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SUMMARY

Bureau of Land Management (BLM) Report

"Alaska's Kodiak Island-Shelikof Strait Region: A History"

- The report is a source document to assist BLM make navigability determinations for land title purposes.

- To comply with the Statehood Act and Alaska Native Claims Settlement Act (ANCSA), BLM is transferring 145,000,000 acres to the State of Alaska and Alaska Native corporations.

- An impediment to conveyance is the unknown acreage and location of non-tidal navigable waters.

- The report considers most of the Alaska Peninsula and over 1/2 of Kodiak Archipelago which have been withdrawn into Federal Reserve Status. FWS lands involved are:

  Becharof NWR

  Alaska Peninsula NWR

  Alaska Maritime NWR (Islands off S. Coast AK. Penin.)

  Kodiak NWR

- Based on the report, BLM was to issue a set of navigability determinations by September 30, 1983.

- Copies of the report have been distributed to each affected refuge.

MCGILLIVARY:hs:3245A:10/25/83

IN REPLY REFER TO

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Alaska State Office
701 C Street, Box 13
Anchorage, Alaska 99513

2628 (NAV) (962)

8/8

We should Check this Out Carefully

AHR
Please review carefully and prepare a 1 page bullet type summary for RD/DRD plus take any other appropriate actions.

AUG 02 1983

Keith Schriener, Regional Director
U.S. Fish and Wildlife Service
1011 East Tudor Road
Anchorage, Alaska 99503

Dear Mr. Schriener:

We are pleased to submit the attached final report on water bodies in the Kodiak Island-Shelikof region. The report is designed to facilitate the BLM's endeavors to make navigability determinations in Alaska; to serve as a source document in reviewing the validity of past navigability determinations in the event that the legal standards of navigability change; to assist the BLM's and the State of Alaska's efforts in developing court test cases on navigability criteria; to inform the public on the information and rationales used by the BLM in making navigability determinations; and finally, to make known to the public those water bodies already determined by the BLM to be navigable or nonnavigable.

By September 30, 1983, the BLM will issue a final set of determinations of navigability and nonnavigability on the basis of the Kodiak Island-Shelikof Strait Regional report. This set of determinations will affect water bodies not covered in the first set of determinations, a draft of which was sent to you in May, 1983. A copy of the final determinations will be sent to you after they have been made.

Sincerely yours,

Robert W. Faithful IV

Robert W. Faithful IV
Acting Assistant to the State
Director for Conveyance Management

Enclosure:
"Alaska's Kodiak Island-Shelikof
Strait Region: A History"

ALASKA'S KODIAK ISLAND-SHELIKOF STRAIT REGION:

A History

By

Dwight Wm. Tuttle
Bureau of Land Management
Anchorage, Alaska

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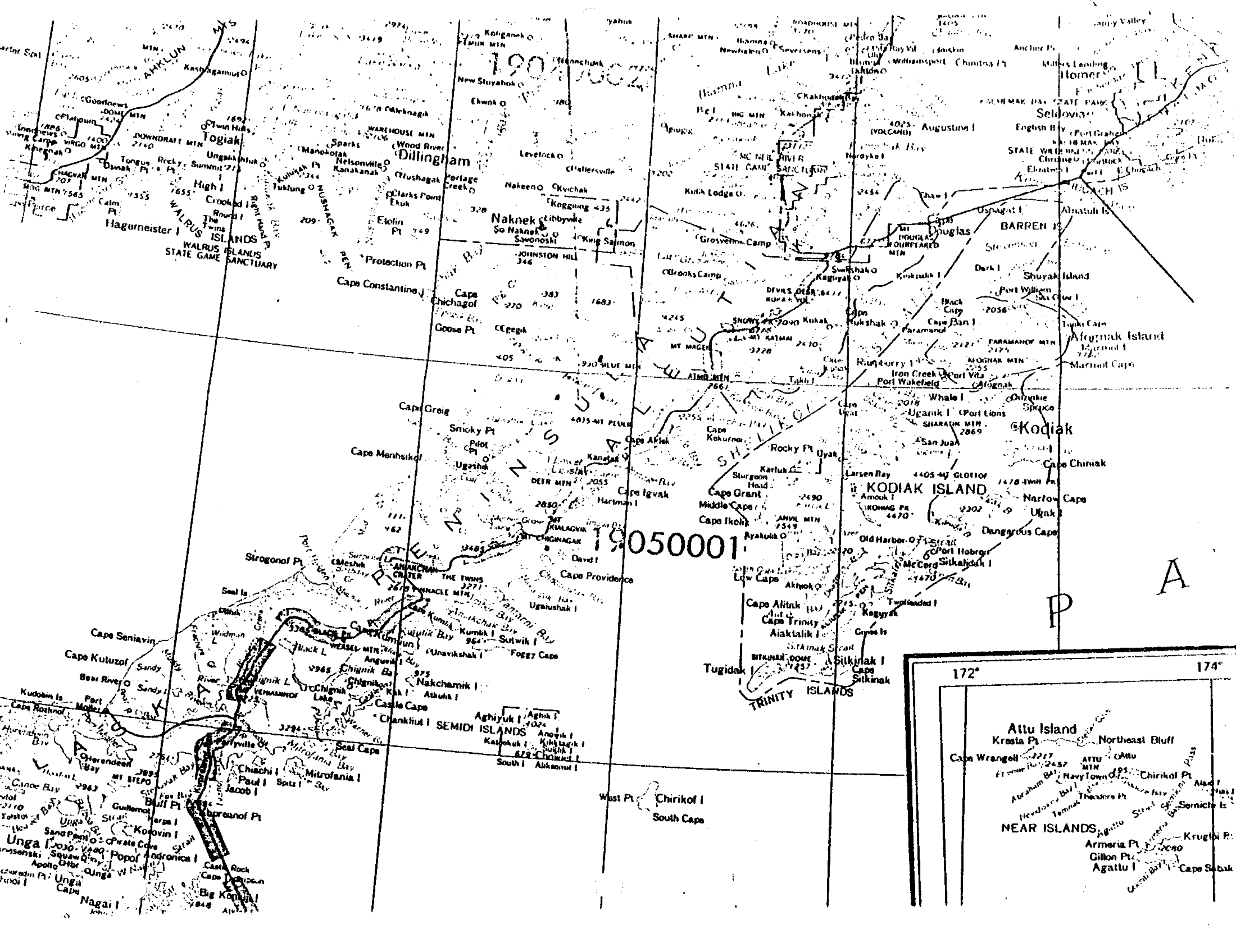
1983


19050001
Dillingham
Togiak
Goodnews
Platinum
Kashagamiut
Twin Hills
High I
Crooked I
Round I
The Twins
Hagemeister I
WALRUS ISLANDS
WALRUS ISLANDS STATE GAME SANCTUARY
Nushagak
Clarks Point
Ekuk
Etolin Pt
Protection Pt
Cape Constantine
Portage Creek
Aleknagik
Manokotak
Kanakanak
Nelsonville
Koliganek
New Stuyahok
Ekwok
Levelock
Naknek
So Naknek
Savonoski
Libbyville
King Salmon
Nakeen
Kvichak
Koggiung
Cape Chichagof
Goose Pt
Egegik
BLUE MTN
Iliamna Lake
Newhalen
Seversens
Pedro Bay
Williamsport
Iliamna
Kakhonak
Nondalton
Augustine I
Igiugig
Kulik Lodge
Grosvenor Camp
Brooks Camp
MC NEIL RIVER STATE GAME SANCTUARY
Nordyke I
Swikshak
Kaguyak
MT KATMAI
MT MAGEIK
DEVILS DESK
KUKAK VOL
SNOWY PK
Kukak
Kuliak
Nukshak
Cape Douglas
MT DOUGLAS
FOURPEAKED MTN
BARREN IS
Ushagat I
Chugach Is
Homer
Seldovia
Port Graham
English Bay
KACHEMAK BAY STATE PARK
Shuyak Island
Port William
Afognak Island
Marmot I
Marmot Cape
Raspberry I
Port Wakefield
Iron Creek
Port Vita
Afognak
Whale I
Uganik I
Port Lions
Ouzinkie
Spruce
Kodiak
Cape Chiniak
KODIAK ISLAND
Larsen Bay
Karluk
Uyak
Sturgeon Head
Rocky Pt
Cape Grant
Middle Cape
Cape Ikolik
Ayakulik
Amook I
KOHIAG PK
Narrow Cape
Ugak I
Dangerous Cape
Old Harbor
Port Hobron
Sitkalidak I
McCord
Low Cape
Akhiok
Cape Alitak
Cape Trinity
Aiaktalik I
Twoheaded I
Kaguyak
Geese Is
Tugidak I
Sitkinak I
Cape Sitkinak
TRINITY ISLANDS
Cape Greig
Smoky Pt
Pilot Pt
Ugashik
Cape Menshikof
DEER MTN
Kanatak
Cape Aklek
Cape Kekurnoi
Cape Igvak
Hartman I
MT CHIGINAGAK
KIALAGVIK
David I
Cape Providence
Strogonof Pt
Meshik
ANIAKCHAK CRATER
THE TWINS
PINNACLE MTN
Ugaiushak I
Yantarni Bay
Amber Bay
Kumlik I
Sutwik I
Foggy Cape
Unavikshak I
Chignik Bay
Chignik
Chignik Lagoon
Chignik Lake
Anguvik I
Nakchamik I
Atkulik I
Castle Cape
Chankliut I
SEMIDI ISLANDS
Aghiyuk I
Aghik I
Kateekuk I
Anowik I
Kiliktagik I
Chowiet I
South I
Aliksemit I
Seal Cape
Mitrofania I
Chiachi I
Paul I
Jacob I
Spitz I
Chirikof I
Wust Pt
South Cape
Cape Seniavin
Cape Kuluzof
Bear River
Port Moller
Kudobin Is
Cape Rozhnof
Herendeen Bay
Perryville
Ivanof Bay
Bluff Pt
Kupreanof Pt
Korovin I
Unga I
Popof I
Andronica I
Nagai I
Castle Rock
Big Koniuji I
Sand Point
Squaw Hbr
Unga
Seal Is
172°
174°
Attu Island
Krasta Pt
Northeast Bluff
Cape Wrangell
Attu
Navy Town
Chirikof Pt
Abraham Bay
Semichi Is
NEAR ISLANDS
Armeria Pt
Gillon Pt
Agattu I
Krugloi Pt
Cape Sabak
A
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EDITOR'S INTRODUCTION

The U.S. Department of the Interior, Bureau of Land Management (BLM) is currently transferring title to about 145 million acres of land to the State of Alaska and Alaska Native corporations in compliance with the Alaska Statehood Act of 1958 and the Alaska Native Claims Settlement Act of 1971, respectively. A serious impediment to the conveyance of land title is the unknown acreage and location of nontidal navigable waters in Alaska.

By authority of the Statehood Act of 1958 and the Submerged Lands Act of 1953, the State of Alaska owns the beds of tidal waters and nontidal navigable waters unreserved as of the date of Statehood. Submerged land acreage of navigable waters unreserved as of the date of Statehood may not be charged against the State's entitlement under the Statehood Act; and by virtue of the fact that ownership of these submerged lands passed to the State in 1959, may not be included in conveyances of land title. On the other hand, lands underlying nonnavigable waters as well as those submerged lands in a reserved status in 1959, remain in the public domain or in trust for the riparian owner.

During the 1960s the BLM made determinations of navigability for water bodies on lands to be conveyed to the State. However, after the passage of the Alaska Native Claims Settlement Act and the subsequent promulgation of regulations requiring, among other things, the BLM to make navigability determinations for waterways on lands to be conveyed to the Native corporations and to account for the submerged land acreage, the State quickly asserted its claim to potentially navigable waters on ANCSA-selected lands by two methods. First, the State provided the BLM with its definition of navigable waterways and a set of maps known as Water Delineation Maps illustrating waterways on ANCSA-selected

insufficient information about many minor waterways, some of them located on lands to be conveyed to the State or the Native corporations. The need for additional documentary research and possibly field investigations was apparent.

In 1979, representatives of the BLM and the State of Alaska met several times to discuss and decide upon methods by which: 1) the BLM could make timely determinations of navigability in connection with the land conveyance programs; 2) the BLM and the State could reach agreement on what waterways were clearly navigable and nonnavigable under BLM and State criteria; and 3) the BLM and the State could identify water bodies that best reflect differences in the BLM's and the State's criteria of navigability for the purpose of litigation. The decisions that were made then are still valid today, although some have been modified as necessary to take into account unexpected developments.

Three alternatives in establishing priorities for administrative determinations of navigability were identified: 1) make determinations only for water bodies on land to be conveyed to the Native corporations and the State on a township-by-township basis; 2) make determinations for all nontidal water bodies in Alaska on a regional or subregional basis; or 3) make determinations for nontidal water bodies on a township-by-township basis as well as on a regional or subregional basis.

It was decided to adopt the third alternative. This entailed the formation of three independent but interacting teams: one in the BLM State Office to make navigability recommendations in connection with the State and ANCSA land conveyance programs; the others in the BLM State Office and State Department

rafts as determinants of navigability for title purposes, Mr. Tuttle's report will facilitate the task of identifying those water bodies that meet the new legal standards.

C. Michael Brown
Lead Historian

include: Katmai National Park and Preserve, Becharof National Wildlife Refuge, Aniakchak National Monument and Preserve, Alaska Peninsula National Wildlife Refuge, Alaska Maritime National Wildlife Refuge encompassing islands off the south coast of the Alaska Peninsula, and Kodiak National Wildlife Refuge on Kodiak and Afognak Islands.

In writing this report, designed to assist the Bureau of Land Management (BLM) in making navigability determinations for title purposes, the author relied primarily on BLM land records, U.S. Geological Survey (USGS) bulletins, and a computerized data base compiled by the Arctic Environmental Information and Data Center of the University of Alaska under a contract with the BLM. A number of other research materials were consulted: field notebooks and maps of early USGS explorers; Gold Rush guidebooks, books, and article-length reminiscences; numerous government reports including those produced by the U.S. Fish Commission, Alaska Road Commission, Alaska Division of Geological and Geophysical Survey, U.S. Fish and Wildlife Service, and a number of other federal, state, and local agencies. Also the author looked at back issues of the Kodiak Mirror for information on historic use of the area's rivers and lakes.

A number of oral interviews were conducted with individuals personally acquainted with the report area to fill a void in the historical record. Because of their first-hand knowledge of Kodiak Island, the following persons were contacted: Willard Troyer, Dick Hensel, Linda and Michael Yaborough, William Workman, Dick Marriot, Frank Van Hulley, Louis Carufel, LaRalle Smith, Gary Seitz, and Darrell Farmer. To all these individuals who were kind enough to allow me to talk with them about Kodiak Island, I am extremely grateful. I would also like

PART I

THE KODIAK ISLAND-SHELIKOF STRAIT REGION

The Kodiak Island-Shelikof Strait subregion in southcentral Alaska includes the Kodiak Island Group and the southern coast of the Alaska Peninsula from Cape Douglas to Stepovak Bay. The subregion consists of about eleven thousand square miles of land. 1/

KODIAK ISLAND GROUP

The Kodiak Island Group consists of sixteen islands with a total area of nearly five thousand square miles. From the Barren Islands in the north to Chirikof Island in the south, the archipelago trends in a northeast-southwesterly direction for approximately 260 miles. Kodiak Island (3,588 square miles) and Afognak Island (700 square miles) are the largest in the group. 2/

Kodiak Island

About one hundred miles long and up to sixty miles wide, Kodiak Island is characterized by rugged mountains trending northeast-southwest and ranging in elevation between 2,000 and 3,500 feet and by irregular, deep, and narrow bays resembling the indented fjords of Norway. 3/ Uyak Bay on the west coast nearly bisects Kodiak Island as it extends inland thirty-five miles to within six miles of Three Saints Bay on the east coast. 4/ Local relief on the coast varies from one to two thousand feet. 5/ Sitka spruce three to four feet in diameter are found at elevations below one thousand feet on the northeast tip of the island. 6/

35,200 acres of land, was established on May 22, 1943 by Public Land Order 128. With the passage of the Alaska Native Claims Settlement Act in 1971, the reserve was abolished. With the passage of the Alaska National Interest Lands Conservation Act of December 1980, Uganik Island was added to the Refuge. 11/

Brown bear, tundra mole, weasel, red fox, and land otters are indigenous to the area. Game officials have also introduced Roosevelt elk, Sitka black-tailed deer, reindeer, Dall sheep, beaver, mountain goat, red squirrel, and snowshoe hare into the refuge. 12/

Afognak Island

Situated three miles north of Kodiak Island, Afognak Island is forty miles long and twenty-five miles wide with low to moderate relief. 13/ Mountains rising to over two thousand feet dominate its southwestern half. Near the center of the island mountains trend in a northeast and southwest direction. These give way on the northeast to lowlands with little relief and numerous small lakes and ponds. 14/ Most of the island is forested with Sitka spruce stands, which are heavily concentrated along the indented bays and scattered nearby islands. 15/ In 1923 and 1924, game officials introduced Sitka black-tailed deer and Roosevelt elk to Afognak Island. 16/

On December 24, 1892, President Benjamin Harrison, at the request of the U.S. Commission of Fish and Fisheries, created the Afognak Forest and Fish Culture Reserve by withdrawing all of Afognak Island except for a one-mile strip along the coast. 17/ In 1908 President Theodore Roosevelt included the reserved lands in the Chugach National Forest. 18/

close to the sea, much of the Alaska Peninsula Pacific coastline consists of sea terraces and steep cliffs with overhanging ledges overlooking rock bound beaches. 26/

Most rivers in the area are short and have steep gradients with small drainage areas. Those streams located near the higher mountains, such as Mt. Veniaminof, Mt. Katmai, and Mt. Douglas, have wide and braided channels that carry heavy sediments and glacial debris to the sea. Runoff rates for the area average seventy-five inches per year. 27/

The entire south coast of the Alaska Peninsula is located in various federal land reserves. As a result of widespread publicity given to the explorations of Professor Robert T. Griggs of Ohio State University in the Valley of Ten Thousand Smokes in 1915, 1916, and 1917, the Katmai National Monument was created by presidential proclamation on September 24, 1918. During the Second World War, the federal government added the offshore Pacific islands to the monument. 28/ Under the Alaska National Interest Lands Conservation Act (ANILCA) of December 2, 1980, the monument became the Katmai National Park and Preserve. Today most tourists visit the park and not the preserve. 29/

The Alaska National Interest Lands Conservation Act also established three other federal reserves on the Alaska Peninsula: the Becharof National Wildlife Refuge, the Aniakchak National Monument and Preserve, and the Alaska Peninsula National Wildlife Refuge. From Puale Bay south, many small islands along the coast were included in the Alaska Peninsula Unit of the Alaska Maritime National Wildlife Refuge. The Becharof National Wildlife Refuge includes the Becharof Lake watershed in the central Alaska Peninsula. The Aniakchak National

bitter enemies. The Russian promyshlenniki or frontiersmen, however, did not distinguish between the two ethnic groups, enslaving both the Koniag Eskimos and Aleuts as hunters and referring to both as Aleuts. Descendents of the Eskimos adopted the name Aleut. 37/

Occupying the Kodiak Island Group and the northeast coast of the Alaska Peninsula, the Koniag Eskimos were a seafaring people who relied heavily on sea mammals for subsistence. From seals, whales, and other sea mammals, the Koniags obtained food, oils, and skins to make clothing. Their most important garment, the Kamleika or raincoat, was made from the intestines of whales, seals, sea lions, and bears. 38/ The Koniags' daily routine revolved around a busy summer of salmon fishing and hunting sea animals followed by a winter spent in idleness at their main settlements along the bays or coast. 39/

When in the early 1780s the Russians first settled Kodiak Island, an estimated eight thousand Eskimos lived on the island. Owing to disease, intermarriage, or warfare with the Russians, the number of the Koniags diminished to about 2,500 by the middle of the nineteenth century. Today, the descendents of the early Eskimos live in six fishing villages around the island. 40/

EXPLORATIONS

The first Europeans to discover Kodiak Island were Captain Vitus Bering and Aleksei Chirikof. In 1741, Bering in the St. Peter and Chirikof in the St. Paul sailed for America from Okhotsk, Siberia. The voyage began ominously as the two vessels were soon separated by bad weather. Chirikof continued the southward voyage hoping to encounter the St. Peter, but finally decided to

Between 1764 and 1768 the Russian government attempted to verify the discoveries of its private trading companies by dispatching two naval expeditions to Alaska. One of these expeditions, headed by Captain-Lieutenant Petr Krenitsyn, charted many of the Aleutian Islands as far east as the Alaska Peninsula. On at least four occasions between 1765 and 1780, Russian vessels visited the shores of Kodiak and Unga islands. In 1776, the Archangel St. Michael under the command of Dmitri Polutof anchored in Ugak Bay. Confronted by hostile Aleuts, the men did not attempt to land. 48/

During the years 1780 to 1800 there were twenty-two Russian expeditions to Alaska. In their search for furs, they sailed ever farther eastward, claiming entire regions as their private fields of operation. It remained, however, for Gregorii Ivanovich Shelikov to take full advantage of the discoveries in Alaska.

