

KISARALIK RIVER SYSTEM

(Including interconnected slough and Kisaralik Lake)
HUC 30502, Zone 2, Kuskokwim River Region

FINAL SUMMARY REPORT

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Office of History and Archaeology
Department of Natural Resources
State of Alaska

Kuskokwim Assistance Agreement
Phase IV Submission

January 15, 2010

ERRATA:

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Page 59, third paragraph, the last two sentences should read as follows (underlining indicates change):

According to surveys conducted by ADF&G, the average angler effort on the Kisaralik River between 1983 and 2005 was 1,377 angler days per year. The average angler effort on the river between 1995 and 2004 was 1,512 angler days per year; between 2000 and 2004 the average angler effort was 1,862 angler days per year.¹⁸³

PREFACE

This study is funded by the U.S. Department of the Interior, Bureau of Land Management (BLM) through the Navigability Assistance Agreement (Cooperative Agreement # LAA-04-0010). The BLM and the State of Alaska (State) established an assistance agreement in 2004 to facilitate the research and preparation of navigability reports. These reports are designed to be used for a variety of purposes, including as evidence of navigability in the process for determining ownership to lands underlying inland water bodies, for land use managers in the management and planning processes and for use as historical documentation.

The Navigability Assistance Agreement began with a pilot project focused on researching water bodies in the Kuskokwim River region. The scope of work for the Assistance Agreement calls for identifying potentially navigable water bodies where the United States is an upland landowner or may otherwise have a potential interest in the submerged lands; gathering information from the BLM records and reports; writing narrative histories of each water body summarizing land status, land conveyance decisions, past navigability determinations, physical character of the water body, and a history of use on the water body. These reports are prepared in stages, starting with a land status, then an interim summary report, which is limited to information in the files of the U.S. Department of Interior and the 1982 regional history of the Kuskokwim River region. The Phase IV report represents work at a more advanced stage, where the research was expanded to include the files of other state and federal agencies, the holdings of various libraries and archives in Alaska, and interviews with people who have knowledge of use of the water body.

The research and writing of this report was conducted by State employees working under the guidance of an Assistance Agreement Management Team. This team is composed of representatives of the BLM and the State. The management team sets priorities, reviews the reports on water bodies at specific stages, and decides at what point enough research, analysis and writing has been completed on each specific water body. The management team has directed the Office of History and Archaeology staff, who author these reports, to provide an overview at the end of the report summarizing the types of documented historic and contemporary use and highlighting those areas (such as portions of the water body) where gaps in knowledge remain and additional research might be warranted.

For other completed Navigable Waters Research Reports in this series, see the Alaska Department of Natural Resources website: <http://www.dnr.state.ak.us/mlw/nav/naar/>

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Attachments (in PDF format)

- Attachment 1.** Patrick C. Beckley, Memorandum on Inland Navigable Waters, Akiak selection area, December 10, 1975, BLM files, F-814824.
- Attachment 2.** Patrick C. Beckley, Memorandum on Easement Task Force Meeting on Akiak selections, December 10, 1975, BLM files, F-14824.
- Attachment 3.** Letter from Robert E. Sorenson, BLM Chief, Branch of Lands and Mineral Operations, to Ivan M. Ivan, Kokarmuit Corporation, January 14, 1976, BLM files, F-14824-A.
- Attachment 4.** Letter from Frank A. Stefanich, Habitat Protection Section, Alaska Department of Fish and Game, to Horace Sanders, BLM, May 9, 1977, BLM files, F-14824-EE.
- Attachment 5.** Notice of Proposed Easement Recommendations for the Village of Akiak, May 17, 1977, BLM files, F-14824-EE.
- Attachment 6.** Letter from the Board of Kokarmuit Corporation to the F/S Land Use Planning Commission, July 1, 1977, BLM files, F-14824-EE.
- Attachment 7.** Curtis McVee, Memorandum on Final Easements for the Village of Akiak, March 8, 1978, BLM files, F-14824-EE.
- Attachment 8.** Paul O. Johnson, Realty Specialist, Memorandum on Trip Report of Meeting with Kokarmuit Corporation (Village of Akiak), June 11, 1982, BLM files F-14824-EE.
- Attachment 9.** Fred Wolf, Memorandum on Final Easements for Kokarmiut Corporation (Village of Akiak), June 22, 1982, BLM files, F-14824-EE.
- Attachment 10.** Ann Johnson, Chief, BLM Branch of ANCSA Adjudication, Decision on Section 12(b) Application Rejected in Part, Lands Proper for Village Selection Approved for Interim Conveyance or Patent, June 29, 1982, BLM files, F-14824-EE.
- Attachment 11.** Interim Conveyances 610 and 611, December 29, 1982, BLM files, F-14824-A.
- Attachment 12.** Wayne A. Boden, Memorandum on Navigable Waters in Group Survey No. 268 (Window 1836), May 8, 1989, BLM files, F-14824.
- Attachment 13.** Letter from C. Michael Brown, Chief of Navigability Section, to Dennis P. Daigger, Alaska Department of Natural Resources, June 27, 1990, BLM files, 2628 (961).
- Attachment 14.** Edgar A. Earnhart, Memorandum on Inquiries about navigability of Kisaralik River, September 29, 1992, BLM files, 2628 (961).
- Attachment 15.** Letter from Joanne M. Grace, Alaska State Assistant Attorney General, to Secretary Bruce Babbitt of the U.S. Department of the Interior, December 17, 1996, DNR/PAAD files.
- Attachment 16.** Gust C. Panos, Memorandum on Navigability Review for Waters in Window 2700, November 7, 1997, BLM files, Native allotment F-17018.

- Attachment 17.** U.S. Survey No. 12142, surveyed July 27-August 3, 1998 and approved June 7, 1999.
- Attachment 18.** Letter from Jane Angvik, Director of the Alaska State Division of Land, to Gust C. Panos, Chief, BLM Branch of Mapping Sciences, June 3, 1998, DNR/PAAD files.
- Attachment 19.** Letter from Gust C. Panos, Chief, BLM Branch of Mapping Sciences, to Jane Angvik, Director of the Alaska State Division of Land, June 25, 1998, DNR/PAAD files.
- Attachment 20.** E-mail from Ralph Basner to Bob Perry on Kisaralik River Navigability, July 5, 2000, Native allotment application FF-16482, Record Group 49, Box 3, file 14/02/04(3), NARA, Anchorage.
- Attachment 21.** Gust Panos, memorandum on Navigability Determination for Waters in Native allotment or ANCSA Sec. 14(h)(1) applications for Survey Window 2732 (Akiak), July 26, 2000, Native allotment file FF-19273, Record Group 49, Box 10, file 14/02/02(4), NARA, Anchorage.
- Attachment 22.** Corrected Interim Conveyances 1935 and 1936, October 4, 2005, BLM files, F-14824-A.
- Attachment 23.** K.J. Mushovic, Final Easement Memorandum for Lands to be Patented [to] Kokarmuit Corporation for the Village of Akiak, January 25, 2006, BLM files, F-14824-EE.
- Attachment 24.** Dominica VanKoten, Memorandum on Navigable Waters with ANCSA-Selected and Interim-Conveyed lands in the Akiak-Akiachak Village Project Area, March 14, 2006, BLM files, F-14823-A.
- Attachment 25.** Letter from Herman W. Reeth to the Alaska Road Commission, Takotna, December 18, 1924, p. 5, Record Group 30, Records of the Alaska Road Commission, Program Planning and Research Correspondence, 1905-1959, Box 38, file 13/150-2, NARA, Anchorage.
- Attachment 26.** W.R.D. [Wayne R. Dawson], "Navigability Field Report – Kisaralik River," November 3, 1975, BLM files, F-014824-EE.
- Attachment 27.** Ed Swanson, President of Knik Kanoers & Kayakers (Anchorage) to Dick Thompson, Associate State Director, Bureau of Land Management, September 18, 1975, p.4, BLM files, F-14885.
- Attachment 28.** Paul Allred, Ouzel Expeditions Incorporated, to Danny R. Allison, Alaska Department of Natural Resources, May 18, 1994, copy found in the DNR/PAAD file for the Kwethluk River.
- Attachment 29.** MTPs for the Kisaralik River area.

KISARALIK RIVER SYSTEM

HUC 30502, Zone 2, Kuskokwim River Region

Phase IV Final Report

I. Introduction

The Kisaralik River System is located in the Yukon-Kuskokwim Delta Region, within Zone 2 of Hydrologic Unit Code (HUC) 30502 (Figure 1). The Kisaralik River System includes Kisaralik Lake, the Kisaralik River and an inter-connected slough with the Kuskokwim River. The Kisaralik River empties into the Kuskokwim via the Kuskokuak Slough.

The Kisaralik River System originates at Kisaralik Lake near the 1,600 foot elevation in the Kilbuck Mountains, about 80 air miles east of Bethel. From the outfall of Kisaralik

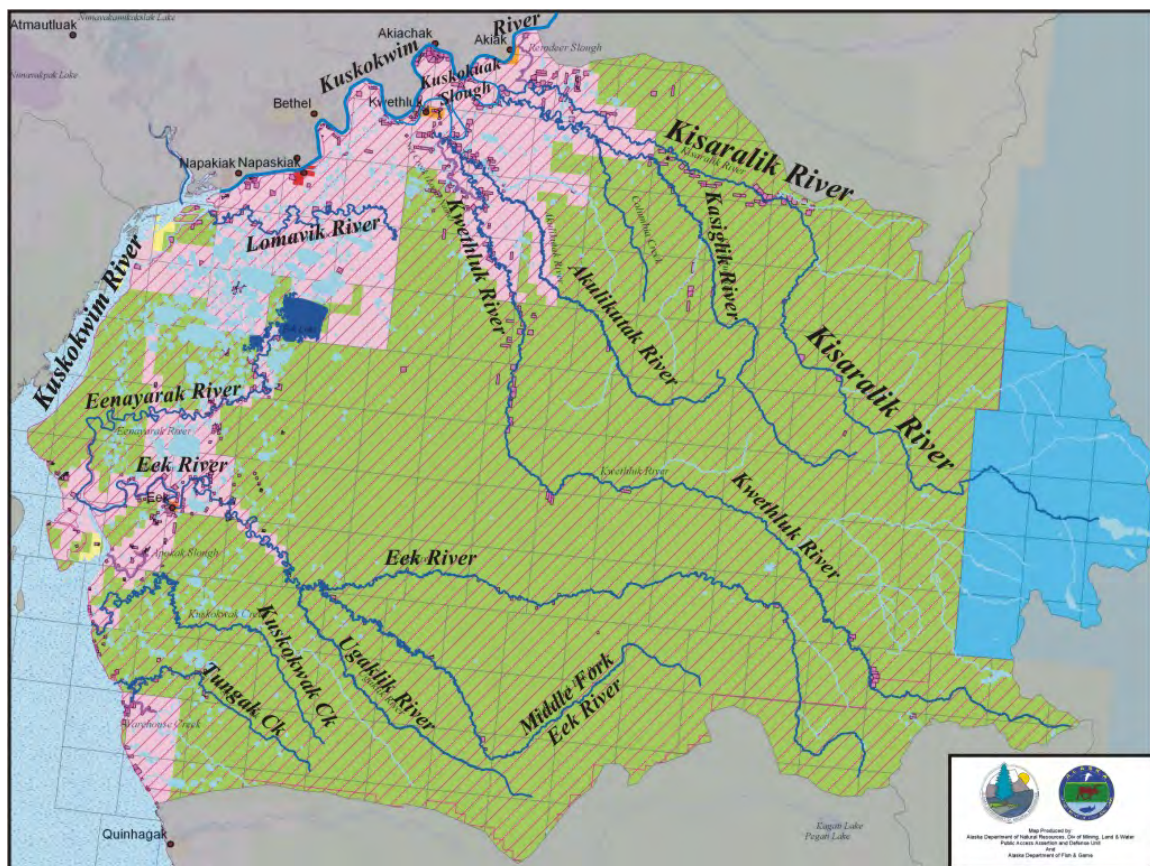


Figure 1. Map showing the location of the Kisaralik River within Zone 2 of HUC-30502 in the Kuskokwim River Region.

Lake, the Kisaralik flows northwesterly for 116 miles¹ to the Kuskokuak Slough, a backwater slough of the Kuskokwim River. The confluence of the Kisaralik and the Kuskokuak Slough is located about 20 miles northeast of Bethel.

