**LAND REPORT TITLE PAGE**

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**Date(s) of examination**

**LANDS INVOLVED**

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A total of 87 contiguous townships are involved encompassing parts of the Salcha River, Tanana River, and Shaw Creek waterbodies. See the following page for townships, serial numbers, and acreage.

**Purpose of report** To make recommendations regarding the navigability or non-navigability of inland waterbodies within an area of State Selections.

**Prepared by**

K. LeRoy Cook  

**Title**  
Natural Resource Spec.

**Date of report**  
2/1/80
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NAVIGABILITY RECOMMENDATIONS

I. General Description of the Area

A. Physiographic Features

The thirty-seven (37) contiguous townships involved are located within central interior Alaska north of the Alaska mountain range in the Yukon-Tanana Upland physiographic division. All the townships lie within the major drainage basin of the Tanana River. Rounded ever-topped ridges with gentle side slopes characterize this section of broad undulating divides and flat-topped spurs. Ridge-crest altitudes vary from 1500-3000 feet and rise 500-1500 feet above adjacent valley floors. Valleys are generally flat, alluvium floored, and 1/4-1/2 mile wide to within a few miles of headwaters. Drainage divides are very irregular. The streams have sharp bends, often involving a reversal of direction. The few small lakes in the subject townships are mainly thaw lakes in valley floors and low passes. There are no glaciers. The entire area is underlain by discontinuous permafrost.

Geology of this upland is chiefly Precambrian(?) schist and gneiss. Some windblown silt lies on the lower slopes of hills, and thick accumulations of muck overlie deep stream gravels in some valleys. Alluvial deposits of gold and other metals abound throughout the upland. Pingos are common in valleys and on lower hill slopes.

The subject townships are covered by the Big Delta 1:250,000 topographic map.

Vegetation is of the upland spruce-hardwood forest type. This ecosystem is a fairly dense interior forest composed of white spruce, birch, aspen, and poplar. Black spruce typically grows on north slopes and poorly drained flat areas. Root depths are shallow and fire scars are common. Undergrowth consists of mosses with grasses on drier sites and with brush on moist slopes. Typical plants are willow, alder, ferns, rose, high and low bush cranberry, raspberry, currant, and horsetail. Mammals utilizing the subject lands would include: black bear, grizzly bear, wolverines, moose, caribou, snowshoe hare, beaver, wolf, coyote, red fox, lynx, mink, weasel, marten, squirrels, and mice. Birds such as grouse, ravens, songbirds, hawks, eagles, and woodland owls can be found throughout the area.

The climate varies widely, but is characterized by strong cold winters and short warm summers. Precipitation is moderate (11-13 inches).
B. Major Water Bodies

The Salcha River watershed drains all and parts of 35 of the 37 subject townships. This southwest flowing river is a major tributary to the Tanana River and its main channel flows across the northern edge of the subject lands. The Salcha River has numerous north/south tributaries.

The southern boundary of the subject lands embraces one major drainage (the Tanana River) and one minor drainage (Shaw Creek). The majority of the townships dealt with lie between the Salcha, Tanana, and Shaw Creek waterbodies (see attached 1:250,000 map).

Two large lakes, Harding Lake and Birch Lake, lie just north of the Tanana River. The mouth of the Little Delta River flows into the Tanana just south of Birch Lake.

The area contains several small thaw lakes and numerous small creeks that are unnamed because of their physical size. A cursory examination of all waterbodies (named and unnamed) follows in section III of this report. Recommendations then follow for each waterbody in each township (see section IV).

C. Cultural Aspects. (AEIDC Data)

1. Past

Cultural and archaeological inventories for the subject area have not been completed. A map is attached (see appendix 1) showing known archaeological, historic, and early mining sites. Several 19th century village sites of Athabascan Indians were located along the Tanana River. Reports seem to indicate that most of these sites were abandoned before caucasions entered the area in the late 1800's. A small village at the mouth of the Salcha River (called Salcha) was one of the last to be abandoned. There are no Athabascan villages today within the subject townships.

White history of the subject lands begins with the gold rush to Fairbanks during the late 1800's. One of the early overland routes to Fairbanks was a trail that closely followed the Richardson Highway (also known as the Mahony Trail). Although travel on major river courses in the winter was dangerous because of warm springs it was sometimes done. Prospectors also built rafts and boats for river access in the summer months. Soon roadhouses, mining centers, and post offices sprung up along these major access routes. A roadhouse, store, and military telegraph office were established at the mouth of the Salcha River. Aurora Lodge is a historic roadhouse.
Harding Lake was known earlier as Salchaket Lake; here an old roadhouse stop and mining center was located fifty miles south of Fairbanks on the Richardson Highway. A post office was opened August 21, 1909 and later closed June 15, 1926. The Richardson Roadhouse was a small community with a post office (1906-1943); here the Tanana River changed its course and the erosive efforts forced the people to move. Shaw Creek Roadhouse was established in the early 1930's. Early uses of the subject lands would include prospecting and gold mining and hunting and trapping in support of a subsistence life style by both natives and non-natives.

2. Present

The southern boundary of the Salcha River watershed makes up part of the Fairbanks North Star Borough. Modern man occupies (lives and works) those lands that lie adjacent to the Richardson Highway which passes through townships 7 South, Range 5, 6, 7, and 8 East of the Fairbanks Meridian. The Richardson Highway parallels the north bank of the Tanana River and is a key land transportation route to interior Alaska, connecting Fairbanks and Delta Junction. Many private homes are located along the Richardson Highway and around Harding Lake. The Alaska oil pipeline that runs from Prudhoe Bay to Valdez crosses through the subject lands north of the Richardson Highway. Many of the waterbodies within the subject land are used for summer and winter recreation. Boating in the larger rivers is mainly associated with hunting and fishing and many of the rivers have recreational cottages.

II. Navigability Criteria

Criteria for making navigability recommendations comes from BLM State Office instructional memos 79-233, 79-233 Change 1, 79-233 Change 2, 79-301; the Garner memo (Associate Solicitor to BLM Director, March 16, 1976); the State Director's memo - "Guidelines for the Exclusion of Water Acreage Under Inland Navigable Waters for Interim Conveyance Purposes"; ANCAB ruling #76-2 on the Nation and Kandik Rivers, December 14, 1976; and other studies, investigations, testimony, and guidelines that this examiner has been able to find.

The below navigability determinations are recommended after considering 1) the history of use of the waterbody (documented waterborne commerce), and 2) the physical character of the waterbody (susceptibility to navigation for waterborne commerce).
III. Specific Description of Applicable Water Bodies

A. Tanana River

The Tanana River is the largest river within the subject townships and the surface water of all rivers and creeks in the area flow either north or south, eventually into the Tanana.