Entering the fur rush to America rather late, Shelikov was one of many financiers behind the various short-lived fur trading associations. In 1781, Shelikov, Ivan Larionovich Golikov, and Captain Mikhail Sergeevich formed a trading company and planned to establish a permanant settlement on the American continent. In August 1783, the Shelikov expedition sailed from Okhotsk in Siberia. It consisted of about two hundred men on five-year contracts, cattle, and goods necessary for a self-sustaining colony. In late July 1784, Shelikov sighted Kodiak Island and chose Three Saints Bay as the site for his colony. 49/

Once the settlement was established, Shelikov rapidly expanded his company's trade influence in southern Alaska. In May 1785, a large expedition of promyshlenniki, Aleuts, and Eskimos was sent north to establish contact with the Natives on the adjacent islands, Kenai Peninsula, Prince William Sound, and

west nearly to Chignik Bay. Five years later, Lieutenant Woronkofski surveyed the southern coast of the peninsula from the vicinity of Chignik Bay to Unimak Pass. 57/

In spite of these voyages of exploration, the Russians remained ignorant about most of the interior of Kodiak and Afognak islands and the Alaska Peninsula. This situation can be attributed to several factors. First, Aleuts and Koniags in the region rarely traveled inland. Unlike the Aglegmiuts on the Bering Sea who hunted land mammals and fished for salmon, the Aleuts depended primarily on the sea mammals for their subsistence. 58/ Second, local Natives also did not venture inland because of a common belief that many volcanoes in the Aleutian Range were places of evil. 59/ Finally, the rugged mountains, the marshy and flat tundra valleys, and the rocky cliffs of the Alaska Peninsula impeded travel.

In 1867 the United States purchased Alaska from Russia. The first American exploration of the Alaska Peninsula, however, was not conducted until 1895. George F. Becker and William H. Dall, two geologists employed by the U. S. Geological Survey (USGS), arrived at Kodiak on the mail steamer. They secured the use of a tug boat and proceeded to circumnavigate the island and to survey the southern coast of the Alaska Peninsula from Cape Douglas to Unalaska Island. They visited the Red River (Ayakulik) on Kodiak Island, Sitkinak and Chirikof islands, Amalik Harbor, Katmai, Metrofania and Cold bays (Puale Bay), Chignik Bay and River, and the Shumagin Islands. 60/

In 1899, William H. Dall returned to Alaska with the Harriman Expedition, sponsored by the railroad baron, Edward H. Harriman, with the cooperation of several federal agencies. On June 30, the expedition of 25 scientists, 2 photographers, 3 artists, and the Harriman family, totalling 126 persons with

USGS investigator noted that miners had worked the beaches at Cape Alitak on the south end of the island, Miners Point at the south entrance to Uganik Bay, and the west coasts of both Uganik and Raspberry islands. Gold was also taken from Sevenmile Beach near Uyak prior to World War I. However, the greatest amount of activity was on a stretch of beach a few miles north of Ayakulik and south of Low Cape. 65/

In 1895 George F. Becker of the USGS traveled to southwest Kodiak and reported placer mining in progress near the mouth of the Ayakulik River. 66/ Almost twenty years later, Alfred G. Maddren of the USGS visited the area and estimated that between $50,000 and $150,000 in gold had been extracted from the Ayakulik area beaches since the mid-1880s. He wrote that in some years as many as one hundred prospectors worked the beach placers. 67/

The miners on all these beaches used simple rockers and portable sluice boxes. Their combined production probably did not exceed a few thousand ounces. Since the Second World War the only placer mining reported on Kodiak was by two men on the beach near the mouth of the Ayakulik River in 1951 and 1952. 68/

Kodiak's lode gold miners were located on the west and northern coasts. The most productive mines were situated along Uyak Bay. Around the turn of the century the Bear, Calaveras, and Dan mines on the west side of the bay across from Amook Island were worked. The Wanberg and Boyer, Lake, Amok, and Wanberg mines were scattered from north to south on the east side. However, only the Amok was extensively developed. In 1906 the Amok Mining Company erected a five-stamp mill to work its lodes. It eventually constructed five

cases the government agencies determined that the mineral ore was too poor for exploitation. In 1967 Henry C. Berg and Edward H. Cobb of the USGS reported that only "sporadic" mining occurred in the region. 71/

Mining on Afognak Island and the Alaska Peninsula was even more limited. A 140-foot adit was driven to a gold and silver vein on the north side of Afognak's Manila Bay sometime in the early part of this century. Apparently it did not prove economic to mine. 72/ The Alaska Packers' Association cannery at Chignik Lagoon on the Alaska Peninsula mined a nearby coal deposit around the turn of the century. 73/ In 1946 a pumice deposit on the coast of Katmai National Park and Preserve was strip mined and the product shipped to Anchorage. The material was found suitable for making cement blocks. Some placer mining also occurred on a small stream on Cape Kubugakli from 1915 to at least 1923. 74/

The Alaska Peninsula was one of the first areas in Alaska to be explored for petroleum. Oil drilling began near Puale Bay in the summer of 1903 and continued into 1904. The Pacific Oil and Commercial Company and a company owned by J. H. Costello drilled about five wells in the area drained by Trail, Dry, Oil, and Becharof creeks. Operating from Puale Bay, the companies constructed seven or eight miles of road along Trail Creek to the uplands. When no oil in commercial quantities was found, the companies left the area. 75/

With the enactment in 1920 of the Mineral Leasing Act, the Puale Bay-Becharof Lake area again attracted the interest of oil companies. According to a 1922 USGS map, numerous oil claims existed in the Aniakchak River valley and near

Compared to the various sea-related industries, ranching in the region was insignificant. The Russians first introduced cattle on Kodiak Island before 1790. In 1886, a San Francisco company made an unsuccessful attempt to ranch on Chirikof Island south of Kodiak Island. 80/ In the early 1900s, ranching became established on the open range northeast of Kodiak and on the smaller islands of the archipelago. In 1906, the government established an agricultural experimental station on the Kupreanof Peninsula, specializing in the husbandry of Galloway Cattle. Part of the herd grazed on Woody Island before being transferred to Kalsin Bay south of Kodiak. Cattle has also been raised on Chirikof Island in the 1950s and 1960s by an American company who used an Abatoir to fly the beef for Anchorage. The business failed as a result of the Federal and State governments to provide meat inspections or graders for the enterprise. 81/

The timber industry in the region proved to be more successful. In 1792 Baranov moved the first Russian settlement from Three Saints Bay, which had been destroyed by a tsunami, to Saint Paul (later named Kodiak), where there was abundant timber for shipbuilding and fortifications. Three years later the Russians constructed two ships named the Delphin and Olga at a shipyard established on nearby Spruce Island. 82/

Logging was confined to Afognak and Raspberry islands. The Bureau of Commercial Fisheries from 1908 to 1932 operated a small sawmill on Afognak Lake in conjunction with a fish hatchery. 83/ During the Second World War, the military operated a sawmill on Kazakof (Danger) Bay to supply timber for its outposts on Kodiak Island and in the Aleutian chain. 84/ During 1941 and 1942, Dal Valley operated a mill two miles southeast of Afognak Village. 85/ A

In 1970, the city of Kodiak had a population of 3,798 including 642 Natives. The city has a private Catholic school, community college, post office, library, hospital, thirteen churches, daily newspaper, four banks, four hotels, and a 7,500-foot paved and lighted runway. 90/

Old Harbor

Situated on the west shore of Sitkalidak Strait fifty-six miles southwest of Kodiak, Old Harbor Village is approximately eight miles northeast of the first Russian settlement at Three Saints Bay. After Baranov moved the original Three Saints Bay Village to what is present-day Kodiak, Three Saints Bay continued to be an important supply station for the Russians. 91/

Founded in 1884 on a narrow sandy beach, Old Harbor Village, like other coastal villages, is dependent on a subsistence fishing economy and, to a lesser degree, hunting. During the fishing season, Kodiak Fisheries, Incorporated, operates a station at Old Harbor where salmon are transferred from fishing boats to tenders for transport to canneries. 92/ Local residents obtain some income by working on a floating crab processing plant. The village currently has a post office, school, community hall, library, theatre, pool hall, coffee shop, bakery shop, Russian Orthodox Church, and a 2,000-foot gravel runway. 93/

Kaguyak

This village was once located at the head of Kaguyak Bay on the southeast coast of Kodiak Island. Petroff reported in 1880 that the village had a population of ninety-seven Eskimos and four creoles. 94/ Prior to its

Port Lions

Port Lions was founded in 1964 on Settler Cove, an arm of Kizhuyak Bay, by the people of Afognak and Port Wakefield after a tsunami destroyed their villages. Port Lions has a post office, community center, library, hotel, school, clinic, grocery, cafe, sawmill, and a 2,000-foot gravel airstrip. In 1970, the population numbered 227. 99/

The principal village industries are commercial fishing and fish processing. After a fire in 1975 destroyed the Wakefield cannery, the villagers' sole source of employment, Port Lions formed a corporation to purchase a floating cannery to process shrimp, halibut, salmon, Tanner Crab, and King Crab. 100/

Port Wakefield

Founded in 1935 when Lavern Wakefield constructed a herring plant on the north shore of Rasberry Island, the settlement port consisted of a bunkhouse, cookhouse, power plant, reservoir, store, and laboratories. A jeep road connected Port Wakefield to Port Vita where another herring plant was located. In 1964 the people of Port Wakefield moved to the new village of Port Lions when a tsunami destroyed their small village. 101/

Ouzinkie

Ouzinkie is located on the west coast of Spruce Island ten miles north of Kodiak. Ouzinkie was once a retirement center for employees of the Russian-American Company. In 1889 the Royal Packing Company built the first cannery there. The next year a Russian Orthodox Mission was established. 102/ The village

Kanatak

Kanatak was a small Native settlement at the head of Portage Bay. According to Linda Yarborough, who did an archaeological survey of the Native village, Kanatak first appeared on a Russian map of 1849. By the census of 1890, twenty-six people in seven families lived there. In 1922 a USGS visitor noted that during the summer some villagers worked in the cannery at Egegik on the west side of the peninsula, while others traveled to a summer fishing village at the head of Becharof Lake to catch and dry salmon for winter use. As a result of an oil boom between 1920 and 1922, the town population increased to nearly two hundred people residing in tents, log cabins, and frame buildings. 106/ By 1940, 134 persons lived in Kanatak. From 1922 to 1943 and 1946 to 1954, the village had a post office. In the 1950s, the village was all but abandoned when oil activities ceased. 107/ Presently the former village is a port of call for local mail steamers. 108/ In addition to the summer fish camp at the head of Lake Becharof, a number of archeological sites have been discovered at Ugashik Narrows separating lower and upper Ugashik Lake. 109/

Kaguyak (Douglas)

Some confusion exists as to the exact location and name of this village on the Alaska Peninsula. Both the names of Kaguyak and Douglas have been used synonymously to describe two different village sites; one four miles north of Cape Chiniak in Swikshak Bay, and the second at Swikshak Lagoon across the bay. Present USGS map shows an abandoned settlement at Swikshak Lagoon. After an investigation of early census records and Russian and American maps, John S. Hussey concluded that the two villages were the same. The village

that hunters, trappers, and cross-country skiers "for years" had used a trail from Monashka Bay to Neva Cove. 114/ And in 1964 the U.S. Coast and Geodetic Survey reported a foot trail from a cannery at Lazy Bay southward to the village of Akhiok. 115/

The Russians reportedly built the first road on Kodiak Island. It connected Saint Paul (Kodiak) with Mill Bay on Spruce Cape three miles to the northeast. Grain raised at the Russian colony at Fort Ross, California was shipped to Mill Bay where it was ground into flour and then transported to Saint Paul by road. 116/

In the twentieth century over one hundred miles of road were built on the island. In 1928 the Alaska Road Commission built a sled road along the old Native portage from Larsen Bay to Karluk River. This was to service a weir constructed on the river by the U.S. Bureau of Commercial Fisheries. 117/ Other roads built on the island were designed for autos traveling from the town of Kodiak and most were developed in the 1940s and 1950s. All were one- or two-lane, unpaved thoroughfares. Roads currently run from Kodiak to Spruce Cape, Anton Larsen Bay, Cape Chiniak, Sequel Point, Pasagshak Bay, and Saltery Cove. The road from Kodiak to Sequel Point, south of Cape Chiniak, is forty-seven miles long and parallels the coast. At Middle Bay, a spur road heads south paralleling American River and an unnamed stream for fourteen miles to Saltery Cove on Ugak Bay. At Kalsin Bay, a second spur road goes south to Pasagshak Bay alongside Kalsin Creek skirting Lake Rose Tead before reaching the bay. Near the eastern side of the head of the Pasagshak Bay, the road splits into two forks: one continuing south to Pasagshak Point, and another heading east for about five miles to Narrow Cape. From Buskin Lake

the icehouses to the wharves. To excercise stable horses during the summer months, the local superintendent constructed an additional eighteen miles of road around the island. 120/

On Long Island, five miles east of Kodiak, the military during the Second World War built a road the entire length of the island. 121/ A three-mile jeep road on Raspberry Island, situated between Kodiak and Afognak islands, was built in conjunction with the construction of a pipeline from Port Wakefield to Port Vita on the north shore of the island. The purpose of the pipeline was to transfer herring oil from the plant at Port Wakefield to Port Vita where it was converted into fertilizer. 122/ Current USGS maps do not show this road, but rather depict an unimproved dirt road between Iron Creek and Port Vita. 123/ USGS maps also show two roads on Sitkalidak Island, off the southeast coast of Kodiak Island. A road approximately three miles long runs between Port Hobron, an old whaling station on the north coast of Sitkalidak Island, and Natalia Bay on the southwest coast. A second road about four miles long connects Port Hobron with Ocean Bay on the southeast side of the island. 124/

The Alaska Peninsula had more trails than did Kodiak but few were improved to accommodate automobiles. Alfred G. Maddren's 1903 map of the area furnishes the most complete description of portages on the Alaska Peninsula found in researching this report. Unfortunately, Maddren did not make the distances of the portages clear nor did he indicate whether any of the routes were only used seasonally. The antiquity of these trails is uncertain. The trans-peninsula routes within the Kodiak Island-Shelikof Strait Region were: the Chignik Lake-Black Lake "Bidarka Portage" which provided transit from villages near Chignik Bay to the now-abandoned village of Unangashik near Strogonof Point; a portage from Kujulik Bay to Meshik River via Blue Violet

skin boats," he wrote, "could easily have passed through here to the Pacific." 132/ The mails were also transported by this route after a post office was established at Kanatak in 1922. 133/

The only extensive description of travel on the portage stemmed from a biological reconnaissance of the Alaska Peninsula made in the summer and fall of 1902 by Wildfred H. Osgood of the U.S. Department of Agriculture. From Nushagak, Osgood took a small schooner to Egegik Village, and then ascended Egegik River to Becharof Lake in a canoe. Upon reaching the lake, Osgood and his party followed the south shore to the head of an arm and then ascended a small stream to a lake, probably Ruth Lake. At the mouth of the stream he spotted several barabaras. From the lake they then crossed Kanatak Pass to Portage Bay. Later recounting his trip, Osgood wrote: "The portage trail runs from the east side of the small lake across a half mile of swamp, and thence up about 1,000 feet, traversing a rocky pass and continuing on down over more rocks to the native village of Kanatak, situated just above high-water mark on the bay of the same name." Upon reaching the coast the men loaded their equipment in a small rowboat, and followed the rocky shoreline to Puale Bay where they secured passage on a southbound mail steamer. 134/

In the early 1920s an oil find prompted the Associated Oil Company and the Standard Oil Company to build a wagon road from Kanatak to the southeastern tip of Becharof Lake and thence westward to their oil wells. 135/ The Alaska Road Commission (ARC) improved the road to Becharof Lake between 1923 and 1925. 136/ Besides the oil companies, J. H. Lee used the ARC road in the 1920s to haul lumber and supplies to his mink ranch on the lake. 137/ It also was used as part of a winter trail from Kanatak to the southern shore of Becharof Lake and thence down the Egegik River to Bristol Bay. 138/ The oil boom

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According to John D. Murray, a fishery biologist with the Alaska Department of Fish and Game, the river at this point, reaches a depth of six to seven feet. Most of the deep pools on Karluk River are located here. Beginning at a point about five miles below the Portage, the river flows through a narrow valley to empty into Karluk Lagoon. According to Murray, the river is a shallow, slow-moving stream with a few deep holes varying in width between two and four hundred feet. 2/

Oriented in a general east-west direction, Karluk Lagoon is approximately two miles in length. A shingle spit, three-fourths of a mile long and about one hundred yards wide, is located at the mouth of the lagoon. Visiting Karluk River in 1898, Jefferson Moser of the U.S. Fish Commission noted that the spit nearly blocked entrance to Karluk Lagoon by boat. He wrote that it was possible to enter the lagoon by boat through a narrow channel at times between high and half tide. 3/

Above the Portage, the Karluk River valley is characterized by wet tundra and numerous small ponds and tributaries. Silver Salmon Creek joins the Karluk River 2.7 miles below the lake outlet and adds a considerable volume of water to the river. Below the Portage, the river valley narrows and the stream gradient increases to twenty-six and one-half feet per mile. Between the Portage and the Lagoon, the river drops 350 feet. Moss and clumps of willow and alder trees are found along its banks. The only other named tributary, Shasta Creek, enters the river two miles from its mouth. Two unnamed creeks, heading in small lakes, discharge into the river about two miles below the Portage. 4/

king salmon, however, spawn only in the Karluk River or its tributaries. In 1958, George A. Rousenfell, a fishery research biologist with the U.S. Bureau of Commercial Fisheries, estimated that 75 percent of the salmon spawn in the tributaries of Karluk River, and the remainder spawn in Karluk Lake. The large numbers of salmon attract brown bears, foxes, eagles, ravens, and gulls. Small numbers of Sitka black-tailed deer and reindeer are also found along the river. 6/

Koniag Eskimos probably resided along Karluk River and Karluk Lake long before the Russian period. In the 1930s Ales Hrdlicka, the noted anthropologist with the Smithsonian Institution, located numerous house pits and barabaras (sod huts) on both sides of Karluk Lagoon and along the lower river. In addition, he noted the existence of "old sites" at the outlets of Thumb River and Karluk Lake. 7/

In more recent years, archaeologists discovered other sites on Karluk Lake. At Barabara Point, on the southeast shore of the lake, Linda Yarborough in 1976 or 1977 uncovered a barabara of the early American or possibly late Russian period with a large iron pot and several rusted #4 traps used for trapping land otters and foxes in the late fall or winter. From local residents she learned that a year-round village once existed on Thumb Lake until the 1800s. 8/

Twelve house pits are located at the Pinnell Site, named for a local guide who once had a hunting cabin near the mouth of O'Malley River. Situated in a row on a shoreline ridge, the house pits are visible evidence of a major inland settlement. If, as Urey Lisianski estimated, one barabara housed eighteen people, the Pinnell Site was a large village with a population of two hundred.