The name Kisaralik River comes from an Eskimo name reported in 1914 as “Kiselalik” by P.S. Smith of the U.S. Geological Survey.² Variant names include the Kilakalik, Kiolemik, Kioleralik, Kiolerulik, Kiselalik, Kiseralik, and Kiserolik.³

The Kisaralik River System is one of five water bodies that drain the Kilbuck Mountains and the north central portion of the Yukon Delta National Wildlife Refuge (hereafter referred to as the Yukon Delta NWR). The lower part of the Kisaralik River System is located northeast of Bethel and Kwethluk and southeast of Akiachak and Akiak. Bethel is the nearest regional hub.

The only overland access to the Kisaralik System is the Akiak-Crooked Creek Trail (RST-21), a right-of-way claimed by the State across federal land under Section 8 of the Mining Law of 1866. The Akiak-Crooked Creek Trail is a historic route dating from the late 1910s or early 1920s starting at Akiak and extended southeast for 45 miles to the placer mines on Canyon Creek, a tributary of Crooked Creek in the headwaters of the Kwethluk River. The trail crossed the western portion of the Kisaralik and Kasigluk rivers in Township (T.) 9 N., Range (R.) 67 W., Seward Meridian (SM), Alaska.

The Kisaralik River System is located within eighteen townships:

TRM (Township, Range, Meridian):

T. 3 N., R. 58 W., SM	T. 4 N., R. 62 W., SM	T. 8 N., R. 63 W., SM
T. 3 N., R. 59 W., SM	T. 5 N., R. 62 W., SM	T. 8 N., R. 64 W., SM
T. 3 N., R. 60 W., SM	T. 4 N., R. 63 W., SM	T. 8 N., R. 65 W., SM
T. 4 N., R. 60 W., SM	T. 5 N., R. 63 W., SM	T. 9 N., R. 66 W., SM
T. 3 N., R. 61 W., SM	T. 6 N., R. 63 W., SM	T. 8 N., R. 66 W., SM
T. 3 N., R. 62 W., SM	T. 7 N., R. 63 W., SM	T. 9 N., R. 67 W., SM

II. Land Status

The Kisaralik River System is bounded by federal, state, Native village and regional corporation, and Native allotment lands (Figures 2-6). Kisaralik Lake (Mile 116) and the

¹ Different sources estimate the length of the river at 110 to 120 miles. The overall length of the Kisaralik River and the river mile markers used in this report are based on Geographic Information System (GIS) calculations using the National Hydrography Data Set which was derived from U.S. Geological Survey quadrangle maps. The river mile marker system used in this report may be different than river mile markers found in BLM/ANILCA documents, which may be based on air miles between points rather than distances along the river bed of the main channel.

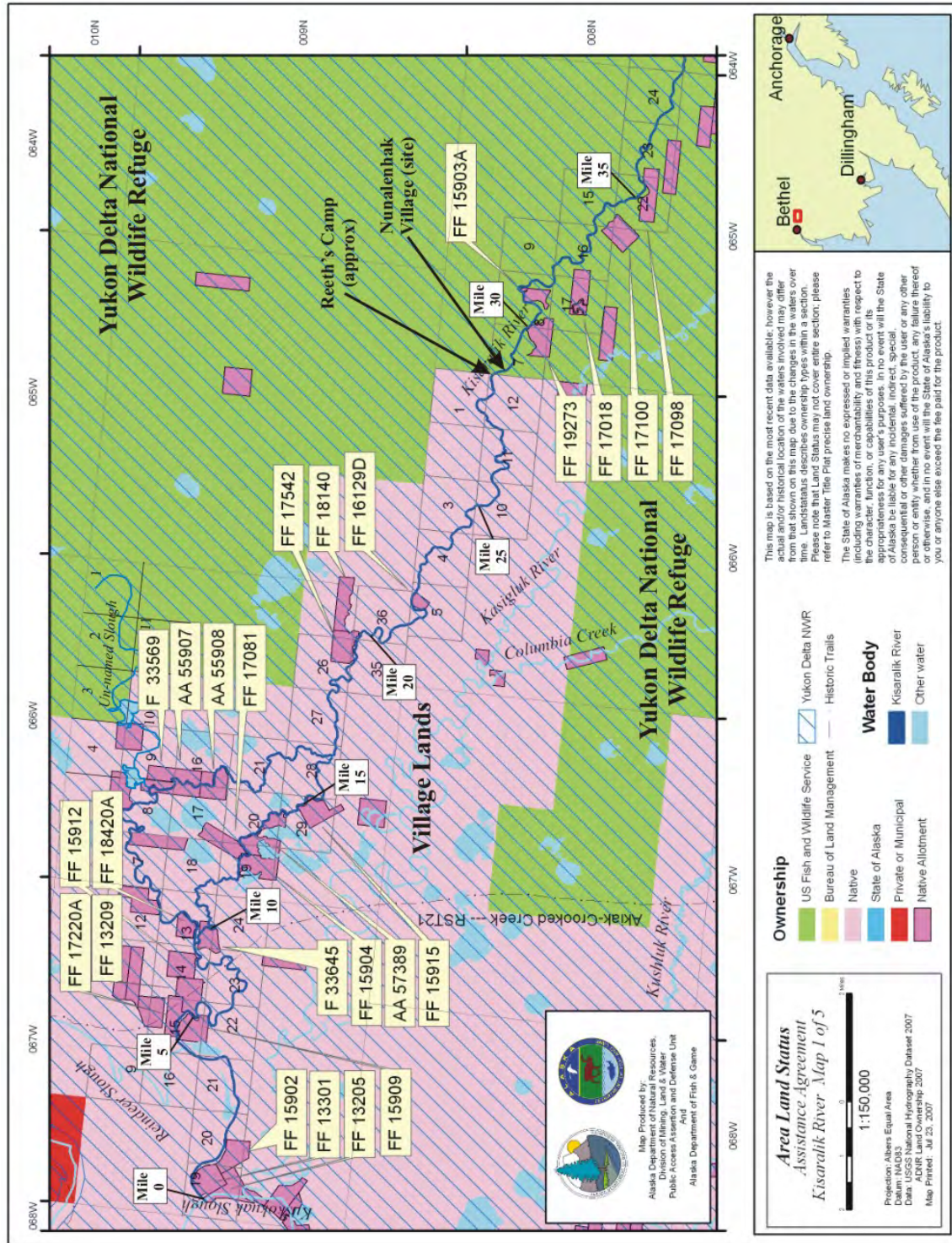


Figure 2. The lower portion of the Kisaralik River, showing village lands, Native allotments and National Wildlife Refuge lands.

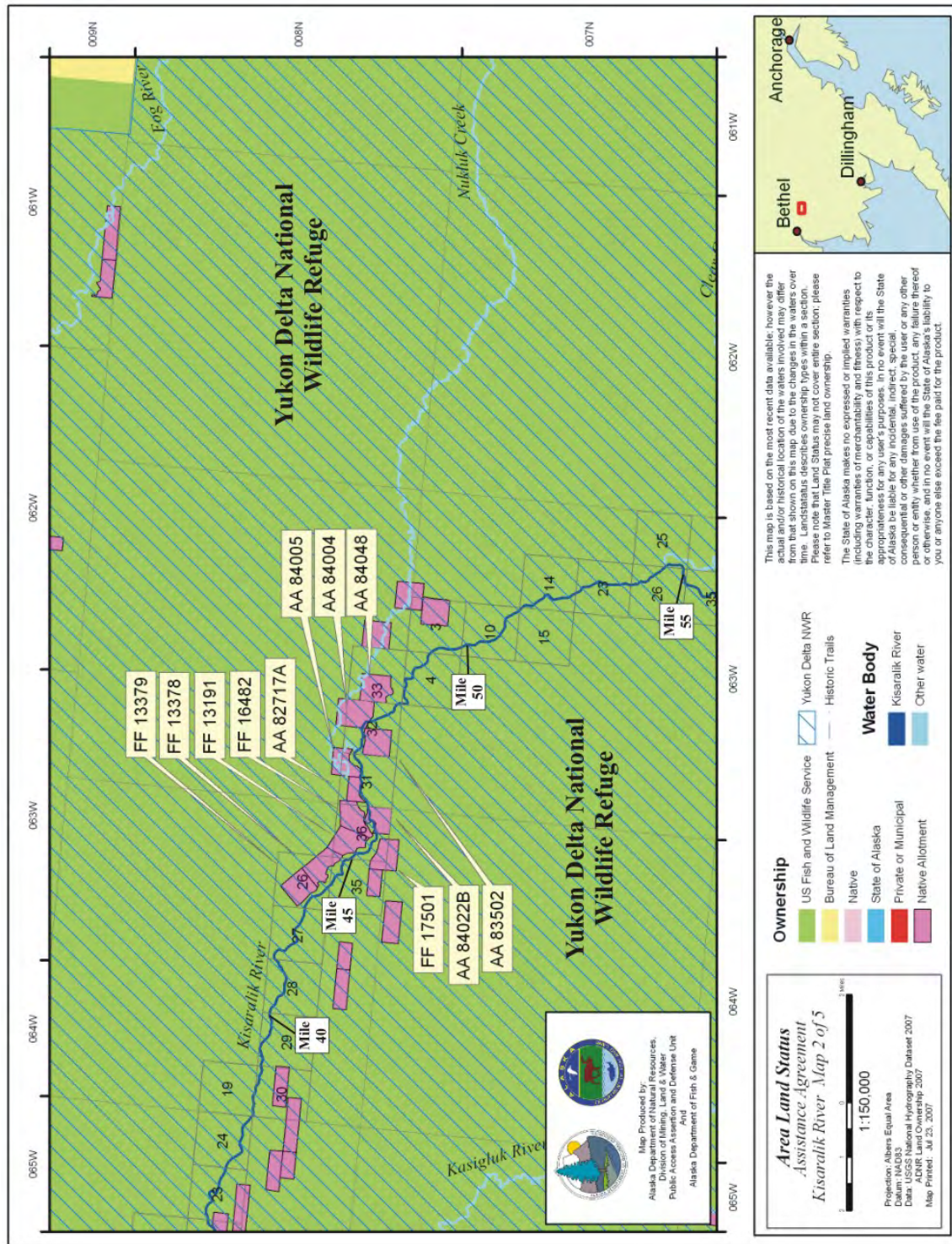


Figure 3. The lower-middle portion of the Kisaralik River, showing the location of Native allotments.

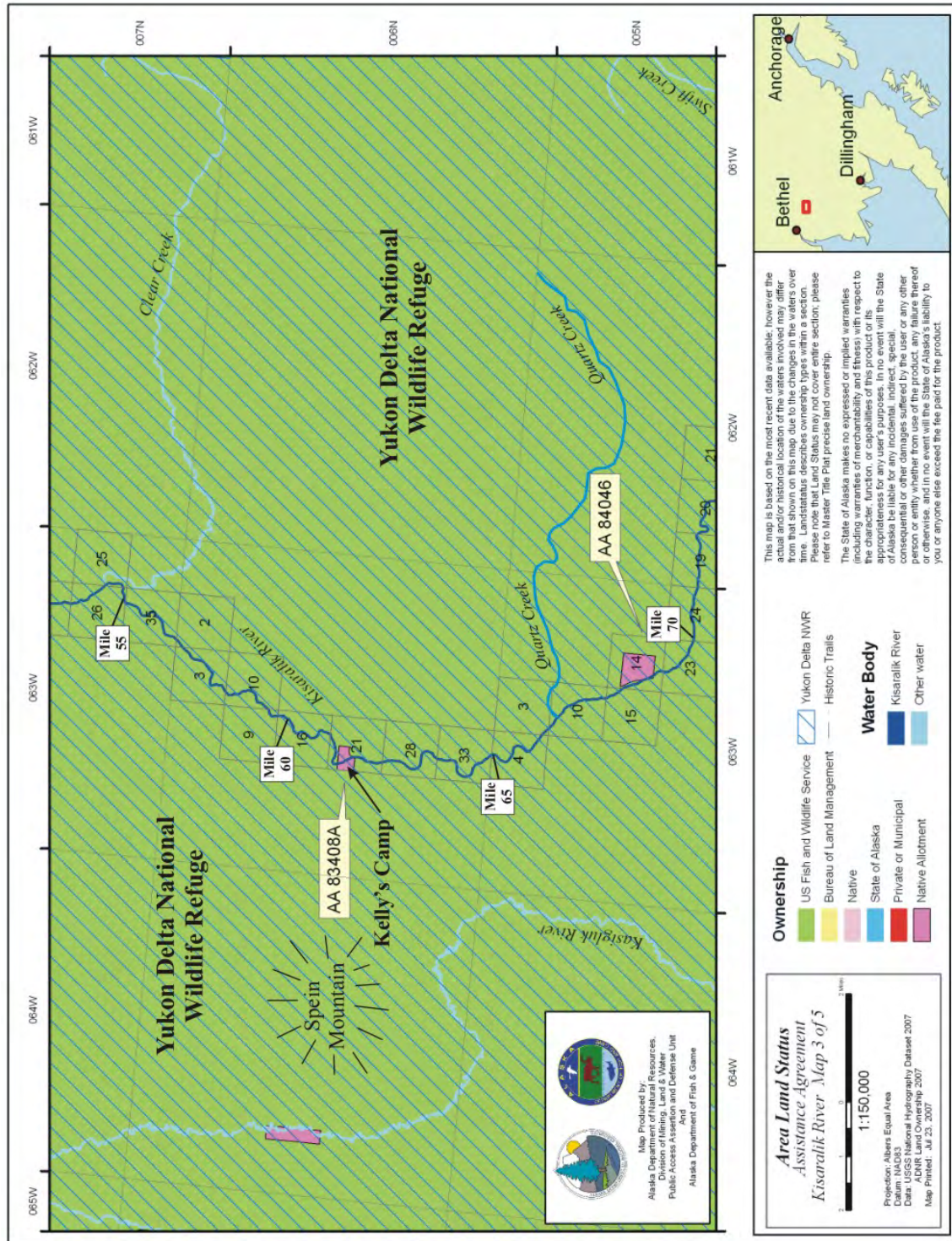


Figure 4. The middle portion of the Kisaralik River, showing the location of Native allotments.