Based on the AEIDC (Arctic Environmental Information and Data Center) material and an earlier report on the "Navigability and Non-navigability Waters in the Northway Area" prepared by Mike Brown, BLM historian from the Alaska State Office; the Tanana River and its interconnected sloughs have been determined to be navigable from its mouth to its confluence with the Chisana and Nabesna Rivers. Because of this the Tanana River will not be discussed further.

B. Harding Lake (Salchaket Lake, Big Harding Lake)

1. Physical Characteristics

Harding Lake is located at Milepost 324 of the Richardson Highway. This large deep lake of the region receives a full spectrum of water resource uses. Primarily a summer time recreational area; uses include fishing, boating, swimming, and water skiing. Ground access exists to the lake via the Richardson Highway and several established access roads to and around the lake shore. Most of the water front property has been developed with the building of private cottages and several large recreation facilities (Shriners Lodge, Camp Clegg, Presbyterian Youth Camp, Military Recreation Area, and the Harding Lake Recreation Area). There is also a public recreational boat landing site.

Harding Lake is approximately 142 feet deep with a surface area of 2400 acres and shore line of 40,200 feet. The mean depth is 53 feet. There are large sections near the shore that are shallow. The shore line has moderate to steep slopes with bedrock hills on three sides and a dam of alluvial sediment on the fourth. The drainage area is relatively small totaling 5,838 acres; the lake surface being approximately 40% of the drainage area. There is no outlet. The lake is highly oligotrophic and well oxygenated at all times with exception of a small area deeper than 40 meters.
2. Use Data

a. Historical (reference AEIDC data)

The early overland route to Fairbanks crossed just south of Harding Lake established by prospectors and gold seekers in the late 1800's. Lodges, commercial establishments, and private residences have been located in the area ever since. Early aircraft utilized the lake as a landing field during both summer and winter. Wiley Post and Will Rogers are reported to have landed a sea plane there in 1935. Undoubtedly hunting also occurred on and around the lake. Tanana Valley sportsmen are reported to have stocked the lake as early as 1939.

b. Present

Today almost every type of water sport occurs on Harding Lake. Houses and recreational facilities dot the entire shore line. The lake is also stocked on a regular basis by the State of Alaska, Department of Fish and Game. Access roads follow the shore line 3/4 of the way around the lake. All types of shallow draft power boats and pleasure craft utilize the lake.

C. Birch Lake

This large interior lake was so named by early prospectors after its groves of graceful trees. Birch Lake is located at Milepost 312 of the Richardson Highway 28 miles northwest of Big Delta. Maximum depth for this 800 acre lake is 49 feet. Water quality is very good and supports a viable recreational sport fishery. The Alaska Department of Fish and Game first stocked the lake in 1966. Fish stocking occurs at frequent intervals. Good road access exists two and three quarters the way around Birch Lake. Summer cottages in the vicinity and on the shore are estimated at 70+. All types of shallow draft power boats and pleasure craft utilize the water body for water sports. The lake also provides winter recreation for the interior resident (ice fishing and snow machining). Float and ski planes can easily utilize the lake and there is a public boat ramp. No historical evidence was found indicating that Birch Lake had been used for travel, trade, or commerce.
D. Chisholm Lake (Lost Lake)

This lake, approximately 0.5 miles long, is located south of the Richardson Highway and Birch Lake; 28 miles northwest of Big Delta. It is 94 acres in size and 39 feet deep. Road access exists to the lake and much of the surrounding land is privately owned. The lake supports fish life and is stocked periodically (rainbow trout and silver salmon) by the Alaska Department of Fish and Game; 1964 was the first stocking. A boy scout camp was established in the late 1960's on the south side. The lake, known locally as Lost Lake, is open to and utilized by the public for recreation. A natural outflow from the lake to the Tanana River runs intermittently and during high water periods provides access to Chisholm Lake for fish. No historical data was found indicating that the lake had been used previously for travel, trade, or commerce.

E. Salcha River (Including Tributaries)

1. Physical Characteristics

The Salcha River is a northerly large clear water tributary of the Tanana with its headwaters 30 to 40 miles north of the Tanana River in areas of high relief. The bedrock of the lower course is chiefly mica and quartz schist.

The lower river drops 10 feet to the mile with an average run-off of 2170 CFS. Average fall above "the Splits" (see map) is 19 feet per mile. The river drains 2170 square miles and water levels fluctuate readily. King and chum salmon use the water system along with a variety of other wildlife.

The Salcha is formed by the gathering of waters from many tributaries and becomes considerable size before it enters the sloughs of the Tanana. Along the river course there are numerous riffles easily fordable by horses at ordinary stages. Long gravel bars are also exposed at low water. The largest tributary of the river is the North Fork located about 50 miles above the mouth. The river descends at a steady rate of 4 to 6 m.p.h. with its speed increasing slightly along the numerous riffles. There are no water falls or extremely swift areas (rapids). The riffle areas are more numerous in the upper part of the river above the confluence of the North Fork and main Salcha. Small green islands occasionally occur along the water course and the banks frequently have dangerous overhanging trees and unstable log jams. Width and depth can vary significantly along given sections depending on the physiographic characteristics and water run-off.
2. Use Data

a. Historical (reference AEIDC data)

Near the mouth of the Salcha River a small Indian settlement was located, called Salcha. The northerly tributaries of the central part of the Salcha are auriferous (gold bearing) and miners began prospecting and exploring the Salcha in the late 1800's. White men established a roadhouse, store, and military telegraph office at the river mouth. Access up river was either by poling boat or overland. Miners eventually established a trail on the east side from the river’s mouth to Caribou Creek. At low water horses were used to tow shallow draft boats as far as Butte and Caribou Creeks (tributaries from the north 50 miles above the mouth). The gravel bars of the river at low water are laid bare for considerable distances and a horse could easily ford the river from side to side while towing the boat loads of supplies. This could not be done at high water. Trips down river were also made in the poling boats and were a dangerous undertaking due to the riffles and log jams. Besides placer mining, trapping and hunting also occurred. A lot of the moose killed on the Salcha River were sold in Fairbanks. Good gold returns were found on the tributaries up river (including Butte and Caribou Creeks).

b. Present

Today small power boats can ascend the river with little difficulty. Uses include sport fishing, sight seeing, floating, hunting, and camping. Several modern recreational cottages are located on the river. Supplies for many of these structures were brought in by river boat. Mining still takes place in the Upper Salcha. Three airstrips also exist on the upper river near Caribou.

Shallow draft power boats with motor lifts can ascend the river up to Paldo Creek during normal periods of water flow. Some difficulty may be encountered in the longer shallow riffle areas with a power boat just below Paldo Creek. Small power boats are not able to ascend South Fork or North Fork drainages near "the Splits". These tributaries are too rocky and shallow.
Paldo Creek is located in T1S, R16E, FM, here the river takes on a different character from the lower river due to the many tributaries that converge at this point (Serpentine Creek, Lost Creek, Dan Creek, and Paldo Creek). All the subject townships lie below these headwaters.

