

# United States Department of the Interior



### BUREAU OF LAND MANAGEMENT ALASKA STATE OFFICE 701 C STREET, BOX 13 ANCHORAGE, ALASKA 99513-0099

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Northern Region DOT & pp

Solomon-GS-FY'89-#3 Nome-GS-FY'89-#1 F-14893-EE (75.4) F-14908-EE (75.4) F-19525-EE (75.4) F-19570-EE (75.4) F-21943 (2653) F-38174(2620) F-40413 (2653) F-44470 (2620) (961)

Bendeleben-GS-FY'89-#4

#### Memorandum

To:

Deputy State Director for Cadastral Survey (923)

From:

Deputy State Director for Conveyance Management (960)

Subject: Navigable Waters in Window 128 (Seward Peninsula Southwest)

This memorandum identifies navigable water bodies below a certain size on land in Window 128 selected (but not conveyed) under the Alaska Native Claims Settlement Act (ANCSA), the Statehood Act, or the Native Allotment Act, and not reserved or withdrawn at the time Alaska joined the Union.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. Only those cemetery and historic sites the BIA has examined in the field are reviewed. Table 1 lists the lands and navigable waters in the forty-one townships in the report area.

Streams 198 feet or more in width 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. Water bodies thus excluded by reason of size include Salmon Lake in Tps. 6 and 7 S., R. 31 W., Kateel River Meridian (KRM), and T. 7 S., R. 32 W., KRM, and unnamed lakes in T. 5 S., R. 27 W., KRM, and Tps. 5 and 6 S., R. 28 W., KRM.

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 (A80-359) 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 about the land status, history and physical character of the water bodies in the report area comes primarily from the USGS Bendeleben, Solomon, Nome and Teller quadrangle maps; NASA aerial photographs taken at 60,000 feet; and BLM's master title plats, Alaska Automated Lands and Mineral Records System, easement files, and to a great extent prior navigability reports. James Ducker's "Alaska's Northwest Region: A History" (unpublished manuscript, BLM, 1985) was a helpful source. In addition, Ed Earnhart of the Navigability Section interviewed the following people in the winter and spring of 1989 (Edgar A. Earnhart to File F-14908-EE, January 31, 1989; File F-19525-EE, February 9, 1989; File F-33819-EE, March 28, 1989; and File F-38174, April 19, 1989):

<u>Name</u>	Date(s)	Phone Number and Background
Barrow Morgan	01/06/89 04/06/89	(443-2155) Long-time Nome Resident active in using streams
Charles Lean	01/06/89	(443-2825 ADF&G biologist in Nome
Dan Levinson	01/10/89 04/06/89	(443-2480) High school teacher, Nome
Daniel Stang	01/10/89	(443-2055) Dentist in Nome for many years
Fred Payton	01/12/89	BLM geologist in Nome from 1980-1988
Dudley Holmevig	01/07/89	(443-5201) Teacher at Nome-Belz H.S
Roy Tobuk, Jr.	03/23/89	(443-2751 State employee and Native allottee
Ralph Alanna	04/05/89	(443-2831) Helicoptor mechanic in Nome allottee, Nome resident.
Roger Aulabaugh	04/05/89	(486-4762) Employee of State Division Fish and Wildlife Protection
Nathan Perkins	04/06/89	(443-2730) Kawasaki boat dealer in Nome

People who were contacted but furnished no substantive information were: Becky Pushruk, Manager, Mary's Igloo Native Corporation; Roseanne Timbers, Solomon Native Corporation; Guy Martin, Bering Straits Native Corporation; Gary Longly of Council Native Corporation; and Bonnie Johnson, a State employee.

