

KUSKOKWIM RIVER RDI PRIOR NAVIGABILITY DETERMINATIONS

ITEM	AUTHOR	YEAR	REPORT NAME
1	Bureau of Land Management	May 6, 1980	Navigable and Non-navigable Waters of the Upper Kuskokwim River Basin.
2	Bureau of Land Management	November 8, 1984	Navigable Waters of the Kuskokwim Region, Alaska
3	Bureau of Land Management	July 8, 1985	Waterbodies Determined Navigable Through the Regional Report Process as of July 10, 1985.



United States Department of the Interior

IN REPLY REFER TO

2620 (932)

BUREAU OF LAND MANAGEMENT

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

MAY 6 1980

Memorandum

ALASKA RIVER BASIN PROJECT
U.S. DEPT. OF INTERIOR

To: State Director (910)

From: Chief, Division of Resources (930)

Subject: Navigable and Nonnavigable Waters in the Upper Kuskokwim River Basin

Attached is a staff report on the physical character and historic uses of waterbodies in the upper Kuskokwim River basin. On the basis of this report, we recommend that the following waterways be determined navigable:

1. The Kuskokwim River;
2. Takotna River to the mouth of Fourth of July Creek;
3. Nixon Fork to the mouth of West Fork;
4. Big River to the mouth of Middle Fork;
5. Middle Fork to the mouth of Pitka Fork;
6. Pitka Fork to the mouth of Salmon River;
7. South Fork of the Kuskokwim River to the bluffs in T. 31 N., R. 24 E., S.M.;
8. Little Tonzona River to the mouth of No Creek;
9. North Fork of the Kuskokwim River to Minchumina Portage;
10. Swift Fork to the mouth of Highpower Creek; and finally,
11. East Fork of the Kuskokwim River to the mouth of Slow Fork.

The streams appear to meet the standards of navigability as set forth in Departmental guidelines and clarified by the Alaska Native Claims Appeal Board in its decision of December 14, 1979, on the navigability of the Nation and Kandik Rivers.

We have considered all lakes and other streams in the basin, and recommend that they be determined nonnavigable. None appear to be susceptible to navigation.

Your concurrence with the recommendations is respectfully requested.

I concur:

Mont D. Arnold

5/6/80

ACTING State Director

Date

Enclosure



United States Department of the Interior

IN REPLY REFER TO

2620 (932)

BUREAU OF LAND MANAGEMENT

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

MAY 6 1980

MAY 11 1980

ALASKA RECORDING SYSTEM
U.S. DEPT. OF THE INTERIOR

Memorandum

To: Chief, Division of Resources (930)
Through: Chief, Branch of Lands and Minerals (932)

From: Historian

Subject: Navigable and Nonnavigable Waters in the Upper Kuskokwim River Basin

We are pleased to submit the attached report describing the physical character and historic uses of water bodies in the upper Kuskokwim River basin. Many of these water bodies are located in areas selected by Doyon, Ltd. and various village corporations under the provisions of the Alaska Native Claims Settlement Act. In its Water Delineation Maps, the State of Alaska has identified many of the water bodies as navigable. If the water bodies are or were navigable, title to the submerged lands passed to the State of Alaska on January 3, 1959, the date of Alaska Statehood.

We are reasonably satisfied that the information in this report is sufficient to make reliable determinations of navigability and nonnavigability on the basis of the U.S. Department of the Interior's guidelines and the Alaska Native Claims Appeal Board's decision of December 14, 1979, on the navigability of the Nation and Kandik Rivers. We therefore make the following recommendations.

1. We recommend that the entire length of the Kuskokwim River be determined navigable. Since the early 1900's, the Kuskokwim River has been the principal supply line for the Innoko and McKinley mining districts. The river continues to be the principal route of travel and trade from tidewater to numerous villages and towns, including McGrath and Medfra.