F. Shaw Creek

Shaw Creek is noted for its good grayling fishing. The creek is approximately 40 miles long with the lower part flowing through a wide flat (Shaw Creek Flats) area noted for its stands of tamarack. Shaw Creek is a clear slow flowing small water body that empties into the Tanana River 25 miles northwest of Delta Junction. The creek drains 410 square miles and has a normal discharge of 11,000 CFS. The river's flood plain is interspersed with numerous potholes, sloughs, oxbow lakes, and small tributaries. This type of ecosystem supports a variety of wildlife and Shaw Creek is known as a good moose calving area.

Prospectors around Shaw Creek found only low quantities of gold. The Richardson Highway crosses the Creek at its mouth. The first bridge was built in 1909 with a ferry being used before that time. Shaw Creek Lodge is also located at the Creek's mouth and is a favorite launching site for river boats traveling up and down the Tanana River. Besides the excellent grayling fishing sportsmen also catch whitefish and burbot. Most of the grayling fishing is done in the spring and fall when the fish are near the mouth. This is because boats are unable to ascend but only the first few miles of the Creek due to the tremendous amount of fallen trees in the water. Most of the time small shallow draft power boats (river boats with motor lifts) can ascend the Creek about 7-8 miles. The confluence of Caribou Creek with Shaw Creek is the upper limit for boats traveling up stream. No historical data was found indicating that the Creek had been used previously for waterborne travel, trade, or commerce.

G. Delta Creek (Little Delta Creek, Mahutze Creek, Russel Creek, Silok Creek)

The extreme lower part of the mouth of Delta Creek (few feet) is located in T7S, R7E, FM, as it enters the Tanana River.
1. Physical Characteristics

Delta Creek has its terminus at Trident Glacier in the Alaska Range and flows north to the Tanana draining 720 square miles. The stream is glacial and braided with the water channel continually shifting its course as it flows through the broad gravel/sandy flat that is at times one half mile wide (see attached map). Average drop on the river is 46 feet per mile. Water volumes fluctuate rapidly and break up into numerous shallow channels as it moves through the flat. Because of this it is difficult at times to tell where the main water course goes.

The several small clear streams that drain into the creek do not affect its murky sediment appearance. The creek makes a rather straight course flowing between 4-7 m.p.h. The clear tributaries support fish life in the summer.

2. Use Data

a. Historical

Little historical use information was found in the AEIDC (Arctic Environmental Information and Data Center) data. The river channel has been used by hunters and trappers as a land transportation route in the summer and winter. Delta Creek is located 16 miles NW of Big Delta. The old Sullivan roadhouse is located on the east bank of Delta Creek south of the township. Here the Donnelly-Washburn winter cutoff sled trail crossed Delta Creek and proceeded on to the mouth of the Little Delta River and Fairbanks. The route was only used in the winter and cut off from the Richardson trail at Donnelly.

b. Present

The Delta Creek channel is still used as a land transportation route for hunters and trappers. Access is generally by plane (landing on gravel bars) or snow machines, track vehicle or foot. The creek is too shallow to take a small power boat up except possibly during periods of spring flooding. One can walk up the creek bed. The shallow multi-channeled riverlets cannot be avoided and must be stepped through.
H. Little Delta River (Delta Creek, Husachez, Silok Creek, Silokh Creek)

1. Physical Characteristics

The lower part of the Little Delta River flows through one of the subject townships, T7S, R5E, FM. Its headwaters meet at the junction of the East and West Fork of the Little Delta River and flow 24 miles north to the Tanana. The river is of glacial origin and shows a tendency to fluctuate rapidly in volume. The actual water course is braided with the numerous shallow channels continually shifting their course as they flow through the broad sandy flat that is at times over a mile wide. The glacial sediment makes the water a chalk color and because of the numerous channels it is difficult to tell where the main water course goes. The Little Delta River drains 690 square miles and drops an average of 30.8 feet per mile.

The several small clear streams that drain into main water course do not affect its murky sediment laden appearance. The river course makes a rather straight line flowing north between 4–7 m.p.h. The clear tributaries support fish life in the summer.

2. Use Data

a. Historical

Historical information extracted from the AEIDC (Arctic Environmental Information and Data Center) data show that the Donnelly-Washburn winter sled route joined the Little Delta River 14 miles above its mouth on the east side and after 7 miles it crossed over and followed the river on its west side to its mouth. The Washburn Roadhouse was located across the Tanana River opposite the river's mouth. The Donnelly-Washburn trail was a winter sled route that cut off from the Richardson trail and bypassed Delta Junction only to again join the Richardson trail after crossing the Tanana River. In 1905 a gold rush to the valley of the Little Delta River occurred. Much hunting and trapping has also occurred at the river's headwaters and along its main water course. Early use was as a land transportation route, both in the summer and winter.
The water body came to be called the Little Delta River in 1900 which differentiates it from nearby Delta River and Delta Creek. Husachez and Silokh are Indian names.

Nowhere in the information available was it indicated that water borne craft were used as a means of travel, trade, or commerce.

b. Present

Part of the upper part of the Little Delta River is used as an aerial gunnery range for military aircraft. Little Delta River is larger than Delta Creek. During normal and higher flows a small canoe can be floated down its lower parts. Access upriver by sportsmen is generally by plane in the summer and fall (landing on gravel bars). In the winter snowmachines can ascend the channel. Track vehicles are also sometimes used. Access upriver by small power boat is difficult due to the shallow turbulent multichanneled riverlets.

The river does not normally receive recreational waterborne traffic. It is the western boundary for the Fort Greely military reservation.

IV. Navigability Recommendations for State Selected Townships

A. Serial Number F-029680

1. Township 7 South, Range 5 East, FM

   a. Recommendations

   It is recommended that the Tanana River and its interconnecting sloughs and Birch Lake be administratively considered navigable throughout the subject township. It is further recommended that the Little Delta River, Lost Lake, Gunnsack Creek and all the remaining unnamed water bodies be administratively considered non-navigable.

   b. Rationale

   (1) Navigable Water

   Tanana River - Historic waterborne commerce is documented.
2. Township 5 South, Range 8 East, FM

a. Recommendation

It is recommended that all the waterbodies throughout the subject township be administratively considered non-navigable. This includes all named and unnamed waterbodies.

b. Rationale

Named Water Bodies

Named water bodies include Lenant Creek, Uncle Sam Creek, and Monte Cristo creek, all of which are not large enough to sustain small boat traffic. No historical information was found to indicate that any of these creeks were used for waterborne commerce on or before statehood.

Unnamed Water Bodies

The remaining unnamed waterbodies within the subject township were not recommended due to their small size, location, and other physical limiting factors.
Report Prepared By:  

K. Lee Cook  
Natural Resource Specialist  

Date  

Reviewed By:  

W. E. Cooper  
Navigability Specialist  

Date  

We, the undersigned, have reviewed this Land Report for the State Selection Navigability Recommendations. It is technically adequate and we concur with the recommendations made.