## Niukluk River

The Niukluk is ANCSA-selected in T. 7 S., R. 26 W., KRM and T. 6 S., R. 27 W., KRM, and it is on State-selected land in T. 5 S., Rs. 27 and 28 W., KRM. The river was determined navigable throughout the (Council) ANCSA selection (to the north boundary of Section 4, T. 7 S., R. 25 W., KRM) and was excluded from conveyance in IC 506. On October 5, 1984, the BLM determined Niukluk navigable to the Casadepaga in Sec. 14, T. 6 S., R. 27 W., KRM. (Robert W. Arndorfer to Chief, Branch of Adjudication, October 5, 1984, F-19525-EE.) On May 14, 1985, it was determined navigable upstream on State-selected lands in T. 5 S., R. 27 W., KRM. (Harold E. Wolverton to Chief, Branch of State Adjudication, May 14, 1985, F-44476.) On May 26, 1982, the BLM determined all water bodies in State-selected T. 5 S., R. 28 W., KRM. non-navigable. This included a short stretch of the Niukluk. (Harold E. Wolverton to Chief, Division of ANCSA and State Conveyances, May 26, 1982, F-44477.)

The fifty-two-mile-long Niukluk flows from five miles east of Mt. Bendeleben to Fish River. Its major tributaries include the Libby and Casadepaga rivers. Double-lined on the Solomon D-4 and D-5 (1950, minor revisions 1973) and Bendeleben A-5 (1950, minor revisions 1981) quadrangles, the Niukluk has a moderate gradient through the selected lands. The map shows a number of divided channels and sandbars. BLM's aerial photographs show the river unobstructed. The stretches of divided channel are less than a chain wide. There is a short, wide, shallow stretch above the mouth of the Casadepaga River. Upstream the river gradually narrows to less than two chains wide, narrowing to less than one chain around the mouth of the American River. (CIR 60: roll 3006, frames 2411, 2396-2398, August, 1981; roll 2919, frame 2411, July, 1980).

Historical use of the Niukluk above the Casadepaga includes horses pulling barges to and above the mouth of the Casadepaga laden with cargoes for the mines. USGS explorers used canoes. Today, there is substantial recreational use in skiffs with jet units. For the 1985 report which found the Niukluk navigable in T. 5 S., R. 27 W., KRM, the Navigability Section interviewed three persons (guide John Elmore, Nome dentist Dan Stang, and Council resident William Laws). All had boated the river in eighteen-foot boats, powered by thirty-five to eighty-five horsepower jet motors, to Kingsley Creek. Earnhart in 1988 obtained further evidence that the Niukluk is boatable annually by skiffs using jet motors and by smaller craft, during periods of high water, to points upstream of the survey window. His informants used, or knew of use of, the Niukluk with power boats to American Creek and beyond.

I determine the Niukluk River navigable to and through T. 5 S., R. 27 W., KRM. The river is used by hunters and recreationists using jet-powered boats as far upstream as Kingsley Creek in T. 4 S., R. 26 W., KRM.

#### American Creek

This twenty-mile-long stream heads in the mountains in T. 7 S., R. 29 W., KRM. It meanders through tundra for approximately the last eight miles before reaching the Niukluk. Single-lined on the USGS Bendeleben A-5 (1950, minor revisions 1981) and Solomon D-5 (1950, minor revisions 1973) quadrangles, it

has a gradient of about six feet per mile for its lower eight and one-half miles. The BLM's high altitude photographs from August, 1981, show the creek to be clear and unobstructed. It varies from about ten to twenty feet in width and has low, brushy banks for the first five or six miles above its mouth. (CIR, roll 3006, frame 2397, August, 1981.)

This creek is ANCSA-selected in T. 6 S., R. 27 W., KRM. On May 14, 1985 and May 25, 1982, it was determined non-navigable on State-selected lands upstream in T. 5 S., R. 27 W., and in Tps. 5 and 6 S., R. 28 W., KRM. (Harold E. Wolverton to Chief, Branch of State Adjudication, May 14, 1985, and to Chief, Division of ANCSA and State Conveyances, May 26, 1982, in F-44476 and F-44477 respectively.)

Several local residents describe American Creek as narrow and deep, a flat tundra stream. The limits for boating are set by its increasing narrowness and sharp turns as one proceeds upstream. Dan Stang, a Nome dentist who spends his summers in Council, told Earnhart that he has boated it for about five miles several times with his sixteen-foot jet boat. Even during the dry summer of 1988, he went up several miles. Barrow Morgan said that the American is "slough-like to the foothills." Morgan said it is about it is about six feet deep and fifteen to thirty feet wide. Biologist Charles Lean said he boated it with a small, jet-powered boat for about three miles last summer, adding that last year was one of unusually low water.

