evaluations and interpretations contained herein are subject to re-evaluation as the work progresses and additional data are collected.

## RESEARCH PROJECT SEGMENT

STATE: ALASKA Name: Sport Fish Investigations of Alaska.  
Project No: F-5-R-8 Title: Investigations of Alaska's Public Fishing Access Requirements.  
Job No: 18-G

Period Covered: July 1, 1966 to June 30, 1967.

## ABSTRACT

Statewide public access investigations were concerned largely with the broader aspect of multiple use land managing rather than individual site recommendations.

Public recreation land classifications issued by the Department of Natural Resources, Division of Lands, reserved 62,298.36 acres on 138 lakes and 7 streams. The Public Access Investigation Project is assisting in planning the intensive development at the Nancy Lake recreation area. This will furnish fully developed public use facilities on 23 lakes by 1980.

Cooperation with land use planning is also being extended to the State Division of Lands and local Borough governments for recreation-oriented areas located at the Palmer Flats, Keystone Canyon, and the Chena River.

The State Department of Highways was assisted with information concerning access points and route location for realignment projects and new highway construction.

Cooperative studies were conducted with the Bureau of Land Management to determine the highest possible utilization of the fish and game resources in proposed multiple use classifications located in the Forty Mile, Lake Iliamna, and Denali Highway-Gulkana River areas. Investigations concerning fish size and distribution were conducted on 38 lakes falling within the Denali classification.

Recreation and Public Purpose Applications were processed through the Bureau of Land Management for three sites located on the Alaska Peninsula and one site near Glennallen.

Grants of right-of-way obtained from private land owners will furnish access to two lakes and one river.

## RECOMMENDATIONS

1. It is recommended that the project of investigating Alaska's public sport fishing access requirements be continued.
2. It is recommended that site and access requests to land agencies be made on the basis of recreational and multiple-use land planning, with the Department of Fish and Game cooperating with the land agencies in formulating such land plans.
3. It is recommended that the location, size, and nature of a proposed access site be made in terms of biological carrying capacity of a particular body of water, in addition to the need imposed by an anticipated public use based on highway traffic and population.
4. It is recommended that continued effort be directed toward the improvement of techniques in cataloging land and biological data to enable fast, accurate recall of information.

## OBJECTIVES

1. To investigate potential recreational fishing areas in the public domain, State selected lands, borough grant lands, and when required, private lands.
2. To make recommendations to State, Federal, and local governmental agencies for the classification of lands for public fishing access purposes.

## TECHNIQUES USED

1. Biological data were gathered from Department of Fish and Game lake and stream survey records. Current information was also obtained, using standard biological field survey methods, while working in cooperation with district biologists.
2. Land status information was obtained from public records and ownership files located in borough, State, and Federal land offices. Access information obtained was cataloged and coded for inclusion into the statewide access site inventory catalog.
3. Cooperative field parties, including land planners, geologists, foresters, and biologists from Federal and State agencies, conducted on-site investigations and discussed merits of possible management plans while viewing the resource and geography.

## FINDINGS

The access project assisted the programs of various Federal and State land agencies by furnishing biological and hunter-angler harvest information obtained from field investigations and other projects undertaken by Department of Fish and Game biologists.

The Department of Natural Resources has a policy of providing public access sites to every body of water suitable for fish production on which it classifies land. Information provided by the Department of Fish and Game is used often in considering the size and location of access sites to be classified for public recreation.

During this report period, public recreation land classifications reserved 62,298.36 acres of land furnishing access to 138 lakes and 7 streams (Table 1). These were issued by the Department of Natural Resources, Division of Lands.

TABLE 1. State Land Classifications for Public Recreation, 1966.

<u>Classification Order</u>	<u>Acreage</u>	<u>Water</u>	<u>Location</u>
360	2,000.00	Taiya River	Skagway
412	21,127.00	Nancy Lake Recreation Area	66 mi. N. of Anch.
413	42.21	Twin Island Lake	10 mi. NW Anch.
413	56.09	Lost Lake	10 mi. NW Anch.
413	19.93	Un-named Lake "A"	10 mi. NW Anch.
413	4.97	Un-named Lake "B"	10 mi. NW Anch.
423	9.69	Miller Point	Kodiak
426	38,974.71	Shaw Creek Flats	84 mi. SE Fairbanks
436	63.76	Tanana River (Chena Townsite)	Fairbanks

The most noteworthy State lands classifications in terms of area are the Nancy Lake Recreation Area and the Quartz Lake-Shaw Creek Flats Area.