M. C. Wilson  
Fortymile Area Manager  

Date  

C. A. Johnson  
Fairbanks District Manager  

Date
Memorandum

To: State Director (910)

From: Chief, Division of Resources (930)

Subject: Navigability Recommendations - Fortymile (Partial)

We have received a report from the Fairbanks District Office containing recommendations as to the navigability of waterbodies within areas of State selection in parts of the Salcha River, Tanana River and Shaw Creek drainages.

We are presently reevaluating our position on non-lineal waterbodies, and this memorandum does not include recommendations as regards the following selections:

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86,834.71 Ac +

A report on these selections will be made at a future date.

The selections to which this memorandum refers are as follows:

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</table>
The District report does not specifically state that the State of Alaska's 1974 Water Delineation maps were reviewed. However, all water-bodies in the township were discussed.

A review of the report for content and consistency with the 12/14/74 ANCAB decision on navigable waters. I agree with the conclusions and recommendations contained in the report and find them consistent with the ANCAB decision. Your concurrence is requested.

I concur:

[Signature]

6-23-80

Acting Associate State Director Date
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DECISION

State of Alaska : F-029689
Department of Natural Resources :
Division of Research and Development :
Pouch 7-005 :
Anchorage, Alaska 99510 :

General Purposes Grant
State Selection

Decision of November 13, 1963 Modified in Part

On May 3, 1962, the State of Alaska filed general purposes grant selection applications F-029689 and F-029690 under the provisions of Sec. 6(b) of the Alaska Statehood Act of July 7, 1958 (72 Stat. 339), for lands in T. 5 S., R. 7 E., Fairbanks Meridian. By decision dated November 13, 1963, the selections were combined under application F-029689 and tentative approval was given to the State for approximately 22,788 unsurveyed acres.

It has been determined that the Salcha River is the only navigable water body in this township. The decision of November 13, 1963 is therefore modified to exclude the Salcha River from the lands tentatively approved.

Although these lands are now surveyed, patent can not be issued until a supplemental plat of survey determining the navigable water acreage is approved. The additional survey was requested on November 29, 1980.

Lands within this selection are listed under Section D of the State's FY 82 patent priority list and are within the Alaska natural gas pipeline route.

[Signature]
Chief, Branch of State Adjudication
Memorandum

To: Chief, Branch of State Adjudication (964)

From: Deputy State Director for Conveyance Management (960)

Subject: Final Navigability Determination for a State Selection on the Big Delta Quadrangle

This is the final navigability determination for lands selected by the State of Alaska in T. 4 S., R. 6 E., Fairbanks Meridian, which is shown on the USGS Big Delta C-5 and C-6 quadrangles, 1958 and 1949 editions, photorevised 1972 and 1975, respectively. The township is traversed by the Little Salcha River, a portion of Ninetyeight Creek, and unnamed tributaries to these and to other water bodies. A portion of Salcha River is located in Sec. 36. The north half of the township is shown on the Master Title Plat as being within Public Land Order No. 5187, a withdrawal for Military Purposes. The withdrawal is also shown on the USGS Big Delta quadrangle.

Past Determinations

On February 8, 1981, the State Director determined the Little Salcha River and all other water bodies in State-selected T. 4 S., R. 5 E., Fairbanks Meridian to be nonnavigable (see file F-495). This determination was based upon a report prepared by the Fairbanks District Office on September 10, 1980. On August 5, 1980, the State Director determined the Ninetyeight Creek in T. 4 S., R. 7 E., Fairbanks Meridian, to be nonnavigable. Salcha River was determined to be navigable. (See selection file F-494, which includes T. 4 S., R. 7 E., Fairbanks Meridian, and T. 4 S., R. 6 E., Fairbanks Meridian.)

General Information

The subject township is located about 45 miles easterly of Fairbanks. The terrain is mountainous, with one peak rising to 2,330 feet. The Little Salcha River, Ninetyeight Creek.
possibly a small portion of the Salcha River in Sec. 36, and the unnamed creeks flowing down mountain sides have cut narrow channels in the course of their flow. No settlement claims of any type are shown on the Master Title Plat for the township.

The Salcha River traverses many of the townships under State selection in this area including the township immediately to the east, T. 4 S., R. 7 E., Fairbanks Meridian. In various reports on this and other townships, the Salcha River was determined to be navigable.

Water Body Specific Information

The Little Salcha River and Ninetyeight Creek have been determined nonnavigable in their lower reaches. The Salcha River has been determined navigable further upriver than in this township.

The unnamed creeks in this township flow, in the main, down mountain sides. Many have steep gradients, in the 300 f.p.m. to 550 f.p.m. range. No lakes are shown on the USGS quadrangle.

Determinations

The following applies only to water bodies or segments of water bodies still under Federal jurisdiction.

I find that the Salcha River, as shown on the USGS quadrangle in Sec. 36, is navigable, as it has been, and is capable of being used, as a highway of commerce.

I find that the Little Salcha River, Ninetyeight Creek and all other unnamed water bodies in this township are nonnavigable because they have not been used, nor are they susceptible to being used, as highways of commerce. All available information indicates that boats cannot be used on these water bodies.

/s/ Robert W. Arndorfer

cc:
Retained Lands Unit - Navigability
Division of Land and Water Management
Department of Natural Resources
Pouch 7-005
Anchorage, Alaska 99510
Memorandum

To: Deputy State Director for Cadastral Survey (923)

From: Deputy State Director for Conveyance Management (960)

Subject: Navigable Water in Survey Group No. 113 (Window 558)

This memorandum identifies navigable water bodies below a certain size on lands in Survey Group No. 113 (Big Delta) selected (not conveyed) under the Alaska Native Claims Settlement Act or the Alaska Statehood Act. It also names navigable waters (if any) that were excluded from conveyances under these acts. We have issued navigability reports for most of the selected and conveyed lands. Several townships include lands withdrawn by the Department of Defense on the date of Statehood. Navigable waters, if any, on these lands are not identified.

The lands in the twenty-four townships and the navigable water bodies which must be segregated in accordance with the provisions of the proposed Memorandum of Understanding (MOU) with the State of Alaska, are described in Table 1. Streams 198 feet or more in width, such as the Tanana River and Delta Creek, are not listed in the table because, regardless of their navigability status, they are segregated on the survey plats. The same is true for lakes fifty acres or more.

The only nonmeanderable water bodies determined navigable in the course of earlier determinations in the report area are Clear Creek and Salcha River. These water bodies are listed in Table 1. (See J. David Dorris to State Director, March 17, 1972, State Selection F-029695, Jules Tileston to State Director, April 15, 1980, F-028920 and June 23, 1980, F-029691.)

The BLM’s navigability determinations are based on criteria described in the memorandum dated March 16, 1976, from the Associate Solicitor, Division of
Table 1

Navigable Rivers and Streams Less Than 198 feet Wide and Lakes Less Than 50 Acres in Size in Group Survey 113 (Window 558) to be Excluded on Survey Plats, by Township.