2. We recommend that the Takotna River to the mouth of Fourth of July Creek, and Nixon Fork to the mouth of West Fork be determined navigable. Until the construction of the Sterling Landing-Takotna Road in the late 1920's, all freight to the Innoko mining district went over the Takotna River to Takotna in steamboats and launches, and sometimes to Big Creek in launches and pole boats. The physical character of the river is such that launches and pole boats may be used to the site of the former Indian village at the mouth of Fourth of July Creek.

As concerns Nixon Fork, the principal tributary of Takotna River, the historical record indicates that prospectors and trappers customarily traveled on the river in pole boats and possibly launches to reach their headquarters on West Fork. This use has been documented for a 30-year period.

No other tributaries of the Takotna River and Nixon Fork are considered to be navigable. The records indicate that the Moore Creek mines were dependent upon the Iditarod-Moore Creek trail for travel and the transportation of freight. Only small boats, such as canoes and aluminum riverboats, may be used on the Takotna River above the mouth of Fourth of July Creek. The Candle Creek mines on Tatalina River were from the beginning served by roads and trails from the Kuskokwim River. The Nixon Fork mines were also served by the road from the Kuskokwim River.

3. We recommend that the Big River to the mouth of Middle Fork, Middle Fork to the mouth of Pitka Fork, and Pitka Fork to the mouth of Salmon River, be determined navigable. This water system has long been the customary route of summer travel to villages and roadhouses-trading posts on the Rainy Pass Trail, as well as to prospecting and trapping headquarters on Windy Fork and Sheep Creek. Launches and barges have been used on the water route.

Hunters and fishermen have used the upper stretches of Big River, Middle Fork, Pitka Fork, Salmon River and their tributaries in small boats. The record suggests that the upper stretches of these rivers are suitable for travel in small boats only.

4. We recommend that the South Fork of the Kuskokwim River as far as the bluffs in T. 31 N., R. 24 E., S.M. be determined navigable. Steamboat and barge traffic to Nikolai Village has been documented. Local residents have stated that use of large boats to the mouth of Little Tonzona River, the former location of Nikolai Village, as well as to the bluffs for hunting purposes, is possible.

In addition, we recommend that Little Tonzona River as far as the mouth of No Creek be determined navigable. A fish camp has been located near the mouth of No Creek for many years. The South Fork and Little Tonzona River are the customary routes of travel to the summer camp.

The South Fork above the bluffs and other tributaries of the South Fork are considered to be nonnavigable. While several local residents have stated that boats may be used to the headwaters of the South Fork, the historical record indicates that the customary route of travel to the head of the South Fork was the Salmon River-Rainy Pass Trail, and the summer trail which began at the Little Tozona River.

5. We recommend that the North Fork of the Kuskokwim River as far as the Minchumina Portage be determined navigable. The historic record indicates that the North Fork was an important route of travel between the Kuskokwim and Tanana River basins. Pole boats and launches have been used on the river to the portage.

6. We recommend that the Swift Fork as far as the mouth of Highpower Creek be determined navigable. Use of wooden riverboats to Telida Village has been documented. The physical character is such that wooden riverboats may be used to Highpower Creek. Beyond that point, the river is too shallow for boat traffic.

Red Slough is not considered to be a "slough" of the Swift Fork as the term is generally understood. The slough meanders a considerable north of Swift Fork, and appears to be very narrow in the southeast section. Local residents report use of the slough in small boats. We therefore recommend that the slough be determined nonnavigable.

7. We recommend that the East Fork of the Kuskokwim River as far as the mouth of the Slow Fork be determined navigable. The East Fork was the principal route of summer travel to the East Fork and Slow Fork villages and roadhouses.

8. No lakes in the upper Kuskokwim River basin are considered to be navigable. All of the lakes are small and for all practical purposes landlocked. The lakes are accessible by land and airplane. Local residents traditionally hunt and fish on the lakes in small canoes. The lakes are too small to be considered potential highways of commerce.