shop, Chinese quarters, warehouse, and trading post. The cannery superintendent lived in a comfortable home filled with elegant furniture, Chinese servants, and hot and cold running water. Offshore from the spit, moorings were constructed for steamers supplying the canneries and carrying the packs to San Francisco. The only commercial establishment today on the spit is a small store operated by the Alaska Packers' Association. 12/

Today the church is the center of life at Karluk Village. Although supplies can be obtained from the APA general store, many villagers still obtain much of their food supplies by hunting, fishing, and trapping. A few residents serve as bear hunting guides. Local women work in the cannery at nearby Larsen Bay. Karluk Village currently has a recreational hall, library, post office, and a commercial lodge owned by Gust and Freida Reft. 13/

Airplane landing facilities at Karluk Village are reportedly substandard. In 1964, the land about Karluk Village subsided about one and a half feet as a result of an earthquake. Because of the subsidence the number of parking spots for seaplanes on Karluk Lagoon at high tide was reduced. Karluk is also accessible to wheeled aircraft, which land on a 1,400-foot airstrip. The gravel strip was constructed sometime before 1952. 14/

Commercial fishing on Karluk River probably began in the early Russian period. In 1793, promyshlenniki or fur traders working for the Shelikov-Golikov Company established a depot on Karluk Lagoon to supply its hunters with dried salmon. In 1796, the depot provided two large fleets of bidarkas equipped for sea otter hunting with 30,000 dried fish. It is presently unknown whether the depot operated in subsequent years. 15/

different nationalities were employed by the fisheries: local Natives and contract Chinese labor to process the fish; Italian and Scandinavian crews to harvest the salmon. 19/

When not working for the local canneries, local Natives also fished for salmon within the confines of the Karluk River. In 1946, Herbert Bingham, a local teacher, made a survey of the incomes of Natives in Karluk Village. Bingham stated that the Natives had not fished for salmon outside of Karluk River prior to 1917. 20/

In the early years, seining occurred in Karluk Lagoon and along the beach. Captain Carl Rydell, an American sailor hired by the Alaska Improvement Company to run a cannery at Karluk, wrote that before 1889 all salmon fishing was done in the river. However, with the increase in the number of canneries, seining expanded along the beach. Monty Hawthorn, who prior to the turn of the century worked in the canneries at Karluk and Chignik villages, recalled that twenty-seven seines operated at Karluk in 1889. The same year fishermen place a temporary fence or barricade across the mouth of the river to catch salmon. As early as 1884, cannery fishermen also used traps and gill nets to catch salmon in the lagoon. 21/

Although salmon fishing expanded outside the spit in 1889, the local salmon runs could not accommodate the increased competition. In response to declining salmon runs, the canneries in 1891 entered into a trust agreement known as the Alaska Packers' Association to pool their resources and limit production. The next year the canneries created a new organization, the Alaska Packing Association, which leased and operated its member canneries. Participants received

In 1906, the APA hatchery released more than 200 million fry. A superintendent oversaw six to eight workers, including a cook, and additional help from the canneries when necessary. Attempts by the APA to increase salmon runs on Karluk River proved unsuccessful. By 1907, only one cannery was in operation. In 1911, when a new cannery was built at Larsen Bay, equipment remaining in the canning plants on the spit was removed to the new cannery. The hatchery operation continued until 1916 when the APA closed it. 25/

Many reasons have been put forth to explain the decline of the salmon runs on the Karluk River: the destructive effect of counting weirs, predatory fish such as dolly varden, overfishing, and reduced fertility of Karluk Lake. In the early years, from 1889 to 1895, the annual catch of red salmon was three million fish. In the period 1944 to 1953, the average yearly run into Karluk Lake was approximately 1,030,000 fish. This amounted to a 34 percent reduction in the runs of earlier years. 26/

Although it established hatcheries on Afognak and Uganik lakes, the federal government never built a hatchery in the Karluk River system. Proposals for a government hatchery on Karluk Lake were made periodically, however. In 1889, Franklin Booth of the U.S. Fish Commission recommended the establishment of a hatchery on Karluk Lake as sites along the river were boggy and unsuitable. He noted that access to the lake could be accomplished with the construction of a road from the west end of Larsen Bay along the foothills east of the Karluk River. Almost twenty years later, Federal officials seriously considered moving the APA hatchery to Karluk Lake. In 1907, F. M. Chamberlain of the Bureau of Fisheries observed that if the hatchery was relocated to Karluk Lake, it could easily be reached by way of the portage from Uyak Bay to the upper Karluk River and thence inland to the lake. 27/

fish weir, which was to be installed on an annual basis across the river. A trail was planned from the weir to a skiff landing site at the head of Karluk Lagoon. 30/

On March 14, 1983, the author contacted Bill Donaldson of the ADF&G seeking additional information on the ADF&G research station just above the mouth of Karluk River. Donaldson stated that the station at the outlet of Karluk Lake had been moved to the new site above the mouth of Karluk River because more salmon were found there than in the lake. He also mentioned that the access trail from Karluk Lagoon was built prior to the construction of the cabins. 31/

Historically, the principal route of travel from tidewater to Karluk Lake was by way of Larsen Bay. People usually crossed the old portage trail to Karluk River, and then proceeded upriver by boat to Karluk Lake. In a few instances, residents of Larsen Bay crossed the tundra directly to the lake. 32/

Many visitors to Karluk Lake left records describing Karluk River and their journeys to the lake. In 1889, the U.S. Commission of Fish and Fisheries sent a party headed by icthyologist Tarleton Bean to investigate the fishery resources of the Karluk River system. This was the first government party to visit Karluk River. In addition to Bean, the party consisted of Livingston Stone, superintendent of the government salmon-hatching stations in California and Oregon, and Franklin Booth, a cartographer from San Francisco. Arriving at Karluk in August, the men intended to ascend the river to Karluk Lake. The effort failed, however, because, as Bean explained, "of the low stage of the water, the extreme difficulty of walking along the shores, and the impossibility

depth. It was a matter of great difficulty to find a place deep enough to float a bidarka. As we traveled farther down, the river became narrower and the current more rapid, while places were passed in which the water was 6 feet deep. Near the isolated mountain shown on the chart the river cuts through a bed of ferruginous clay, which it has washed out so as to make an 8 foot channel alternately along the eastern and western banks. After passing the mountain the rate of descent measurably increases. Here we judged by the barometer that the river is about 200 feet above tide water at Uyak Bay.

The distance in a direct line from the point where Karluk River leaves the lake to its mouth at Karluk we estimated at 16½ miles.

In the first 5 miles its slope is inappreciate except in the rapids a short distance north of the lake, where in a distance of about 500 yards the river falls about 10 feet. This would leave about 250 feet of descent in about 12 miles direct distance, giving as the slope of the river valley about 20 feet to the mile.

Booth noted that the bed and banks of the river consisted of "irregularly sized, water-worn slate boulders" and that the mouths of the tributary stream did not exceed six feet in width. Finally, he claimed that local inhabitants used the river as a winter route of travel to Karluk Lake. 36/

Describing the mouth of Karluk River as being about three hundred feet wide, with boulders filling the entire width of the channel, Booth believed that the river was too shallow for even bidarkas, although tidewater extended up the

information on six small salmon-spawning creeks discharging into the lake. On September 14, he left the lake to descend the river to Karluk in seven hours. 40/

In the late summer of 1919, Henry O'Malley and Charles Gilbert of the Bureau also inspected the salmon-spawning grounds on the lower half of Karluk Lake, traveling to Karluk Lake by way of the Portage and thence by boat and on foot to the lake. Describing the tributaries of the lake, they wrote:

> Passing along the western shore of the lake, scattered salmon were found, and schools of no great size were about the mouths of all the small creeks that dash down the abrupt slopes on that side of the lake. Salmon were trying to ascend all these small streams, making frantic efforts to pass up through the broken water which forms a series of waterfalls and rapids among great rocks and course bowlders. These streams seem wholly unfitted for spawning. They were short, violently rapid wherever seen, and appeared to be without quiet gravelly reaches where spawning could be successfully accomplished . . . .
>
> Crossing at the eastern shore, there were found larger and longer streams, rapid brawling creeks, with course bowlder beds, but far more practicable than the creeks of the west side. As the mouth of the streams were approached, dead salmon that had drifted out after spawning lay thick on the bottom of the lake, and upon wading up the rough beds of the creeks, dead salmon were found lying everywhere, lodged among the bowlders or stranded on the shallows.

Bureau officials (usually including Gilbert and Rich) returned to Karluk Lake in later years, but no mention is made in their reports of the route or mode of travel, although Rich wrote that on August 27, 1926, after completing his work at Karluk Lake, he made a trip "down to the portage." 44/ After numerous visits to Karluk River and Lake, Gilbert and Rich wrote what is probably one of the most complete descriptions of the river:

> [From Karluk Lake] Karluk River flows tortuously in a westerly direction for about 2 miles; then a northerly direction along the western side of the valley for some 8 miles more. At this point, it is within some 3 miles of the upper end of Larsen Bay, an arm of Uyak Bay, and here there is a portage trail connecting Larsen Bay with the River . . . . The descent of the river during the first 10 miles below the lake is approximately 50 feet, and most of this drop occurs in the first 4 or 5 miles. Here the river is swift and shallow, but in the next 4 or 5 miles just above the portage trail to Larsen Bay the river is deeper, wider, and flows much more slowly. During the late summer and fall this comparatively quiet portion is so filled with dense growth of aquatic plants, chiefly the water crowfoot . . . that it is almost impossible to navigate either with motor or oars. Below the portage, the descent of the river is more rapid, falling about 300 feet in the 15 or 20 miles between the portage and the mouth of the river. 45/

Other government officials also commented unfavorably on the use of boats on Karluk River. 46/ For example, Stephen R. Capps, a geologist with the U.S. Geological Survey, wrote in the early 1930s that the Karluk and Ayakulik rivers were reportedly not navigable "for even shallow draft power boats." 47/

They then hiked five miles inland over bear trails. Returning to Karluk Lake over the same route, the party spent several more days hunting before returning home. 50/

In May 1935, another hunter named J. Bruce Allen accompanied Madsen on a hunting trip on Karluk Lake. Traveling by steamer to Larsen Bay, Allen was met there by Alf Madsen. From Larsen Bay the two men flew by hydroplane to Karluk Lake. Using a canoe to cross the lake, the party spent several days tracking brown bears. Although Allen was not specific as to the exact location of their campsite, his reference to two camps about six miles apart coincides with Claude Barr's two camps situated on Camp Island and at the mouth of O'Malley River. 51/

On May 14, 1954, Madsen, in the company of Carl Clare of Chicago, Illinois and John Day of Medford, Oregon, flew to his base camp on Camp Island. The first day Madsen took his party down the lake in an eighteen-foot skiff to his favorite lookout point (location unknown), where they killed a bear. The next day he lined a skiff up Thumb River which was then at flood stage due to melting snow. Establishing a camp at the other end of the lake, Madsen and his party hunted brown bear in the nearby valleys and hills following bear trails that were "almost like small roads." 52/

Sometime in the early 1960s, Madsen and an Aleut named Nick guided Fox Burns, a hunter. Landing on Karluk Lake in a Cessna 180, Burns and Nick used a seventeen-foot skiff to travel around the lake. 53/

Other guides who frequently worked in the Karluk Lake area included Hal Waugh, Bill Pinnell, and Morris Talifson. In April 1951, Earl Steven accompanied

are used. For example, Joe Black, a professional photographer, landed on Karluk Lake in a Grumman Goose. 58/ Howard Baltzo, his son, and three others were flown on October 14, 1978, to the U.S. Fish and Wildlife cabin at the Portage for a week of steelhead fishing in a Flirite Cessna 206 floatplane. 59/

Three hundred persons, mostly anglers, reportedly visited Karluk River in 1978. According to the Alaska Department of Fish and Game, 145 and 266 anglers fished Karluk River in 1972 and 1977, respectively. Forty percent of the fishermen, it was estimated, traveled the river in inflatable rafts. 60/ Rafting is also associated with hunting, particularly bear and duck hunters who frequent Karluk River and Lake. 61/

Most people who run rafts down Karluk River fly their equipment to Karluk Lake. Only in recent years, however, has this recreational use been documented. During the third week of June 1968, Don Zellhuber and three other persons floated the Karluk River. Landing on Karluk Lake in a Kodiak Airway Widgeon after a forty-minute flight from Kodiak, the party of four stayed two days at the recreational cabins at the lake outlet. The group then floated in two rafts down the river to the Portage. After four days of fishing at the Portage, the anglers resumed the float trip to Karluk Lagoon. Because of the high tide, they were forced to pull their rafts along the shore for the last two miles before being picked up by a Widgeon that landed in the lagoon. 62/

In the last week of June sometime in the early 1970s, Reverend Gordon L. Corbet, and two others flew into Karluk Lake from Kodiak in a Grumman Goose. They spent the first day fishing on the lake. On the second day they floated

River. In addition, Watson recommended an easement along the north shore of Thumb Lake from its outlet and a campsite easement on the east side of Thumb River at its mouth. These easement were necessary, wrote Watson, so as to "allow a full right of public use and access (including other villages) for camping, fishing, hunting, bear watching, and photography." He noted that Thumb River received light use by sport fishermen; and the lake and "creek" moderate use by bear hunters. Little or no increase in the number of fishermen and hunters was expected in the near future. However, he expected the number of bear watchers to increase significantly.

Both Watson and Frank A. Stefanich of the Alaska Department of Fish and Game (ADF&G) recommended that Camp Island, situated in the middle of Karluk Lake, be reserved, because the Kodiak National Wildlife Refuge, the National Marine Fish Service (NMFS) and the ADF&G used the island as a research station. Facilities on the island included two cabins, a shop-dormitory, fuel shed, two boat ramps, and two aircraft ramps. The field station of the NMFS consisted of a cabin, dormitory-mess, warehouse-shop, and a generator shed. According to Stefanich, the station had been used since the 1950s. Both Stefanich and Watson claimed that use of the island by their agencies would increase in the future. Stefanich pointed out that the island was needed too by the ADF&G as a base "to survey, construct, operate and maintain future salmon egg incubation and rearing facilites that will be on some of the tributary streams."

Stefanich, Watson, Farrar, and William R. Thomas of the U.S. Bureau of Outdoor Recreation also requested an easement on the north side of Karluk River at the outlet of Karluk Lake. According to Stefanich, this place had been used sporadically by anglers since 1942. The number of anglers visiting the site increased

navigated upstream by conventional craft. You must walk or fly." He pointed out that while the river in 1975 supported 500 angler days per year, it once supported 1,100 angler days per year. Stefanich predicted that the river would support more than 3,000 angler days per year in the future.

In addition, Frank Stefanich recommended easements on both banks of the river from the outlet of Karluk Lake to "King Hole," a distance of about a mile. This stretch of the river cannot be floated during normal water conditions, he wrote. Based upon actual observations, about sixty anglers walked the trail from the lake to the popular fishing hole each year. Their numbers would probably increase to ten to twenty per day in the future. Because the stream bank varied from boggy to very steep, he requested a wide easement corridor for the existing trail.

Stefanich also recommended a trail easement along the right bank of Karluk River from the Portage to the outlet of Karluk Lake, a distance of about nine miles. Apparently a trail from Portage to the lake did not exist, for Stefanich indicated that there was no past or present use of the route. However, he observed that the easement was needed to "provide for access to haul supplies, especially during periods of inclement weather" to the lake. The ADF&G planned to haul equipment and supplies to a salmon enhancement complex at the lake outlet.

Stefanich, Watson, and Farrar all nominated easements for the Karluk Portage and campsite. According to Stefanich, the trail, about two miles long, was the only practical way of walking from Larsen Bay to Karluk River. The trail was used by Natives of Karluk and Larsen Bay for inter-village travel. From 1926 to

On September 2, 1975, the BLM easement and navigability task force met to consider easement recommendations for Karluk and Larsen Bay villages, among others. Most of the nominated easements were approved. The proposed trail easement along the unnamed creek north of Larsen Bay to a small lake was rejected. In the belief that continuous easements along Karluk River did not meet departmental criteria, the task force recommended periodic easements along the river as well as easements on several islands in Secs. 15 and 16, T. 30 S., R. 31 W., Seward Meridian. The trail easement from the Portage to Karluk Lake proposed by the ADF&G was rejected, the BLM observing that the "terrain is very poor for trails and the existing mode of transportation on the Karluk River is by boat on the river itself." Finally, the BLM itself recommended a trail easement along the north shore of Karluk Lake from the lake outlet to Moraine Creek and a campsite easement at the mouth of the creek. The BLM maintained that the easements were needed to accommodate fishermen who walk from Karluk River to Moraine Creek. The BLM State Director concurred in the recommendations for Karluk and Larsen Bay villages on November 8, 1975 and November 11, 1975, respectively. 66/

Several Federal and State agencies objected to the deletion of the Karluk River streamside and the Portage - Karluk Lake easements. Dale Tubbs of the Alaska Department of Natural Resources wrote that periodic site easements along the river were not sufficient "to serve the public need and have a manageable system of use." 67/ Frank Stefanich wrote that the river received "significant and substantial use" and that "much fishing effort from Karluk Lake to Karluk Lagoon is accomplished from rafts." In view of this fact, continuous easements on both banks of Karluk River were needed "to minimize the occurrence of involuntary trespass by anglers." 68/ Gordon Watson noted that periodic site

On December 8, 1977, the BLM issued a Decision to Issue Conveyance (DIC) of lands to Koniag, Incorporated and Karluk Native Corporation. All waterways in T. 30 S., R. 30 W.; Tps. 29 - 31 S., R. 31 W.; Tps. 29 - 32 S., R. 32 W; Tps. 30 - 33 S., R. 33 W.; and Tps. 31 and 32 S., R. 34 W., Seward Meridian, were determined to be nonnavigable. On June 5, 1978, the BLM also issued a DIC to Larsen Bay Village for lands in Tps. 30 - 32 S., R. 28 W.; Tps. 30 - 32 S., R. 29 W.; and Tps. 30 - 32 S., R. 30 W., Seward Meridian. All waterways in the townships were determined to be nonnavigable. On June 30, 1978 and August 27, 1978, respectively, these lands were conveyed to Karluk Native Village, Nu-nachkpit, Inc., and Koniag, Inc. These conveyances included the bed of Karluk River and Lake. 72/

In the summer of 1981, the BLM reconsidered the navigability of Karluk River and other water bodies in Tps. 29 and 30 S., R. 31 W., Seward Meridian (excluding lands withdrawn by PLO 1634 of May 16, 1958), lands selected by Karluk Village. According to Carl F. Ehelebe of the Anchorage District Office, the historic record "indicates that over a period of years the Karluk River was occasionally used throughout its length under conditions wherein boats or bidarkas were pulled or poled through or portaged around rapids. Five outfitters of fly-in fishing and hunting parties are reported to presently use sectors of the Karluk River for their operations."

In addition, Ehelebe interviewed BLM employees John D. Bowman, Mike Kasterin, Carl Neufelder, and Lance Lockard for information pertaining to Karluk River. These officials, according to Ehelebe, "stated that they know that sectors of

A conversation with Dora Aga of Larsen Bay, disclosed that when she was a small girl in the late 1920 era, her parents transported goods and fish up and down the Karluk River.

From my experience working on and near the Karluk River and from the conversations with some of the local people, in my opinion the Karluk River should be deemed navigable.