The State Division of Lands contracted with Sam L. Huddleston and Associates of Denver, Colorado to provide a master plan for the Nancy Lake Recreation Area. The Huddleston plan calls for full development by 1980, at a total cost of 14 million dollars. According to current population projections through 1980, the area will furnish outdoor recreation access for an estimated 195,000 people living in the greater Anchorage metropolitan area.

The Nancy Lake Recreation classification, located in the Kettle-Morain area 66 miles north of Anchorage, will furnish access to 67 lakes larger than 5 acres in size and 17 miles of streams. Twenty-three lakes within the 10,557-acre recreation area are believed suitable for fish management.

Initial recommendations to the State Division of Lands for public access to key lakes within this area were started in 1959 when use sites were recommended on 11 lakes. Additional sites on nine lakes were recommended in 1963, and one in 1965. Access sites were not requested for two additional lakes as their suitability for fish production has only recently been determined.

The Shaw Creek Flats-Quartz Lake land planning unit is located 84 miles southeast of Fairbanks, north of the Tanana River at Big Delta. The land classifications within the unit consist of 743.00 acres for private recreation, 10,313.00 acres for timber, and 38,974.71 acres classified for public recreation.

Quartz Lake, located in the center of the planning unit, is 1,240.00 acres in size, has a maximum depth of 43 feet and contains northern pike Esox lucius (Linnaeus), and whitefish, Coregonus Clupeaformis (Mitchell).

Prior to Statehood, the Bureau of Land Management had withdrawn a large area on the lake for public recreation. The 753.00-acre private recreation classification will be located on Quartz Lake. Sufficient land was classified as public recreation to provide access to the lake. The land on which much of the public recreation classification is located consists of poorly drained soil underlain with permafrost. This results in a flat area being covered with scattered ponds and areas of standing water too shallow to maintain fish populations. The final land plan for this unit was formulated without the assistance of the Department of Fish and Game. The plan requested that the large area of muskeg be classified for public recreation on the basis of being prime moose and waterfowl area.

#### Proposed Public Recreation Land Classifications

Public Recreation land classifications are being considered for the Palmer Hay Flats near Palmer, Keystone Canyon near Valdez, and the Chena River near Fairbanks.

The Palmer Hay Flats classification order will be a major step in providing the much needed land control for management of the moose and waterfowl which are seasonally abundant in the area. The Palmer Hay Flats is a level, marshy, tundra area approximately 13 miles long and 4 miles wide, located 28 miles northwest of Anchorage and 5 miles southwest of Palmer. The sport fisheries within the area include the Palmer Slough containing rainbow trout and silver salmon, and Cottonwood Creek containing rainbow trout and runs of silver and sockeye salmon.

The Keystone Canyon area, located 15 miles from Valdez on the Richardson Highway, is being considered by the Department of Natural Resources for the establishment of a State park. Biological and limnological information on the four sport fisheries within the area was provided by the Department of Fish and Game. Sea run Dolly Varden are found in the Lowe River, and rainbow trout stocked by the Department of Fish and Game are in Blueberry Lake, Summit Lake #1, and Summit Lake #2. The three alpine lakes have a total area of 85 surface acres.

The proposed Chena River recreation area, located 55 miles east of Fairbanks, was provided for by the 1967 Alaska State Legislature in Senate Bill 101. The recreation area will provide access to 28 miles of the Chena River. The description of the protracted sections and townships included in the recreation area is:

Township 1 North, Range 6 East, Fairbanks Meridian, Section 24.

Township 1 North, Range 7 East, Fairbanks Meridian, Section 1, 2, 3, 8, 9, 10, 11, 12, 15, 16, 17, 19, 20, and 21.

Township 2 North, Range 7 East, Fairbanks Meridian, Sections 12, 13, 24, 25, 35, and 36.