C. M. Brown



United States Department of the Interior 2628 (NAV) (962)

IN REPLY REFER TO

BUREAU OF LAND MANAGEMENT

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

NOV 08 1984

Memorandum

To: Chief, Branch of Conveyance Services (962)
From: Deputy State Director for Conveyance Management (960)
Subject: Navigable Waters of the Kuskokwim Region, Alaska

This memorandum identifies certain navigable water bodies totaling approximately 430 miles in the Kuskokwim region of Alaska. The present navigability determinations apply only to water bodies or segments of water bodies currently under Federal jurisdiction. Title to the beds of navigable waters, if not reserved by the United States on January 3, 1959, passed to the State of Alaska at the time of Statehood.

I determine the following water bodies to be navigable:

1. South Fork Kuskokwim River to Tatina River (95 miles).
2. Holitna River to Chukowan River (121 miles).
3. Chukowan River to Gemuk River (28 miles).
4. Gemuk River to Beaver Creek (7 miles).
5. George River to Julian Creek (40 miles).
6. Aniak River to Salmon River (56 miles).
7. Whitefish Lake and Outlet (23 miles).
8. Johnson River: Mud Creek Portage to Crooked Creek (10 miles).
9. Crooked Creek to Unnamed Lake (16 miles).

10. Unnamed Lake (Secs. 2-4, 9-12, 14-16, 22-23, T. 18 N., R. 63 W., Seward Meridian).
11. Kulik Lake.
12. Unnamed Lake (Secs. 18-20, T. 19 N., R. 63 W., Seward Meridian).
13. Unnamed Lake (Secs. 13, 23, 24, T. 19 N., R. 64 W., and Sec. 19, T. 19 N., R. 63 W., Seward Meridian).
14. Talbiksok River to Portage (35 miles).

These navigability determinations are based upon criteria set forth in the Solicitor's opinion of March 16, 1976 (otherwise known as the "Garner Memorandum"), the Regional Solicitor's opinion of February 25, 1980, regarding the Alaska Native Claims Appeal Board's decision on the navigability of the Nation and Kandik rivers, and the Bureau of Land Management's Instruction Memorandum No. AK-81-78, change 1. The remainder of the memorandum sets forth my rationale for the above determinations.

Ordinary Conditions

To the best of my knowledge these water bodies were at the date of Statehood and remain today in their natural and ordinary condition.

Accessibility

All of these water bodies are accessible by commercial waterborne crafts from navigable waters.

Seasonality

Commercial waterborne crafts can be used on these bodies at any time during the ice-free season. Navigation may be impeded by low water levels at certain times of the summer season.

Commercial Craft

At the time of Statehood the smallest waterborne craft in customary use on the region's freshwater bodies for commercial purposes was an eighteen- to twenty-four-foot wooden riverboat equipped with an outboard propeller-driven motor. (Aluminum boats and jet units were not used on a customary basis until the 1960s.) As the U.S. Army Corps of Engineers observed in 1971, "During the summer months natives living in the region

use small river boats, averaging 18 feet in length, for transportation much as the Americans use automobiles." In the late 1950s, while conducting anthropological studies at Napaskiak, anthropologist Wendell H. Oswalt recorded that most men preferred to travel in a "plank boat," which he described as approximately twenty-four feet long with a three-foot beam and powered by outboard motors ranging from one and one-half to twenty-two horsepower. Similarly, in the early 1960s anthropologist Edward H. Hosley observed in the upper Kuskokwim basin that Native families had "at least one flat-bottomed boat from fourteen to twenty-four feet long." Built from spruce planks, the boats were usually equipped with twelve- to fifteen-horsepower outboard motors.

Highway of Commerce

1. South Fork Kuskokwim River To Tatina River (Medfra and McGrath Quadrangles)

The use of steamboats, barges, and riverboats on the South Fork to Nikolai Village and the Little Tonzona River is well documented. Above these points the historic record is almost silent. According to oral tradition, Indians and some Eskimos descended the river from some point in the Alaska Range in bullboats loaded with meat and hides to the lower South Fork and the Kuskokwim. Some credence may be given this tradition in view of the fact that turn-of-the-century explorers noted plentiful signs of Indian hunters on the upper South Fork and that the first U.S. Geological Survey exploring expedition to the Kuskokwim basin successfully descended the river in canoes. In 1898 Josiah Edward Spurr and his men reached the headwaters of the river from the Yentna River system, and from a point at or near Hartman River, located a considerable distance upstream of Tatina River, floated down the South Fork to the Kuskokwim in eighteen- to nineteen-foot cedar canoes, only once leaving the river to make a quarter-mile portage around a canyon.