On the basis of his research and interviews, Ehelebe concluded that Karluk River "is generally physically susceptible to present use by traditional watercraft." He recommended that the river "be considered navigable due to the fact that it meets the criteria for use by commercial watercraft and has in the past served as a route for transporting goods and fish as well as people with their possessions." All other water bodies, described as small or shallow, were recommended to be determined nonnavigable. As of the present writing, the BLM, State Office, has taken no action on the District Office's recommendations for Karluk River. 73/

Manager of the Kodiak National Wildlife Refuge in the 1960s, Dick Hensel told this writer on December 15, 1981, that he floated down the Karluk River three times in a raft between 1965 and 1968. Sometime before 1964, he descended the river from the lake to the lagoon. He also remembered taking six skiffs into Karluk Lake by way of the Larsen Bay - Karluk River Portage for the Bureau of Commercial Fisheries. Boats taken upstream, Hensel stated, have to be dragged over shoals located three-fourths of a mile below the lake. Just below the lake outlet remnants of an old Koniag weir made of rock still could be found in the middle of the river. Also, a fish tower was located nearby. According

Several BLM employees have floated down Karluk River in inflatable rafts. In an interview with this writer, LaRalle Smith, a forester employed by the BLM, Alaska State Office, stated that he has floated down the river three times in rafts: with his son in 1976, with his family in 1977, and again in 1978 with fourteen BLM employees and their wives. On the last trip, three Avon Redshank rafts were used. On all three trips, Smith was landed near the U.S. Fish and Wildlife cabin on Karluk Lake in a Cessna 185.

During these excursions down the Karluk, he camped across the river from the recreational cabin at the Portage; at Shasta Creek; and at a campground located at the mouth of the river. According to Smith, the river at the Portage was between sixty and ninety feet wide and the water about four feet deep. He believed that a boat could be taken up the river if it had a thirty-five horsepower motor. Louis Carufel, a biologist with the BLM State Office who accompanied Smith on the 1978 rafting excursion, stated that at Shasta Creek, the party had to get out and drag the raft for several hundred yards. 77/

Gary Seitz, the present chief of the Navigability Section in the BLM, State Office, floated down the Karluk River four or five times in the 1970s in an Avon Redshank raft. He recalled that a privately-owned recreational camp catering exclusively to French fishermen was located on the river about two to three miles above the Portage. The fishermen reached the camp by floatplane, which landed on the river. The camp consisted of eight living tents and a mess tent. According to Seitz, just below where Silver Salmon Creek enters Karluk River, the Alaska Department of Fish and Game used to maintain a fish weir. Unlike the main weir that existed at various times at the mouth of the river, at Karluk Portage, and at the outlet of Karluk Lake, all of which impeded

access for hunting, fishing, hiking and photography. He noted that bear hunters occasionally used the route. Frank Stefanich of the ADF&G requested an easement for a proposed research station at the waterfall; he stated that his agency planned to construct living quarters and fish ladders at the place. 81/

On August 8, 1975, Allen C. Kutt and Lloyd Sutton of the BLM, Anchorage District Office, met with officials of Larsen Bay Village Corporation to discuss the proposed easements. According to Kutt, the corporation objected to the proposed easements due to lack of public use. 82/

Nevertheless, on September 2, 1975, the BLM easement and navigability task force endorsed the proposed easements in part. Rejecting Watson's proposed streamside easement along Brown's Lagoon with the comment that the route was not necessarily the best one to public land, the BLM proposed easements along both banks of Brown's Lagoon for a distance of about one and one-fourth miles. In addition, the BLM rejected the proposed site easement at the falls because it did not meet departmental criteria. Finally, the BLM recommended a site easement for a floatplane pull-out at the outlet of the small lake at the head of Brown's Lagoon. On October 11, 1975, the BLM State Director concurred with the recommendations. 83/

Reexamining the task force recommendations in June 1976 in line with Secretarial Order 2982, the BLM modified the streamside easement to include the streambed above the limit of tidal influence. The one-acre easement at the outlet of the small unnamed lake at the head of Brown's Lagoon was also modified to include an easement twenty-five feet wide on the adjacent lake bed. In justification of the streamside easement on Brown's Lagoon, the BLM pointed out that "Hunters and fishermen range the river and hunting from skiffs is common practice."

River "is traveled only during high flow periods or with great difficulty at other times. It is doubtful that the river meets the navigability decision requirements." 88/

Spiridon Lake

Located on the lower half of a peninsula between Uyak and Spiridon bays on the south and Uganik Bay on the north, Spiridon Lake (elevation 446 feet) is nestled among mountains 1,000 to 2,300 feet above sea level. Approximately five miles long, the lake drains an area of twenty-two square miles. According to the ADF&G in 1971, the lake is about 395 feet deep. 89/

The lake is drained by a small stream that flows south about one and one-half miles to Spiridon Bay. Heading in two small unnamed lakes two miles to the west, a small stream discharges into the southwest end of Spiridon Lake. From May 1962 to July 1965, the U.S. Geological Survey operated a gaging station on the lake outlet three hundred feet downstream from the lake. The U.S. Army Corps of Engineers in the 1950s considered the lake as a potential site for a hydroelectric project. 90/

According to Willard Troyer, manager of the Kodiak National Wildlife Refuge from 1954 to 1963, deer and bear hunters used to visit the lake in Grumman Gooses. He stated, however, that at present the preferred mode of access is by Cessna 206 floatplane. Troyer also stated that he himself had landed and taken off from the lake in a Cessna 206, a Super Cub, and a Widgeon. 91/

Mr. Daigger's letter was in response to a BLM navigability determination for 742.51 acres located on the southwest side of Uganik Bay in T. 28 S., Rs. 26 and 27 W., Seward Meridian, which he misinterpreted to mean Spiridon Lake, Little River Lake, and an unnamed lake in these townships. 92/

Little River

Heading in Little River Lake (elevation 638 feet), this river flows eight miles northwest to a lagoon three-fourths of a mile long, formed by a "shingle and bowlder spit." A marked difference in vegetation separates the grasslands and alpine tundra of the surrounding mountains from the wet tundra and alder of the narrow river valley. Jefferson Moser, who visited Little River and nearby fish houses on the beach that two canneries on Uyak Bay had built, reported in 1898 that the river had little current. The river narrowed to one-eighth of a mile within a mile of the coastline, and a number of grassy islands were located in the river near its mouth. According to Moser, the river ran "in a rapid to the straits" at the spit. 93/

Nestled between five mountains over 2,000 feet in elevation, Little River Lake is an oval-shaped lake two and a half miles long. Fed by three small streams, the lake has a surface area of 0.8 mile and a drainage area of 7.8 square miles. The estimated annual runoff is 14,000 acre-feet. 94/

Brown bear, Sitka black-tailed deer, short-tailed weasel, land otter, and red fox frequent the area. An abundance of pink salmon, red salmon, silver salmon, rainbow trout, and dolly varden make the river an excellent fishery. 95/

Mr. Daigger's letter was in response to a BLM navigability determination for 742.51 acres located on the southwest side of Uganik Bay in T. 28 S., Rs. 26 and 27 W., Seward Meridian, which he misinterpreted to mean Spiridon Lake, Little River Lake, and an unnamed lake in these townships. 97/

Uganik River

Heading in glaciers and small lakes on Mount Glottof (elevation 4,039 feet), the Uganik River flows northwest in two branches, one more than nine miles long, the other more than sixteen miles long, into the south end of Uganik Lake. From Uganik Lake (elevation 75 feet), the river flows northwest about four miles in a wide valley and finally across tidal mud flats to empty into the East Arm of Uganik Bay. The river gradient between the lake and the tidal flats is about nineteen feet per mile. At rivermile 1.3, the river receives the waters of its principal tributary heading in Mush Lake, a northwest-southeast trending lake 1.3 miles long. In 1941, the Bureau of Sports Fisheries reported the river to be fifty-nine inches deep, one hundred feet wide on the average, and flowing over a sand and gravel bottom with a riffle-flow effect. The flow rate has been estimated at 13,700 cubic feet per second. The average discharge reported by USGS from May 1951 to September 1978 from a gage one-half mile upstream from tidewater is 673 c.f.s. Since May 1951 the U.S. Geological Survey has operated a gaging station on the right bank of Uganik River one-half mile above tidewater. Access to the site is by way of a foot trail from Uganik Bay. 98/

A narrow, crescent-shaped body that trends in a southeast-northwest direction, Uganik Lake is about three and one-half miles long with a surface area of about two miles. Draining an area of ninety-seven square miles, the lake has an

In 1898, five members of the U.S. Fish Commission visited Uganik Bay. Jefferson Moser, a member of the party, described the river at its mouth as flowing "over tidal flats in an east-and-west direction for a distance of 2 miles, having an average width of half a mile." "These flats," he wrote, "are largely uncovered at low water, having two channels through them, one close to the northern shore and skirting the native summer village; the other, entering near the center of the width of the arms, turns sharply to the northward around the northern end of a large, rocky and wooded island, when it turns again to the westward." The village mentioned by Moser was probably the same one listed in the 1890 census with thirty Eskimos. 102/

Moser and his companions hiked up the left side of Uganik River to Uganik Lake. "After a hard walk of five hours" along a grassy plain and sloping mountain sides and through thickets of cottonwood, alders, and willows, the group reached a point near the lake outlet. Moser described the lake and its principal inlets as follows:

> The lake is somewhat crescent-shaped, about 6 miles long in a northwest and southeast direction, and of an average width of about a mile. It lies throughout its length between two ridge-like mountain masses which reach a height of 2,000 feet above its surface. The banks are steep, precipitous in many places, and heavily wooded to a height of 300 to 400 feet. There are numerous shelving beaches of gravel, black sand, and fine slate. The lake has the appearance of being very deep. At the southeast end are two inflowing streams about a quarter of a mile apart at the mouths; the larger one, flowing from the southeast, is about 40 yards wide, and the smaller one,

For a short time, Moser believed that a hatchery might be established on Uganik Lake. In 1896, the canneries took more than 350,000 red salmon near the mouth of the river; in 1897, less than 15,000 red salmon. After the journey, however, Moser recommended against Uganik Lake as a site for a hatchery, claiming the lake to be inaccessible. 103/

Disregarding Moser's advice, in 1913 the Bureau of Fisheries installed an experimental hatchery on Uganik Lake, and a weir across the mouth of Uganik River. On account of the swift current, it proved impossible to maintain the weir. The next year, when it was discovered that many fish spawned before reaching the lake, the hatchery was transferred downstream to tidewater. The Uganik hatchery, with a capacity of three million salmon eggs, was a substation of the Afognak Lake hatchery. Eggs collected at Uganik were transferred to Afognak Lake for shipment to the States. In 1918 the substation on Uganik River was closed. 104/

In early September 1927, warden Howard Hungerford visited Uganik River to investigate the possibility of installing a weir. Walking up the river, he found a suitable site for the weir 250 feet above tidewater. Walking to the lake the next day, he established a camp on the lakeshore at an "old eyeing station," and then walked around the lake to locate salmon-spawning grounds. 105/

From 1928 to 1932 the Bureau of Fisheries operated a weir on the Uganik River at the site selected by Hungerford, who also oversaw its construction. In 1929 the weir was destroyed in a flood. Two years later, after another flood, the Bureau moved the weir eleven feet downstream. 106/

Four years later, in September, Madsen guided G. Scott Towne and son into Uganik Lake on a hunting expedition. Establishing his camp across the ridge from Mush Lake, Madsen spent several days scouting the lower river for brown bear. The entire group consisted of Madsen, his two daughters, his son, a camp helper, two guides, and the cooks. The first day one of the guides and Towne hiked up river to an area known as the "lookout." The following day after waiting for high tide, the guides, accompanied by Towne, brought a dory upriver and spent the remainder of the day "glassing" the mountains along the river and tidal flats for bears. The third day, Towne and a guide took a dory upriver to the "lookout" to allow the trio to cross to the north side of the river if bears were spotted there.

Towne spent several days hunting the lower Uganik River while his son, a camp helper, and the two guides hiked into Uganik Lake to scout for bears. As Towne described the trip: "The trip had definitely been a tough one, made mostly on foot. Roy and Tommy had walked along the shore much of the four miles, pulling the boat with tow ropes slung over their shoulders, while Fred and Eli waded behind it pushing it against the current. As they came within the site of the lake the going became easier." The entire trip upstream took six hours. After killing two bears at the head of the lake, the party transported their trophies down the river by boat to the base camp. The boat often scraped the river bottom, and twice the men had to get out of the boat and push it through shallow places. The return trip took less than two hours. 108/

An article published in The Alaska Sportsman in 1935 provides additional evidence of a motorboat on the Uganik River. One morning in early June in the 1930s, men employed by Madsen took "a power dory" one mile upstream and made camp

The lower Terror River flows northeast about seven miles from Terror Lake to Terror Bay on Shelikof Strait. The river cascades over several falls in a U-shaped, broad valley. From rivermile 2.6 to rivermile 1.0, the stream flows in three channels: Bear Creek; the main channel, which is full of scour holes, side channels, and log-debris jams; and Ouzel Creek, a spring-fed stream between the main channel and Bear Creek. The lower river drains an area of forty-six square miles. Pink salmon spawn in the river to rivermile 4.5. 113/

Terror Lake (elevation 1,240 feet) is a crescent-shaped lake with a surface area of about one square mile. The estimated average discharge from the lake is 138 c.f.s. The lake outlet is a very promising dam site. In 1956, the U.S. Army Corps of Engineers proposed to run a tunnel northeasterly from the lake to a powerhouse site as the head of Kizhuyak Bay. In the 1960s, the city of Kodiak considered plans for a hydroelectric site on the lake. 114/

In the 1970s, the State of Alaska selected Terror Lake as the site for a major hydroelectric project to supply Kodiak with power. The State's plan calls for the construction of a rockfill structure across the lake outlet that will raise the water surface level in the lake more than forty meters. To maintain the fish spawning beds, a reinforced concrete outlet conduit will pass through the base of the dam allowing controlled release of water. A power tunnel intake structure will extend northeast to Kizhuyak Valley where a major transmission line will transmit power to Kodiak. An access road from Kizhuyak Bay to the powerhouse and dam site will be constructed with an extension to the east shore power intake tunnel. 115/

Unnamed Streams and Lake in T. 25 S., Rs. 24-25 W., Seward Meridian

In October of 1982 the BLM Navigability Section considered the navigability of unnamed streams and lakes in T. 25 S., Rs. 24-25 W., Seward Meridian in connection with State-selected lands. The streams, it noted, are unnamed, relatively short in length, with steep gradients. The lakes are small. Only a few could accommodate floatplane use. Based on this information it recommended that all freshwater bodies in these townships be determined nonnavigable. On November 1, 1982, the Assistant to the State Director for Conveyance Management concurred with these recommendations. 120/

Unnamed Streams and Lakes in T. 26 S., Rs. 24-25 W., Seward Meridian

In October of 1982 the BLM Navigability Section considered the navigability of unnamed streams and lakes in T. 26 S., Rs. 24-25 W., Seward Meridian in connection with State-selected lands. The streams, it noted, are unnamed, relatively short in length, with steep gradients. The lakes are small. Only a few could accomodate floatplane use. Based on this information it recommended that all freshwater bodies in these townships be determined nonnavigable. On November 1, 1982, the Assistant to the State Director for Conveyance Management concurred with this recommendation. 121/

Barabara Lake

Barabara Lake is a small body located in a narrow valley four miles south of Port Lions and about one mile west of Kizhuyak Bay. The lake is drained by a small creek that empties into Barabara Cove in Kizhuyak Bay. Alder bush and grassland interspersed with patches of cottonwood predominate in the area.

David S. Jackman of the Federal-State Land Use Planning Commission, after reviewing the proposed easements, agreed with the BLM decision on the basis of "prior existing use." Because of the heavy use of the outlet to Barabara Lake for recreational camping and vehicles, the BLM in November 1976 revised the recommendation for a campsite easement at the outlet to include a twenty-five foot extension on the bed of the lake. 125/

On December 9, 1977 the BLM issued a Decision to Issue Conveyance for lands to Afognak Native Corporation. All waterways in T. 24 S., R. 23 W.; T. 25 S., Rs. 23 and 24 W.; T. 26 S., Rs. 22 to 24 W.; and T. 27 S., Rs. 22 to 23 W., Seward Meridian were determined to be nonnavigable. On August 1, 1979 these lands were conveyed to the Afognak Native Corporation. 126/

In February 1981, the BLM, Anchorage District Office, considered the navigability of water bodies in T. 27 S., R. 23 W., Seward Meridian, excluding Barabara Lake where land (Secs. 23, 24, 25, and 26) had already been conveyed. Noting the existence of numerous small unnamed lakes and streams in the area, and that floatplanes landed on the larger lakes, the District Office recommended that all water bodies in the township be determined nonnavigable. The District Office chose not to discuss Barabara Lake as the bed of the lake had been conveyed. 127/

Red Cloud River

Heading in low mountains (elevation 750 feet) north of Kodiak, this river flows north about four miles in a narrow valley to empty into Anton Larsen Bay. From 1963 to 1980, the most recent year for which data has been published, the

easements on both banks of Elbow Creek. In addition, Farrar requested a campsite easement on high ground near the mouth of the creek. Both men pointed out that the creek was a major salmon stream visited by fifteen to twenty anglers each year. They anticipated two to five hundred anglers would annually visit the creek once the road from Kodiak to Port Lions was constructed. 132/

On June 2, 1975 the BLM rejected these easement proposals, recommending instead a one-hundred-foot trail easement along the right bank of Elbow Creek inland from the head of Sharatin Bay to public lands. On October 31, 1975 the BLM State Director concurred. No action has yet been taken by the BLM on the proposed easement recommendation. 133/

In the spring of 1982 the BLM District Office considered the navigability of Elbow Creek in connection with State-selected lands in T. 28 S., R. 21 W., Seward Meridian. Elbow Creek, like most streams on northeast Kodiak Island, is narrow and shallow and has a gradient in excess of one hundred feet per mile. Both John Merrick and John Bowman of BLM stated they know of no streams in the township used as highways of travel. Considering the physical character of the creek, and the existing road system within the township, the District Office concluded that Elbow Creek and all other water bodies within the township were nonnavigable. On May 12, 1982, the State Director concurred with this recommendation. 134/

Beaver Lake

In March 1981, the BLM considered the navigability of water bodies on State-selected lands in T. 27 S., R. 19 W., Seward Meridian. Water bodies in the

Buskin Lake

Buskin Lake (elevation 5 feet) is located in a popular recreation area approximately five miles northwest of Kodiak. The lake is drained by Buskin River, a clearwater stream three and one-half miles long that empties into Saint Paul Harbor. Barometer Mountain rises abruptly from the lake's south shore to over 2,500 feet. Rolling grassland, brush, and poplar trees surround the lake. During the 1964 earthquake, the deltas of the three streams entering Buskin Lake subsided several feet. 138/

Both the lake and river receive large runs of chum, coho, sockeye, pink salmon, and dolly varden every year. In 1975, 9,506 anglers visited the area. 139/ In view of the heavy fishing pressure, from 1970 to 1974, the ADF&G conducted intensive studies of the salmon escapement. The project included the use of a skiff on Buskin Lake in 1970 and 1971 and in August 1974. 140/

As recounted in Yule Chaffin's Alaska Southwest: Koniag to King Crab, Mrs. Albert, whose family in the early 1900s lived on a ranch on Buskin River at or near the present Coast Guard airfield, used to descend a cliff by rope when the tide was low and follow the narrow beach three and a half miles to Kodiak. Between 1922 and 1928, the Alaska Road Commission improved a five-mile trail extending from Kodiak to the Albert ranch. By 1928 the trail was suitable for wagon traffic and served several homesteads in the area. A trail also existed along Buskin River to the lake; it was passable for foot travelers and horses during the 1930s. 141/

In the spring of 1982 the BLM Anchorage District Office considered the navigability of Buskin River and Lake on State-selected lands in T. 29 S., R. 20 W., Seward Meridian. According to John Merrick and John Bowman of the BLM:

> Small boats and inflatables have probably been, or could be, used on most lakes within the report area, but such use would probably have been associated with recreational industry or short term studies by government officials or scientists. They knew of no use of any of the lakes within the report area as highways for travel, trade, and commerce. They know of recreational boat use on Russian and Buskin rivers. Both streams have summer races similar to Anchorage's Campbell Creek Classic where small recreational type boats (bought and homemade) race downstream. Mr. Bowman felt that upstream travel past the limit of tidal influence would be very difficult on both these streams.