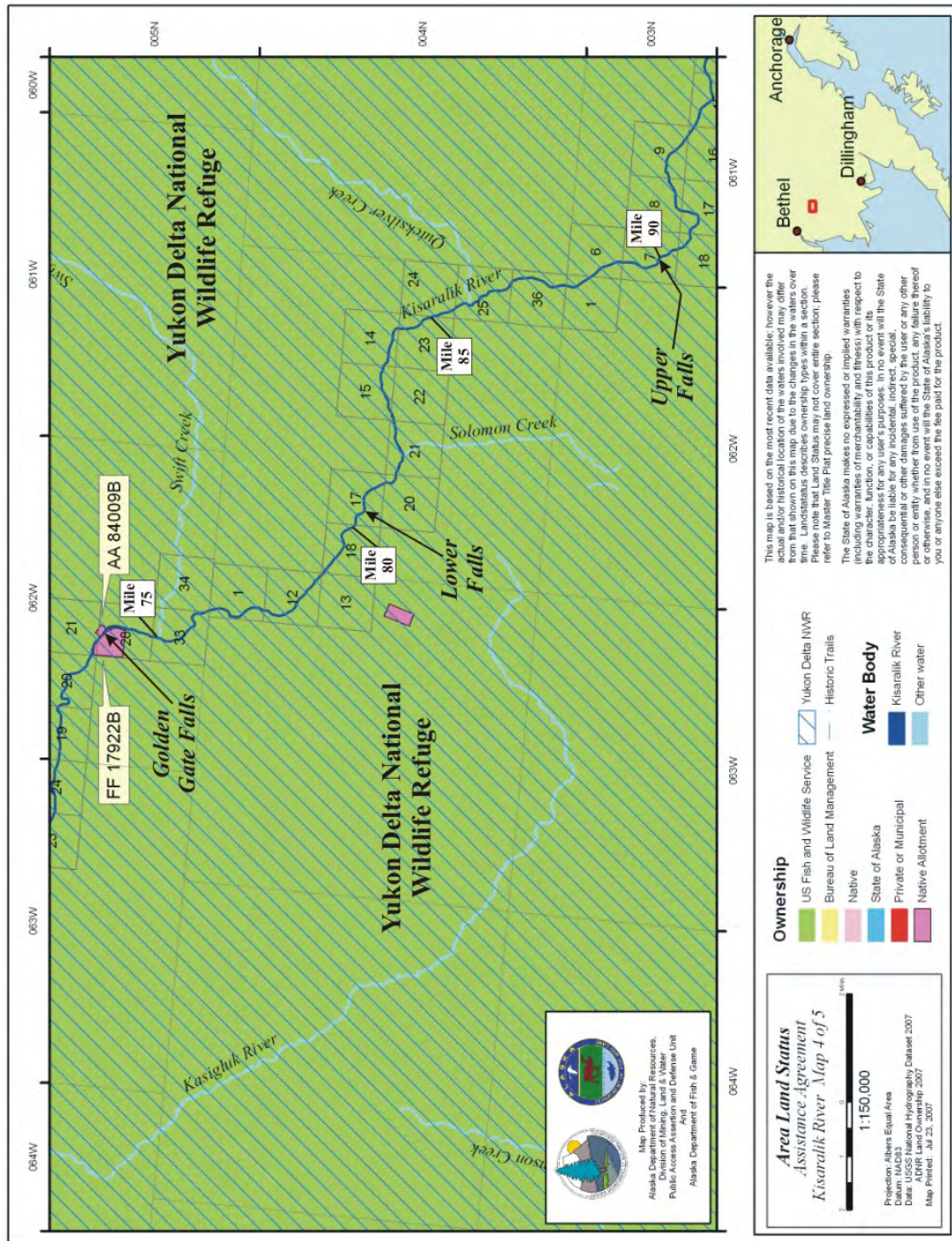


Figure 5. The upper-middle portion of the Kisaralik River, showing the location of Native allotments.

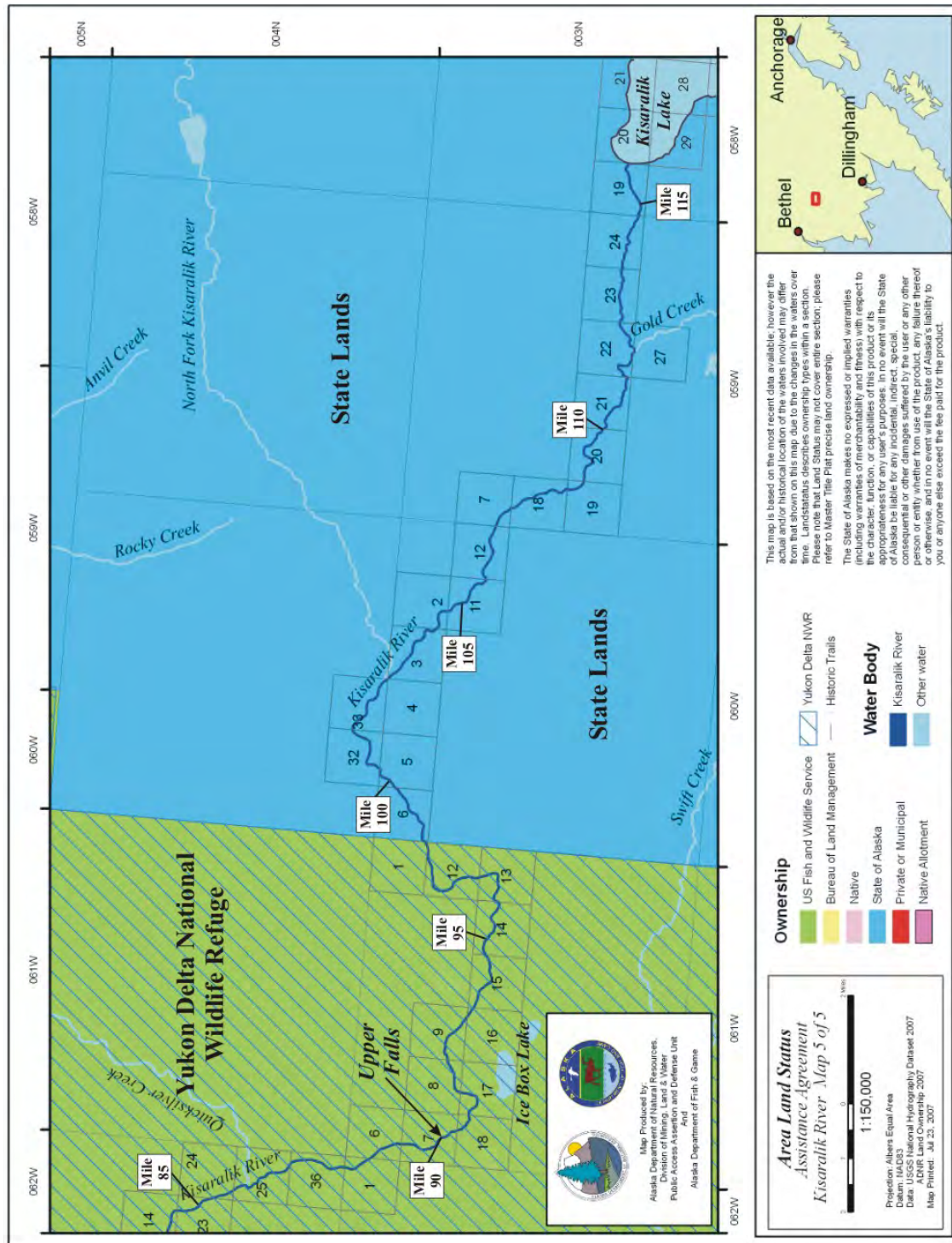


Figure 6. The upper portion of the Kisaralik River, showing state and federal lands.

upper stretch of the Kisaralik River are located in State lands (to Mile 99). The middle portion of the Kisaralik River is within the Yukon Delta NWR (Mile 99 to 29) and the lower portion of the river is bounded by Native lands (Mile 29 to Mile 0). There are numerous Native allotments interspersed on the federal and Native lands along the river.

The lower portion of the Kisaralik River is located within lands conveyed to Native village and regional corporations under the Alaska Native Claims Settlement Act (ANCSA) of 1971 (Figure 2). Lands abutting the lower portion of the Kisaralik River were selected in the 1970s and conveyed to Kokarmiut, Incorporated, the village corporation for Akiak, by Interim Conveyance (IC) 610 in 1982 and IC 1935 in 2005. These lands have not been patented. Lands selected by Calista Regional Corporation were conveyed by IC 611 in 1982 and IC 1936 in 2005, but have not been patented.

Twenty-one Native allotments occur along the lower portion of the Kisaralik River System within the lands selected by Kokarmiut, Inc. for the village of Akiak and the Calista Regional Corporation (Figure 2). Twenty of those allotments were certificated (6 in the 1980s, 12 in the 1990s, and 2 during 2006). One Native allotment application (F-33645) within the village selection area is still pending. Another eighteen Native allotments are located along portions of the Kisaralik River (Figures 2-5) within the Yukon Delta NWR between the western boundary of the refuge (Mile 29) and Golden Gate Falls (Mile 74). Nine of these allotments have been certificated (between 2000 and 2004). Ten Native allotments applications are still pending and most of them are in the middle and upper middle portion of the Kisaralik River.

The Yukon Delta NWR (Figures 2-6) was withdrawn from unreserved public lands managed by the BLM in 1972 (Public Land Order 5184, March 9, 1972) and transferred to the federal refuge system under the Alaska National Interest Lands Conservation Act (ANILCA, PL 96-487) of 1980. Title to federal refuge lands in Alaska is held by the United States and the U.S. Fish and Wildlife Service (USF&WS) is the manager of the Yukon Delta NWR.

The State selected lands in the headwaters and upper part of the Kisaralik River System (Figure 6) as part of its Statehood entitlement. State-selected lands on the upper Kisaralik River received Tentative Approval (TA) in 1975 and were patented to the State on November 13, 1975.²

III. BLM Navigability Determinations

The BLM began actively seeking information on navigable waters in the Kisaralik River System in the 1970s in response to land selections by the State under the Statehood Act and Native village and regional corporation selections made under the Alaska Native Claims Settlement Act (ANCSA). Kokarmiut, Inc., the village corporation for Akiak,

² Patent No. 50-76-0046.

and Calista Regional Corporation selected lands along the lower Kisaralik River. The State selected lands on the upper part of the Kisaralik River.

Navigability Determinations for ANCSA Selections on the Lower River

In preparation for adjudicating ANCSA selections on the lower Kisaralik River, the BLM Easement and Navigability Task Force met on November 13, 1975, and concluded that the Kisaralik River was tidally influenced “upstream to major fork in stream in S[ec.] 13, T. 9 N., R. 67 W., SM”⁴ (Mile 9.5). (Attachment 1) On December 10, 1975, the task force, in a working (non-final) memorandum, recommended a 25-foot trail easement “along [the] Kisaralik River to public lands.” The task force also recognized the need for a streamside easement along the Kisaralik River, but noted that “present criteria does not permit it.”⁵ Handwritten notes from April 1, 1976 on the memorandum recommended “a 25-foot continuous streamside easement along both sides of the Kisaralik River,” including “the bed of stream in portion which is not navigable.” (Attachment 2)

On January 14, 1976, the BLM sent a letter to Kokarmiut, Incorporated of the village of Akiak which stated “an administrative determination has not been made on those portions of the...Kisaralik River...you have identified as being navigable.”⁶ (Attachment 3) The BLM files do not identify which portions of the river that the Kisaralik village corporation considered navigable.