I determine American Creek navigable in Secs. 5 and 6, T. 6 S., R. 27 W., KRM. This slough-like stream is deep and unobstructed. It has been boated by two people for hunting and recreation with sixteen- and eighteen-foot jet-powered boats; a third man confirmed the slough-like nature of the stream. On the aerial photographs, the creek is unobstructed.

## Casadepaga River

A major tributary of Niukluk River, the Casadepaga flows through ANCSA-selected T. 6 S., R. 27 W., KRM, into the Niukluk in Sec. 14 of that township. Upstream, the river flows through five State-selected townships The BLM determined the river non-navigable in all five townships.

The Casadepaga is thirty-two miles long and has a number of small tributaries. Double-lined on the USGS Solomon D-5 and D-6 (both 1950, minor rev. 1973) maps. The river has a gradient of nine feet per mile in its lower eleven miles. In NASA color-infrared photographs taken in August, 1981, the stream is essentially as it appears on the USGS maps. There are several short sandbars and gravel bars where it appears very shallow. It varies from about thirty to one hundred feet in width. (CIR 60, roll 3006, frames 2398, 2407, August 1981.)

Ducker summarized the historical use of the Casadepaga as a transportation route for miners and USGS explorers. In 1904 the USGS reported that the river was navigable for horse-drawn flatboats carrying five-ton cargoes; and in 1908 it declared the Casadepaga navigable by canoes and small boats for fifteen miles. Various sources at the turn of the century suggested prospectors were using boats on the river. (Ducker, p. 159.)

Three people report that they have boated the Casadepaga for various purposes. Two persons told BLM's Sherman F. Berg in March 1985 that they boat the Casadepaga with jet boats. Barrow Morgan boats to his summer camp about five miles above its mouth during periods of high water after rains. Using an eighteen-foot, aluminum, flat-bottomed boat powered by a jet motor, he said he has made the trip from Council in one and one-half hours when water is high in the Niukluk and Casadepaga. Fred DeCicco of the Alaska Department of Fish and Game also said he boated the Casadepaga in a jet boat. (See Robert W. Arndorfer to Chief, Branch of State Adjudication, March 15, 1985 and April 25, 1985, in files F-44490 and F-44489, respectively). In 1989, Charles Lean told Earnhart that the Casadepaga below the mouth of Big Four Creek is regularly boated. With a companion, Dudley Holmevig puts his fifteen-foot canoe in at Ruby Creek and descends the fifteen miles to the Niukluk during times of high and low water. Lean said that above Morgan's camp the stream is forty to fifty feet wide and several feet deep, with a number of riffles where the water is only about six inches deep.

I determine Casadepaga River navigable in T. 6 S., R. 27 W., KRM, during periods of high water every spring and after rains. Barrow Morgan and others use jet boats to and sometimes beyond Morgan's camp near the south boundary of the township. The river is floated by Dudley Holmevig in a fifteen-foot canoe. Although it is rocky, the river's width (30-50 feet) and depth (2 feet) is adequate for small boat navigation.

## Grand Centra River

The Grand Central River rises on the northeast side of the 4700-foot Mt. Osborn. It flows twelve miles to the west end of Salmon Lake. On May 25, 1982, the BLM determined it non-navigable on State-selected land in T. 7 S., R. 32 W., KRM, due to its physical characteristics and lack of evidence of use. [File F-44494 (2620)]. The first two miles of the river are ANCSA-selected, specifically, Secs. 10 and 11 of that township. In general, this is the stretch below where the Nome-Kougarok road crosses the river.

As shown on the USGS Nome D-1 (1950, minor rev. 1972) map, the stream is heavily braided above the Nome-Kougarok road bridge; below the bridge, the channels are fewer. The stream gradient averages about seven feet per mile in the lower four miles to Salmon Lake. BLM photographs from July, 1977, show it to be clear of obstructions, and narrow in several spots (ten or fifteen feet wide). It appears to be very shallow as it widens and enters the lake (CIR 60, roll 9, frames 291, 292).