The lack of commercial use information on either the lake or river, coupled with the existence of an existing road system in the area led the District Office to conclude that Buskin Lake and River as well as all other water bodies within the township were nonnavigable. On May 12, 1982, the State Director concurred with this recommendation. 147/

Russian Creek

Heading in a mountain (elevation 1,300 feet) southwest of Kodiak, Russian Creek flows easterly over seven miles to Womens Bay. From the head of the

Clamming and sport fishing are popular recreational activities in the area. A dirt spur road, constructed before 1952, extends up the southern side of the valley for a short distance. A military rifle range is located immediately north of Salonie Creek. 151/

In March 1978, Stanley Bronczyk, a BLM realty specialist, recommended a twenty-five-foot streamside easement on both banks as well as on the beds of Salonie and Russian creeks. Since the early 1940s, he wrote, these streams had been used by fishermen. A minimum of two hundred sport fishermen used the stream each year. The BLM has not yet taken any action on the proposed easement. 152/

In spring of 1982 the BLM Anchorage District Office considered the navigability of Salonie Creek and other water bodies on State-selected lands in T. 29 S., Rs. 20-21 W., Seward Meridian. Neither John Merrick nor John Bowman knew of any streams within the report area used as highways of travel. Based on the absence of information concerning boat traffic on the streams, the physical character of the streams, and the existence of a road system in the report area, the District Office concluded that Salonie Creek and all other water bodies within the townships were nonnavigable. On May 12, 1982 the State Director concurred with this recommendation. 153/

American River

Heading in a high mountain (elevation 1,800 feet), this river flows northeast for ten miles through a wide valley to the head of Middle Bay eleven miles southwest

steep hills covered with Sitka spruce and alder. Just before the river empties into the bight, it receives Kalsin Creek, a northeast-flowing stream four miles long that heads in high mountains south of Kalsin Bay. About one mile above the junction of these two streams is a small unnamed lake. Two miles above the bight, Olds River is joined by the Henley River, a small stream approximately three miles long that heads in the mountains southwest of Kalsin Bay. 159/

The entire area is a popular recreational area for picnicking, camping, boating, hunting, fishing, and clamming. According to Troll, 428 fishermen visited Olds River in 1975. 160/

In 1906, the Federal government established an agricultural experiment station on Kupreanof Peninsula, specializing in the husbandry of Galloway cattle. Part of the herd was grazed on Woody Island before being transferred to Kalsin Bay. Kalsin Bay is easily reached from Kodiak by a dirt road to Cape Chiniak. A spur road runs south along Kalsin Creek to Pasagshak Bay and thence easterly to Narrow Cape. 161/

Sacramento River

Heading in a mountain (elevation 700 feet) about six miles southeast of Kodiak, this river flows east approximately two miles in a narrow valley and thence about one and a half miles southeast in a broad valley to empty into the Gulf of Alaska. The river empties into the ocean in two channels, the mouths of which are located about one mile from one other. A small circular lake is situated near the coast between the mouths of the river. 162/

tidally affected as a result of land subsidence caused by the 1964 earthquake. Because of the large run of pink and coho salmon as well as dolly varden in the lake, brown bears frequent the area and hundreds of eagles roost in cottonwood trees at the lake's northwest shore. 165/

The river valley, due to its excellent forage, is suitable for livestock grazing. Joseph Zentner since 1950 held a lease to 25,000 acres of grazing land in the vicinity of Lake Rose Tead. In 1948 he built a cabin at the outlet of Lake Rose Tead and filed a homestead claim to 159 acres in 1962 encompassing both sides of as well as the submerged beds of the river. In 1965 the Bureau of Land Management conducted a field examination of Zentner's homestead in which the river was observed to be tidally affected to Lake Rose Tead. As a result of the changed condition of the river the BLM in 1971 waived "the shore space requirements and the requirements that a homestead must comprise a compact area of contiguous land." According to Chaffin, Zentner sometimes used the beaches of Pasagshak Bay as a landing area for his light airplane. Located one-half mile below the lake, a bridge built by Zentner was destroyed in the 1964 earthquake. 166/

In 1975, according to Troll, approximately four thousand anglers fished Lake Rose Tead. Many tourists visit Pasagshak Bay by a dirt road from Kodiak to Pasagshak Point that skirts the edge of Lake Rose Tead. In response to increased public use of Pasagshak Bay, the ADF&G in 1965 classified the east side of Pasagshak Bay as a public recreational area. Trails, picnic tables, and private recreational cabins were placed there. 167/

According to Dick Marriott, a biologist with the ADF&G on Kodiak Island from 1969 to 1980, launches used for fishing in the bay are kept in the small river (locally known as Pasagshak River) that drains Lake Rose Tead when not in use. During the salmon run, Marriott recalled, fishermen took their boats up

According to Frank Van Hulle of the ADF&G, the lake received a lot of floatplane use in late summer from deer hunters as well as anglers for silver salmon. He stated that the ADF&G currently (1982) keeps a fourteen-foot aluminum boat on the lake for fish research. In 1970, he landed on Lake Miam in both a Grumman Goose and a floatplane while engaged in a project to retrieve silver salmon eggs for the Fire Lake hatchery near Anchorage. In an interview with this writer, Dick Marriott also stated that he landed on Lake Miam in a Grumman Goose and near the lake in a wheeled plane. 171/

In October of 1982 the BLM Navigability Section considered the navigability of Lake Miam and other water bodies in State-selected lands in Tps. 30-31 S., R. 21 W., Seward Meridian. The streams, it noted, were unnamed, relatively short in length, with steep gradients. The lakes, including Lake Miam, were small. Only a few could accomodate floatplane use. Based on this information, it recommended that all freshwater bodies in these townships be determined nonnavigable. On November 1, 1982, the Assistant to the State Director for Conveyance Management concurred with this recommendation. 172/

Saltery Lake

Located twenty-four miles southwest of Kodiak, Saltery Lake is a major spawning ground for red salmon. The lake, about a mile in length, is drained by Saltery Creek, a small stream two miles long flowing southeast through a broad wetland valley into Saltery Cove on the north shore of Ugak Bay. As a result of the 1964 earthquake, the lakeshore subsided three feet, causing the destruction of two houses that were part of John Hurst's ranch. 173/

In the spring of 1982 Mac Wheeler of the BLM, Anchorage District Office, considered the navigability of this lake system in connection with State-selected lands. He reported the gradient of Saltery Creek as ranging from about twenty feet per mile to more than four hundred feet per mile. Following interviews with John Merrick, chief of the BLM Peninsula Resource Area, and John Bowman, a BLM realty specialist, Wheeler wrote:

> They were aware of no use on [Saltery Lake] other than floatplanes. Mr. Bowman has personally landed on Saltery Lake for examination of grazing leases. He pointed out that a commercial lodge supplied by road or air from Kodiak is located on Saltery Lake. He saw a few small skiffs (14 to 16 feet) that are kept at the lodge and used by the guests for recreational fishing. Since the creek is not boatable from tidewater to the lake, the skiffs are just used on the lake . . . . Mr. Bowman felt that Saltery Creek was too small and shallow for boating use.

Wheeler thus concluded that Saltery Creek was nonnavigable. He reached the same conclusion about the lake: "Although most of the lakes [on northeast Kodiak Island] are wide and deep enough to accomodate boats capable of carrying small commercial type loads, the absence of actual commercial use information along with land status, or inaccessibility, undevelopable shorelines, or the existing road transportation system, leads the author of this report to believe that in their liquid state they will not be used as highways for travel, trade, or commerce." On May 12, 1982, the State Director concurred with this recommendation. 177/

steep gradients. The lakes are small. Only a few could accomodate floatplane use. Based on this information, it recommended that all fresh water bodies in this township be determined navigable. On November 1, 1982, the Assistant to the State Director for Conveyance Management concurred with this recommendation. 180/

Deadman Bay

A large terminal stream with two forks discharges into the head of Deadman Bay. The West Fork is about 7.5 miles long and the North Fork is 7.8 miles long. According to Dick Hensel, the main stream flows 0.6 mile south from the confluence of the two forks and enters a brackish slough of Deadman Bay. 181/

Unnamed Streams and Lakes on Southeast Kodiak Island, Two Head Island, Geese Island, and Trinity Islands

In December of 1980, a BLM realty specialist completed a report on State-selected lands in T. 36 S., Rs. 27-29 W., T. 37 S., Rs. 27-30 W., T. 38 S., Rs. 27-29 W., T. 39 S., Rs. 29-30 W., and T. 40 S., Rs. 29-30 W., Seward Meridian, on southeast Kodiak Island, Two-Head Island, and the Geese Islands. Citing the lack of historic use information and the shallow, narrow, and steep character of the water bodies, he recommended that all water bodies in these fourteen townships be determined nonnavigable. On January 28, 1983 the Acting Assistant to the State Director for Conveyance Management concurred with this recommendation for the following townships: T. 36 S., Rs. 27-28 W., T. 37 S., Rs. 27-29 W., T. 38 S., Rs. 27-30 W., and T. 39 S., Rs. 29-30 W., Seward Meridian. 182/

> upper part, the stream is broad with a gravel bottom, sluggish current, and grasses growing in the water along the shores. Elsewhere the bed of the stream is rocky with some gravel and shingle in places. It is full of low riffles and a few shore rapids, besides the cascades and rapids . . . the total fall from lake to lagoon is about 45 feet.

The lagoon he estimated to be five-eighths of a mile in length, very shallow with a bottom of sand, gravel, shells, and shingle, and "badly choked by a thick matted growth of coarse eelgrass." A long, narrow spit extending from the south shore separates the lagoon from Olga Bay. 185/

According to Booth, the Kodiak Packing Company once maintained a small fishing station known as North Fishing Station near the lagoon. He did not indicate when the station was established or how long it operated. 186/

Archaeologists recently discovered three sites in the area: a Koniag period site at the mouth of Horse Marine Lagoon, a Koniag period site on the north side of Horse Marine Lagoon, and a major settlement of numerous house pits and cemetery on the south side of Horse Marine Lagoon at its outlet. 187/

The BLM has not yet made a navigability determination for Horse Marine Lake or its outlet. However, in 1975, while considering proposed easements on land selected by Ahkiok Village, the BLM collected information about the lake. Frank Stefanich of the ADF&G, Daniel Farrar of the Alaska Conservation Society, and Gordon Watson of the U.S. Fish and Wildlife Service nominated a streamside easement along the entire length of Horse Marine Creek. Noting the area received light use by fishermen and bear hunters, Watson recommended the

However, on September 9, 1977, when it decided upon final easements, the BLM reversed itself and recommended a trail easement from Deadman Bay to Horseman Lake. Two site easements were also reserved for camping, staging, and vehicle use at the mouth of Horse Marine Creek and on the east side of Horse Marine Lake near an unnamed stream. The lake site was to be used as a floatplane docking area. The lagoon site was to accommodate boat docking. The proposed easement along and on Horse Marine Creek was deleted. 192/

Finally, on October 24, 1980 the BLM easement staff assembled to conform the final easements. With the exception of the proposed access trail from Deadman Bay to Horse Marine Lake, all proposed easements were approved. 193/

Olga Bay

A tidal, crescent-shaped water body on the south end of Kodiak Island, Olga Bay is about eighteen miles long and between one-half mile and two miles wide. The western end of the bay is separated from the Pacific Ocean by a strip of low-lying land little more than a mile wide. The north and the south shores of Olga Bay rise sharply to elevations of between two and five hundred feet. 194/

From Alitak Bay, passage into Olga Bay is through the Narrows. At its narrowest point, the channel is only three hundred feet wide. At high tide many swirls are present in the Narrows. While many small cannery steamers have successfully navigated the Narrows, local knowledge is required to make a safe passage. In the past, cannery steamers waited for slack water before entering Olga Bay. 195/

Station Lake I (elevation 50 feet) has a surface area of 2.2 square miles. Upper Station Lake II exceeds the lower lake in yearly runoff, averaging 8,000 acre-feet to 10,500 acre-feet. 198/

Less than a mile in length, South Olga Creek flows west from the west lake to Olga Bay. Visiting Olga Bay in 1900, Jefferson Moser described the creek as thirty feet wide, twelve to fourteen inches deep, and flowing with a current less than one mile per hour. He estimated the stream gradient at fifteen feet per mile. Four hundred feet before the creek reaches the beach, he observed, the creek broadens into a one-hundred-yard wide lagoon, which was a favorite breeding ground for ducks. Entrance to the creek was blocked by a narrow shingle. He described the upper stretches of the creek as being full of small boulders and rocky outcrops. 199/

Both lakes support excellent salmon runs. A recent report estimated an average escapement of 57,000 red salmon, 222,000 pink salmon, and between 2,000 to 4,000 silver salmon. Dolly varden, steelhead, and rainbow trout are present in the lakes. 200/

A number of archaeological sites are located on the Olga Creek system. One large site is located near Olga Creek. According to Ales Hrdlicka, it was probably a summer fish camp. One site is located on the stream connecting the upper and lower lakes, and another at the mouth of the stream draining Upper Station Lake II. 201/

In 1925 the Alaska Packers' Association filed for two homesteads under soldier's additional scrip on the outlet stream of Upper Station Lakes. One tract, obtained from John Sutter, the original assignee, was at the mouth of South Olga Creek

Stefanich nominated a third easement on the south side of Olga Creek opposite the ADF&G weir for a storage site for the weir. According to Stefanich, the cabin and weir were moved to the lake outlet in 1969. The structure had been located one-half mile downstream since prior to Statehood. Between fifteen and twenty anglers annually fished the site. This number, he estimated, would increase to over one hundred in the future. These three easements were needed not only to facilitate public use but also for a "proper management of the fisheries by the ADFG." Watson pointed out that ADF&G personnel operated the weir from June to September and that a public camping area was located there.

Stefanich, Watson and Farrar recommended a streamside easement on both banks of the creek connecting Upper Station Lake II with Upper Station Lake I, and a campsite easement at the outlet of Upper Station Lake II. In addition, Stefanich nominated a campsite and research station easement at the mouth of the creek. Between fifteen and twenty anglers and photographers recently fished both this stream and Upper Station Lake II, he wrote. Since the 1950s the ADF&G had monitored silver salmon and red salmon escapement and gathered silver salmon eggs at the head of the Upper Station lakes. An easement with a boat and docking area was needed here to accommodate not only a camping site but also a temporary weir with living quarters.

Gordon Watson noted that the creek connecting the lower and upper lakes received light camping and sport fishing use. Little or no increase in the number of fishermen and campers was expected in the near future. A stream-side easement was required to allow the public full use of the lakes and for

Reexamining the task force recommendations in July 1976 in line with Secretarial Order 2982, the BLM made only one change. The streamside easement on both banks of Olga Creek was modified to include the streambed. On November 18, 1977, the BLM issued a Decision to Issue Conveyance for lands to Koniag, Inc., and Ahkiok, Inc. Subsequently, on November 21, 1978, the lands were conveyed to the corporations. The beds of the Upper Station lakes and Olga Creek were included in the conveyance. 208/

Frank Van Hulle, a biologist with the ADF&G, told this writer that he used a sixteen-foot Boston Whaler boat with a glass bottom while conducting fish research on the Upper Station lakes. John Bowman of the BLM, Anchorage District Office, stated that a trail runs along Olga Creek to Upper Station Lake I. 209/

Dog Salmon Creek

Heading in Frazer Lake (elevation 353 feet), Dog Salmon Creek flows approximately seven miles in a southerly direction to Olga Bay. In the first seven-tenths of a mile from the lake, the creek flows in a series of pools and riffles to a thirty-foot waterfall. Below the falls, the stream flows with a sluggish current. At mile 5.3, the creek receives the water of the North Fork, a stream heading in a series of alpine lakes north of Frazer and Karluk lakes. At the junction with the North Fork, the stream channel is strewn with boulders and rapids and the current is very swift. Just before reaching Olga Bay, Dog Salmon Creek splits into two forks. 210/

Located fourteen miles north of Akhiok and about twenty-six miles southeast of Karluk, Frazer Lake is a long, narrow body with a convoluted shoreline. The lake is nine miles long, one mile wide, and oriented northwest-southeast. Nine

To enumerate the number of spawning salmon, the ADF&G in 1965 constructed a smolt weir on Dog Salmon Creek approximately one-fourth of a mile above the falls. Lumber for the weir was shipped from Kodiak to Moser Bay, where the material was loaded aboard a Grumman Goose and flown to the outlet of Frazier Lake. The lumber was then floated downstream to the weir site. According to one report: "The width of the stream at the weir site was approximately 100 feet. The streambed at this location was composed of medium and small gravel and the average depth of the water was 2½ feet during normal stream flow. The site was selected because of the level stream bottom and uniform depth of the water flow." A skiff was also used that year to observe sockeye salmon spawning on Frazer Lake. 216/

In 1966 a Super Cub was chartered by the ADF&G to transport sockeye fry from the Kitoi research station hatchery to Frazer Lake and adult salmon from Red Lake to Frazer Lake. The following year the operation was repeated between the Kitoi research station and Frazer Lake in a Widgeon. 217/

Besides the research facilities of the Fish and Wildlife Service at the falls on Dog Salmon Creek, several hunting, fishing, and trapping cabins are located in the area. On April 27, 1977 the Fish and Wildlife Service granted to Lawrence O. Talifson, a local hunting guide, a permit to construct a one-story frame cabin for his hunting and trapping operations one mile east of Dog Salmon Creek. The site was located approximately 57°07'24" latitude and 153°59'50" longitude. The agency granted on May 11, 1977 a second permit to Sidney M. Omlid of Kodiak to build a one-story frame fishing and storage building at approximately 57°07'25" latitude and 154°04'35" longitude in connection with a fish net site 300 yards east of the mouth of the stream. 218/

On September 2, 1975, the BLM easement and navigability task force convened to consider easement recommendations for Akhiok Village, among others. The proposed easement for the access trail was accepted on the basis of Stefanich's statement. The BLM rejected the proposed streamside easement, since access to the area was already provided by the ADF&G trail. 220/

Both Stefanich and Watson protested the BLM's deletion of this easement. Stefanich argued that Dog Salmon Creek was a major salmon stream, one of three streams on Kodiak Island with king salmon. Over $100,000 of public funds had been spent to build fish ladders on this stream. Watson pointed out that the ADF&G trail paralleled the river, "but at some distance from it and will not adequately provide access for fishing." 221/

Reexamining the task force recommendation in July 1976 in line with Secretarial Order 2982, the BLM reversed itself, approving a streamside easement on both banks and the bed of Dog Salmon Creek. The BLM State Director concurred with these recommendations on November 20, 1976. On November 18, 1977, the BLM issued a DIC to Akhiok, Inc. Dog Salmon Creek was determined to be nonnavigable. On November 21, 1978, the BLM conveyed the bed of the creek to the corporation. 222/

So far as is known, only the ADF&G has used boats on Dog Salmon Creek. On August 10, 1977, an ADF&G party descended the creek in a raft in order to count salmon. 223/ In an interview with this writer, Frank Van Hulle stated that he once took a raft with a motor up the creek to the waterfall. 224/

Silver, pink, and sockeye salmon all spawn in Akalura Lake. Dolly varden and rainbow trout also reside in the lake. In 1976 the ADF&G estimated that five anglers fished the river for a total of eight days. 228/

In 1929 the Alaska Packers' Association filed for two homesteads under soldier's additional scrip (previously held by William D. Reynolds and John Sutter) in T. 35 S., R. 31 W., Seward Meridian. Sutter's tract was situated on the east side of Akalura in the immediate vicinity of the Olga Bay Cannery. According to the application, the land had been used as a summer fish camp by the Natives of Akhiok. Improvements consisted of a one-story frame building and two small dwellings maintained by the cannery. The second homestead was located immediately west of the lagoon where many auxiliary buildings for the cannery had been constructed. A Bureau of Fisheries' warden operated a weir across Akalura Creek during the entire summer season. 229/