A letter from the Alaska Department of Fish and Game (ADF&G) to the BLM Easement Task Force, dated May 9, 1977, claimed that the tidal influence on the Kisaralik extended to Sections (Secs.) 20 and 29, T. 9 N., **R. 67 W.**, SM.⁷ (Attachment 4) This legal description appears to be incorrect. It was probably meant to be Secs. 20 and 29, T. 9 N., **R. 66 W.**, SM (Mile 15), as the Kisaralik River, according to the Master Title Plat (MTP), does not flow through Sec. 29, T. 9 N., R. 67 W., SM.

On May 17, 1977, the BLM released an official “Notice of Proposed Easement Recommendations for the Village of Akiak” that listed the Kisaralik navigable “by reason of travel, trade and commerce” or “affected by tidal influence” upstream “to [a] major fork in [the] stream in Section 13, T. 9 N., R. 67 W., SM”⁸ (Mile 9.5). (Attachment 5) In the same document, BLM also recommended a 25-foot streamside easement on the Kisaralik River (EIN 3 K) for both sides of the river throughout the tidal portion and included the river bed throughout the non-tidal portion within the selection area. The stated purpose of the easement “is to provide public use on waters having highly significant present recreational use.”

The Kokarmiut Corporation of Akiak opposed the proposed BLM streamside easement in a letter dated July 1, 1977, protesting that such an easement would “disturb or destroy” critical fish and furbearer habitat through pollution and heavy traffic.⁹ (Attachment 6)

A BLM easements memo dated March 8, 1978, retained the streamside easement stating:

Reservation of this streamside easement is necessary to assure continued public recreational use of this waterway.... It [the Kisaralik River] is also used as an access route to public lands for trapping, hunting, etc. Fishing and boating are the primary uses occurring along the river. This easement will provide space for foot travel, boat moorage, and other uses associated with use and travel on the river.”¹⁰ (Attachment 7)

The March 8, 1978 BLM memo also clarified the definition of the tidal influence for the Kisaralik River. Whereas the river had previously been considered tidally influenced to Sec. 13, it was now considered tidal only to the east section line in Sec. 20, T. 9 N., R. 67 W., SM (Mile 2). The BLM explained that this change was based on “additional information submitted by Alaska Department of Fish and Game,” referring to ADF&G’s May 9, 1977 memo.

At a meeting with the BLM officials in June of 1982 to discuss a BLM draft easements memorandum and decision to convey lands, representatives of the Kokarmiut Corporation pointed out that there were “numerous” Native allotments located upstream along the Kisaralik outside of the area to be conveyed. The villagers stated that the allotments were accessed by boat “in high water conditions.” Since these conditions were not predictable, Kokarmiut representatives agreed with the BLM that the river was navigable only to Sec. 13, T. 9 N., R. 67 W., SM (Mile 9.5). Akiak residents at the meeting also stated that there was no need for a trail easement (EIN 9 D1) for access to public lands because access was already accomplished “through the use of the Kisaralik River, a major waterway, in its frozen state.”¹¹ (Attachment 8)

In a memorandum on Final Easements for the Kokarmiut Corporation of Akiak, dated June 22, 1982, BLM designated the Kisaralik River as a “major waterway” as it “has been identified for inclusion in the National Wild and Scenic River System³ and provides access to public land.” The memorandum described the Kisaralik River as navigable “by reason of travel, trade and commerce” from its confluence with the Kuskokwim River at Sec. 19, T. 9 N., R. 67 W., SM (Mile 0), to “the ‘Y’ in Sec. 13, T. 9 N., R. 67 W., Seward Meridian”¹² (Mile 9.5). (Attachment 9) The memorandum added that the river’s tidal influence extended only to Sec. 20, T. 9 N., R. 67 W., SM (Mile 2). The BLM dropped the proposed trail and streamside easements along the river from consideration because of new easement regulations published on November 27, 1978.

On June 29, 1982, the BLM issued a Decision on the Akiak village selection. (Attachment 10) Lands to be conveyed followed the course of the Kisaralik River upstream through Sec. 12, T. 8 N., R. 65 W., SM (Mile 29) (Figure 7). A series of maps were attached to the Decision showing the lands conveyed and navigable water bodies. The latter were marked with a dark line and a series of “N”s. The Decision and the

³ The Department of Interior later conducted a study of the Kisaralik River and dropped the river from consideration as part of the National Wild and Scenic River System because the State owned the lands along the upper portion of the river.

attached maps were key documents in the conveyance process. The Decision stated that the beds of navigable waters were excluded from lands approved for conveyance and that the navigable waters were identified on the attached maps. The Decision also excluded lands underlying tidal waters, which were to be identified later “at the time of survey.” One of the Decision maps attached to the June 29, 1982 Decision showed the Kisaralik River navigable only up to the forks in Sec. 13 of T. 9 N., R. 67 W., SM (Mile 9.5). The BLM determined the remainder of the Kisaralik River in the selection area, including the interconnecting slough, non-navigable from the forks upstream through Sec. 12, T. 8 N., R. 65 W., SM (Mile 29).¹³

The BLM issued IC 610 to Kokarmuit for the surface estate and IC 611 to Calista Corporation for the subsurface estate on December 29, 1982. The ICs included the same language used in the Decision to exclude lands from conveyance underlying navigable waters from the conveyances. The maps attached to the IC 610 and IC 611 documents show the Kisaralik River as navigable from the Kuskokwim River to the forks in Sec. 13, T. 9 N., R. 67 W., SM (Mile 9.5). The BLM conveyed the remaining upstream portion of the Kisaralik River and its interconnecting slough in the selection area, from the forks through Secs. 1 and 12, T. 8 N., R. 66 W., SM (Mile 29), to the two Native corporations.¹⁴ (Attachment 11) The BLM conveyed a total of 19.5 miles of the Kisaralik River bed to the two Native corporations.

The BLM has not yet issued patents to these lands. The BLM meandered the Kisaralik River in the three townships encompassing lands conveyed to the Native corporations (in ICs 610 and 611) and segregated the submerged lands from the uplands. The three ICD townships were Tps. 8 and 9 N., R. 66 W., SM, and T. 9 N., R. 67 W., SM (officially filed in 1989, 1984 and 1984, respectively). The river was meandered by photogrammetric methods in Tps. 9 N., Rs. 66 and 67 W., SM. In T. 8 N., R. 66 W., SM, the river was meandered in the field by the auto-surveyor method (helicopter).

In a navigability memorandum dated May 8, 1989, BLM examined Native allotments in the Akiak village selection area and determined several components of the Kisaralik River System as navigable based on the criteria in use at the time in which waters were considered navigable if the craft were larger than a “one-man kayak.” (Attachment 12) Table 2 attached to the memorandum listed water bodies excluded from *IC 610* including the Kisaralik River to the forks in Sec. 13, T. 9 N., R. 67 W., SM (No. 21) and the Reindeer Slough diverging from the Kisaralik in Sec. 15, T. 9 N., R. 67 W., SM (Nos. 20, 22, 23). In Table 3, BLM listed waters on ANCSA lands found navigable through photo-interpretation including (No. 7), the “stream emptying into interconnecting slough of Kisaralik River, in Secs. 1, 2, 3, and 11, T. 9 N., R. 66 W., SM.” These sections, although selected by the village of Akiak, had not yet been conveyed. In Table 4, waters on Native allotments found navigable through photo interpretation included the “interconnecting slough of Kisaralik River in Native allotment AA-55907 in Secs. 8 and 17, in Native allotment AA-55908 in Secs. 16 and 17 and in Native allotment F-033569 in Secs. 9 and 16, T. 9 N., R. 66 W., SM.” The three allotments had been specifically excluded from conveyance under *ICs 610* and *611*, so the May 8, 1989 memorandum

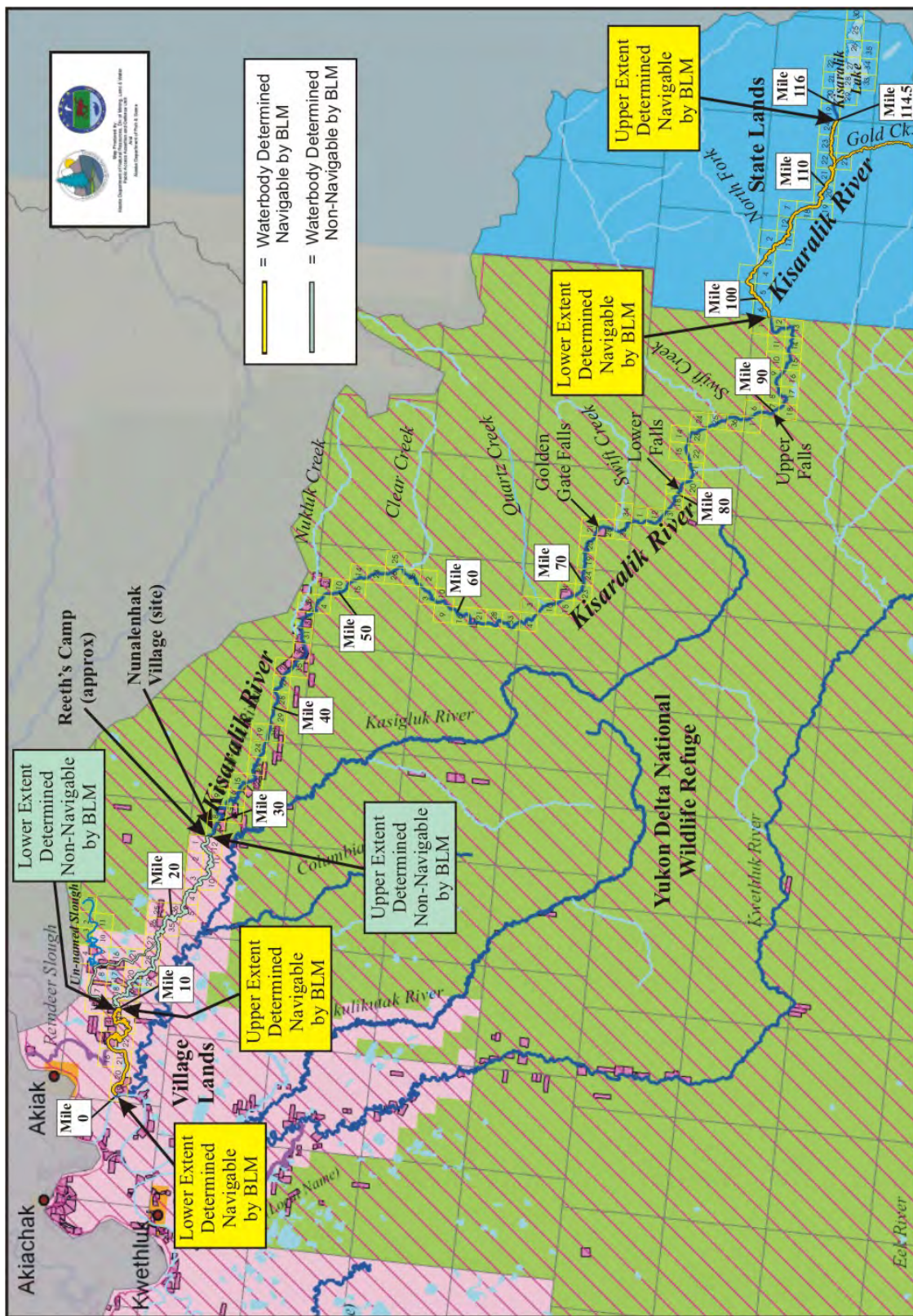


Figure 7. Map showing portions of the Kisaralik River that BLM has determined navigable.

excluded the waters in the allotments from conveyance on future surveys. In Table 5, all of these items were again listed as navigable waters less than 198-feet wide.¹⁵

Navigability Determinations for State Selections on the Upper River

On February 2, 1972, the State selected lands on the upper Kisaralik River in Tps. 3 and 4 N., R. 60 W., and T. 3 N., Rs 58 and 59 W., SM, as part of its statehood entitlement. This selection extended from Kisaralik Lake, its outlet at Mile 116 and down the Kisaralik River to Mile 99 (Figure 6). The BLM granted Tentative Approval (TA) to the State on May 12, 1975 and issued a patent to the State for the land on November 13, 1975. The lands under the upper Kisaralik River were not segregated from survey; thus they were charged against the State's total acreage allotment under the Statehood Act.¹⁶