**Fairbanks Meridian**

Tps. 5–6 S., R. 3 E.
None.

Tps. 4–7 S., R. 4 E.
None.

T. 4 S., R. 5 E.
None.

T. 5 S., R. 5 E.
Salcha River.

Tps. 6–8 S., R. 5 E.
None.
T. 5 S., R. 6 E.
Salcha River.

Tps. 6–8 S., R. 6 E.
None.

T. 5 S., R. 7 E.
Salcha River.

Tps. 6–7 S., R. 7 E.
None.

T. 8 S., R. 7 E.
Clear Creek.

T. 4 S., R. 8 E.
Salcha River.

Tps. 5–7 S., R. 8 E.
None.

T. 8 S., R. 8 E.
Clear Creek to the tributary in Sec. 28.
Energy and Resources, to the Director, Bureau of Land Management, subject "Title to submerged lands for purposes of administering ANCSA"; the Alaska Native Claims Appeal Board's (ANCAB) decision (RLS 76-2) of December 14, 1979 on the navigability of the Nation and Kandik rivers: the Regional Solicitor's February 25, 1980, interpretation of the ANCAB decision: and dicta in the United States District Court's decision (ABO-359) of April 16, 1987, on the navigability of the Gulkana River. In general, the BLM considers nontidal water bodies navigable if at the time of Statehood, they were navigable for crafts larger than a one-person kayak.

Information for this memo was obtained from the USGS Big Delta and Fairbanks maps (scale 1:250,000), the BLM's master title and survey plats, and Alaska Automated Lands and Minerals Record System, and NASA infrared aerial photography flown at 60,000 feet (Roll No. 21, Frames 16 and 18, July 1978, and Roll 2800, Frames 3984, and 3989, August 1979) and past navigability reports.

State-selected lands lie in Tract A, T. 5 S., R. 3 E., FM. The slough adjacent to these State-selected lands is shown on the USGS Fairbanks B-1 and C-1 (1950, Photorevised 1972 and 1975, respectively) quadrangles. The NASA aerial photography taken in July 1978 (Roll 21, Frame 51), the slough is the same color as the Tanana River. The slough is less than two chains wide and open through the selected area. The well-defined banks, as well as the bed of its confluences, are heavily vegetated.

I find that all other streams less than 198 feet in width and lakes less than fifty acres in size on selected (not conveyed) lands are not navigable. The creeks are too shallow, steep, and narrow. The lakes are too small and, for all practical purposes, are landlocked.

Ist: Robert W. Anderton

Enclosure:
Table 1

CC:
State Interest Determinations
Division of Land and Water Management
Alaska Department of Natural Resources
P.O. Box 7-005
Anchorage, Alaska 99510

State of Alaska
Department of Natural Resources
Division of Land and Water Management
Land Title Section
3601 C Street, Suite 960
Anchorage, Alaska 99503
Memorandum

To: Deputy State Director for Cadastral Survey (923)

From: Deputy State Director for Conveyance Management (960)

Subject: Navigable Waters in or along Native Allotments in Survey Window 558 (Salcha Area)

This memorandum identifies navigable water bodies in or along certain small land tracts (five Native allotments) in the Salcha area. We have reviewed those tracts which straddle rivers or streams in conveyed lands (IG'd or TA'd), tracts which abut rivers or streams on Federal lands (lands not selected under the Statehood Act or ANCSA), and lands patented to the State which are to be reconveyed for conveyance to Native allottees. The tracts of land are listed in table 1. Navigable water bodies are listed in table 2. See our memo dated April 15, 1988, for group survey 113 for navigable waters on lands selected under ANCSA and the Statehood Act and navigable waters excluded from conveyances (IG'd or TA'd) under these laws.

Only rivers and streams under 198 feet in width and lakes less than 50 acres in size are considered in this memo. Larger water bodies are routinely meandered and segregated from the public lands.

The BLM’s navigability determinations are based on criteria described in the memorandum dated March 16, 1976, from the Associate Solicitor, Division of Energy and Resources, to the Director, Bureau of Land Management, subject "Title to submerged lands for purposes of administering ANCSA"; the Alaska Native Claims Appeal Board's (ANCAB) decision (RLS 76-2) of December 14, 1979, on the navigability of the Nation and Kandik rivers; the Regional Solicitor's February 25, 1980, interpretation of the ANCAB decision; and dicta in the United States District Court's decision of April 16, 1987, on the navigability of the Gulkana River. In general, the BLM considers nontidal water bodies navigable if, at time of Statehood, they were navigable for crafts larger than a one-person kayak.
The main sources for this determination are the USGS Big Delta B-5 (1949, rev. 1975) quad; BLM reports and aerial photographs; and interviews conducted by Edgar A. Earnhart of the Navigability Section on February 23, 1980. Interviewees were Bill Ridder, a biologist with the Alaska Department of Fish and Game in Delta (telephone 896-4632) and BLM natural resource specialist, Jerry Nordman, in Fairbanks.

On June 23, 1980, the BLM determined Salcha River navigable on State-selected lands in T. 4 S., R. 8 E., FM, and Shaw Creek nonnavigable in T. 7 S., R. 8 E., FM. (See Jules Tileston to State Director, in File F-28920).

Shaw Creek

Heading in low mountains, Shaw Creek flows southwesterly for over forty miles. It has a slow current in the lower seventeen miles as it meanders across Shaw Creek Flats to the Tanana River in Sec. 35, T. 7 S., R. 8 E., FM. The creek is double-lined on the USGS Big Delta B-5 map to the east boundary of Sec. 35, about one-third of a mile from its mouth. In BLM’s high altitude photographs the stream appears to be approximately 120 feet wide in its first three miles and free of obstructions (CIR 60, roll 21, frames 76 and 77, July 1978).

A BLM Fairbanks District Office report in 1980 summed up the use and characteristics of the creek at that time. Fishermen and hunters in small, shallow-draft boats travel up the first few miles. Small boats can be taken up as far as Caribou Creek, a distance of seven to eight miles (K. LeRoy Cook, Land Report, February 1, 1980, file F-028520). Nordman said that there has been increasing use of the stream since 1980, with people going farther upstream. He confirmed that it is about 120 feet wide in its lower two to three miles and is six or seven feet deep. It is now more heavily used as people go farther up with boats in use today, hunters even cutting trees fallen across the channel. Bill Ridder said the creek is navigated during the full ice-free period. Most use occurs in the lower three miles or to a point slightly east of the Alyeska Pipeline crossing.

I determine Shaw Creek navigable through Native allotment F-14813. Fisherman and hunters boat the creek. A BLM natural resource specialist who has observed the area for many years has observed various types of craft on it, and a State sport fish biologist who lives in the area confirms its extensive use by sport fishermen and hunters.

All other water bodies less than the meanderable size in or along the small tracts are non-navigable. Streams are too shallow. Lakes are too small and are practically landlocked.