The BLM first considered the navigability of Akalura Creek in 1975 when identifying easements on lands selected by Akhiok Village under the Alaska Native Claims Settlement Act. In the spring of 1975, Daniel Farrar of the Alaska Conservation Society, Gordon W. Watson of the U.S. Fish and Wildlife Service and Frank Stefanich of the ADF&G recommended a continuous linear easement on both banks of Akalura Creek from Cannery Cove to Akalura Lake, and a site easement at the outlet of Akalura Lake for a proposed ADF&G station. In addition, Stefanich requested an easement for a research cabin and weir on Akalura Creek near Cannery Cove built by the ADF&G in 1968; an easement for a heavy equipment access road to be used in the construction of a fish control station at the outlet of Akalura Lake; an easement for two boat ramps at the lake outlet and Cannery Cove; and easements for a "foot trail along [the]

both banks of Akalura Creek because a public trail paralleling the left bank of Akalura Creek from Olga Bay almost to Akalura Lake was in existence. The task force also rejected the site easements on the east and west banks of Akalura Creek at the lake outlet. However, the BLM did recommend an easement for the trail along Akalura Creek connecting Olga Bay with Frazier Lake, and a site easement on the lower Akalura Creek for the ADF&G research station. The BLM State Director concurred with these recommendations on October 10, 1975. 231/

Watson and Stefanich objected to the deletion of the Akalura Creek streamside easement. Watson wrote that the alternative access trail adopted by the BLM "does not allow access to the stream for sport fishing, which is the purpose of the requested streamside easement." Stefanich pointed out that a minimum of thirty fishermen yearly used Akalura Creek which was "significant for such a small stream." The streamside and trail access easements complemented rather than duplicated one other, he believed. 232/

Reevaluting the task force recommendations in July 1976 in line with Secretarial Order 2982, the BLM reversed itself on the need for the continuous streamside easement, noting that the stream received "considerable use" by the public. The BLM approved the linear easement along both banks and the bed of Akalura Creek. The BLM State Director concurred with these recommendations on November 26, 1976. The proposed access trail easement from Olga Bay to Frazier Lake via Akalura Creek, was deleted. However, on September 9, 1977, the BLM again approved this easement. 233/

In a Decision to Issue Conveyance of land to Akhiok Village issued on November 18, 1977, the BLM excluded the proposed easement on the banks and bed of Akalura Creek. The BLM approved a site easement on the lower Akalura Creek for the

Red Lake (elevation 203 feet), is 3.7 miles long and about one mile wide. It occupies a small basin and drains an area of twenty-one square miles. Two small streams empty into the lake: Connecticut Creek on the northeast shore, and a small stream on the southeast shore which heads in a tiny unnamed lake. The lake has an average yearly runoff estimated at 74,500 acre-feet. 237/

At river mile 10.3, the Ayakulik River receives Bare Creek, which heads in Bare Lake (elevation 600 feet), approximately five miles to the southeast. The lake, slightly less than one mile in length, has a surface area of 120 acres, and drains an area of forty miles. The maximum depth is reportedly twenty-five feet and the mean depth thirteen feet. Several small springs and one small stream empty into the lake. 238/

One and a half miles below the confluence of Bare Creek and the Ayakulik River, the river meanders in a westerly direction between rolling hills and a few mountains to empty into the Shelikof Straits. Dense alder patches and several small ponds are located along the river. 239/

A sand and shingle spit is located at the river mouth. At high tide, according to the Coast and Geodectic Survey, the river can be entered only by small launches. Over the years this spit has changed its configuration. When Moser visited the river in 1900, the superintendent of the Olga Bay cannery informed him that three years earlier the river turned sharply to the south after leaving the "ravine at its mouth," to skirt the coastal bluff for one and one-fourth miles before entering the sea. In 1899, the Ayakulik flowed straight out to sea over the shingle. In 1900, the river discharged into the ocean one-half mile north of the ravine. 240/

a report of coal and gold deposits, he found placer mining in progress on the beaches near Ayakulik River. 244/

The small mining village of Ayakulik was located at the mouth of the river. Today, it consists of several families, four buildings, and a cemetery. Because of its small size the Alaska Native Claims Appeal Board in October 1974 ruled that Ayakulik Village did not have the status of a Native village. The small settlement was a rest stop for people travelling between Karluk and Akhiok villages. 245/

In addition to mining, the Ayakulik River region has experienced a brief history of fox farming. In the late 1800s, Ayakulik residents had a fox farm on Ayakulik Island. In 1915, Frank Peterson of Uyak operated a fur farm on the island. In 1917, he experimented with raising foxes in corrals on the mainland. 246/

One Native allotment is located on the Ayakulik River at its mouth. In his application dated April 27, 1971, Jack Rastopsoff of Akhiok filed for parcels on the right and left banks of the Ayakulik River in Secs. 27 and 28, T. 34 S., R. 33 W., Seward Meridian. The applicant claimed to have hunted and fished (July-September) on the land in every year since 1947. 247/ On May 17, 1979, a BLM employee traveled to the site by helicopter; he found no physical evidence of use or occupancy by the applicant. The remains of an old abandoned house were visible where the village of Ayakulik once existed, however. 248/

Before the turn of the century, the Ayakulik River was a favorite seining place for fishermen from the Karluk canneries. Hauling their packs to the open beach, they transferred them to boats in the Ayakulik River for transport to waiting steamers. 249/

> the passage of adult salmon. Fish migrating upstream were led into the trap and easily captured in the shallow water . . . . The smolt trap was placed immediately upstream from the adult trap. This trap consisted of an 18-gauge, 6 mesh-to-the-inch screen placed across the stream to block the downstream movement of smolts. Above this was a V-shaped lead constructed of mesh of the same size.

The traps were maintained from 1950 to 1956 or during the life of the experiment. During the limnological experiment on Bare Lake in the 1950s, the U.S. Fish and Wildlife Service built and anchored a frame raft on the lake to obtain water samples. According to John Greenback and W. T. Edmonsen, two research biologists who participated in the program, access to Bare Lake was by air. 253/

During the summer of 1962, five biological investigators conducting research in the Kodiak National Wildlife Refuge, established field headquarters at the U.S. Fish and Wildlife Service cabin near Bare Lake. Along with visits to large lakes by floatplane and smaller lakes by helicopter, the scientists floated down Bare Creek as well as the Ayakulik and Karluk rivers in a boat. 254/ Finally, in August 1978, a U.S. Fish and Wildlife Service crew tried to float down the Ayakulik River from Red Lake in an inflatable raft. According to anthropologist Michael Yarborough, a member of the crew, the river was shallow, forcing them to drag the raft from pool to pool. 255/

Besides scientists and sports fishermen, big game hunters also worked in the Ayakulik River basin. In 1949, guides Pinnell and Talifson built a cabin on

River Flats in a Widgeon and routinely flew to the Ayakulik River in Super Cubs after the July 4th. According to Willard Troyer of the ADF&G, the U.S. Fish and Wildlife Service and air taxis regularly land floatplanes on the major lakes of south Kodiak, including Red, Akalura, Frazer, and Karluk lakes. He also stated that Bill Pinnell constructed several sod barabaras in the Red River Flats and Sturgeon River areas which he used on bear hunting expeditions. 258/

On February 17, 1983, the BLM determined that the Ayakulik River on State-selected lands T. 34 S., R. 33 W., Seward Meridian, was navigable. According to a BLM report prepared in support of the determination, several house sites are located on the upper Ayakulik River which flows from Red Lake and just below the mouth of Bare Creek, a tributary of the Ayakulik. In addition, the report writer stated:

> The river's gradient ranges from an apparent flatness to some short reaches of 25 feet per mile. . . . The Ayakulik is a slow meandering clear water stream with a series of pools and riffles running over gravel and rocky bottoms. Many of the riffles become braided during seasonal low waters and are easily waded. . . .
>
> Presently, the Alaska Department of Fish and Game maintains two weirs, one at the mouth of Red Lake and the other about 100 yards upstream from the lagoon. They use a 14 foot aluminum skiff powered by a short shaft motor to set the weir and move bulk material around. They utilize this skiff in stream census work up to the Red Lake tributary stream, about 16 miles from the mouth of the Ayakulik.

Sturgeon River

Heading in the mountains (elevation 1,250 feet) west of Karluk River, the Sturgeon River flows twenty-three miles into Shelikof Strait. From the mountains, the river flows southwesterly about eight miles in a narrow valley and exhibits a swift current. Riffles and pools predominate with more of the former than the latter. Swinging to the northwest in river mile 13, the river flows through a wide valley for the remainder of its length. The current decreases and the frequency of pools become greater. In river mile 9, a large stream heading in the vicinity of the Northeast Fork of the Ayakulik River, enters the main channel. From this point, the river meanders until it reaches a terraced ravine that channels the stream into a saltwater lagoon. Two shingle spits nearly enclose the lagoon. 262/

Only one Native allotment is located on Sturgeon River. In his application dated November 17, 1971 for an allotment in Sec. 12, T. 31 S., R. 33 W., Seward Meridian, at the mouth of the river, Willie P. Wasilie of Karluk claimed use of the land for hunting, fishing, and trapping in every year since 1931. He wrote "I still go back to this land." 263/ On April 18, 1973 Stanley H. Bronczyk, a BLM realty specialist, conducted a field examination of the applicant's land. No evidence of human use or occupancy was found. Also, no mention was made as to how the examiner reached the allotment. 264/

According to the U.S. Coast and Geodetic Survey, boats should enter the lagoon only at half tide or better. 265/ No evidence of watercraft on the river itself is known. In an interview with this writer, Dick Hensel stated that the Sturgeon River could more easily be thought of as a large stream rather than a river due to its small flow and limited drainage area. 266/

easement on the west side of the lagoon was approved, as was a trail easement easterly from the mouth of Sturgeon River to public lands. The latter easement was needed to accomodate "an existing use on the Sturgeon River" as well as "bear hunters using the existing trail." The BLM State Director concurred with these easement recommendations on November 11, 1975. 269/

Reexamining the task force recommendations in June 1975 in line with Secretarial Order 2982, the BLM modified the one-mile streamside easement on the lower Sturgeon River to include both sides of the river as well as the riverbed. Finally, on January 12, 1977, the BLM recommended extending the easement upstream from the river outlet to the southern border of Sec. 13, T. 31 S., R. 33 W., Seward Meridian, approximately four miles from Sturgeon River Lagoon. These easements were included in the DIC issued by the BLM on December 8, 1977 to Koniag, Incorporated and Karluk Native Corporation. 270/

Afognak Lake

Located three miles northwest of Afognak Bay, Afognak Lake (elevation 64 feet) is a freshwater body of water five and one-half miles long and three-eighths of a mile wide with a surface area of 1,200 surface acres. Two major tributaries -- Hatchery Creek and Egg Lake Creek -- and several minor streams provide the lake's water supply. 271/

Gently rolling mountains with a dense spruce forest on the lower slopes and alpine vegetation and brush at higher elevations surround the lake and its outlet. Two major promontories dominate the surrounding countryside: Afognak Mountain (elevation 2,856 feet) on the north shore of Afognak Lake, and Hatchery Peak (elevation 2,019 feet) northeast of the lake. 272/

> rank growth of the narrow flat-leaved eel grass; so thick is the growth of this grass that it is very difficult to push a boat even on 3 feet of water if the tide is low . . .
>
> The grade of the river above the falls is very slight - not more than 7 or 8 feet to the mile. From the falls to tide-water the grade is much steeper, there being a difference of elevation, including the fall, of about 40 feet between the river above the falls and high-tide level in the estuary, which is at a distance of about 600 yards below the falls. The difference of elevation of the upper and lower ends of the estuary, calling the lower end of the estuary the head of Afognak Bay, is about 14 feet, that being the average rise and fall of the tide, which generally ebbs to the upper end of the bay, leaving the estuary almost bare. Great numbers of salmon are thus stranded and many die before the next tide rescues them.
>
> The Afognak River has two tributaries, both of which enter the main stream below the falls. . . . Owing to the lack of time we did not trace them to their sources. Where they joined the river they were from 15 to 20 feet wide and from 12 to 18 inches deep, with a current of about 2 miles per hour. Their shores, surroundings, and rate of descent are similar to those of the main river.

From a width of two miles at the lake outlet, the Afognak River valley constricts to about one-half mile at the head of Afognak Bay, wrote Booth. Thick stands of spruce trees on mound-like hills were seen throughout the entire river valley. 273/

In the summer of 1900 Jefferson Moser and the crew of the Albatross visited Afognak Bay. Moser reported that excellent anchorage was available at the head of the bay, but warned that great care must be exercised in entering the bay owing to islets and reefs. During their brief stay, a party from the Albatross visited the remains of the old Russian zapor or fish trap located one hundred yards below the falls or a short distance above tidewater. Moser described it as consisting of: "Large cribs of heavy logs weighted with stone, place at intervals across the river to form piers, at a suitable location. Between the piers other logs were secured, forming a line of support for the rail or saplings, which were placed side by side, in the direction of the stream, with the butts upstream, embedded in the gravel or river bottom and the other end resting on timber support." The north crib had been removed by Natives. Before departing the party dismantled the remaining cribs and burned them. As Afognak Island was in a forest and fish reserve, fish traps were illegal. 277/

Located on the extreme southeast coast of Afognak Bay opposite Whale Island, Afognak Village was established by the Russian-American Company in 1835 as a retirement colony for its employees. The village extended three-fourths of a mile along the beach. The Native fishing village of Litnik was located a few hundred yards north of the Russian settlement. Unlike the creole village of well-constructed log and frame houses, the Eskimos of Litnik occupied barabaras or sod houses. Every summer they left their homes to hunt sea otters for the Russian and later American trading companies. 278/

By the turn of the century, Afognak Village had two stores, a school, and a new chapel. Except for the years 1895 and 1896, a post office was in operation

March 2, 1889 enacted legislation forbidding the construction of barricades, dams or any other obstructions on salmon-spawning rivers in Alaska. The Commissioner of Fish and Fisheries was authorized "to investigate the habits, abundance and distribution of salmon in Alaska, and the present conditions and methods of fishing" for the purpose of recommending additional legislation to Congress. 282/

Subsequently, Commissioner Spencer F. Baird appointed Tarleton H. Bean, an icthyologist, to head an investigation of the fisheries of Kodiak and Afognak islands. Accompanied by Franklin Booth and Livingston Stone, Bean in August 1889 surveyed the streams and rivers of Kodiak and Afognak islands on board the Albatross. The results of their investigation were published in two reports: a preliminary report in 1889, and a more complete report in 1892. In the latter report, the commission recommended the establishment of national salmon parks or salmon reservations, a proposal argued earlier by Stone in a paper to the American Fisheries Society. The mild climate, the availability of timber in the area, and skilled labor from the nearby fishing village of Afognak, Stone argued, made the salmon-spawning stream of Afognak (known locally as Litnik River) an ideal site for a hatchery. In response to Stone's public plea for a salmon reservation, and the backing of the Commissioner of Fish and Fisheries, Congress on March 3, 1891 passed enabling legislation permitting the president to create forest reserves and the U.S. Fish Commission to establish fish culture stations on both Afognak and Kodiak islands. 283/

On December 24, 1892, President Benjamin Harrison, at the request of the Commissioner of Fish and Fisheries, withdrew all of Afognak Island within one mile of its shore as the Afognak Forest and Fish Culture Reserve. In a

dating from the early 1910s show several small boats on the lake next to the hatchery, and workers obtaining eggs from sockeye salmon at a nearby creek. 287/ The Bureau in 1911 blasted a runway out at the falls to facilitate the migration of fish and constructed a fish rack at the lake outlet. 288/ Later, from 1926 to 1932, a fish weir was operated at the lake outlet. The Bureau also constructed a warehouse on Afognak Bay. In December 1915, the warehouse received a shipment of fifteen million red salmon eggs in cases. When the weather improved later that month, the Bureau transported the cases over the river ice to the hatchery. 289/ In 1915, the Bureau built a tramway connecting the hatchery with Litnik. Later, a gravel road was constructed from the head of Afognak Bay to the hatchery. Apparently, the road was the primary route to the hatchery which ceased operations in 1932. 290/

During the Second World War, the Navy converted the hatchery facilities for use as a recreation camp. Thirty-one cabins with electricity and running water were built: twenty-five for single men, and six for families. The Navy also constructed a seaplane ramp adjacent to the camp. The camp was abandoned shortly after the war. 291/

In the early 1950s Dal Valley, who operated a sawmill at Afognak Village, received a permit from the Navy to reopen the resort. He employed his mother to oversee operations and do the cooking. In 1956 A. Blackeray of the U.S. Forest Service, accompanied by two other persons, visited Afognak Lake. They observed twelve bunkhouses housing four fishermen plus two separate rooms for married couples. 292/

Although duck, elk, and brown bear hunters visit Afognak Lake and River, the primary recreational pursuit today is deer hunting and sport fishing. 293/ Little documentation of these activities came to light until the late 1970s.

In addition, Stefanich recommended a linear easement on both banks of Afognak River from mean high tide to the lake so as to accommodate use of Afognak River by approximately one hundred fishermen. "Plans are being formulated," he wrote, "to improve access to this river." While vague on the exact plans, he probably was referring to the proposed timber road.

Finally, Stefanich nominated an easement for the entire lakeshore, an easement for a weir and cabin on Afognak River, and a series of one-acre easements at the site of the former hatchery and on Afognak River and its creeks. According to Stefanich, salmon enhancement surveys had been conducted in the past at the lake inlets and at the outlet, where a weir once operated. Stefanich requested trail access to these sites to expedite "surveys of spawner distribution and timing for egg-take purposes." A road access was also "required to move heavy incubation and cabin and weir equipment from saltwater to lake." 294/

Daniel H. Farrar of the Alaska Conservation Society recommended a number of campsites and public easements for Afognak Lake and River. These included: a streamside easement "on both sides of Afognak River and perimeter of lake to the site of present recreational camp;" an easement for the road to the former recreational camp; campsite easements at the mouth of Afognak River and the terminus of the Muskomee Bay - Afognak Lake trail. Both Afognak River and Lake, he wrote, "have long histories of recreational use with intensive use by recreational fishermen." 295/

On April 22, 1975, the BLM easement and task force met to consider proposed easements for the villages of Afognak, Port Lions, Ouzinkie and Litnik. The task force recommended a "10-foot wide lake shore (sic) easement on north side

On March 17, 1981, the BLM easement task force convened to conform final easement recommendations. The BLM reaffirmed that all inland water bodies on the lands conveyed, which included Afognak Lake and River, Upper and Lower Malina lakes, Little Afognak Lake and River, Big and Little Kitoi lakes and Kitoi Creek were nonnavigable. 300/

In the winter of 1981, Susan Eaton of the BLM, Anchorage District Office, reconsidered the navigability of Afognak Lake and River and other water bodies on State- and Native corporation-selected lands in T. 20 S., Rs. 18 to 22 W., T. 21 S., Rs. 16 to 22 W., T. 22 S., Rs. 16 to 23 W., T. 23 S., Rs. 17 to 24 W., T. 24 S., Rs. 18 to 24 W., and T. 25 S., Rs. 22 and 23 W., Seward Meridian. In surveying the historic record. Eaton found no documenting evidence of boat use on Afognak Lake and River.

Contacted by telephone, local residents were unable to recall use of the lake and river as a route of boat travel. Henry Eaton, general manager of the Koniag Regional Corporation, stated that most travel in the area was "carried out in tidal waters." Pete Olsen, president of the Afognak Native Corporation, added that commercial fishing was conducted "up to the old bridge on Afognak River," the location of which he placed at "just below the falls, close to tidewater." Contacted by BLM employee John Bowman in August 1981, Gene Sundberg, the vice-president of lands for the Koniag Regional Corporation, described plans by his corporation to establish "a large commercial recreation complex" on Afognak Lake near the former Navy recreation camp. "The area lends itself well to hunting, fishing, and boating," Sundberg said. He added that the corporation intended "to leave the surrounding area much the same as it is today." Rudy Sundberg, the uncle of Gene Sundberg who lived in the region for more than

tation into the area. He doubted that the river had been used for boat travel, stating that "none of the island's rivers lend themselves well to travel."