The Grand Central is reported by local people to be boatable by canoes and by jet boats below the bridge. Barrow Morgan told Earnhart that, based on observations from the bridge, the Grand Central is boatable to the lake, and for a short distance upstream. Dan Levinson said he has walked it above the bridge and it is only boatable for a short distance, possibly three hundred feet above the bridge where it makes a sharp drop. Native allottee Roy Tobuk, Jr., (his allotment is on the left bank of the the river extending east from the bridge) told Earnhart that he has descended the Grand Central in a canoe from the second bend above the bridge. He has fished from the shore above the bridge for several miles. He believes it could be canoed up as well as down from the point where he put in. Below the bridge, the channels are about twenty-five to thirty feet wide and about two feet deep. Tobuk said the several shallow spots are not hard to get over with a small, jet-powered skiff.

I determine the Grand Central River navigable from its mouth in to and through the NW1/4, Sec. 10, T. 7 S., R. 32 W., KRM. This part of the stream has been canoed by Roy Tobuk, Jr. Other local people who have walked the stream's shores are convinced it can be floated or boated from a short distance above the Nome-Kougarok bridge.

## Pilgrim River

The Pilgrim River rises from Salmon Lake in T. 7 S., R. 31 W., KRM, and flows easterly and northerly fifty-nine miles to join the lower part of the Kuzitrin. It flows through ANCSA-selected lands in Tps. 6 and 7 S., R. 31 W., and Tps. 5 and 6 S., R. 30 W., KRM. This is the uppermost twenty-two miles of the river.

In 1980 and 1982, the BLM determined Pilgrim River nonnavigable on State-selected lands in Tps. 5 and 6 S., R. 29 W. (August 15, 1980, files F-44478, F-44484); and Tps. 5-7 S., R. 30 W. (May 25, 1982, F-44479; August 15, 1980, F-44484 and F-44491), and Tps. 6 and 7 S., 31 W., KRM (May 25, 1982, F-40301 and F-44493). The BLM determined it navigable through State-selected T. 4 S., R. 30 W., KRM, on March 8, 1985. (See file F-44473)

The Pilgrim is double-lined throughout its course on the USGS Solomon D-6 (1950, minor rev. 1973) quadrangle. Its gradient from Salmon Lake to Lucky Dog Creek near the Nome-Kougarok road bridge averages about sixteen feet per mile. The river flows in a single channel for its first five miles below Salmon Lake. There is much braiding for about three miles downstream from the mouth of Crater Creek (rivermile 56). In NASA photographs the river appears to be clear throughout its course. It varies from about thirty to nearly two hundred feet in width. The Pilgrim appears deep, but obviously is shallow in the often rocky wide spots. (CIR 60, roll 3472, frames 8784, 1887, 8888 and 8789, August, 1985.)

Numerous people told BLM employees that the Pilgrim is used by rafters and canoers. Fred DeCicco of the ADF&G said that the Pilgrim's depth varies between one and twelve feet. DeCicco said he has taken a sixteen-foot boat with an outboard jet above the road bridge in Sec. 24, T. 4 S., R. 30 W. KRM. [See Robert W. Arndorfer to Chief, Branch of State Adjudication, March 8, 1985, in file F-44468 (2620).] Barrow Morgan said people float it from Salmon Lake in sixteen- or seventeen-foot canoes every year. Morgan said there is one troublesome two-mile stretch commencing in Sec. 32, T. 6 S., R. 30 W., KRM. Charles Lean of the ADF&G confirmed Morgan's statements. Lean and two other interviewees said state employees floated a twelve-foot raft down the Pilgrim in July, 1988, apparently without incident. Fred Payton and James Deininger of the BLM also floated the Pilgrim in July, 1988. Payton said there were only a few places where they got out and dragged their Avon raft for short distances.

I determine the Pilgrim River navigable for canoes and rafts in Tps. 5 and 6 S., R. 30 W., and Tps. 6 and 7 S., R. 31 W., KRM. Numerous people have floated the river from Salmon Lake to the Nome-Kougarok road in rafts and canoes in time of ordinary summer high water.