Township 2 North, Range 8 East, Fairbanks Meridian, Sections 6, 7, and 18.

An important sport fishing access point to the Chena River was obtained when the Forestry Branch of the State Division of Lands specified in a timber permit that the permittee was obligated to extend the access road that was to be constructed into the timber area to the bank of the river.

Reserve-Use Applications are recorded by the Division of Lands at the request of the Department of Fish and Game. Sites on which Reserve-Use Applications are filed may or may not be ultimately classified for public recreation or for Reserve-Use with recreation the intended use. A Reserve-Use Application is merely a request for that portion of land to be considered for Reserve-Use classification at some future date. Reserve-Use Application actions during the report period were:

1. Reserve-Use Application 33629 was applied to a 10-acre site on the Wood River (1860) near Dillingham.
2. Reserve-Use Application 27194 was applied to a 41.2-acre boat launch site on the Chatanika River (224) near Fairbanks.
3. Reserve-Use Application 26670 on Parson Lake (1413) on the north Kenai Peninsula was withdrawn due to conflict with a private entry.

#### Department of Highways Cooperative Planning

The Department of Highways will construct an approach to a proposed boat launch site on the Tanana River at Nenana. A boat launch site at this point will provide a facility for river boat users from Fairbanks to reach prime hunting and fishing along the Tanana and Nenana Rivers. This site will also be the nearest access to Interior waters for anglers and hunters from Southcentral Alaska upon completion of the Anchorage-Fairbanks Highway.

An aerial survey was conducted with the Game Division of the Department of Fish and Game on the Willow-Honolulu segment of the partially completed Anchorage to Fairbanks Highway. The highway route was surveyed for access needs to sport fishing waters and hunting areas that will be available to the public upon completion of the road.

The Petersville road, extending west from Talkeetna to the gold mining community of Petersville, which will be connected to the highway system in the fall of 1967, was examined for critical access areas. Recommendations will be submitted to the Department of Highways and Department of Natural Resources for access routes and sites in critical areas upon completion of on-the-ground inspections.

Recommendations concerning three possible routes of the proposed Alaska Peninsula crossing were submitted to the Department of Highways. The proposed highway would link the Cook Inlet area, which is served by the Marine Highway, to the villages of King Salmon and Naknek on the Kvichak Bay. The northern route begins at Iniskin Bay and follows the north shore of Lake Iliamna to Igiugig and King Salmon. The middle route extends from Ursus Cove to Kokhanak Village and along the south shore of Lake Iliamna to King Salmon. The southern route also begins at Ursus Cove then to the southwest by way of the McNeil River Valley to King Salmon. The northern route, which would afford the best access to the sport fisheries at Iliamna, could be most harmful to the trophy rainbow trout fishery and the red salmon spawning areas if strict control is not maintained over all construction in that watershed. Gravel must not be taken from the streams and beaches, or siltation allowed to occur, because of removal of the limited vegetative cover.

#### Cooperative Studies - Bureau of Land Management

The United States Department of the Interior, Bureau of Land Management, requested information and assistance from the Department of Fish and Game concerning the wildlife resources in the Forty Mile, Lake Iliamna, and Denali Highway-Gulkana Basin management units. The BLM will be segregating and classifying lands under the authority of Public Law 88-607 which directs that certain lands be disposed or managed under the principles of multiple use.

The Bureau of Land Management has segregated and is proposing to classify 6,522,000 acres of land in the Lake Iliamna-Cook Inlet area located 200 miles southwest of Anchorage. The proposed land use classification, the first under Public Law 88-607, includes many of the sites recommended by the Department of Fish and Game in 1964 and will give the BLM the land tenure necessary for long range management activities.

Commercial development of the mineral deposits discovered in 1964-1965, along with the building of the proposed road from Cook Inlet to King Salmon, will put critical pressure on the vulnerable trophy fishery if orderly land use is not instituted. Preliminary information necessary for the segregation was gathered on cooperative BLM-ADF&G field trips during 1964 and 1965. Definitive site studies will be conducted jointly during 1967.