On the basis of her research and interviews, Eaton concluded that Afognak Lake was navigable. She reasoned:

> [Afognak Lake] is a larger clearwater lake than the other lakes and its potential for recreational use as evidenced by the Navy recreational camp has been appreciated in the past. The Koniag Corporation is currently planning to develop a commercial recreational complex near the lake. Unlike other areas on Afognak Island that have and will continue to be heavily logged, the land and forests around Afognak Lake will be set aside by the corporation and maintained in their natural state. The lake has been, and in the future will continue to be, used as the principal means of access to lands adjacent to the lake. Access to the lake itself has been, and in all likelihood will continue to be, by floatplane, or by tidewater and road, if the old road serving the hatchery and Navy camp is rehabilitated.
>
> No evidence was discovered in the historical records of commercial boat traffic on Afognak Lake. The lake has been used in the past by the Navy as a recreational camp. The size and types of boats used are not known, but it is probable that they were capable of carrying in excess of 1,000 pounds (i.e., commercial). Additionally, the lake has been used by government scientists in boats and skiffs as the best available highway on which to carry out their studies and fish

Finally, she recommended that all other water bodies in the report area be determined nonnavigable. 301/

Both Willard Troyer and Dick Hensel, interviewed by this writer in 1981, stated that they frequently landed on Afognak Lake in floatplanes; Troyer between fifteen and twenty times, Hensel about one hundred times in Super Cubs and Cessna 180s over a ten-year period. Dick Hensel noted too that skiffs were used at the Navy recreational camp on Afognak Lake. Also interviewed by this writer in 1981, William Workman, a professor of archaeology at the University of Alaska, stated that in the spring of 1971, while conducting an archaeological survey, he saw five or six sixteen-foot skiffs with outboard engines on the lower Afognak River. He himself used a twelve-foot aluminum skiff with a five-horsepower engine to cross the mouth of the estuary. 302/

After reviewing the first draft of this report Norman R. Howse, Acting Forest Supervisor of Chugach National Forest, provided additional information on Afognak Lake. Due to the planned "impending conveyance of Afognak Lake vicinity to Native ownership," the recreational cabin on the northwest shore of Afognak Lake was relocated to Laura Lake in 1979. A fourteen-foot aluminum skiff at the cabin received extensive use by both anglers and hunters as a means of transportation to other areas of the lake. Recreationists gained access to the cabin by float plane. 303/

Upper and Lower Malina Lakes

These two lakes are located between Malina Bay and Raspberry Bay in southwest Afognak Island. The larger of the two, the upper lake, is over two miles long, one mile wide, and is fed by a number of small streams including one large

use of the Upper and Lower Malina lakes. Both Frank Stefanich of the ADF&G and Daniel Farrar of the Alaska Conservation Society nominated linear easements on both banks of Malina Creek and the perimeter of Upper Malina and Lower Malina lakes. Daniel Farrar pointed out that this watershed was frequented by sport fishermen. Frank Stefanich noted that in the past five to ten anglers per year used the lake system. He estimated that currently ten to thirty anglers fished the area. Due to the excellent salmon, char and trout runs, he expected the number to increase to between five and six hundred in the future. The public access easement was thus needed to accommodate sport fishermen.

In addition, Farrar and Stefanich recommended two campsite easements: one near the outlet of Malina Creek; and one at a U.S. Forest Service cabin on the northeast shore of Upper Malina Lake. According to Stefanich, a campsite adjacent to Malina Creek above the mean high tide was necessary for anglers to gain access to the stream by small boats. 308/

On April 22, 1975, the BLM task force recommended three easements: a trail easement running from the mouth of Malina Creek up the north bank of the creek to Lower Malina Lake, and thence along the north shore of both Lower Malina and Upper Malina lakes to the head of the latter, and thence to the terminus of the Muskomee Bay - Afognak Lake trail; a campsite easement at the mouth of Malina Creek; and a campsite easement at the recreation cabin on Upper Malina Lake. On June 2, 1975, the BLM acting State Director concurred with these easement recommendations. 309/

Responding to the BLM's notice of proposed easements, Richard T. Wamser of Natives of Afognak, Inc., opposed the proposed easements along the creek and lakes, pointing out that an existing trail system ran along the north bank of

Lily Pad Lake

This lake is unnamed on USGS maps. Located in T. 23 S., R. 20 W., Seward Meridian, approximately two miles east of the head of Kazakof Bay, this lake is about one mile long and one mile wide. The lake is drained by a small stream that empties into Kazakof Bay. 314/

In the spring of 1975, when the BLM solicited easement nominations for lands selected by various Native corporations, Daniel Farrar of the Alaska Conservation Society and Frank Stefanich of the ADF&G proposed a trail easement on the perimeter of the lake and on both banks of the outlet stream to Kazakof Bay, and a campsite easement at the outlet of the lake. Both believed that the easements were needed to accommodate an expected increase in public use of the water bodies once the U.S. Forest Service constructed a logging road from a camp on the east shore of Kazakof Bay, about four miles northeast of Cape Kostromitinof, to the north. Farrar noted that a Forest Service cabin used by sportsmen was located at the site of the proposed campsite easement. Both the lake and stream provided excellent salmon and trout fishing. In the past, the lake accommodated twenty anglers per year. In the future, he wrote, two to five hundred anglers would use the lake annually. 315/

According to Norman R. Howse, the former Forest Service cabin, while never converted to a public recreational cabin, is used by fishermen who fly to the cabin by commercial air taxi. Because of the lake's small size, only Super Cubs landed here. 316/

Waterfall Lake and Creek

Both water bodies are unnamed on USGS maps. Waterfall Lake is located in T. 21 S., R. 20 W., Seward Meridian approximately three miles west of Delphin Bay in the north central area of Afognak Island. It is about one mile in width at its widest point and about two to three in length. Waterfall Creek, its outlet stream, flows approximately two miles north into Big Waterfall Bay. 321/

The only public use information on these two water bodies was provided by Norman R. Howse of the Chugach National Forest. He stated:

> Waterfall Lake is located in the north central area of Afognak Island, approximately three miles west of Delphin Bay. A Forest Service public recreation cabin is still maintained by the Forest Service at the south end of the lake. Because of scenic values and hunting opportunities, this cabin receives extensive commercial fly-in use in the summer and fall. A 14-foot aluminum skiff is still maintained at the cabin for public use.
>
> Waterfall creek is blocked by several falls. At high tide, the creek can be boated by skiff to within approximately 150 yards of the existing fish ladder. A small waterfall at the bend in the creek below the fish ladder restricts further skiff access even during high tide. 322/

Pauls and Laura Lakes receive extensive commercial access for fishing and hunting. At high tide, Forest Service crews have been able to take Zodiac inflatable boats into Pauls Lake; the last 10 yards approximately were negotiated by pulling the Zodiac through the shallows. The Laura Lake public recreation cabin, presently maintained by the Forest Service, also includes a 14-foot aluminum skiff. This cabin is popular for fly-in fishing and hunting.

Gretchen Lake has received limited commercial access for day fly-in fishing and hunting, being accessible by super cubs only due to the small size of the lake. A logging road from Natives of Kodiak owned lands (managed by KONCOR) now extends to the lake from a southerly direction. 328/

Portage Lake

Located twenty-two miles northeast of Kodiak, Portage Lake (elevation 55 feet) is approximately one and one-half miles long and about one-half mile wide. The lake is drained by a creek that flows approximately one mile north to Discoverer Bay. 329/

Eight archaeological site, ranging from one to many house pits, were recently discovered along the banks of the creek. Some were summer fish camps, occupied by people subsisting on silver, red, and humpback salmon. The presence of petroglyphs in the vicinity of these sites indicates habitation prior to Russian contact, but, according to Linda Yarborough, the exact time period is not known. 330/

to an area around the trapper cabin. This litigation was not successful due to, among other reasons, the fact that this cabin had never been authorized by the Forest Service. In conversations with Forest Service personnel, the trapper spoke of accessing this cabin by hiking from Discoverer Bay up to Portage Creek to Portage Lake, then boating across Portage Lake. The trapper claimed that he and his partner had dragged this boat from Discoverer Bay to Portage Lake originally. At high tide, Portage Creek can be boated by skiff to within approximately 100 yards of existing fish ladder on Portage Creek. Portage Creek, beyond that point cannot be navigated by skiff.

Portage Lake continues to receive commercial fly-in fishing and hunting use, particularly by sportsmen who obtain permission from KONCOR representatives to utilize the former Forest Service public recreation cabin. 334.

Although the U.S. Forest Service failed to approve the original cabin alluded to by Howse, in 1956 they did grant a permit to Alf Madsen, the famed Kodiak guide to construct a hunting cabin on the lake. In October of 1957 Rolfe W. Flemming of the U.S. Forest Service visited Portage Lake. During his brief sojourn here no cabin was observed. On June 8, 1983 the Assistant to the State Director for Conveyance Management determined Black Lake to be non-navigable. 335/

Pillar Lake

This lake is unnamed on USGS maps. Located in T. 23 S., Rs. 17-18 W., Seward Meridian between Cape Pillar and Tonki Bay in a valley lined by two

campsite easement near the hatchery and at the foot of a trail to Little Kitoi Lake, and another campsite easement between Big Kitoi Lake and Ruth Lake to the southeast. Writing that both lakes were used by the public, Stefanich stated that anglers used Little Kitoi Lake for a "minimum of 50 angler hours yearly." In addition, John A. Calvin of the U.S. Forest Service nominated a trail easement on the left bank of the stream draining Big Kitoi Lake for its entire length, and thence along the south lakeshore before turning inland to Duck Mountain. He also recommended a campsite easement at the mouth of the stream. 340/

On April 22, 1975, the BLM proposed to adopt most of these recommendations. The proposed shoreline easements on Big and Little Kitoi lakes were deleted, however. The Federal-State Land Use Planning Commission subsequently concurred with the recommendations. 341/

These easements were included in a Decision to Issue Conveyance of lands to Afognak, Inc., issued by the BLM on February 20, 1976. The State of Alaska appealed the decision to the Alaska Native Claims Appeal Board, arguing the need for additional easements in the Kitoi Lake system. Specifically, the State requested a public use and fishery management easement for the hatchery, water supply system, and a hydroelectric plant constructed in 1962 at the mouth of the stream draining Big Kitoi Lake; a utility easement for a water pipeline built in 1961 from the hatchery to Big Kitoi Lake; a campsite easement between Big Kitoi and Ruth lakes including a twenty-five-foot easement on the beds of both lakes; and a campsite easement at the outlet of Little Kitoi Lake.

Local Forest Service personnel stationed on Kodiak Island, according to Norman R. Howse, observed trespass structures along the lake shore of Little Afognak Lake. Also Kodiak townspeople reported trappers wintering on the lake. The land was conveyed to private ownership before trespass action was initiated. 346/

In response to a request by the BLM for easement nominations for lands selected by Afognak, Inc., Frank A. Stefanich of the ADF&G recommended in 1975 a trail easement along Little Afognak River up to and around the perimeter of Little Afognak Lake. Both the lake and the river, he noted, were fished by ten to fifteen anglers per year. The lake and stream, he wrote, would "receive more use when the Afognak Village mill site is established next year." 347/

The BLM did not include the proposed trail easement in the Decision to Issue Conveyance issued to the Natives of Afognak, Inc., on February 20, 1976. Following an appeal by the State, however, the BLM agreed to issue another Decision for lands in the vicinity of Little Afognak Lake and River. The new decision, issued on June 30, 1978, included a linear easement on the south shore of the lake for the use of fishermen, and an easement on both banks and the bed of the river "for public use of water having highly significant present recreational use." 348/

Unnamed Streams and Lakes on Shuyak Island

In October of 1982 the BLM Navigability Section considered the navigability of water bodies on Shuyak Island and sections of Afognak Island to the south in T. 18 S., Rs. 18-21 W., T. 19 S., Rs. 19-21 W., and T. 20 S., Rs. 19-20 W.,

The BLM first considered the navigability of Kametolook River when identifying easements for lands selected by the village of Perryville under the Alaska Native Claims Settlement Act. In the spring of 1975, Frank A. Stefanich of the ADF&G recommended a continuous linear easement along the river, an easement at the mouth for proposed incubation facilities, and a trail easement from Perryville to the river. He wrote that the ADF&G was investigating the possibility of enhancing the pink and chum salmon population in the river. 352/

John C. Moores, a geologist with the Bristol Bay Corporation, provided some information about use of the river. Citing Boris Kosbruck, president of Oceanside Corporation as his source of information, Moores wrote: "The rivers within the village selection area of Perryville and Ivanof Bay are nonnavigable except for very short distances at their mouth during high tide. The actual location of the mouth of several of these rivers changes each time there is a major storm." He added that a field survey would be necessary to determine the actual extent of tidal influence in these rivers. 353/

On May 12, 1975, Allen Kutt and Robert Wiseman of the BLM, Anchorage District Office, met with officials of Perryville Corporation to discuss the proposed easements. The officials objected to the proposed incubation facilities on the river, and pointed out that a trail from Perryville to the river did not exist. Local residents walked along the beach to the river. 354/

On June 23, 1975 the BLM easement and navigability task force met to consider easement recommendations for the village of Perryville, among others. The task force recommended against a trail easement from the village to the river, and

On December 7, 1977 a final decision for conveyance of lands to Oceanside Corporation was issued. No change was made in regard to the determination of tidal extent in the Kametolook River. On February 3, 1978, an interim conveyance of lands was made to Oceanside Corporation. 359/

Chignik River

Heading in Black Lake (elevation 28 feet) on the Alaska Peninsula, Chignik River flows southeast to Chignik Lake and Chignik Lagoon for a total distance of about nineteen miles. The river drains an area of 579 square miles. 360/

Black Lake is approximately six and one-half miles long, and reaches a maximum width of four miles. The lake covers an area of about fourteen square miles. Because of its shallow depth (about ten feet), the lake is very rough and turbulent in periods of moderate winds. 361/

The Chignik River between the Chignik and Black lakes is a shallow and braided stream with a gravel bed. The river in this stretch reaches a width of about three hundred feet. Just before emptying into Chignik Lake, the river flows over a shifting arm between one and three hundred yards in width. 362/

Approximately ten square miles in area, Chignik Lake is about eight miles long and one and one-half miles wide. According to D. W. Narver of the Fisheries Research Institute at the University of Washington, the lake is in places over 180 feet deep. 363/

> A shallow shifting arm, from 100 to 300 yards wide, leads through an extensive bog at the head of the lake, for a distance of 10 miles to a second lake. The bog is black volcanic mud and probably the result of filling an old lake bed, which may have formed another lake connection in early times. The second lake is nearly of equal size with the first, but is shallow, with muddy bottom, the water here inclining to be muddy, while the water in the first lake is clear. A large part of the banks are low, but there are some bluffs on the northern side which continue some distance. A number of small streams enter the lake, and one of considerable size flows in from the northwest. 365/

The West Fork, Chiaktuak Creek, and Bearskin Creek are the principal tributaries of the upper Chignik River. The West Fork, the largest tributary, heads on the north slopes of Mt. Veniaminof and flows twenty-four miles in a northerly direction. Approximately five miles before it reaches the Chignik, the river exhibits a braided character. Chiaktuak Creek flows northwest twelve miles to join the Chignik River just below Black Lake. Heading in mountains east of Chignik Lake, Bearskin Creek flows north six miles and thence east six miles to empty into Chignik River one mile above the head of Chignik Lake. Chignik Lake is fed by several small streams: Cucumber Creek in the east, and Clark River and Home Creek in the southwest. Several swift unnamed streams flow into Black Lake from the west and northwest. Named tributaries include Crater Creek and Alec River. 366/

Like the Karluk and Ayakulik rivers, the Chignik River is a major salmon spawning stream. All five species of Pacific salmon spawn in the river. Brown bear, caribou, wolverine, red fox, and a variety of small animals and birds are found in the area. 367/

2,160 barrels of salted salmon. In 1889, the company, operating under the name Chignik Bay Company, built a cannery on the eastern shore of Chignik Lagoon two and one-half miles from the entrance. Two other companies, the Shumagin Packing Company and the Chignik Bay Packing Company, also constructed canneries nearby. In 1890, the three companies formed an operating agreement whereby all three companies shared expenses and profits. Three years later, the three companies joined the Alaska Packers' Association. For many years, these were the only canneries in Chignik Lagoon. However, in 1932, Harry Crosby established a cannery on the west side of Chignik Lagoon. 371/

The Alaska Packers' Association developed a coal mine on Chignik River during the 1890s. Located on the north bank of the river, three miles from the lagoon, the coal deposit was discovered in 1885 by a man named Henderson. Robert Lee took over Henderson's claim and mined several hundred tons of coal. In 1892, he sold his rights to the mine to the Alaska Packers' Association. Requiring six hundred tons of coal annually to run its operations, the canneries employed three men to mine coal during the summers. Their combined daily output was two and one-half tons of coal. In winter, two men worked at the mine on an irregular basis. The coal was hauled in tram cars to a barge for transportation to the canneries. 372/ The coal mine was probably abandoned in the early 1910s.

Beginning in the early 1920s, the U.S. Bureau of Fisheries and its successors monitored the salmon runs in Chignik River. Each spring, Bureau officials placed a weir on the north bank of the Chignik River near the old coal mine. In 1929, Charles Petry of the Bureau described the weir as follows:

assistant rowed up Alec River to the mouth of Milk Creek. In 1931, Petry again traveled to Black Lake, presumably in a boat, to inspect the salmon-spawning streams. 376/

In 1925, Russell K. Knappen of the USGS also noted that the upper Chignik was difficult to navigate. As he put it, "the outlet of Black Lake flows through a broad swamp area, which is almost impassable when not frozen." 377/

In 1960, while conducting a study of red salmon in the Chignik River system, the Fisheries Research Institute of Seattle, Washington operated two norseman skiffs on Chignik and Black lakes. The skiffs were used to tow nets. It is presently unknown how the skiffs were transported to Black Lake. 378/

In the early 1970s, local residents filed for seven Native allotments along the upper Chignik River. Doris Lind of Chignik Village, claimed a parcel on the west bank of the river in Sec. 20, T. 44 S., R. 61 W., Seward Meridian. In her application for the land, she wrote that she used the parcel on a seasonal basis for subsistence hunting, fishing, and berry picking and that a campsite and cabin were located on the land. In support of her application, Andy Kalmakoff of Chignik Lake Village wrote that Lind had a fire pit, boat landing, and traps on the parcel of land. 379/

John Stepanoff, Sr., of Chignik Village claimed an allotment on the left bank of the river at the mouth of an unnamed stream in T. 44 S., R. 61 W., Seward Meridian. Improvements on the land included a small cabin and fish rack which he had used since 1935 for salmon fishing and caribou, wolf, moose, and ptarmigan hunting. In the past, he reached the place by walking or by dog team; later

on the left bank of Bearskin Creek in Secs. 30 and 31, T. 44 S., R. 61 W., Seward Meridian. The land parcels were used by him as well as by his father. According to Elia Ann and Ricky J. Lind of Chignik Lake Village, a campsite, fire pit, and traps existed on the parcel. 383/

Seven Native allotments are also located on Black Lake. Bill Lind claimed forty acres on the northwest shore of Black Lake, in T. 43 S., R. 62 W., Seward Meridian; he and his father had a hunting camp on the land which they reached by foot or skiff. Matrona McCauley claimed two parcels on Black Lake in Secs. 4, 5, 8, 9, and 31, T. 43 S., R. 61 W., Seward Meridian; she used the land for hunting, fishing, trapping, and berry picking since 1949. 384/

Claiming an allotment in Sec. 34, T. 45 S., R. 61 W., Seward Meridian, at the mouth of an unnamed stream on the east shore of Black Lake, Mary Stepanoff stated that she had fished and picked berries at the site since 1965. Virginia Aleck claimed a parcel on the south shore of Black Lake, one mile from the lake outlet, in Sec. 2, T. 43 S., R. 62 W., Seward Meridian. She stated that she used the land to hunt, gather wood, and pick berries. According to Paul and Emil Artemie of Chignik Lake Village, a campsite, fire pit, and hunting rack existed on Aleck's parcel. 385/

Nick Odomin, Jr., George Orloff, and Sam Stepanoff, all of Chignik Lake Village, have campsites on Black Lake. Odomin's campsite is located on the east shore of Black Lake in Sec. 20, T. 43 S., R. 61 W., Seward Meridian. Orloff's campsite is situated on an unnamed creek one-half mile upstream from Black Lake in Sec. 5, T. 43 S., R. 62 W., Seward Meridian. Stepanoff's campsite, used for hunting, fishing, trapping, and berry picking, is located on the west shore of Black Lake in T. 43 S., R. 62 W., Seward Meridian. 386/

snowmachines on the trail in connection with hunting and trapping activities. He added that easements were needed on the banks of Rapid Creek, a tributary of West Fork; Alec River, a tributary of Black Lake; Cathedral Creek, a tributary of Alec River; and Metrofania Creek which flows into Chignik Lagoon. These streams received heavy use by local hunters and trappers. He also recommended five ten-acre campsite easements that could accommodate floatplanes, boats, and overnight campers at the following sites: the outlet of Black Lake in Sec. 27, T. 45 S., R. 60 W., Seward Meridian; on Metrofania Creek; the head of Portage Bay; the mouth of Alec River; and in Sec. 2, T. 45 S., R. 61 W., Seward Meridian, on Black Lake. He requested an easement for an airstrip near the mouth of West Fork. This landing strip was used by local guides and big game hunters.