## Eldorado River

This river is on ANCSA-selected land in Tps. 9 and 10 S., R. 31 W., KRM. On September 24, 1987, the BLM determined it navigable to and through T. 10 S., R. 31 W., KRM. The year before, the river was found navigable for eighteen-foot boats carrying a thousand pounds to S% Sec. 29, T. 10 S., R. 31 W., KRM. The BLM also collected information suggesting that the Eldorado is canoeable to Venetia Creek in T. 8 S., R. 31 W., KRM. [See Robert W. Arndorfer to Deputy State Director for Cadastral Survey, September 24, 1987, in file F-14908-EE. This is the navigability report for Group Survey 226 (Window 1547).]

Upstream of the mouth of Pajara Creek and the north boundary of T. 10 S., R. 31 W., KRM, through T. 9 S., R. 31 W., KRM, the Eldorado's gradient is only moderately steeper than downstream - about ten feet per mile. As shown on the USGS Solomon C-6 (1950, minor rev. 1982) map, the stream is double-lined through the selected lands and beyond. Gravel bars are evident in numerous places, especially around the mouths of tributaries. From Pajara Creek upstream to Venetia Creek, a distance of twelve miles, the stream is generally thirty or more feet wide, with a few narrower points past through the gravel bars (CIR, roll 3472, frames 8778-8782, August, 1985).

Five people told Dorothy Tideman of the Navigability Section in 1987 that they have taken boats propelled with jets to the vicinity of Pajara Creek or beyond. All trips beyond Pajara Creek were at times of unusually high water. None believed they could go any appreciable distance beyond Pajara with jet boats during normal high water stages. Roy Piscoya once took a twenty-foot jet boat to Venetia Creek in September after heavy rains. He did not believe this could be done every year. Richard Miller of Nome said that after fall rains he has taken his eighteen-foot boat to the canyon above Pajara Creek to moose hunt. Miller did not indicate whether he could do it regularly in that season. (See Robert W. Arndorfer to Deputy State Director for Conveyance Management, August 19, 1986, in file F-14908-EE.)

Those interviewed by Earnhart for this report believed that the Eldorado is too shallow, rocky, and narrow for regular use of any craft above Pajara Creek. Morgan said that reports of use above Pajara Creek are greatly exaggerated.

I affirm the determination of September 24, 1987, that the Eldorado is navigable to Pajara Creek at the north boundary of T. 10 S., R. 31 W., KRM, and nonnavigable upstream. The river is regularly navigated to Pajara Creek. Beyond, the river is too shallow and rocky for small boats.

#### Flambeau River

This river is ANCSA-selected in T. 9 S., R. 32 W., and Secs. 3, 10, 11, 13, 14, 24 and 25, T. 10 S., R. 32 W., KRM. Downstream of Sec. 25, T. 10 S., R. 32 W., KRM, this river is IC'd or patented above the line of mean high tide. On September 24, 1987, it was determined navigable from the south boundary of Sec. 25, T. 10 S., R. 32 W., KRM, to the left-bank stream in NE4NE4 Sec. 14 of that township. (See Robert W. Arndorfer to Deputy State Director for Cadastral Survey, September 24, 1987, file F-14908-EE.) The 1987 determination was based on evidence of use of the stream to a point near the

lower end of a narrow canyon, and on its restrictive physical characteristics upstream. Through the two-mile canyon the river is less than a chain wide and contains large rocks, according to those interviewed.

The Flambeau is mostly single-lined on the USGS Solomon C-6 (1950, minor revisions, 1982) and Nome C-1 (1950, minor revisions 1970) quadrangles. Numerous sandbars are evident throughout. Its gradient from Washington Creek in Sec. 16 T. 9 S., R. 32 W., to a point in Sec. 34 above the narrow canyon is about twenty feet per mile. On BLM's aerial photographs it is about two chains or less in width to the left-bank stream in Sec. 14, T. 10 S., R. 32 W., and somewhat wider (from less than one to three chains) in T. 9 S., R. 32 W., KRM. The stream has numerous vegetated small islands and sandbars. (CIR 60, roll 8, frame 82, August, 1980, and roll 3006, frame 2438, August, 1981.)

I affirm the determination of September 24, 1987 that the Flambeau is navigable to the unnamed left-bank stream in Sec. 14, T. 10 S., R. 32 W., KRM. No record has been found of its use through and above the narrow canyon in the north half of T. 9 S., R. 32 W., KRM. Local people do not believe the stream can be boated by crafts in current use beyond the vicinity of the bottom of the canyon. The river is too shallow.