The State amended its application on February 1, 1979, for the parcel along the upper reaches of the Kisaralik River to exclude all tidally influenced waters and "all non-tidal waters navigable in fact up to the line of ordinary high water."¹⁷ After protracted negotiations between the BLM and the State in the 1980s and passage of the Alaska Submerged Lands Act of 1988, the Chief of BLM's Navigability Section determined the upper Kisaralik River navigable on June 27, 1990 "for inflatable rafts, canoes, and larger watercraft with a payload of about a thousand pounds or more" across State lands in T. 3 N., R. 59 W., SM and Tps. 3 and 4 N., R. 60 W., SM.¹⁸ (Attachment 13) This determined the upper portion of the river navigable from Mile 99 to Mile 114.5, a point 1.5 miles below Kisaralik Lake. Gold Lake and Gold Creek, a tributary of the upper Kisaralik located in T. 3 N., R. 59 W., SM, were also determined navigable. However, the BLM's June 27, 1990 determination made no mention of Kisaralik Lake or the upper 1.5 miles of the Kisaralik River between Mile 114.5 and Mile 116 (both water bodies located in T. 3 N., R. 58 W., SM) as being navigable. On March 15, 1993, the BLM granted the State meanderable water acreage credit in the amount of 6,701.53 acres for lands under the upper portion of the Kisaralik River under the General Purposes Grant entitlement.¹⁹

Navigability Determinations on the middle reaches of the Kisaralik River

Additional determinations of navigability were made in the 1990s on portions of the river located within the Yukon Delta NWR. Several of these navigability determinations resulted from increased interest in the navigability status of the overall river as the USF&WS began preparing a Draft Management Plan for the Kisaralik River in 1992.²⁰ Inquiries about the status of navigability along the river prompted a BLM navigable waters specialist to reiterate on December 13, 1995, previous determinations of navigability and non-navigability on segments of the lower river, and to repeat that the upper reaches of the river had been determined navigable in T. 3 N., R. 59 W., and Tps. 3 and 4 N., R. 60 W., SM. The BLM employee added that "the river up to Kisaralik Lake

is navigable,” but overlooked that neither Kisaralik Lake nor the upper 1.5 miles of the river below the outlet of the lake had been determined navigable.²¹ (Attachment 14) On December 17, 1996, the State notified the Secretary of the Interior that the State “intends to file quiet title actions as to the submerged lands” on the Kisaralik River.²² (Attachment 15)

The BLM also began issuing a series of navigability memorandums in the mid-1990s to give its surveyors direction as to what had been determined navigable in IC documents, TAs and Native allotments, and to make determinations for remaining ANSCA and pending State selections and Native allotments outside of ANCSA and State selection areas. During the 1990s, most of the BLM’s navigability determinations were made only for waters bisecting Native allotment applications. As a general rule, the BLM’s navigability determinations in the mid- and late-1990s addressed water bodies less than the meanderable size of 3 chains (198 feet) or lakes of 50 acres.

On November 7, 1997, BLM issued a memorandum on navigable and non-navigable waters within survey Window 2700, an area encompassing 24 townships including Native allotments along the Kisaralik and Kasigluk Rivers.²³ (Attachment 16) The memorandum noted that the Kisaralik had previously been determined navigable within the selection window from its mouth (Mile 0) to the “Y” in Sec. 13, T. 9 N., R. 67 W., SM (Mile 9.5), but did not mention the 1989 determination that the Kisaralik’s slough was navigable within three Native allotments. Appendix I of the memorandum found no navigable waters in or adjacent to the 20 Native allotments along the Kisaralik River from T. 8 N., R. 65 W., SM (Mile 29, at the western boundary of the Yukon Delta NWR) upstream to the southern boundary of T. 5 N., R. 62 W., SM (Mile 76, just upstream from Golden Gate Falls).

The BLM memorandum issued on November 7, 1997, identified only one Native allotment by name on the Kisaralik River. The memorandum noted that a portion of the Kisaralik (at Mile 31) that had formerly been straddled by Native allotment F-15903 (in Sec. 8, T. 8 N., R. 65 W., SM), had dried up following an avulsive event that occurred sometime between 1957 and 1981. The Kisaralik cut a new channel along the southern boundary of the allotment, leaving the anabranch in the old channel across the top of the allotment. The BLM’s Cadastral Survey asked the State if it had an interest in segregating the old channel, now dried up, were it to be considered navigable. The State replied by asking BLM to not segregate the old channel as there were no State lands located nearby. In its November 7, 1997 memorandum, BLM determined the Kisaralik’s new channel non-navigable at the southern boundary of the Native allotment, possibly because the new channel came into existence post-statehood. MTPs show the river was not meandered through this allotment. The Kisaralik created a new channel within the same township (T. 8 N., R. 65 W., SM) that connected the Kisaralik and Kasigluk Rivers. The BLM determined the new channel, known in the local Yupik dialect as “Chicoyuilnik,” as navigable in Native allotment F-17018 (Sec. 17, T. 8 N., R. 65 W., SM).²⁴ The channel was subsequently meandered and segregated in U.S. Survey No. 12142 from the lands certificated to the allottee.²⁵ (Attachment 17)

In a response to the BLM's memorandum, the Director of the State Division of Lands wrote to the BLM on June 3, 1998, that the State considered the entire Kisaralik River, "along with its streams and sloughs" to be navigable due to susceptibility to travel, trade and commerce. This included Native allotment F-15903, which, the State asserted, straddles the Kisaralik.²⁶ (Attachment 18) The BLM replied that its memorandum of November 7, 1997 "stands as written" and that Native allotment F-15903 would be surveyed based on the criteria in the *Manual of Instructions for the Survey of Public Lands* (1973).²⁷ (Attachment 19)

A BLM Navigability Specialist later clarified the BLM's position in an e-mail to Bob Perry, a BLM adjudicator, on July 5, 2000, that "As per our navigability review dated November 7, 1997, the Kisaralik River was administratively determined non-navigable within Native allotment FF-16482 (located [at Mile 46] in Sec. 31, T. 8 N., R. 63 W., and Sec. 36, T. 8 N., R. 64 W., SM) situated in T. 8 N., Rs. 63 and 64 W., SM (Survey Window 2700)."²⁸ (Attachment 20)

In a Memorandum on Navigability Determinations for Waters in Native Allotments for Survey Window 2732 (Akiak), dated July 26, 2000, BLM reiterated that it had found no navigable waters on 16 Native allotments located in 10 townships in the Akiak area. The decision referenced five Native allotments along the Kisaralik River in the Yukon Delta NWR located in T. 8 N., Rs. 64 and 65 W., SM (FF-13191 [Mile 45], FF-15903-A [Mile 31], FF-19273 [Mile 30], FF-13378 [Mile 44], and FF-13379 [Mile 43.5]) and re-confirmed there were no navigable waters crossing these five parcels.²⁹ (Attachment 21)

On October 4, 2005, the BLM released Corrected ICs 1935 and 1936, which excluded Native allotments from *ICs 610 and 611*. (Attachment 22) Native allotments AA-57389 (Mile 13) and FF-16129-D (Mile 21.5), adjacent to the Kisaralik River in the lower reaches of the water body, were excluded from the previously conveyed lands.³⁰ In the final easement memorandum for lands selected by the village of Akiak, issued on January 25, 2006, the BLM no longer listed the Kisaralik as a major water body and did not reference the river's inclusion in the National Wild and Scenic Rivers system.³¹ (Attachment 23) The maps attached to this memorandum were the same as in *IC 610*, which show the Kisaralik River navigable to a tributary in Sec. 13, T. 9 N., R. 67 W., SM (Mile 9.5). No easements were reserved along the river.

In a navigability memorandum dated March 14, 2006, the BLM revisited former navigability determinations for the lands conveyed in the Akiak and Akiachak selection areas. The memorandum reaffirmed that the Kisaralik River in T. 9 N., R. 67 W., SM is navigable "from its confluence with the Kuskokwim River [at the Kuskokuak Slough, Mile 0] to the 'Y' in Sec. 13, T. 9 N., R. 67 W., SM" (Mile 9.5). The March 14, 2006 memorandum concluded that there were no navigable waters in conveyed lands in Tps. 8 and 9 N., R. 66 W., SM, reversing navigability determinations on two tributaries of the Kisaralik River made in the May 8, 1989 memorandum. The first tributary was the Kisaralik's interconnecting slough in Secs. 1, 2, 3, and 11, T. 9 N., R. 66 W., SM (Figure 2). This slough had earlier been determined navigable in 1989 using the "one person-

kayak” standard. After reviewing aerial photos, reports and maps, the BLM’s navigability staff in March 2006 “determined that these lands contain no navigable waters.” The second tributary was the Kisaralik’s interconnecting slough in T. 9 N., R. 66 W., SM, which was determined navigable on May 8, 1989 through three Native allotments (FF-33569, AA-55907 and AA55908). The March 14, 2006 memorandum overturned the navigability determination on the slough flowing through those three allotments.³² (Attachment 24) The BLM later meandered the Kisaralik River in those parts of the interim conveyed area and segregated the submerged lands from the uplands.

Summary of Navigability Determinations on the Kisaralik River

To date, the BLM has determined the Kisaralik River navigable from its mouth at Mile 0 to the forks at Mile 9.5 at the lower end of the river and from Mile 99 to Kisaralik Lake at Mile 116 at the upper end of the river (Table 1). The BLM determined approximately 19.5 miles of the river non-navigable within lands ICd to the Kokarmiut and Calista corporations on the lower end of the river (Mile 9.5 to Mile 29). The surveyors meandered these 19.5 miles of the river during survey and segregated them from the uplands. There has been no determination of navigability on the 86 miles of the Kisaralik River within the Yukon-Delta National Wildlife Refuge, except within five Native allotments that abut the river between miles 30 and 45, which were determined non-navigable.

None of BLM’s navigability determinations on the Kisaralik River specifically stated whether commerce was present on the river prior to or at the time of statehood in 1959, or whether the river was susceptible to commerce after statehood. The 1985 Kuskokwim Regional history report includes descriptions of mining, surveying and rafting activity on the Kisaralik River, but BLM has not addressed navigability in terms of documented travel, trade and commerce on this river.

Table 1: Kisaralik River Navigability Determinations

Dates	River Section	Type Decision and Substance	Navigability Criteria
6/29/1982 (Attachment 10)	lower	Navigability Decision: Kisaralik determined navigable from Mile 0 to Mile 9.5; Determined non-navigable, including north slough, from Mile 9.5 to Mile 29.0.	Travel, trade and commerce
12/29/1982 (Attachment 11)	lower	IC 610 & 611: Interim conveyance of land to Native corporations. Same as the 6/29/1982 Nav. Decision.	Travel, trade and commerce
5/8/1989 (Attachment 12)	lower	Memo on Navigable waters in Survey 268: Inter-connecting slough navigable in Secs. 1, 2, 3, & 11, T. 9 N., R. 66 W. SM and Inter-connecting slough navigable through Native allotments AA-55907, AA-55908, and FF0033569 in T. 9 N., R. 66 W., SM.	“One person kayak”
3/14/2006 (Attachment 24)	lower	Navigable Waters Memo: Kisaralik navigable from Mile 0 to Mile 9.5; Interconnecting sloughs in T. 9 N., R. 66 W., SM determined not navigable.	Travel, trade and commerce; air photographs;
11/7/1997 (Attachment 16)	middle	Navigability Review for Survey Group 2700; Kisaralik determined non-navigable through and adjacent to Native allotments from Mile 29 to Mile 76.	Boat with capacity of 1,000 pounds or more.
7/26/2000 (Attachment 21)	middle	Navigability Determinations in Native allotments with Survey Window 2732: Kisaralik River determined non-navigable within 5 Native allotments between Mile 30 and Mile 45.	Boat with capacity of 1,000 pounds or more.
5/12/1975	upper	TA, transfer of land to the State: Kisaralik presumed non-navigable.	(Not addressed)
11/13/1975	upper	Patent of land to State: Kisaralik presumed non-navigable.	(Not addressed)
6/27/1990 (Attachment 13)	upper	Navigable Waters Decision: Kisaralik River determined navigable from Mile 99 to Mile 114.5.	Boat with capacity of 1,000 pounds or more.

IV. Physical Character of the Waterway

The Kisaralik River System is a non-glacial river draining an area estimated at 1,470 square miles. The river heads in the Kilbuck Mountains at the Bristol Bay divide and flows northwest into the Kuskokwim River by way of the Kuskokuak Slough. The Kisaralik River drainage has three major lakes (Kisaralik, Gold and North Fork lakes) and seven major tributaries. The headwaters of the river are located at the outlet of Kisaralik Lake in Sec. 20, T. 3 N., R. 58 W., SM. The Kisaralik River flows in a generally north-northwesterly direction. It flows into the Kuskokuak Slough of the Kuskokwim River in Sec. 19, T. 9 N., R. 67 W., SM. The Kisaralik River varies in width, ranging from 25 feet at the outlet of Kisaralik Lake to 250 feet wide at its mouth. The river's depth varies from 10 inches to four feet depending on the location measured and the season.³³ The channel gradient in the upper reach is 21 feet per mile and in the lower reach is 10 feet per mile,³⁴ or an average gradient of 16 feet per mile over the entire course of the river.³⁵ The river is a swift, rapid drop river over most of its course until it reaches the Kuskokwim Flats. It flows along a rocky streambed for most of its distance. Much of the upper half of the river is rapids. In the lower reaches, the river generally flows at 3 to 4 miles per hour, except during flood stages.