Spurr thought it doubtful that a "boat could be gotten upstream by any means." Subsequent events proved him wrong. In the spring of 1907, after an arduous journey from Cook Inlet through Rainy Pass, four men built a twenty-six-foot scow six feet wide several miles below Post River or about seven miles below Tatina River, and with the spring breakup of the river ice, descended the river to its mouth in the scow. That fall they started the return journey to Cook Inlet, towing the scow by hand to a point one of the men believed to be about ten miles below their former camp. Seventy years later certain residents of Nikolai Village and McGrath described their boat trips up the South Fork, most of them made in connection with

big game hunting. Nic Dennis poled a wooden boat to Egypt Mountain (about ten miles below Tatina River); Miska Deaphon ascended the river at least to Post River in a thirty-two-foot boat with an eighteen-horsepower motor; John Andrews once hauled a load of lumber to Farewell Lake Lodge located about fifteen miles below Tatina River in a thirty-foot boat, and saw an old thirty-foot poling boat at Tatina River. Interviewed by the BLM in 1981, guide Stan Frost said there is "no problem" in "negotiating" the South Fork as far as Farewell Lake in most years; he claimed to have taken a twenty-foot Smokercraft boat with two fifty-horsepower outboard motors to a point between Denny Creek and Hell's Gate.

While there is no available record of commercial waterborne traffic on the South Fork above Nikolai Village, it appears that such traffic could occur as far as Tatina River at least. This point was the location of an important roadhouse and trapping headquarters on the Rainy Pass winter trail and an emergency landing strip on the Anchorage-McGrath air route. The report that an old poling boat is located there, suggests that the roadhouse proprietors or trappers occasionally used boats to transport their winter supplies to the site. The fact that boat traffic did not develop on the upper South Fork as it did on many other rivers in Alaska during the gold rush days may be due to the absence of a substantial summer population in the area, the difficulties of navigating the river, and the existence of the Rainy Pass trail. This excellent winter trail evidently satisfied most needs for travel and transportation in the area until the aviation age made its appearance.

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| 2. Holitna River
(Sleetmute and Taylor Mountains Quadrangles) | To Chukowan River |
| 3. Chukowan River
(Taylor Mountains Quadrangle) | To Gemuk River |
| 4. Gemuk River
(Taylor Mountains Quadrangle) | To Beaver Creek |

The largest tributary of the Kuskokwim, the Holitna has served as a highway of summer travel between settlements and to mining and trapping grounds. Unfortunately much of the details of that history are obscure or unknown. During the 1830s and early 1840s the Holitna was an important water link in the Russians' supply line extending from the Nushagak Bay posts to the Kuskokwim River. At the turn of the century trappers and prospectors ascended the river in search of new ground; the extent of their travels and the character of their boats is presently unknown. However, the reports of several government officials in the 1910s that the river was navigable for small

steamboats for sixty or seventy-five miles and that poling boats could be taken further, is suggestive.

During the 1940s cinnabar ore from Cinnabar Creek, a tributary of Beaver Creek, was transported by barge or poling boat down the Holitna to Sleetmute. The U.S. Geological Survey reported that at times of high water small barges could be pushed upriver as far as Kasheglok Village just below Chukowan River, and that the Cinnabar Creek deposits were reached chiefly by poling boats with outboard motors. In 1943, W. A. Cady and C. A. Hickox of the U.S. Geological Survey ascended the Holitna, Chukowan, and Gemuk rivers to Beaver Creek in a thirty-foot poling boat with an outboard motor. While the government trip was conducted strictly for scientific purposes, the boat used in the trip was certainly of the type in customary use for commercial purposes in the area at the time of Statehood.