Wayne R. Boden
### Table 1
Native Allotments in Survey Window 558 (Salcha Area)
Scheduled for Survey in Fiscal Year 1989

**Fairbanks Meridian**

**Townships**

T. 5 S., R. 4 E.
F-18823, F-27630.

T. 4 S., R. 8 E.
F-14233 A, F-15060 B.

T. 7 S., R. 8 E.
F-14813.

### Table 2
Navigable Waters in or Along Native Allotments
Survey Window 558 (Salcha Area)

**Fairbanks Meridian**

T. 5 S., R. 8 E.
None.

T. 4 S., R. 8 E.
Salcha River, along F-14233 A and F-15060 B.

T. 7 S., R. 8 E.
Shaw Creek through F-14813.
CC:
State Interest Determinations
Division of Land and Water Management
Alaska Department of Natural Resources
P.O. Box 7-005
Anchorage, Alaska 99510

State of Alaska
Department of Natural Resources
Division of Land and Water Management
Land Title Section
3601 C Street, Suite 960
Anchorage, Alaska 99503
Memorandum

To: Deputy State Director for Cadastral Survey (923)
From: Deputy State Director for Conveyance Management (960)
Subject: Navigable Waters in Group Survey 113/114 (Window 85)

This memorandum identifies water bodies below a certain size on lands in Survey Group 113/114 (Delta/Salcha) which are selected (but not conveyed) under the Alaska Native Claims Settlement Act (ANCSA), the Statehood Act, and the Native Allotment Act and not reserved or withdrawn at the time Alaska joined the Union. It also identifies navigable waters excluded from conveyances (IC or TA) under ANCSA and the Statehood Act.

We have issued navigability reports for most of the selected and conveyed lands in this window. Several townships include lands withdrawn for the Department of Defense on the date of Statehood. Navigable waters, if any, on these lands are not identified.

The water bodies in twenty-four of the townships in Window 85, those in Group 113 (Salcha), were addressed in my memoranda of April 15, 1988 and March 13, 1989, which identified navigable waters on State-selected land and within Native allotments, respectively. (See Robert W. Arndorfer to Deputy State Director for Cadastral Survey, April 15, 1988, file F-029695 [2620]; Wayne A. Boden to Deputy State Director for Cadastral Survey, March 13, 1989, file F-14813 [2561].) Navigability determinations were also issued for Native allotments in the remaining thirty-seven townships in Survey Group 114. (See Wayne A. Boden to Deputy State Director for Cadastral Survey, March 13, 1989, ANCSA file F-19329-EE.)
Table 1 lists the lands and navigable waters in the sixty-one townships in the report area. Streams 198 feet or more in width and lakes over fifty acres in size are not listed in this report, because, regardless of their navigability status, they are segregated on the survey plats. These water bodies include: Tanana, Delta, and Johnson rivers, Healy Lake, Hidden Lake (located in Secs. 17 through 20 and 29, T. 11 S., R. 16 E., FM), Lake George, and Moosehead Lake. Shaw Creek was listed as navigable through Native allotment F-14813 located in Secs. 26 and 35, T. 7 S., R. 8 E., FM, in my March 13, 1989 memorandum. It is not listed in table 1 because the lands are no longer under Federal jurisdiction. The Native allotment application was rejected.

The BLM's navigability determinations are based upon Federal law of title navigability. In a March 16, 1976, memorandum, Associate Solicitor, Hugh C. Garner summarized the law for the purpose of administering the Alaska Native Claims Settlement Act. In general, nontidal water bodies are navigable if, at the time of statehood, they were used or were susceptible to use for travel, trade and commerce. The Ninth Circuit Court's decision of December 13, 1989, on the navigability of the Gulkana River provides additional guidance. In this case, the Court found that watercraft customary at statehood included boats with a load capacity of about 1,000 pounds. The Court further held that contemporary guided fishing and sightseeing activity on the Gulkana River was commerce and that watercraft customary at statehood "could have at least supported" this commercial activity.

Information for this memo was obtained from the USGS Big Delta and Mt. Hayes quadrangle maps, the BLM's master title and survey plats, the Alaska Automated Land and Records System, BLM's NASA aerial photographs, and past navigability and conveyance reports.

Navigable Waters

Nonmeanderable water bodies determined navigable in the course of earlier determinations are listed in Table 1. Those within the group 114 townships have the dates of determinations and ICs appended as appropriate. Exhibit A provides added reference.

Other Water Bodies

State-selected lands lie in T. 12 S., R. 11 E., FM. Navigability determinations have not yet been made for these lands. The lands are shown on the USGS Mt. Hayes D-3 (1955, minor revisions 1962) and D-4 (1950, minor revisions 1968) quadrangles. Granite Creek is the only principal water body. Its gradient averages over fifty feet per mile through the area. It was determined nonnavigable in T. 11 S., R. 12 E., FM, and is patented in T. 10 S. R. 12 E., FM.

A few sections of land are selected under ANCSA. Two water bodies of possible significance for navigation were found on a map examination of these lands. The lands include Secs. 13, 24, 25, and 36, T. 12 S., R. 15 E., FM. As shown on the USGS Mt. Hayes D-2, (1955, minor revisions 1962) map, there is a small landlocked lake of about forty acres in Sec. 17. Two small streams, each about a mile long, flow into the lake from the north and east. In high altitude photographs taken in July, 1978, the streams are dried up and the lake appears to be receding (CIR 60, roll 21, frames 210 and 211, July, 1978).
The only other significant water body in ANCSA-selected lands is an unnamed stream through Sec. 30, T. 11 S., R. 16 E., FM. The longest branch of this stream, combined with the main stem, has a length of two and one-half miles. The stream appears to have a moderate gradient, about twenty-five feet for the last mile to its mouth on Hidden Lake in TA'd Sec. 29, T. 11 S., R. 16 E., FM. This stream is barely discernible in the NASA photographs. (CIR 60: roll 2929, frames 8626 and 8627, August 1980, and roll 21, frames 210 and 211, July, 1978.)

I find that all other streams less than 198 feet in width and lakes less than fifty acres in size on selected (not conveyed) lands are not navigable. The creeks are too shallow, steep and narrow. The lakes are landlocked.