Physical Characteristics of the Kisaralik River

The Kisaralik River traverses four major ecosystems: alpine tundra, moist tundra, wet tundra, and upland spruce/hardwood forest. Alpine tundra occurs around Kisaralik Lake and on higher ridges in the Kilbuck Mountains. The largest ecosystem within the river corridor is moist tundra with vegetation including low-growing shrubs, herbs, grasses and sedges rooted in a continuous mat of mosses and reindeer lichens. This ecosystem extends from the alluvial plains surrounding Kisaralik Lake to approximately 30 miles east of Kuskokuak Slough, where it grades into a wet tundra ecosystem. Soils in the upper half of the drainage are underlain by isolated masses of permafrost at depths of 15-30 inches. Soils adjacent to the lower half of the river are characterized by deep deposits of fine textured glacial silt underlain with continuous permafrost. Gravel and sand bars are frequent in the lower section of the river. Dense brush is found along the banks, including alder and willow, with scattered clumps of spruce and birch found on bank slopes and drier sites.³⁶ The water clarity is directly related to riverbed materials. The river is generally clear in the rocky upper reaches and brown and turbid in the lower sandy and silty reaches. Tributaries are small and clear.³⁷

The upper portion of the Kisaralik River (Figures 4-6) is predominately a single swift, boulder-strewn channel from Kisaralik Lake (Mile 116) to Quartz Creek (Mile 67). One source reported in 1977 that the river at the outlet of Kisaralik Lake was 80 feet wide and had an average depth of 2.5 feet.³⁸ Another source reported in 1978 that the river at the outlet of the lake was 50 feet wide and 4 feet deep.³⁹ The Kisaralik River flows northwesterly from Kisaralik Lake (elevation 1,577 feet) for a distance of 17 miles and drops 377 feet in elevation before entering the Yukon Delta NWR.⁴⁰ The first 20 miles

of the river passes through a broad, tundra covered, glacial-drift plain or basin-like area in the Kilbuck Mountains, exposing large areas of bedrock. The river then cuts a valley (Figure 8), up to a mile wide, for 40 miles through the Kilbuck Mountains, which rise dramatically 2,000 to 3000 feet. The mountains along the river are characterized by rounded ridges with steep slopes and sharp bluffs, occasionally topped with exposed bedrock. As the river flows through this narrow valley, exposed bedrock creates rapids, rifts and deep pools in the river. Whole mountain sides are also washing into the river. The river is occasionally braided, has sharp bends and small boulders, and is lined with thick willow and willow brush.⁴¹ In this section, the river is shallow, swift, clear and 32 to 100 feet wide. It is characterized by few pools, clean gravel, cobble and boulder substrate, and some braided channels.⁴²



Figure 8. Two rafts on the upper Kisaralik River just below Kisaralik Lake, August 2008. Photo courtesy of http://www.flickr.com/photos/images_of_life/sets.

In the area between Gold Creek (Mile 112) and the North Fork Kisaralik River (mile 103), the river averages 75 feet wide, 2 feet deep with occasional 5-foot deep pools, contains numerous large boulders and has a current of 5 mph. At Mile 99, the Kisaralik enters the Yukon Delta NWR. From the Refuge boundary to Golden Gate Falls (Mile 74), the river travels 25 miles and drops an average of 20 feet per mile.⁴³ The first of three falls on the river, known as Upper Falls (Mile 90), has two drops about 50 yards apart and is formed where the river cuts through a ridge. A 6-foot drop with large boulders occurs first, followed by two vertical drops of four feet and six feet. At these

last two drops, large boulders block (Figure 9) the river forcing 90 percent of the river's volume through a 6-foot wide gap. According to one description of these two drops, about half of the river's volume flows at right angles into a vertical rock wall on the left side of the canon and then flows into a group of rocks. Below the falls, the remainder of the stream flow pours at right angles into the first half of the flow. According to an employee of the USF&WS who rafted the river, a "relatively easy portage around the falls can be made on the left or south side of the river."⁴⁴



Figure 9. The Upper Falls, Kisaralik River, August 26, 2008. Note the individuals on either side of the falls scouting the route and their rafts at upper right. Photo by Oden W. Jahn, from <http://picasaweb.google.com/1h/photo/XPHhSPTei8mEHYn1EsYjQg>.

Between Upper Falls (Mile 90) and Quicksilver Creek (Mile 86), the Kisaralik River is wider than above Upper Falls. The river cuts through a canyon $\frac{1}{2}$ to 2 miles wide with pinnacles, columns and bluffs as it flows through the Kilbuck Mountains, which rise 2,130 to 6,560 feet above the valley floor. Cottonwood, white spruce, and black spruce begin to appear in the lower reaches. Swift Creek is the primary tributary in this section.⁴⁵ The Kisaralik River is 75 to 100 feet wide, 2 to 6 feet deep with a stream flow velocity of 3 to 5 mph in July. Large boulders are common and rock bluffs up to 75 feet high frequently line the river.⁴⁶ The water in the river is clear and fast moving. The river bottom is covered mainly with large gravel and rocks.⁴⁷



Figure 10. Lower Falls on the Kisaralik River, August 26, 2008. Photo by Oden W. Jahn, downloaded from <http://picasaweb.google.com/1h/photo/rrDnTOrOWHW24QIfPk1Lxg>.

From Quicksilver Creek (Mile 86) to Quartz Creek (Mile 67), the river is about 100 feet wide, averages 4 feet deep with occasional 10-foot deep pools, and has a stream flow velocity of 4 mph. Several short rapids are present in this part of the river. Lower Falls is located at Mile 79.5 (Figure 10). At Golden Gate Falls (Mile 74), the river narrows to 25 feet wide and 15 feet deep, where vertical rock walls rise 25 feet above the water surface. Large boulders are present through the entire gorge and the river has three very sharp bends.⁴⁸ In this section the river is relatively shallow, swift, and has gravel, cobble, and boulder substrates. There is little braiding and pools are rare. Golden Gate Falls (Figure 11) is not a barrier to salmon.

From Golden Gate Falls to the lower Refuge boundary, the river travels 45 miles and drops an average of 14 feet per mile.⁴⁹ The river emerges from the canyon below Golden Gate Falls into a braided channel with logjams and overhanging willow and alder banks. Substrates in the middle section consist primarily of gravel, rubble and sections of bedrock.⁵⁰ In the section from Golden Gate Falls to Quartz Creek, the river is clear, unbraided and deep enough for outboard motor boats, but strewn with larger boulders. The landscape is dominated by birch, aspen, cottonwood, and white spruce in the flood-plain. There is a primitive landing strip for small aircraft at Kelly's Camp (Mile 61).⁵¹

From Quartz Creek (Mile 67) to the western boundary of the Yukon Delta NWR (Mile 29), the Kisaralik River leaves the mountains, descends in elevation, and becomes a



Figure 11. Two men rafting through Golden Gate Falls on the Kisaralik River, August 2008. Photo courtesy of http://www.flickr.com/photos/images_of_life/sets.

gentle, meandering river. Gravel size decreases and the river bed becomes a cut and fill silt outwash as the Kisaralik cuts its way to the Kuskokwim River. Quartz, Clear and Nukluk creeks are the primary tributaries. The Kisaralik flows through forests of birch, aspen, spruce, alder and cottonwood.⁵² The river from Miles 67 to Mile 45 is characterized by a single channel about 100 to 125 feet wide, 2 to 3 feet deep with pools to 10 feet deep, and a stream flow velocity of 3 mph (Figure 12). Near Mile 45, the river changes from a single channel flowing through low foothills to a constantly changing braided riverbed that meanders through terrain characterized by a lowland spruce/hardwood forest along the river and backed by moist tundra.

The portion of the river from Mile 45 to Mile 29 is locally referred to as “the braids” and is more turbid than upstream sections. This section is 160 to 320 feet wide, swift, shallow, with divided channels, and is characterized by quick turns, gravel bars, wind-fallen trees, and sweepers. The physical appearance of this section changes dramatically with changes in water level. There are no major tributaries. Willow mixed with spruce is the dominant riparian vegetation.⁵³ The braided channels are 25 to 50 feet wide, 1 to 3 feet deep with pools up to 6 feet deep, and with a stream flow velocity of 3 to 4 mph.⁵⁴ This section of the river has fewer large boulders, but numerous islands. Log jams, submerged trees, sweepers and overhanging willows can make boat travel difficult. The



Figure 12. The Kisaralik River between Clear and Quartz creeks, April 19, 2004. Photo courtesy of U.S. Fish & Wildlife Service.

bottom in this section consists of silt, sand, fine gravel, and medium, coarse gravel and rubble. Various sizes of gravels make up 80% of the bed materials. The water is light greenish in color in late July. The current is swift, averaging 6.5 feet per second. The river is 10-15 inches deep and the channels vary in width from 40 to 60 feet.⁵⁵

The Kisaralik River leaves the Yukon Delta NWR at Mile 29 and flows through Native owned lands. The lower portion of the Kisaralik River (Mile 29 to Mile 0) meanders through a wet tundra-dominated landscape known as the Kuskokwim Flats or lowlands. The uplands along the river in this section are poorly drained and have continuous permafrost except in the floodplain, where the banks are unstable and frequently slough into the stream. Birch is the dominate vegetation along the lower reaches, where the land along the river is Native owned.⁵⁶ The channel in this area is poorly defined. The river is braided, characterized by meandering channels and sloughs, and has many mud banks. The river banks rise 5 to 10 feet above the water and the river is bordered by a narrow band of trees. The bottom through most of this section is mud and sand, although fine gravel is located at Mile 25. The velocity of the river is quite slow at 2 feet per second, with an average depth of 4.5 feet and an average width of 120 feet.⁵⁷ In the lower river section, the channel is deeper, approximately 120 feet in width, and lined with either mud or fine sand. Turbid water conditions from eroding tundra banks characterize the lower section during the summer. The color of the water is brown. The river is in this section has turbid water, slow current, and extensive riparian vegetation dominated by willow

and alder. At high water in recent years, some of the Kisaralik flow leaves the river bed just below Mile 21, flows through a slough trending southwest and enters the Kasigluk River. This reduces the flow in the lower portion of the Kisaralik River.⁵⁸ At its confluence with the Kuskokuak Slough of the Kuskokwim River, the Kisaralik River flows at an altitude of less than 250 feet.

Hydrological Data on the Kisaralik River

The extent of tidal influence on the Kisaralik is unclear. ADF&G reported in 1977 that the extent of tidal reach on the river was to Secs. 20 and 29, T. 9 N., R. 67 W., SM. (Attachment 4) The river does not flow through Sec. 29 in T. 9 N., R. 67 W., so ADF&G may have meant through Secs. 20 and 29 in T. 9 N., R. 66 W., SM. The BLM interpreted ADF&G's information in 1978 to mean that tidal influence extended up river to the east section line of Sec. 20, T. 9 N., R. 67 W., SM. (Attachment 7) No other information on the extent of tidal influence on the Kisaralik River has been located.

The Kisaralik River is within the transitional climate zone, which is between the maritime and continental climatic zones. This transition zone in the Yukon-Kuskokwim Delta area extends 100 to 150 miles inland.⁵⁹ No weather-gathering stations are located along or near the Kisaralik River. The nearest stations are at Bethel and Nyac, both about 30 miles from the river. The average annual precipitation is between 20 and 40 inches.⁶⁰

The earliest hydrological data gathered on the Kisaralik River dates from the 1970s. An ADF&G crew computed the flow on the lower section of the Kisaralik River at 1,079 cubic feet per second (cfs) on July 30, 1975.⁶¹ The Water Resources Section of the Alaska State Division of Geological and Geophysical Survey collected a discharge flow measurement of 1,110 cfs on the lower reaches of the Kisaralik River on July, 30 1976.⁶² The U.S. Department of the Interior's Heritage Conservation and Recreation Service collected stream flow data on the Kisaralik River for a wild and scenic river analysis in 1978. Agency personnel collected data along the length of the Kisaralik River beginning at the outlet of Kisaralik Lake and extending downstream to near the Kuskokwim River. The agency reported the Kisaralik River to be 50 feet wide and four feet deep as it comes out of Kisaralik Lake and 6 feet deep and one hundred feet wide in the lower 25 miles.⁶³

The most extensive hydrological data collected on the Kisaralik River comes from the U.S. Geological Survey (USGS). The USGS operated a stream gage (Table 2) on the Kisaralik River above Upper Falls (Mile 90) from October 1, 1979 through September 30, 1987.⁶⁴ The stream gage was located in Sec. 17, T. 3 N., R. 61 W., SM (Mile 94), at an elevation of 1,050 feet above sea level. The drainage area above the stream gage was estimated at 265 square miles. See Table 2 for mean, maximum and minimum discharge values for this station.