5. George River To Julian Creek
(Sleetmute and Iditarod Quadrangles)

Since the 1910s mining properties on George River were supplied by river and trail. In 1935 Stephen R. Capps of the U.S. Geological Survey reported that miners transported supplies up George River to Julian Creek in poling boats with outboard motors. Forty years later a BLM official observed that sixty-foot barges twenty feet wide loaded with fuel were used on the river as far as Julian Creek where the river was forty feet wide and four to six feet deep.

6. Aniak River To Salmon River
(Russian Mission Quadrangle)

During the gold rush era the Aniak was an important poling boat highway to the Marvel Creek diggings. According to a local newspaper in 1912, two men took a poling boat loaded with nearly a ton of supplies up the river to the diggings on the upper reaches of Salmon River. The newspaper observed that prospectors should have no difficulty in reaching the mouth of Marvel Creek by poling boat. In 1914 a party of eight men reportedly ascended the Aniak at high water stage in a poling boat for a distance of forty-five miles. Another group of miners took a "large power boat" to a roadhouse forty miles upriver. In 1937 another local newspaper reported that the river was navigable for small boats a distance of sixty miles. These and other reports of boat traffic on the Aniak indicate that the Aniak was in 1959 susceptible to commercial navigation to at least the mouth of Salmon River.

7. Whitefish Lake and Outlet
(Russian Mission Quadrangle) Entire

Whitefish Lake and its outlet were a link in a water and land route to prospective mining ground on Ophir Creek and mining operations on the headwaters of the Tuluksak River. In 1914 the U.S. Geological Survey's Alfred G. Maddren ascended the effluent and crossed the lake to Ophir Creek in a poling boat; he then followed the trail to Bear Creek on upper Tuluksak River. During the trip he observed at least one Native habitation on Whitefish Lake and a camp on lower Ophir Creek. There he met a number of non-Natives catching large numbers of whitefish for sale to Tuluksak River miners. Describing the creek as narrow and deep (6 to 15 feet in places) and the lake as shallow (10 to 15 feet), Maddren considered the water route to Ophir Creek suitable for the transportation of heavy freight by boat. According to BLM officials in 1980 and 1982, local residents traveled the water route in boats or skiffs in connection with subsistence activities. In view of the physical character of the lake and its effluent, and its past history as a route of travel to Ophir Creek and Tuluksak River points in boats comparable to riverboats extant in 1959, it is clear that Whitefish Lake and its outlet are susceptible to commercial navigation.

8. Johnson River Mud Creek Portage
to Crooked Creek
9. Crooked Creek Johnson River to
Unnamed Lake
10. Unnamed Lake Entire
(Secs. 2-4, 9-12, 14-16, 22-23,
T. 18 N., R. 63 W.,
Seward Meridian)
11. Kulik Lake Entire
12. Unnamed Lake Entire
(Secs. 18-20, T. 19 N., R. 63 W.,
Seward Meridian)
13. Unnamed Lake Entire
(Secs. 13, 23, 24, T. 19 N., R. 64 W.,
and Sec. 19, T. 19 N., R. 63 W.,
Seward Meridian)
14. Talbiksok River Portage to Yukon
(Russian Mission Quadrangle) River

These seven streams and lakes comprise the Russian Mission summer portage or the Yukon-Kuskokwim Portage. Indians and Eskimos doubtlessly traveled the portage for decades if not centuries before Lieutenant L. A. Zagoskin wrote in 1844 the first known description of it. Fur traders, prospectors, government officials, mail carriers, doctors, nurses, trappers, and sometimes entire families traveled the route. Since the Second World War, traffic on the Portage appears to have declined significantly, perhaps due to the rise in popularity of air travel. Local residents continue to travel portions of this route to hunting and trapping grounds, however.

The Portage was suitable for a wide range of crafts, including kayaks, canoes, rowboats, and poling boats, which ranged in length from eighteen to thirty-two feet. Prior to 1930 the mail carrier maintained five rowboats on the Portage. These made it possible for him to travel the distance from Bethel to Russian Mission and return in fifteen to twenty days, all the while carrying a minimum of 600 pounds of mail and oftentimes passengers.