#### Sinuk River

The Sinuk River is on ANCSA-selected land in Secs. 1 and 2, in T. 8 S., R. 35 W., KRM (also TA'd in remainder of township). The BLM has determined this river navigable in T. 10 S., R. 38 W., KRM, and excluded it from IC 466. In Tps. 9 and 10 S., R. 37 W. it was determined nonnavigable on TA'd lands on March 11, 1985 and May 25, 1982, respectively (Terry R. Hassett to Chief, Branch of State Adjudication, March 11, 1985, file F-44525; Harold E. Wolverton to State Director, May 25, 1982, F-55507). The river's bed was conveyed to the Sitnasuak Corporation (Nome) in T. 9 S., R. 36 W., KRM (IC 558). In 1982, the BLM also determined it non-navigable in the report area, that is, T. 8 S., Rs. 34, 35 and 36 W., KRM. Two group survey reports in 1987 reported evidence that the Sinuk is boatable through T. 9 S., R. 36 W., KRM, several miles beyond the Nome-Teller bridge.

This river heads at an elevation of 1350 feet in small lakes on the northwest base of Tigaraha Mountain and flows southwesterly to the Bering Sea. The ANCSA-selected area is located in river miles 31 to 34, and includes the outlet to Glacial Lake. The river's overall gradient is about twelve feet per mile, and seventeen feet per mile within the report area. On the USGS maps (Nome D-2), the Sinuk to and through the report area is double-lined. Islands of sand and gravel are located below the mouth of the Stewart River (river mile 28). BLM's high altitude photographs taken in July, 1977, and August, 1985, show the Sinuk varying from about one hundred feet at the Nome-Teller bridge (river mile 17) to about twenty feet at the Glacial Lake outlet, with wide and narrow stretches interspersed through this stretch of the river. (CIR 60, roll 9, frames 141, 142, and 207 July, 1977; roll 3468, frames 8214 and 8215 August, 1985.)

Most people contacted are certain that the Sinuk cannot be boated for more than a few miles above the Nome-Teller road bridge. There is one report of the stream being descended in an eight-foot wooden boat a decade or more ago

According to Ralph Alanna, the Sinuk is too shallow and rocky for boating more than a couple of miles above the the Nome-Teller bridge. Roger Aulabaugh agreed. He noted that the rocks in it are from two to twelve inches in diameter. Aulabaugh said the stream is very shallow in its many wide stretches. Barrow Morgan, who walked it many years ago, remembers it being very shallow and rocky. Dan Levinson, who takes science students on walking trips along this stream, observed that the Sinuk has many spots where it widens and is extremely shallow with narrow deep sections between them. unacceptable amount of dragging would be necessary in any float down. He knew of two university students who ripped their raft in an attempted float of the Sinuk and had to be rescued. The only other instance of floating occurred several miles downstream of the ANCSA-selected lands in the report area. Roy Piscoya told Dorothy Tideman of the Navigability Section he and a companion floated it in an eight-foot wooden boat from a point on the Stewart River a number of years ago. [See Robert W. Arndorfer to Deputy State Director for Cadastral Survey, September, 24, 1987, file F-14908 (75.4).

I determine the Sinuk River nonnavigable in Secs. 2 and 3, T. 8 S., Rs. 35 and 36 W., KRM. The stream is shallow, rocky, and narrow. Persons familiar with the area believe the river is navigable for no more than a few miles above the Nome-Teller bridge.

#### Feather River

Feather River, seventeen miles long, heads in the Kigluaik Mountains and flows westerly to the Bering Sea. This stream, more a creek than a river, is steep. Its gradient averages forty-six feet per mile in its first ten and one-half miles. The Nome-Teller road crosses the river in mile 10. As shown on the USGS Nome D-3 (1950, minor revisions, 1975) quadrangle, the stream is slightly braided and single-lined. The bed consists of sand and gravel. The stream flows through a narrow, steep-sided canyon. Photographs taken in July 1977 and August, 1985 show fifteen- to thirty-foot wide channels that appear shallow. Its five named tributaries are very short, two to about seven miles long. (CIR 60: roll 9, frames 126, 127; roll 3468, frames 8197, 8198.