In addition, Stefanich nominated a number of easements for several ADF&G research sites in the Chignik watershed. Writing that government officials had long monitored the salmon runs in the West Fork, he requested a trail easement along the left bank of the West Fork to Sec. 17, T. 44 S., R. 62 W., Seward Meridian, and a campsite easement at the trail terminus where a cabin and settling pond would be constructed. An easement was also needed at the outlet of Black Lake, he wrote, to accommodate an ADF&G cabin built in 1967 to monitor red salmon runs. Finally, he requested site easements near the old coal mine, where the ADF&G maintained a field headquarters on the north side of the river and a storage area and a garbage dump on the opposite side of the river. Skiffs, scows, piling, and other weir materials were kept there. 389/

Several individuals also submitted information to the BLM on use of the Chignik River system as a route of summer travel. On January 8, 1975, John C. Moores of the Bristol Bay Corporation wrote a letter to Sue A. Wolf of the BLM,

On May 9 and 10, 1975, Allen Kutt and Robert Wiseman of the BLM, Anchorage District Office, met with representatives of Chignik Lake, Chignik, and Chignik Lagoon Villages to discuss proposed easements. In general, all three villages opposed proposed trail easements in the Chignik River system. They did not object to the proposed easement for the ADF&G research station on the lower Chignik River, however. 393/

On June 23, 1975, the BLM easement and navigability task force met to consider easement nominations for the three Chignik villages. The task force recommended campsite easements at the mouth of Alec River, on Black Lake, at the outlet of Black Lake, and at the head of Chignik Lake; an easement for an existing research cabin near the outlet of Black Lake; an aircraft strip easement near the mouth of the West Fork; a trail easement along the West Fork; and easements for the ADF&G research facilities on the left and right banks of the lower Chignik River. Finally, the task force recommended that Chignik River be determined navigable to the head of Chignik Lake. The upper Chignik River and Black Lake were considered to be nonnavigable: "The only boat traffic on the upper river appears to be by small skiff. Indications are that the upper Chignik River and the connecting Black Lake are not susceptible to craft larger than a skiff and there is not reason for commerce or trade to extend beyond Chignik Lake itself." 394/

While receiving a number of objections from representatives of the Bristol Bay Native Corporation and the ADF&G for certain trail and site easements in the Chignik River system, the BLM did not receive any additional information about the upper Chignik River or Black Lake as a route of boat travel.

river and on Black Lake. These have adequately met the needs of trappers and hunters, and scientists examining the Black Lake spawning grounds. When air transportation became economically feasible after World War II, recreational use of the region developed.

No evidence was discovered in the historical record of commercial boat traffic on Black Lake. The lake is used today by Natives from Chignik for hunting, fishing, and berry picking, by sport hunters of brown bear, and by fishery scientists. These uses, by themselves, do not lead to a determination that the lake is navigable, but they are corroborating factors. In the Alaska Native Claim Appeal Board's decision of December 14, 1979, use of a water body by trappers as a route of travel, using boats customarily used in the transport of freight in the area, establishes that the water body is susceptible for use as a highway of commerce. Skiffs customarily used for freight between Chignik Lake village and Chignik have been used on Black Lake by Natives as well as by Fisheries' inspectors.

Considering the evidence of use of Black Lake as a route of travel, and the physical character of the lake, Spude recommended that the lake be determined navigable. The BLM State Director concurred on May 30, 1980. 396/

Upon learning of the BLM's position on the Black Lake case, the Alaska Native Claims Appeal Board on August 26, 1980 remanded the case. On June 15, 1982, the BLM issued a modified decision for interim conveyance of lands to the village and regional corporations which declared Black Lake to be navigable.

This section of the river [Chignik River between Black Lake and Chignik Lake] is seldom referred to by local residents as the Chignik River. Second, Main, or Black River are the names used. Mr. Shaul states there are two difficulties to navigation on the Main River. The first is the delta area where the river enters Chignik Lake and the second is Eagle Rock (presumed by me from his description to be the bluff on the east side of the river in Sec. 17, T. 44 S., R. 61 W., Seward Meridian). Neither of these difficulties represent major impediments to navigation, but do require the engine be lifted and that the boat be lined through these shallow sections. Mr. Shaul has taken a 20 foot flat bottomed skiff and a 17 foot Boston Whaler with 40 h.p. prop engines up the full length of the "Main" River. His purpose for this travel was an anadromous fish tag recovey [sic] program. The University of Washington and the Department of Fish and Game each nave cabins on the lake associated with independent fish study programs. The University of Washington program is still active.

Residents of Chignik Lake travel the length of this river using the same type boats to hunt and trap.

It is also reported that in the early 1900s an individual had a fox farm on Black Lake and accessed the lake annually with a scow that was winched over the difficult parts of the river. Mr. Shaul thought John and Dora Andre', who live at Chignik Lagoon in the summer, could provide more detailed information on this.

Mr. Shaul has been up this river [Alec River] with the previously mentioned boats as far as Milk Creek. He states local residents

where this river empties into Chignik Lake which except during flood stage requires "walking the skiff". I have personally traveled up the Second River by either skiff or airboat every year from 1968 through 1978 except 1970.

People at Chignik Lake and Chignik Lagoon use the Second River as only practical transportation means of getting to the important caribou and moose hunting grounds around Black Lake. Caribou, especially, are used extensively for subsistence by people at Chignik Lake.

The Alaska Department of Fish and Game and the Fisheries Research Institute travel up the Second River by skiff or airboat to do fisheries research work.

People from Chignik Lake have trapped around Black Lake and have depended on the Second River for transportation.

The Alec River (also called the Scow River) is navigable by skiff in the lower portion (at least below the mouth of Milk Creek) and to the upper portion of Broad Creek by airboat. I have personally traveled by skiff to about 1/4 mile below Milk Creek and have run an airboat to the upper portion of Broad Creek. Use of the Alec River is much less than in the Second River. The Alec River is navigated for hunting purposes by the local public and for fisheries research by the Alaska Department of Fish and Game and Fisheries Research Institute.

(elevation 1,055 feet), the river flows southeast twenty-seven miles to Aniakchak Bay on the Pacific Ocean. From Surprise Lake, an irregular-shaped body of water about two and one-half miles long and on the average three-fourths of a mile wide, the river flows a short distance southeast to leave the caldera in what is called The Gates, described by Walter R. Smith of the U.S. Geological Survey in 1925 as "a narrow and picturesquely castled canyon." 402/

For approximately fifteen miles the river exhibits a turbulent character, the stream gradient in this stretch being about sixty feet per mile. East of Pinnacle Mountain, the river enters a wide valley across which it meanders with a sluggish current. This valley is ten miles long, four miles wide, and filled with many swamps, oxbow lakes, and cut-offs. About four miles from tidewater, the river leaves the valley through two converging ridges, one of them named Cape Horn, to empty into the head of Aniakchak Lagoon. 403/

The principal tributaries of the Aniakchak River are the North Fork, Mystery Creek, Albert Johnson Creek, and Hidden Creek. The North Fork, about nine miles long, enters the river from the north about seven miles above its mouth. According to Walter R. Smith of the U.S. Geological Survey who visited the basin in 1922, the river channel near the mouth of the North Fork was about one hundred feet wide and four feet deep. "The current is swift enough to transport small pieces of pumice along the bottom," he stated. 404/

Heading in the mountains north of the river, Mystery Creek flows northeast about four miles to empty into the Aniakchak at its rivermile 8. About four miles upstream, the Aniakchak receives Albert Johnson Creek, a southeasterly-

R. H. Sargent, accompanied by W. R. Smith, Sidney Old, and three others with ten pack horses made a geologic and topographical reconnaissance survey southwest for about ninety miles along the coast range before arriving at Chignik in September. A second party under the command of R. K. Lynt surveyed the country around Mount Peulik and the Kujulik Valley.

Sargent's party discovered the Aniakchak caldera in late August. Members of the party made two trips to the crater, but time constraints prevented an intensive investigation of the crater. Later writing a special report on the crater, geologist Walter R. Smith noted that local trappers were unaware of the crater's existence. He indicated that one could reach the crater by way of Aniakchak River, which was "navigable by small boats as far as the meanders below the mouth of Mystery Creek." One could enter the crater through The Gates on the south side of the river. The north side of the river was not a practicable route. According to Smith, "The stream was too swift to be waded within the canyon when it was visited in August, and an attempt to pass through on the north side of the river terminated by climbing a precipitous cliff 1,600 feet high." 409/

News of the discovery of the Akiachak caldera attracted the attention of Bernard K. Hubbard, a geologist and Jesuit priest. Hubbard led two exploring expeditions to the crater in the early 1930s. In May 1930, Hubbard and four other men from the University of Santa Clara traveled from Chignik to the mouth of the Aniakchak by cannery tender. There he observed several barabaras. After carefully stowing their equipment and supplies in a sixteen-foot boat, the men "worried the craft along the bars of volcanic ash that choke the lower stretches of the river, dragged it across the shallows, and finally got it to a point where

The river trip began on July 11 at Surprise Lake, where the men were landed in a Grumman Goose. Dapkus described subsequent events as follows:

> Two days were spent in the 36 sq. mile caldera exploring. Then on July 13, we paddled across the lake and down to the Gates, which are a natural V opening through which the river flows toward the Pacific Ocean, 32 miles away. We made 5 miles the first day, 5 miles the second day, 8 miles the third day and the remaining distance the fourth day, July 16. We then spent two days at the mouth of the river waiting for the weather to clear so we could be picked up. Three of the team were picked up July 17, by charter plane. The rest of the team were picked up by helicopter July 18, and flown to Port Heiden where we were picked up again by BLM goose and flown back to Anchorage.
>
> The Aniakchak River is runable by raft only. The first 15 miles, including the Gates drop at 100 ft. per mile. It is shallow, rocky, has low falls, and high speed which makes it a very dangerous river. We portaged for about 400 yards near the end of the one mile long Gates and then at two pillars (25 ft. high rocks), about 10 miles downstream, we lined the rafts. The rest of the river is runable by raft by experienced people. The lower 17 miles of river are slow, meandering through flat land. High winds can be expected through the Gates and along the entire river, as can continuous rain. 412/

why this event occurred. Later in the day, however, Flower and Stern, the photographers, met disaster when their craft collapsed upon colliding with a vertical rock face. As Flower was very ill, the men decided that Lyle should continue down the river in a lightly loaded raft with the sick man. The remaining men made camp late that night, "when high winds had forced the rafts to progress by twoing [sic] only, and darkness created hazards finding channel."

The remainder of the trip was mostly uneventful. Anxious to reach Lyle and Flower, the men broke camp early in the morning of July 16. Subsequently, they sighted an airborne helicopter. One of the men in the helicopter, Bill Polsky of Shell Oil Company, agreed to fly down the river and assist Flower. Dobey made few notes on the remainder of the trip. He described Mystery Creek as thirty feet wide, "fast" and "meandering"; and the North Fork, forty feet wide and "draining a large valley." Dobey's final entry in his journal for July 16 was as follows: "Still 5 miles from mouth of river, very difficult to pull raft, have made small camp and built fire. Waiting for helicopter to return and pick up the Shell geologists. Skiff from motor vessel, Ivanof has come up river and will two [sic] raft to fishing boats motored [sic] in mouth of river." 414/

In a pamphlet published in 1980, the U.S. Heritage, Conservation and Recreation Service described the Aniakchak River as "a short, small volume, boulder lined river flowing through alpine tundra and high brush vegetation." From Surprise Lake the river "slowly flows" and then "speeds up through a narrow 1,200' high opening in the caldera wall known as 'The Gates', then drops turbulently at an average of 60'/mile for 15 miles, and finally slowly meanders to Aniakchak Bay and the Pacific Ocean." The Service recommended that people desiring to

Abandoned after the 1912 eruption of Mt. Katmai, the small Native village of Katmai was located at the head of Katmai Bay. The village consisted of a store, a small log chapel, and barabaras. In 1868, the founders of the Alaska Commercial Company (ACC), then known as the Hutchinson, Kohn and Company, established a trading post at Katmai Village. Unlike the Russians, the ACC never achieved a monopoly of trade in the Katmai region. With two posts, one at the village of Katmai and a second at the village of Douglas in Swikshak Bay, the ACC experienced stiff competition from the Western Fur and Trading Company. The latter had a trading post at Douglas and probably one at Katmai. By 1906, both the Douglas and Katmai stations were closed. After the 1912 eruption of Mt. Katmai, the inhabitants of Katmai Village were resettled in the village of Perryville, located on the south coast of the Alaska Peninsula nineteen miles east of Stepovak Bay. 419/

For many years the Katmai River valley was an important overland route of travel to and from Bristol Bay. Before the coming of the Russians to Alaska, Eskimos on the Pacific coast are said to have traveled to Bristol Bay via Katmai Pass to trade for walrus ivory. The Russian fur traders doubtlessly traveled the route as well. Explorers of southwest Alaska, such as Louis Pinart, Ivan Petroff, and Josiah Edward Spurr, also followed the route. 420/ Of these, Spurr provided the first detailed description of the route.

Following an historic journey down the Kuskokwim River and along the southwest coast of Alaska during the summer of 1898, Spurr ascended Naknek River to the village of Savonoski at the head of Naknek Lake, arriving there on October 13. With ten Natives from the village, Spurr and his men walked to Katmai by way of Katmai Pass in three and one-half days. He described the route as follows:

rock, piled together without even a covering of moss. Through this debris and the underlying lava the mountain streams have cut deep gorges. On all the upper part of the pass the snow lay thick at the time of our crossing, in the middle of October. Many natives have perished here by being caught in gales, for during storms, even in summer, the wind blows with intensity and piercing coldness. At such times stones of considerable size are picked up by the wind and carried through the narrow defiles where the traveler must walk, and we found many of these stones lying upon the snow. Owing to this danger the natives can not be induced to cross except in perfectly calm and clear weather. Extensive hot springs emerge from the Katmai side of the mountains below the pass, and there are very frequent earthquakes and other evidences of volcanic activity. Our party itself experienced a slight earthquake just after crossing.

The descent from the summit in the direction of Katmai is much more abrupt than on the northwestern side, and in about 10 miles one passes from an altitude of nearly 3,000 feet to a broad, level flat which is at about the level of the sea. In this gravel flat, several miles wide, the Katmai River flows, and on both sides of it are high and rugged mountains, which run quite down to the coast, and, indeed, extend below the sea, as is shown by the fact that the water close to the shore is very deep, as it is nearly everywhere from here southward and eastward along the Alaskan coast. The gravel flat of Katmai Valley forms on the seacoast a sand beach several miles long, which is effectually shut in on both sides by high mountainous promontories.

resort on the east end of Brooks Lake. A primitive twenty-one-mile jeep road runs from the lodge to a knoll, known as Three Forks, overlooking the Valley of Ten Thousand Smokes. This area is and has been closed to hunting. 425/

Dakavak Lake

Located on the south coast of the Alaska Peninsula in the Katmai National Park and Preserve ten miles southeast of Mt. Katmai, the landlocked lake is about three and one-half miles long. It is surrounded by mountains one thousand feet in elevation. The lake may provide floatplane access for hunters. In the early 1950s, for example, Al Madsen transported a hunting party to the lake in a Grumman Goose. 426/ Additional information about past and current use of the lake is presently not available.

Ninagiak River

Rising in the mountains (elevation 1,000 feet) of the northern Aleutian Range thirty-six miles northwest of Mt. Katmai, the Ninagiak River flows southeast ten miles to Hallo Bay. Like the Katmai River, the Ninagiak is a braided stream with many gravel bars. However, the river flows in a single channel across the mud flats at the head of Hallo Bay. No evidence of travel in the river basin was found in the historic record. According to John Bowman of the BLM, the river is not susceptible to navigation. 427/

Big River

Heading in mountains (elevation 2,500 feet) about seven miles west of Kaguyak Volcano in the Katmai National Park and Preserve, this river flows east twenty

II. Water Bodies

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3. Tarleton H. Bean, "Report on the Salmon and Salmon Rivers of Alaska with Notes on the Conditions, Methods, and Needs of the Salmon Fisheries," Fish Commission Bulletin, 9 (1891): 177. Cited hereafter as "Report on the Salmon"; Jefferson Moser, "The Salmon and Salmon Fisheries of Alaska: Report of the Alaskan Salmon Investigations of the U.S. Fish Commission Steamer Albatross for the Year Ending June 30, 1898," Fish Commission Bulletin, 18 (1899): 145-146. Cited hereafter as "Salmon Investigations 1898."

4. Hensel, "Kodiak Refuge," p. 79; USGS, Karluk (C-1) Quadrangle, 1954, scale 1:63,360.

5. Hensel, "Kodiak Refuge,", p. 77; Harry Hulsing to Curtis V. McVee, 20 November 1975, File AA-7745-EE, ANCSA file; U.S. Department of the Interior, Water Resources Data for Alaska,

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15. Kenneth I. Taylor, "A Demographic Study of Karluk, Kodiak Island, 1962-1964," Arctic Anthropology 3 (1966): 211.

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17. U.S. Congress, Senate, Committee on Commerce Hearings, North Fisheries Problem, 87th Cong., 1st sess., 1964, p. 435.

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28. "Suggested Procedure Change for Karluk River Steelhead, King Salmon and Silver Salmon Survey," File 5.2-5.3, Navigability Team, Division of ANCSA and State Conveyances.

29. Raleigh Conkle, Salmon Survival Investigation (Karluk Lake) (Washington, D.C.: Government Printing Office, 1958), pp. 14, 16, 17.

30. Allen H. Panamaroff to Curtis McBee, 18 February 1975, File AA-6674-A, Docket, BLM Alaska State Office, Anchorage.

31. Telephone Interview with Bill Donaldson, March 13, 1983.

32. Bill Freeburn, "Darn Lucky," Alaska Sportsman, October 1952, 24-25.

33. Bean, "Report on the Salmon," p. 165-166.

34. Marshall McDonald, "Report of the Salmon Fisheries of Alaska," Fish Commission Bulletin, 12 (1894): 16.

35. Bean, "Report on the Salmon," pp. 179-180.

36. Ibid., pp. 177-178.

37. Ibid., pp. 176, 180.

38. Chamberlain, Some Observations on Salmon and Trout in Alaska, pp. 28-29.

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50. Claude H. Barr, "The Courage of the Kodiak," Alaska Sportsman, May 1936, 7, 17-20.

51. J. Bruce Allen, "Kodiak Giant," Alaska Sportsman, April 1936, 6-7.

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70. "Review of Larsen Bay Village easement as per S.O. 2982," 25 June, 1976, File AA-6674-EE, ANCSA file.

71. "Final Easements on Lands Being Conveyed to Karluk Village," 13 September 1977, File AA-6674-EE, ANCSA file; "Final Easements for the Village of Larsen Bay," File AA-6677-EE, ANCSA file.

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113. Ibid., pp. 31-32.

114. USGS, Kodiak Quadrangle, 1952, revised 1967, scale 1:250,000; Harbors and Rivers, pp. 98-99; Cross, Surface Water Resources, p. 17.

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