The completion of the Alaska Railroad, the inauguration of government steamboat service on the Yukon from Nenana to Holy Cross, and the plans of the White Pass and Yukon Navigation Company to run a boat from Dawson to St. Michael beginning with the 1923 season, led to serious consideration of an old proposal to construct a canal between the Yukon and Kuskokwim rivers on the Portage route. The canal proposal was rejected as too ambitious a project for existing and future economic conditions. Most everyone agreed on the need to improve the Portage for travel, however. Thus, in 1929-31 the Alaska Road Commission and the Territory cooperated in making certain improvements on the route. These included the construction of two light trams aggregating 5,943 feet on the Yukon and Kuskokwim sides of the Portage; a three-thousand-foot canal seven feet wide and three and one-half feet deep; controlling dams on the canal and Mud Creek; the installation of winches and derricks at the tram sites; the placement of signs at strategic points along the lakes and creeks; and the construction of two shelter cabins near the trams. Improvements to the water portions of the route included the removal of brush from channels, the straightening of a few sharp corners in Crooked Creek, and the widening of some channels. All these improvements were designed to accommodate boats as large as the mail carrier's -- a thirty-foot boat with a four-foot beam and a payload capacity of 2,600 pounds. The project evidently was successful, for in 1938 a Bureau of Fisheries agent reported, "The largest boats now that go over the portage do not exceed 30 feet in length, 4 foot beam, and

should not draw over a foot or fifteen inches of water at most." The improvements had no effect on the navigability status of the subject water bodies, for it is clear that the streams and lakes were navigable for boats similar to those in commercial use in 1959 before the improvements were effected.

Robert H. Anderson



United States Department of the Interior

IN REPLY REFER TO

BUREAU OF LAND MANAGEMENT

2628 (NAV) 962

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

JUL 08 1985

Memorandum

To: Chief, Navigability Section

From: Historian

Subject: Water Bodies Determined Navigable in Regional Report
Process as of July 10, 1985

The following is a list of all seventy-six water bodies determined navigable as of July 10, 1985 as part of the regional report navigability determination process. The number of river miles has been rounded off to the nearest mile. There are a total of 4,370 river miles determined navigable through the regional report process.

Kodiak Island--Shelikof Strait Region

Afognak Lake

Afognak River to the remains of the old bridge in Sec. 24,
T. 24 S., R. 22 W., Seward Meridian (1 mile)

Akalura and Red Lakes

Aniakchak River to Albert Johnson Creek (15 miles)

Karluk Lake

Karluk River to Karluk Lake (22 miles)

Kuskokwim Region

Aniak River to Salmon River (56 miles)

Big River to Otter Creek (38 miles)

Chukowan River to Gemuk River (28 miles)

Crooked Creek to unnamed lake in Secs. 2-4, 9-12, 14-16, 22-23,
T. 18 N., R. 63 W., Seward Meridian (16 miles)

- East Fork Kuskokwim River to confluence of Slow Fork and Tonzona River (75 miles)
- Gemuk River to Beaver Creek (7 miles)
- George River to Julian Creek (40 miles)
- Holitna River to Chukowan River (121 miles)
- Johnson River from Mud Creek Portage to Crooked Creek (10 miles)
- Kulik Lake
- Kuskokwim River to confluence of its East and North forks (535 miles)
- Little Tonzona River to unnamed tributary in Sec. 12, T. 33 N., R. 25 W., Seward Meridian (2 miles)
- Middle Fork Kuskokwim River to Pitka Fork (12 miles)
- Nixon Fork to its West Fork (43 miles)
- North Fork Kuskokwim River to Minchumina Portage (200 miles)
- Pitka Fork to Salmon River (21 miles)
- Salmon River to forks in Sec. 3, T. 32 N., R. 28 W., Seward Meridian (4 miles)
- South Fork Kuskokwim River Tatina River (95 miles)
- Swift Fork to Highpower Creek (39 miles)
- Takotna River to Fourth of July Creek (72 miles)
- Talbiksok River to Yukon-Kuskokwim Portage (35 miles)
- Tuluksak River to Upper Landing (59 miles)
- Unnamed Lake (Secs. 2-4, 9-12, 14-16, 22-23, T. 18 N., R. 63 W., Seward Meridian)
- Unnamed Lake (Secs. 13, 23-24, T. 19 N., R. 64 W., and Sec. 19, T. 19 N., R. 63 W., Seward Meridian)
- Unnamed Lake (Secs. 18-20, T. 19 N., R. 63 W. Seward Meridian)
- Unnamed Tributary of Little Tonzona River with mouth in Sec. 12, T. 33 N. R. 25 W., Seward Meridian to Native allotment F-17261 (2 miles)