A 634,480-acre recreation complex located along the Canadian Border north of the Alaska Highway and south of a line formed by the Salcha, Charley, and Kandik River drainages will be segregated from the public domain and classified for retention under Public Law 88-607, according to the plans of the Bureau of Land Management. The complex will furnish access to 153 miles of frontage on the Forty Mile River, the Dennison, Walker and North Forks of the Forty Mile River and the West Fork River. These contain grayling, Thymallus arcticus; northern pike; salmon, Oncorhynchus sp; sheefish, Stenodus leucichthys; and whitefish, Coregonus sp.

The Bureau of Land Management issued Public Land Order 4176 (Fairbanks 035286) on March 9, 1967 for the withdrawal of 1,760 acres of land on 5 creeks located 49 to 61 miles northeast of Fairbanks (Table 2). This withdrawal will furnish access to roadside grayling fishing and to hunting and fishing areas off the Steese Highway.

TABLE 2. Sites Withdrawn With Public Land Order 4176, March 9, 1967

<u>Fish &amp; Game Number</u>	<u>Water</u>	<u>Location</u>	<u>Size of Site</u>
1784	Moose Creek	T5N R4E FM	480 acres
1774	Grouse Creek	T5N R4E FM	400 acres
1747	Perhaps Creek	T5N R5E FM	200 acres
1748	U. S. Creek	T5N R5E FM	440 acres

#### Recreation & Public Purpose Applications

Public Domain lands administered by the Bureau of Land Management may be leased or purchased under the provisions of the Recreation and Public Purposes Act. The lands must be used for recreational purposes or publicly owned facilities. This land action, which is ordinarily not undertaken for less intensive recreational uses such as hunting and fishing, is utilized because of specific research projects or development at a critical site. The area contained within the site boundaries is also open to the public for hunting and fishing.

Recreation and Public Purpose Applications were processed through the Bureau of Land Management for four sites (Table 3). The sites will furnish public access while granting the Department of Fish and Game the land control necessary for research and management activities.

TABLE 3. Recreation and Public Purpose Sites Initiated, 1966-1967.

<u>Fish &amp; Game Number</u>	<u>Site</u>	<u>Acreage</u>	<u>Date of Action</u>	<u>BLM Serial No.</u>
00607	Nuyakuk River	59.60	Sept. 26, 1966	AA-289
01853	Nushagak River	30.00	Sept. 26, 1966	AA-290
01854	Togiak River	8.20	Sept. 26, 1966	AA-288
00170	Our Creek	1.32	March 23, 1967	AA-840

### Special Land Use Permits

One Bureau of Land Management special land use permit was requested and granted. A 7.4-acre site on Cold Bay (1020) was requested on August 26, 1966, BLM Serial No. AA-201. The Department of Fish and Game later (April 1967) requested the SLUP to be rescinded to allow for State selection of the site.

A considerable portion of the 1966 field season was spent in the Denali Highway area gathering public use and biological data for the Bureau of Land Management's proposed recreation classification.

An aerial survey of 38 lakes located within the proposed classification was conducted during June. Twenty-three lakes were considered deep enough to support fish populations, nine were too shallow to support fish, and the water depth in the remaining six lakes was undetectable due to water coloration.

Seven of the deep lakes were tested for fish populations with standard variable mesh gillnets. Two 125-foot nets were set overnight in each lake. Fish taken included lake trout, grayling, whitefish, burbot, and suckers. Two lakes produced lake trout averaging 61.0 cm fork length.

On-the-ground studies were conducted during July utilizing saddle and pack horses for transportation. Field work started in 1966 in the Denali area will be completed during the 1967 field season. Biological and site locational data will be used in recommendations to be submitted to the Bureau of Land Management for inclusion into their management plan for the proposed multiple-use oriented recreational complex.

The Bureau of Land Management is currently compiling information on clear-water streams located on public domain lands which are navigable by canoe and rafts. The information will be available to the public in 1967 in a brochure listing those waters. The canoe waterways will have terminal points on the road system and will furnish access to large areas of prime fishing for low development costs.

### Private Lands

Grants of right-of-way from private landowners were obtained for access to three waters during this report period.