/5/ Terry R. Massett
Acting

Enclosures:
Table 1
Exhibit A

cc:
State of Alaska
Department of Natural Resources
Division of Land and Water Management
Title and Contracts Section
3601 C Street, Suite 960
Anchorage, Alaska 99503

State of Alaska
Department of Natural Resources
Division of Land and Water Management
State Interest Determinations Unit
P.O. Box 107005
Anchorage, Alaska 99510-7005

Doyon, Limited
Land Department
201 First Avenue
Fairbanks, Alaska 99701

Mendas Cha-ag Native Corporation
P.O. Box 667
Delta Junction, Alaska 99737

Chief, Branch of Doyon/Northwest Adjudication (964)

Chief, Branch of Planning and Development (920B)

Chief, Branch of Field Surveys (921)

Chief, Branch of Examination and Records (922)
Attn: Records (922)
Section Chief, Special Instructions (923)
Chief, Branch of Mapping Sciences (924)
John Toms (924)
SWMO (080)

961*EEarnhart*blj*02/01/91*9072t
Table 1
Navigable Rivers and Streams Less Than 198 Feet Wide and Lakes Less Than 50 Acres in Size in Group Surveys 113 and 114 (Window 85) to be Excluded on Survey Plats, by Township

**Fairbanks Meridian**

<table>
<thead>
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<th>Township</th>
<th>Description</th>
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<tr>
<td>Tps. 5-6 S., R. 3 E.</td>
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<tr>
<td>Tps. 4-7 S., R. 4 E.</td>
<td>None.</td>
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<tr>
<td>T. 4 S., R. 5 E.</td>
<td>None.</td>
</tr>
<tr>
<td>T. 5 S., R. 5 E.</td>
<td>Salcha River.</td>
</tr>
<tr>
<td>Tps. 6-8 S., R. 5 E.</td>
<td>None.</td>
</tr>
<tr>
<td>Tp. 5 S., R. 6 E.</td>
<td>Salcha River.</td>
</tr>
<tr>
<td>Tps. 6-8 S., R. 6 E.</td>
<td>None.</td>
</tr>
<tr>
<td>T. 5 S., R. 7 E.</td>
<td>Salcha River.</td>
</tr>
<tr>
<td>Tps. 6-7 S., R. 7 E.</td>
<td>None.</td>
</tr>
<tr>
<td>T. 8 S., R. 7 E.</td>
<td>Clear Creek.</td>
</tr>
<tr>
<td>T. 4 S., R. 8 E.</td>
<td>Salcha River.</td>
</tr>
<tr>
<td>Tps. 5-7 S., R. 8 E.</td>
<td>None. (The BLM determination of 3/13/89 for Shaw Creek within Native allotment F-14813 is void.)</td>
</tr>
<tr>
<td>T. 8 S., R. 8 E.</td>
<td>Clear Creek to the tributary in Sec. 28.</td>
</tr>
<tr>
<td>T. 7 S., R. 9 E.</td>
<td>None.</td>
</tr>
<tr>
<td>T. 8 S., R. 9 E.</td>
<td>Interconnecting sloughs of the Tanana River. (7/21/80, in F-27659)</td>
</tr>
</tbody>
</table>
Tps. 7-9 S., R. 10 E.
None.

T. 8 S., R. 11 E.
None.

T. 9 S., R. 11 E.
Goodpaster River; interconnecting sloughs of Tanana River; Clearwater Creek; channel from Clearwater Lake to Tanana River. (8/5/80, in F-027767)

Tps. 10-12 S., R. 11 E.
None.

Tps. 8-12 S., R. 12 E.
None.

Tps. 8-13 S., R. 13 E.
None.

Tps. 9 and 10 S., R. 14 E.
None.

T. 11 S., R. 14 E.
Interconnecting sloughs of Tanana River. (6/17/83, in F-27992; IC 1247)

Tps. 12 and 13 S., R. 14 E.
None.

T. 9 S., R. 15 E.
None.

T. 10 S., R. 15 E.
Lower Healy River in Secs. 32 through 35; interconnecting sloughs of Tanana River. (IC 604, on Big Delta A-2 and Mt. Hayes D-2 quadrangles). See Exhibit A.

T. 11 S., R. 15 E.
Interconnecting sloughs of Tanana River; outlet to Hidden Lake, Sec. 13. (IC 604, on Mt. Hayes D-2 quadrangle). See Exhibit A.

Tps. 12 and 13 S., R. 15 E.
Interconnecting sloughs of Tanana River. (9/10/79, in F-28006 and F-28008)

T. 14 S., R. 15 E.
None.

T. 10 S., R. 16 E.
None.

T. 11 S., R. 16 E.
Hidden Lake outlet in Sec. 18; double-lined inlet, stream and connecting lake within Native allotment F-15283-B, in Sec. 20. (IC 604, on Mt. Hayes D-2 quadrangle) (3/13/89, in F-15283). See Exhibit A.
T. 12 S., R. 16 E.
None.

T. 13 S., R. 16 E.
George Creek; outlet to Black Lake; interconnecting sloughs of Tanana River.
(3/6/81, in F-27998) (IC 604, Mt. Hayes D-2 quadrangle)

T. 14 S., R. 16 E.
None.
Memorandum

To: Chief, Branch of Survey Planning and Preparation (927)

From: Survey Planning and Preparation Branch and Navigability (927)

Subject: Navigable Waters Within State Selected and Tentatively Approved Lands, Window 2884

This memorandum identifies navigable waters on certain State-Selected and Tentatively Approved lands in fifty-two townships. These lands were selected under the Alaska Statehood Act and the Alaska Native Claims Settlement Act. Streams averaging three chains or more in width and lakes fifty acres or more in size are meanderable and will not be discussed further in this report.

These lands have nearly all been the subject of previous navigability determinations. Dates of the previous navigability reports and all determinations in this report are listed with each corresponding township in the table. On June 23, 1980, the BLM determined the Salcha River navigable on State-selected lands up to Paldo Creek. I affirm this determination. Even though small water craft have gone farther than Paldo Creek, it was done with great difficulty as the creek is shallower and huge boulders lie in the creek bed.

1  F-88690 (2620), F-88691 (2620), F-88692 (2620), F-88696 (2620), F-88697 (2620), F-88698 (2620), F-88699 (2620), F-89166 (2620), F-89167 (2620)
If water bodies are less than meanderable size, and not listed in the appendix, they are non-navigable. They are too short, steep-in-gradient, narrow, filled with boulders or too shallow for travel, trade, and commerce.

The BLM-Alaska’s navigability determinations are based on Federal law of title navigability. Title to unreserved lands underlying navigable waters vested in the State at the time of statehood. As a general rule, inland waters are navigable if, at the time of statehood, they were used, or were susceptible to use, for travel, trade, and commerce. In a memorandum dated March 16, 1976, Associate Solicitor Hugh C. Garner summarized the Submerged Lands Act of 1953 (43 U.S.C. 1301) and Federal case law pertaining to title navigability. The Alaska Submerged Lands Act of 1988 (P.L. 100-395) provides specific direction regarding navigability determinations and survey meanders for land transfers under the Alaska Statehood Act, Alaska Native Claims Settlement Act, and the Native Allotment Act. Additional guidance is provided in Appeal of Doyon, Ltd., Alaska Native Claims Appeal Board RLS 76-2, 86 I.D. 692 (1979) [Kandik and Nation Rivers]; Alaska v. United States, 754 F.2d 851 (9th Cir.1983), cert. denied, 474 U.S. 968 (1985) [Slopbucket Lake]; Alaska v. Ahnna, Inc., 891 F2d. 1401 (9th Cir.1989), cert. denied, 495 U.S. 919 (1990) [Gulkana River]; United States v. Alaska, Original No. 84 (1997) [Naval Petroleum Reserve No. 4]; and Alaska v. United States, No. 98-35310 (9th Cir. 2000) [Kukpawruk River].