Five people interviewed by Edgar A. Earnhart for this report knew of no rafting, canoeing, or other use of the stream. Ralph Alanna, who has flown over it a number of times by helicopter, is impressed with how rocky it is. The large rocks contribute a pattern of deep holes and extreme shallows. It is mostly narrow, the thirty-foot-wide stretch under the bridge wider than most. He does not believe navigation is possible with any craft any appreciable distance above the stream's mouth. Roger Aulabaugh said it is too rocky, swift, and shallow to be boated; and Nathan Perkins, said it is too shallow for even two-man rafts. Barrow Morgan and Dan Levinson gave much the same description.

I determine the Feather River nonnavigable in T. 8 S., R. 37 W., KRM. It is too steep, shallow, and narrow. Four persons familiar with the area over a number of years, some walking it, one observing from the air, and all familiar with it in the vicinity of the Nome-Kougarok road bridge have confirmed that the stream is too narrow and shallow for watercraft.

## Nonnavigable Water Bodies

All other rivers, creeks, and lakes less than the meanderable size are nonnavigable. Numerous named streams have been disturbed by mining before 1959, such as the Niukluk tributary, Ophir Creek. Howard and Richter creeks are narrow, and Richter's gradient is over fifty feet per mile. The lakes are essentially landlocked.

Wayne G. Bodo.

Enclosure:

cc:

State Interest Determinations
Division of Land and Water Management
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

Charie Howard
State of Alaska, DOT-PF
Right-of-Way Section
600 University Avenue, Suite F
Fairbanks, Alaska 99709

Council Native Corporation P.O. Box 2050 Nome, Alaska 99762

Bering Straits Native Corporation P.O. Box 1008 Nome, Alaska 99762

Mary's Igloo Native Corporation Teller, Alaska 99778

Sitnasuak Native Corporation P.O. Box 905 Nome, Alaska 99762

Solomon Native Corporation P.O. Box 243 Nome, Alaska 99762

#### Table 1

Navigable Rivers and Streams Less Than 198 Feet Wide and Lakes Less than 50 Acres in Size in Survey Window 128 (Seward Peninsula Southwest), by Township

## Kateel River Meridian

## **Townships**

T. 5 S., R. 25 W.

Tps. 5 S., R. 26 W. None.

T. 7 S., R. 26 W. Niukluk River (Solomon D-4)

T. 8 S., R. 26 W.

T. 5 S., R. 27 W. Niukluk River. (Bendeleben A-5))

With the River. (bendereden k-3)

T. 6 S., R. 27 W.
Niukluk River; Casadepaga River; American Creek. (Solomon D-5; Bendeleben A-5)

T. 7 and 8 S., R. 27 W. None.

T. 5 S., R. 28 W (Bendeleben A-5)

Tps. 6, 7, and, 8 S., R. 28 W. None.

Tps. 5 through 9 S., R. 29 W. None.

Tps. 5 and 6 S., R. 30 W. Pilgrim River (Solomon D-6)

Tps. 7 through 11 S., R. 30 W. None.

Tps. 6 and 7 S., R. 31 W. Pilgrim River. (Solomon D-6

Tp. 8 and 9 S., R. 31 W. None.

T. 10 S., R 31 W.

Eldorado River to Pajara Creek and Shortcut Slough. (9/24/87 Nome-GS-FY'87-#1) (Solomon C-6)

T. 11 S., R. 31 W.

None. (The beds of the Eldorado and Flambeau rivers, "Shortcut Slough, and Beaver Creek" were conveyed by IC 558.)

T. 7 S., R. 32 W.

Grand Central River to and through NW4 Sec. 10

Tps. 8 and 9 S., R. 32 W. None.

T. 10 S., R. 32 W.

Flambeau River from the south boundary of Sec. 25 to the unnamed stream in the NE4NE4, Sec. 14.

Tps. 7 and 8 S., R. 33 W.

None. (Bed of Nome River was conveyed in IC 707.

T. 10 S., R. 33 W.

(Bed of Nome River was conveyed in IC 707.)

T. 8 S., R. 34 W.

T. 8 S., R. 35 W.

T. 8 S., R. 36 W.

T. 8 S., R. 37 W. None.