A picnic and public use site on Matanuska Lake near Palmer, was obtained for use in conjunction with the proposed Dan McGinnis Memorial Site and scenic overlook. Site description is NW 1/4 Sec. 23, T17N, R1E, SM. The site, which was granted to the public for recreational use by a private land owner, will be accessible over University of Alaska Experimental Farm lands. The Board of Regents will be the final authority as to whether such access will be allowed. The Matanuska Valley Sportsmen Club plans to undertake the development of the site on this highly productive lake.

A homestead entryman with land lying between Moose and Tolsona Lakes near Glennallen granted a right-of-way for public use of an existing trail between the two lakes. The right-of-way is located in Section 13, T4N, R5W, CRM. Formerly, the only legal access to Moose Lake was a trail over public domain land around Tolsona Lake. The new right-of-way is particularly important for snow vehicle travel and will also allow boaters to portage from Tolsona Lake to Moose Lake.

A right-of-way was granted by land purchaser Gordon Kukowski for a temporary boat launch site and access trail to the Tanana River near the mouth of the Salcha River. The site is located in Section 21, T5S, R4E, FM, at approximately mile 325 on the Richardson Highway. The facility will serve the public needs for five years or until the State Parks boat launch site is completed in 1968 or 1969, whichever comes first, at which time the grant will expire.

### DISCUSSION

Since its inception in 1959, the public access project has made recommendations to the Division of Lands to have key areas set aside for public use of the fish and game resources. The requests proposed that a public recreation classification be given to those sites. The low rate of success of the Department of Fish and Game requests indicate that access sites do not fall within the public recreation definition set up by the Division of Lands. Several factors may influence the classification of access sites for public recreation.

The Parks and Recreation Branch of the Division of Lands is charged with developing facilities on public recreation sites and will depend heavily upon funds from the Federal Bureau of Outdoor Recreation. Land value can be used on a matching basis for funds if the land has not been acquired or set aside for recreation prior to the request for Federal matching funds. As many of the desirable sites recommended in the past would be enhanced by facility development, funds for which are rarely available to State agencies, it may be in the best long range interest of Parks and Recreation to not so classify a potential recreation site.

Hunter utilization of lands dedicated for recreation could also be a critical factor in classifying certain land areas. The 21,127-acre Nancy Lake Recreation Area may be closed to hunting under the provisions of Alaska Criminal Code 11.55.050 which makes it unlawful to discharge firearms in a park or public grounds. Strict adherence to this law, which provides protection to campers and picnickers in congested campgrounds, would defeat the very purpose of having land set aside as access for sportsmen.

The 38,974.71-acre Department of Natural Resources public recreation classification at Shaw Creek Flats is monumental in that it is the largest classification of that type in the history of the State. Prior to this classification the cumulative total acreage of 143 units classified for public recreation since Statehood totaled 22,008 acres. In Alaska, where fish and game are considered major resources, it would seem feasible for the agency responsible for managing that resource to be consulted or notified of land planning action concerning it. Harvest, an integral part of management, depends upon access which in turn depends upon some measure of land control. Minor changes caused by pollution or indiscriminate landscape development could also upset the ecological balance that exists with the short but accelerated productive season so typical of northern climates.

The existing Department of Natural Resources classification program does not readily lend itself to large area, multiple use land planning. The current classification, for convenience, keeps all land in position for sale or lease in handy marketable packages. The most desirable land is to be sold or leased; the least desirable is to be retained for the public.

New broad classifications should be considered for large areas of State land, each with its own long range land plan. A "Forest" classification could have sub-classifications such as the existing timber, grazing, watershed, public recreation, private recreation, utility, etc., within the overall framework. Commercial type classifications in areas such as in the area of the city of Kenai could also contain the same sub-classifications but with different long range objectives.

Establishment of a lands section within the Game Division of the Department of Fish and Game has helped immeasurably in insuring access to waterfowl and big game hunting areas. The Sport Fish access biologists are working in close coordination with the Game Lands personnel in formulating land plans and recommendations to State and Federal land agencies.

The Department of Fish and Game could, and should, be called upon to supply biological information which would assist the Department of Natural Resources or the Bureau of Land Management in land planning programs, thus incorporating the professional abilities of agencies charged with management of Alaska's natural resources, including the fish and game.

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