In conclusion, we agree with the previous navigability determinations. In addition, we find no new navigable waters on State-Selected lands.

[Signature] 10/16/23
Attachment: Appendix: Table

cc:

State of Alaska
Department of Natural Resources
Division of Mining, Land and Water
Navigability Unit
550 W. 7th Avenue, Suite 1050
Anchorage, Alaska 99501-3579
Attn: Kathy Atkinson

State of Alaska
Department of Natural Resources
Division of Mining, Land and Water
Realty Services Section
550 W. 7th Avenue, Suite 1050A
Anchorage, Alaska 99501-3579

State of Alaska
Department of Fish and Game
Habitat and Restoration Division
333 Raspberry Road
Anchorage, Alaska 99518-1599
Attn: Robin Willis

U.S. Fish & Wildlife Service
Water Resources Branch, Region 7
Attn: Warren Keogh
1011 E. Tudor Road
Anchorage, Alaska 99503

National Park Service
Regional Director (Attn: Lands)
240 W. 5th Avenue
Anchorage, Alaska 99503

Doyon, Limited
Lands and Natural Resources Department
1 Doyon Place, Suite 300
Fairbanks, Alaska 99701-2941

Chief, Branch of Field Surveys (921)

Chief, Branch of ANCSA Adjudication (962)
Chief, Branch of State Adjudication (963)

Northern Field Office (020)

Sam Guim (927)

Rodney Harvey (954C)
Electronic Copy

Dot Tideman (927)
Table for Window 2884
State-Selection and Tad Lands
(POGO North Outside the CSU)

Fairbanks Meridian

T. 1 N., R. 11 E.
No navigable waters (Report of 2/17/83) F-79659

T. 2 N., R. 11 E.
Middle Fork Chena River (Report of 2/17/83) F-79660

T. 3 N., R. 11 E. Secs. 13, 21-28, and 31-36
Middle Fork Chena River, if it traverses part of township (Report of 2/17/83) F-F-79661

T. 1 N., R. 12 E.
No navigable waters (Report of 2/17/83) F-79662

T. 2 N., R. 12 E.
Middle Fork Chena River, if it traverses part of township (Report of 2/17/83) F-79663

T. 3 N., R. 12 E. Secs. 13, and 18-36
Middle Fork Chena River (Report of 2/17/83) F-79664

T. 1 N., R. 13 E.
No navigable waters (Report of 2/17/83) F-79666

T. 2 N., R. 13 E.
No navigable water (Report of 2/17/83) F-79667

T. 3 N., R. 13 E. Secs. 13 and 7-36
No navigable water (Report of 2/17/83) F-79668

T. 4 N., R. 13 E. Selected
No navigable waters (This report) F-87190

T. 1 N., R. 14 E.
No navigable waters (Report of 11/15/82) F-79669

T. 2 N., R. 14 E.
No navigable waters (Report of 2/17/83) F-79670
T. 3 N., R. 14 E.
No navigable waters (Report of 2/17/83) F-79671

T. 4 N., R. 14 E. Selected
No navigable waters (This report) F-87190

T. 1 N., R. 15 E.
No navigable waters (Report of 2/17/83) F-79672

T. 2 N., R. 15 E.
No navigable waters (Report of 2/17/83) F-79673

T. 3 N., R. 15 E. Secs. 6-12 and 13-36
No navigable waters (Report of 2/17/83) F-79674

T. 1 N., R. 16 E.
No navigable waters (Report of 2/17/83) F-79675

T. 2 N., R. 16 E.
No navigable waters (Report of 2/17/83) F-79676

T. 3 N., R. 16 E. Secs. 13, 15, 16, and 18-36
No navigable waters (Report of 2/17/83) F-79677

T. 1 N., R. 17 E.
No navigable waters (Report of 2/17/83) F-79678

T. 2 N., R. 17 E.
No navigable waters (Report of 2/17/83) F-79679

T. 3 N., R. 17 E.
No navigable waters (Report of 2/17/83) F-79680

T. 1 N., R. 18 E.
No navigable waters (Report of 2/17/83) F-79681

T. 2 N., R. 18 E.
No navigable waters (Report of 2/17/83) F-79683

T. 3 N., R. 18 E.
No navigable waters (Report of 2/17/83) F-79682

T. 3 N., R. 19 E.
No navigable waters (Report of 2/17/83) F-79686
T. 1 S., R. 10 E.
No navigable waters (This report) F-88696

T. 2 S., R. 10 E.
No navigable waters (This report) F-88694

T. 1 S., R. 11 E.
No navigable waters (This report) F-88686

T. 2 S., R. 11 E.
No navigable waters (This report) F-88686

T. 1 S., R. 12 E.
No navigable waters (Report of 6/23/80) F-88687

T. 2 S., R. 12 E.
No navigable waters (Report of 6/17/82) F-44052

T. 3 S., R. 12 E.

T. 1 S., R. 13 E.
No navigable waters (Report of 6/23/80) F-88688

T. 2 S., R. 13 E. some selected
No navigable waters (Report of 6/23/80) F-44053

T. 3 S., R. 13 E.

T. 1 S., R. 14 E.
No navigable waters (This report) F-88689

T. 2 S., R. 14 E. Selected
Salcha River (Report of 6/23/80) F-88696

T. 3 S., R. 14 E.
Salcha River (Report of 6/23/80) F-44060

T. 1 S., R. 15 E. Selected
No navigable waters (This report) F-88690

T. 2 S., R. 15 E. Selected
T. 3 S., R. 15 E.
No navigable waters (Report of 6/23/80) F-44061

T. 1 S., R. 16 E. Selected
Salcha River up to Paldo Creek (Report of 6/23/80) F-88691

T. 2 S., R. 16 E. Selected
Salcha River (Report of 6/23/80) F-88698

T. 3 S., R. 16 E.
No navigable waters (Report of 6/23/80) F-44062

T. 1 S., R. 17 E. Selected
No navigable waters (This report) F-88692

T. 2 S., R. 17 E. Selected
No navigable waters (This report) F-88699

No navigable waters (Report of 6/23/80) F-44063

T. 1 S., R. 18 E. Secs. 2-12, 14-23, and 27-36 Selected
No navigable waters (This report) F-89166

T. 2 S., R. 18 E. Secs. 1-12, 15-22 and 26-34 Selected
No navigable waters (This report) F-89167

T. 3 S., R. 18 E. Secs. 2-11, 14-18 Selected, 18-21, 28-33 (Tad) and 34-36 Selected
No navigable waters (Report of 6/17/82) F44064