Whitefish Lake and Outlet (23 miles)

Northwest Region

Agiapuk River to American River (36 miles)

American River to Budd Creek (23 miles)

Fish River to Omilak Creek (58 miles)

Kobuk River to Lower Kobuk Canyon (320 miles)

Kuzitrin River to Noxapaga River (71 miles)

Niukluk River to Casadepaga River (29 miles)

Noatak River to Aniuk River (303 miles)

Noxapaga River to Turner Creek (17 miles)

Selawik River to Kugarak River (65 miles)

Southcentral Region

Chulitna River to Tokositna River (27 miles)

Kasilof River to Tustumena Lake (18 miles)

Kenai Lake

Kenai River to Kenai Lake (82 miles)

Lake Louise and Outlet

Skilak Lake

Skwentna River to Portage Creek (63 miles)

Susitna Lake

Susitna River to Indian River (128 miles)

Talkeetna River to Chunilna Creek (6 miles)

Tokositna River to Home Lake outlet (13 miles)

Tustumena Lake

Tyone Lake

Tyone River to Tyone Lake (30 miles)

Yentna River to the confluence of its East and West forks
(84 miles)

Upper Yukon Region

Beaver Creek to Victoria Creek (182 miles)

Birch Creek and its lower mouth to unnamed right-bank tributary
in Sec. 8, T. 6 N., R. 17 E., Fairbanks Meridian (283 miles)

Chandalar River to the confluence of its North and West forks
(116 miles)

Charley River to Bear Creek (30 miles)

Christian River to the section line common to Secs. 21 and 28,
T. 22 N., R. 10 E., Fairbanks Meridian (22 miles)

Coleen River to Lake Creek (59 miles)

Crooked Creek to the bridge in Sec. 27, T. 9 N., R. 14 E.,
Fairbanks Meridian (25 miles)

East Fork Chandalar River to the outlet of Below Tree Lake
(141 miles)

Grass River to an unnamed tributary in Sec. 29, T. 20 N.,
R. 15 E., Fairbanks Meridian (16 miles)

Hess Creek to the confluence of its North and South forks
(92 miles)

Hodzana River to Pitka Fork (79 miles)

Nuntragut Slough upstream to an unnamed tributary in Sec. 9,
T. 21 N., R. 10 E., Fairbanks Meridian (6 miles)

Porcupine River to the International Boundary (214 miles)

Ray River to the western boundary of NE4, Sec. 1, T. 13 N.,
R. 14 W., Fairbanks Meridian (35 miles)

Seventymile River to Barney Creek (35 miles)

Sheenjek River to Thluickohnjik Creek (90 miles)

Twin Island Lake and Outlet

Unnamed Lake (Sec. 24, T. 16 N., R. 9 E., and Secs. 18-19, 30,
T. 16 N., R. 10 E., Fairbanks Meridian) and Outlet

5
Unnamed Lake (Secs. 1-2, 11-13, T. 16 N., R. 9 E., Fairbanks
Meridian) and Outlet.

Unnamed Lake (Secs. 2, 10-11, T. 16 N., R. 9 E., Fairbanks
Meridian) and Outlet to Birch Creek Lower Mouth (1 mile)

/s/ James H. Ducker

d:07/08/85:0359t