The summary of monthly statistics for the Kisaralik River for the months of June through August, showed the mean monthly discharge well over 1,000 cfs for the 8 years the gage

**Table 2: Mean, Minimum and Maximum Monthly Discharge Values
For the Kisaralik River, near Akiak, USGS Gauge Station 15304200.**

Month	Mean (cfs)	Minimum (cfs)	Maximum (cfs)
January	218	125	380
February	203	125	300
March	190	120	240
April	215	120	700
May	984	160	3900
June	2790	950	5070
July	2190	701	4680
August	1080	415	2350
September	823	360	2660
October	1000	218	4260
November	563	130	1090
December	285	130	520
Annual	878	545.9	1379

was in operation. Snow melt began in May with a mean discharge of 984 cfs. Peak flow occurred in June coinciding with maximum snow melt with a mean discharge of 2,790 cfs. Snow melt continued into July with a measured mean discharge of 2,190 cfs. Snow melt tapered off in August with a measured mean discharge of 1,080 cfs. With cooling temperatures and fall storms in September and October the mean monthly discharge fell to 823 cfs and 1,000 cfs respectively. The highest peak stream flow of 5,070 cfs was recorded on June 28, 1982.

The Alaska Power Authority studied the Kisaralik River for hydroelectric feasibility in the early 1980's. Three locations were considered for hydroelectric potential: Upper Falls, Lower Falls and Golden Gate Falls. Golden Gate Falls was the primary location of choice in the preliminary study.⁶⁵ Harza Engineering produced a Bethel Area Power Plan Feasibility Assessment in 1982. The authors of that regional report collected a flow measurement in the vicinity of the Upper Falls of 1,120 cfs and a flow measurement at Lower Falls of 1,945 cfs.⁶⁶ While a hydroelectric project at Golden Gate Falls could have produced more than sufficient energy for the region, another potential hydroelectric project at Chikuminuk Lake was considered to be more economically feasible. After economic cost analysis, none of the hydroelectric options in the area were acted upon.⁶⁷

A team of ADF&G and USF&WS personnel collected hydrological data on the Kisaralik River in 2000 as part of a project to survey nine tributaries of the Kuskokwim River. The purpose of the study was to identify potential fish weir sites to better monitor escapement for fisheries management. The team surveyed the river from its mouth up to mile 77.5 on August 14-15. They found the water levels to be high, but they were able to identify some potential fish weir sites in the lower 20 miles of the river. The team conducted another survey of the Kisaralik River on September 27, near the Nukluk Hills at river mile 45. The width of the river at this location was 186 feet, depths ranged from 1.9 feet

to 2.9 feet and velocities ranged up to 4.5 feet per second. The substrate was composed of large gravel grading to large cobble. At the time of the survey, the field personnel considered the water levels to be in the high range for the drainage.⁶⁸

USF&WS maintains a stream flow monitoring gage on the right (north) bank of the Kisaralik River near its confluence with Nukluk Creek,⁶⁹ near river Mile 46. The gage was intended to map the river's cross section and determine whether there was sufficient flow to establish a fish weir. It does not provide any useable estimate of discharge."⁷⁰

V. Evidence of Use of the Waterway

Early Native Use of the Kisaralik River

Human occupation of the Kisaralik River area goes back 11,000 years to nomadic hunters of Pleistocene animals. These nomadic hunters were supplanted about 1,900 B.C., when Eskimos from the north moved into and occupied the lower Kuskokwim drainage, bringing with them the so-called Arctic Small Tool tradition. Their descendents, the *Kusquqvagmiut* (also known as Yup'ik Eskimos or mainland southwest Alaskan Eskimos), have inhabited the Kuskokwim River and its tributaries down to the present as far inland as the existing village of Aniak. By 1880, their population was estimated at 3,100.⁷¹ The *Kusquqvagmiut* have lived a traditional subsistence lifestyle that spans many centuries. Subsistence is a form of production and consumption in which hunting, fishing and collecting plants are the primary sources of food and other necessities of life. Traditional Alaska Native subsistence practices involve harvesting, distributing and consuming resources. These activities include important social and religious components, one of the most important of which is the distribution and exchange of subsistence products within families, between families and bands, and with Native groups outside their territory. Each Native culture in Alaska has its own set of customs and values governing the transfer of subsistence goods, falling into categories such as ceremonial, sharing, partnership, trade and commercial exchange. The values which promote ceremonial feasting and distribution of subsistence resource goods have persisted in all Alaska groups.⁷²

The *Kusquqvagmiut* traveled by water craft to access, harvest, and transport subsistence resources to their village sites, and to distribute the harvested resources. As contact with Russian fur traders and American missionaries, traders and miners increased in the nineteenth and twentieth centuries, the Native subsistence system of distribution and exchange gradually changed. While the *Kusquqvagmiut* continued to sustain themselves through their hunting, fishing, and gathering efforts, their involvement in the fur trade brought about significant changes.⁷³ Contact with American traders increased the interaction between subsistence production and commercial exchange, including the sharing and trading of commercial and subsistence goods.⁷⁴

The *Kusquvagmiut* used canoes to travel up the tributaries of the Kuskokwim River to fish for salmon. Historically, they used spears to harvest salmon in the swift, clear water tributary streams such as the Kisaralik, Kwethluk and Kanektok rivers.⁷⁵ Prior to the 1920s, the residents of Kwethluk and other modern-day villages in the area lived in seasonal settlements and camps along the Kisaralik, Kwethluk and upper Kanektok rivers. During the 1920s, people that were living out on the land began to be drawn to permanent villages, such as Kwethluk, after missionaries built churches and schools. People who moved from the interior to Kwethluk continued to travel by water and overland to traditional hunting and fishing areas and the seasonal camps associated with them.⁷⁶

Eskimos have used the Kisaralik and Kwethluk rivers for hundreds of years to return from the mountains after spring hunts. Archaeological evidence suggests that migrating caribou were found throughout much of the Kuskokwim Mountains east of Kwethluk and that the caribou were hunted by people living in the areas adjacent to the Kwethluk, Kisaralik, Aniak and Kanektok rivers. Prehistoric hunting camps and lookouts are scattered throughout the Kuskokwim Mountains near the Kwethluk and Kisaralik rivers, near Kisaralik Lake, and at the headwaters of the Kisaralik River. Ancient stone fences, used to guide the animals to areas where they could be harvested, have also been identified.⁷⁷ The core caribou hunting areas used by Kwethluk hunters have been and continued to be at the headwaters of the Kisaralik, Kwethluk, Kasigluk, Akulikutak and Aniak rivers. Hunters from Akiak and other nearby villages are known to have hunted caribou in the upper Kisaralik drainage in the first half of the early twentieth century.⁷⁸ The Natives built and used skin boats to transport meat, skins, sleds, dogs, tools and their families from spring hunting sites on the upper Kisaralik River to summer village sites. Spring hunting camp in the mountains was an important part of the seasonal round for generations of Akiak and Kwethluk Natives. Before white men and motor boats, the Eskimos took their families by dogsled to the headwaters of the Kisaralik and Kwethluk rivers in the early spring. After spending weeks there catching parka squirrels and caribou, they constructed large skin boats, waited for breakup, and floated down the river (Figure 13) to their village sites near the Kuskokwim.⁷⁹

The large shallow-draft skin boats, known as *angyaqatiit* (bearskin boat), were made for a single journey and disassembled at the end of the trip. This broad raft-like craft was well suited for shallow, fast-moving streams. “They called it *angyaqatak* [from *angyaq*, ‘open skin boat,’ plus *qatak*, ‘about to be’] because they were building them only to return home,” according to Kwethluk elder Paul John. “They went up to the mountains in spring without boats, but their plan was to come back down river after breakup. While they were up there hunting, they tried to catch enough caribou or bears to make a boat with their skins.”⁸⁰ The *angyaqatiit* were almost as wide as they were long, and often carried a family group. Their broad beam promoted safe travel in the fast-moving waters of shallow mountain streams. The boat was almost round and did not easily capsize in rapids. The vessel was made so it would not easily get crosswise with the current and fill with water. The wide beam enabled the boat to carry a heavy load. The raft-like hull shape gave it equal stability in all orientations. In rapids and turbulent currents, the



Figure 13. Two Natives descending Golden Gate Falls, Kisaralik River, in a heavily laden skin boat, 1920s. This photo, which was salvaged after the *Tundra Drums* Newspaper collection was dumped, is courtesy of Bethel resident Jon McDonald.

angyaqatiit was much more stable than a kayak, but harder to steer, as the added stability meant that it resisted changing positions. Two people, one in the front and one in the back, used wide paddles to guide the boat away from rocks or logjams as they floated down stream.⁸¹

Some built *angyaqatiit* at their camping places high in the mountains, but others packed their spring harvest out of the high country and past the places where the current was impassable below their hunting camps. Then they would begin boat construction. The boat frames were made from cottonwood, alder and willow. Since there were few trees in the mountains, wood had to be collected, sometimes at quite a distance from where

they made the boat. They would split the wood to make the pieces useful. When wood was scarce, some men took apart their flat-bottomed sleds and used the slats for boat ribs. The men cut logs into one-inch-thick planks for the sides and bottom of the frame. The keel was made from a long, straight piece of wood running the length of the bottom. Sections of trunks or tree roots with a natural curve were used for the bow and stern pieces. The boat frame was then lashed together with rawhide line or, more recently, cord. When the frame was complete, men covered it with bear, moose or caribou skins that had been soaked in water and sewn together with waterproof stitches, then folded over the gunwales and lashed to the frame (Figure 14). The fur side of the skin rested against the frame to protect the skin from chafing against rough spots in the wood. This also helped with buoyancy, as water logged fur would weigh down the boat. After the boat frame was covered, the men heated caribou fat or tallow and used the rendered oil to paint the seams, making them watertight. If the seams were not painted, they would work loose, and the boat would fill with water.⁸²



Figure 14. *Angyaqatak*, skin boat built in 2007 on the upper Kwethluk River and exhibited at the Anchorage Museum of History and Art for the Yupik Science Exhibit. Photo from <http://www.yupikscience.org/4rivsspring/4-1.html>.

Boat size varied, depending on the success of the hunt and the load to be carried downstream. An *angyaqatak* covered with one moose skin could carry the moose's meat along with the person who caught it. Larger boats could be covered with two moose skins or the skins of brown bear, black bear, or caribou. If their load was large and they had enough skins hunters would make more than one boat. They would also put their

dogs in and bring them along, or if possible they would take the dogs on foot following the river. As they traveled down the river, men were on the lookout for logjams and downed trees blocking their path. When pushed by the current, boats could fill with water and sink. While descending the Kisaralik River in skin boats, the men usually portaged around the Upper Falls. Elder Wassilie Evan recalled a vivid account of a Native man who went over the Upper Falls on the Kisaralik River in a small *angyaqatak*. Both the man and the sink boat survived the mishap.⁸³

Some men also made *angyaqatiit* to return from fall camp in September, when they again hunted for caribou, moose, and bear in the mountains. They went to fall camp in mid-August, walking beside the river and carrying their provisions in backpacks slung on wooden yokes. They followed a trail up behind the village of Kwethluk and along Three-Step Mountain, and up into the mountains without crossing a major river. Once home, the travelers disassembled the boats and used their materials for other things. They stripped the skins from the frame and stored them after drying them. Bearskins could also be used as bedding and they were highly valued both for trade and as gifts during the annual Messenger Feast.⁸⁴

Carl Kawagley, born and raised in Akiak, recalled in the early 1980s experiencing spring camp during the 1930s as a boy. His father carried basic supplies by dog sled in early April from Akiak to timber line in the mountains, then returned for his family. During the trip, his father cut and split 5-6 inch spruce trees, then took them to the headwaters of the Kisaralik where the family would later build a skin boat. The family hunted and trapped in the headwaters of the Kisaralik and Nushagak drainages, obtaining beaver, squirrels, bear and caribou. They traveled on foot mostly at night when the deep snow was hard and dried the skins during the day. On May 24th each year, his father stopped hunting and began preparing for the journey back to Akiak. Kawagley described the process as follows:

We'd go to the head of the Kisaralik, where our ancestors, they'd make the skin boats, just below the lake. They'd assemble the framework and then they'd soak the skins and they'd start sewing the skins together... Then they'd lash the skins onto the frames and then they put this burned grass tallow mixture on all the seams.

It'd take four or five days to make the boat, at the most. If you have taken up reindeer skins, caribou skins, then you have to soak them, then they sew them. If we have to use skins that we just got, then we try to sun dry them as much as possible. In the sun, the skins get pretty hot. Then we take the skins back to where we're going to make a boat at the head of the Kisaralik, then soak them again[;] after they dry them, we sew them together.

While the skins are soaking, they make the frame. When you make a frame, you got to have a bow. There is always a measurement....You've got to make that bow, the height from the keel to the gunwale, so them two ends will meet....

After the framework is done, they don't use nails, they'd lash them together. And those lashes are wet, and they pull them tight.

The boat would be about 20 feet long, big enough to carry everything – dogs, whole family, pelts, sled, everything. Of course the pelts and skins would be put in a waterproof container.

We'd put our sleds in the bottom of the boat, then we'd load everything and the dogs last, so the dog's feet don't puncture the skin of the boat....

Other families would be up there at the same place making boats. Sometimes two families don't see each other for a month, and then they'd build boats and come down the river together.⁸⁵

Kawagley recalled that the man in the back of the skin boat was the boss and the man in the front was the lookout who would warn of rocks and trees in the river. The family traveled quietly so they would not distract the front man or the back man, both of whom were concentrating on the river. When they started the journey down the river, they did not hunt. They stopped only to rest at night. As more Natives sent their children to school in the 1930s and 1940s, according to Kawagley, and teachers refused to let children leave the classroom, spring camp as a subsistence tradition began to fade.⁸⁶

Non-Native Use of the Kisaralik River in the Early Twentieth Century

The early non-Native history of the Kisaralik River is examined in C. Michael Brown's *Alaska's Kuskokwim River Region: A History* (1985), and much of Brown's narrative is summarized below.

Prospectors discovered gold during 1907 in the upper reaches of the Kuskokwim River to the north and east of the Kisaralik River. As prospectors found other gold deposits in the Kuskokwim drainage, the Kuskokwim River became a major trade route between Bethel and the gold fields. Prospectors explored the Kisaralik River and staked mining claims on the headwaters of the Kisaralik. Little is known about their modes of travel in the area, but available information indicates that boats were or could have been used to ascend the Kisaralik River. For example, prospector Herman W. Reeth ascended the Kisaralik River in 1908. Reeth staked a number of lode and placer claims, including the "Royal Group" of quartz claims on the north side of the Kisaralik River (which he called the Reglugalic River) between Nukluk and Clear creeks. He also staked a series of lode claims known as the "Golden Gate Falls Quartz Mine" and placer claims near Golden Gate Falls on the north side of the river. Reeth established his headquarters near the falls, where the ruins of a log cabin are still extant. Additional placer claims were staked south of the Kisaralik River near Twin Falls [now known as Lower Falls], opposite the mouth of King Salmon Creek [which may be present-day Quicksilver Creek]. Reeth established a supply camp on the lower Kisaralik River, where he landed equipment and supplies brought up the river by boat.⁸⁷ In August of 1911, the *Iditarod Nugget* reported that Reeth took "a big outfit" up the Kisaralik where he had some good lode claims.⁸⁸ Eight

years later, Reeth chartered Captain Nicollet's power boat *Alaska* to carry six men and twenty tons of equipment and supplies up the Kisaralik to his camp on the lower part of the river.⁸⁹ (Attachment 25)

Early prospectors prepared at least two maps of the Kisaralik River. Herman Reeth created a "Topographical Sketch Map of the Kuskokwim Gold Belt" in 1912. On the map (Figure 15), the Kisaralik River was called the "Reglugalic River" and the Kasigluk River was identified as the "Kislaralark River." Reeth's map showed the location of a Native fishing village called *Nunalenhak* on the south bank of the Kisaralik, a considerable distance down stream from the mouth of Nukluk Creek. The location of his supply camp on the lower portion of the river is shown as a short distance below the Native fishing village of Nunalenhak and on the same side of the river.⁴ The locations of other camps and villages along the river above Nunalenhak to Cleary Creek [present-day Clear Creek], as well as reindeer herder camps above Golden Gate Falls near Swift Creek, are also shown on the map.⁹⁰ In the spring of 1914, Charles Estmere drafted a map of the Kisaralik and Kwethluk rivers, which he provided to Alfred A. Maddren of the U.S. Geological Survey.⁹¹

In 1913, Lapp reindeer herders discovered a small placer deposit at Canyon Creek in the headwaters of the upper Kwethluk River, south and east of the Kisaralik River. The discovery prompted a small rush of prospectors up the Kwethluk River and its tributary Crooked Creek.⁹² In the 1920s, miners working in the Canyon Creek placer mines built a trail south from Akiak to Crooked Creek to carry equipment and supplies overland from the Kuskokwim River to the diggings in the mountains south of the Kisaralik River. The miners used wagons to transport equipment to the mines, but the Kisaralik and Kasigluk rivers were too wide and deep in their lower reaches to ford during the open season. The Alaska Road Commission incorporated the Akiak-Crooked Creek Trail (Route 92N) into its system of wagon roads in the Bethel District in 1925 and funded ferry boats where the trail crossed the "Kiselakik [Kisaralik] and Kuskluk [Kasigluk] Rivers."⁹³

In 1915, residents of the Bethel area told H.A. Cotton of the U.S. Coast and Geodetic Survey that the Kisaralik River offered "about the same advantages for navigation" as the Kwethluk River. According to people residing in the area, a fifty-ton steamboat could travel up the Kwethluk River a distance of 25 miles and small boats with a draft of about one foot could be taken an additional seventy-five miles up the river.⁹⁴ Prospectors and others traveling in the area during the open season also used rafts to float down the river. A photograph taken in 1921 (Figure 16) shows two men rafting down the Kisaralik River through the rapids at Golden Gate Falls.⁹⁵ Reeth proposed building an electric railroad (as shown on his 1912 map) that would extend from a point a few miles west of his supply camp near Nunalenhak to Golden Gate Falls and Twin Falls [probably Lower Falls at river Mile 76]. The proposed railroad generally paralleled the north side of the

⁴ The location of *Nunalenhak* (the modern Native name is spelled "Nunalanirak") was verified on field maps compiled by BIA/ANSCA archaeologists during interviews in 1988. Telephone interview with Steve Street, Director/Archaeologist for Cultural and Environmental Sciences, Association of Village Council Presidents, Bethel, by Rolfe G. Buzzell, April 9, 2008.

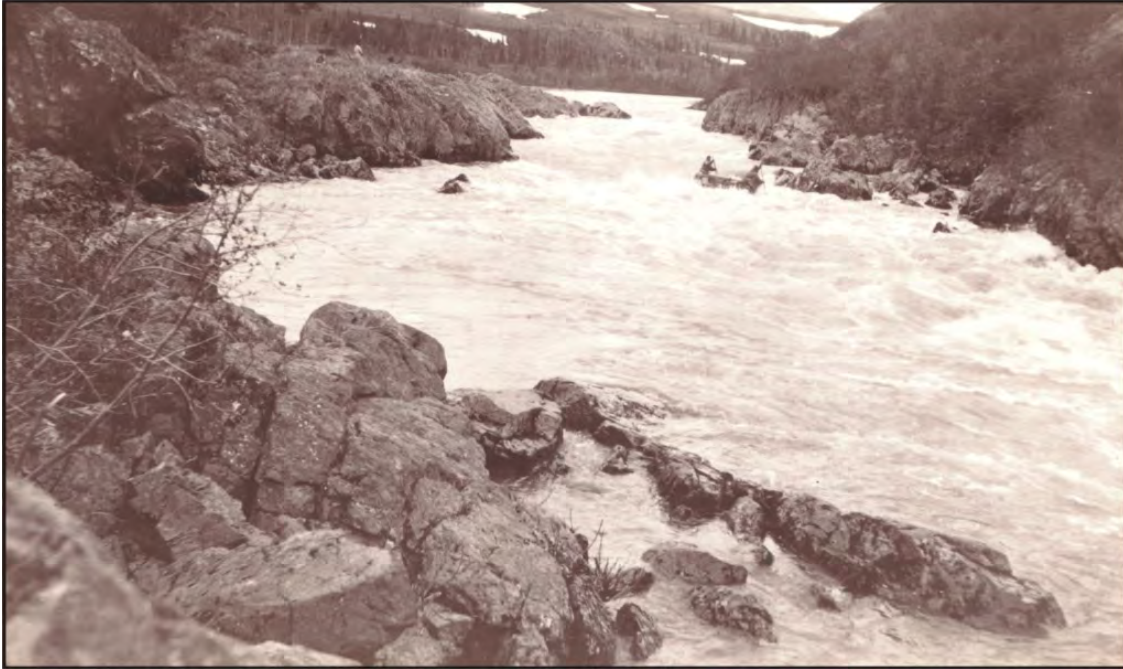


Figure 16. Two men rafting through Golden Gate Falls on the Kisaralik River, 1921. Photographer unknown. Rivers-3 Photo Collection, Alaska State Library, Juneau.

Kisaralik River. At Twin Falls, a branch of the proposed line would have split off and extended east to the Tikchik Lakes in the Nushagak River basin. Reeth was unable to raise funds to build the rail line, so he attempted to persuade the Alaska Road Commission (ARC) to build a wagon road from Akiak to the Canyon Creek Mining District by way of the Kisaralik River basin.⁹⁶

In 1922, Reeth found out that miners on Canyon Creek in the upper Kwethluk River drainage had petitioned the ARC to construct a bridge on the Akiak-Canyon Creek winter trail over the Kisaralik River. Reeth wrote Alaska Governor Scott C. Bone that if the miners' petition was granted, the proposed bridge on the Kisaralik River should be built above the high water mark "so as not to be an obstruction to navigation." The river, he wrote, "is navigable for power boats carrying twenty tons and over, for a long distance above the place where the proposed bridge is to be built." Reeth claimed the proposed bridge site, near the mouth of the Kisaralik, was poorly located as every spring during break-up the banks caved in ten feet or more. Since the proposed Akiak-Canyon Creek winter trail traversed a swampy, lake-studded lowland for thirty or forty miles and could never become a summer trail, Reeth proposed that the government construct a wagon road from the fishing village of Nunalenhak up the north side of the Kisaralik River to Golden Gate Falls and then south over a pass to Canyon Creek in the upper Kwethluk River drainage. His proposed road generally following the route of his earlier proposal for an electric railway. Reeth claimed that a summer trail used by the Natives, reindeer herders, and prospectors already existed from Nunalenhak to Golden Gate Falls. All that was needed to make the route practicable during the summer was the construction of

bridges with eighty-foot spans across the lower end of Golden Gate Falls and across Swift Creek. If improved, Reeth claimed, the route could also be used by miners on Bear Creek in the Tuluksak River basin and would serve to stimulate development of his own Royal Group of quartz claims near the Kisaralik River.⁹⁷

Governor Bone referred Reeth's letter to the ARC for consideration. On March 15, 1923, Colonel James G. Steese, president of the ARC, advised Reeth that a bridge could not be placed across a navigable stream without a permit from the Secretary of War. Steese added that such a permit could only be issued after a thorough investigation, including testimony from concerned navigation interests. He added that the ARC intended to investigate the situation as soon as possible. If it was found that the bridges were needed, they would have to be placed at an elevation sufficiently high to allow clearance of the boats ordinarily used on the river.⁹⁸

Steese made no mention of Reeth's proposed wagon road in his reply, so Reeth wrote to the ARC in December 1924 urging construction of the wagon route up the Kisaralik. Construction of the road from his supply camp near Nunalenhak to Golden Gate Falls, Reeth wrote, presented few difficulties, for the road would be located on a high, level plateau with a good gravel foundation. At Golden Gate Falls, where Reeth had a hydraulic mine, one could cross the river in boats to reach the trail leading to the Canyon and Boulder creek placer mines. If conditions warranted it, a bridge could be built across the Kisaralik River at the falls. Reeth claimed that the road would benefit miners at Canyon Creek as well as the Royal Group of quartz mines, at which he hoped to construct a 500-stamp mill. A proposed dredge at Bear Creek could also be hauled over the road and then transported to the dredging site by way of the Fog River valley. If the ARC intended to build footbridges across the mouths of Kisaralik and Kasigluk rivers, he urged that the bridges be built high enough for power boats like the *Alaskan* to clear.⁹⁹ There is no record of the ARC responding to Reeth's letter. In 1926, the ARC placed ferry boats near the mouths of the Kisaralik and Kushluk [Kasigluk] rivers as part of a 45-mile trail between Akiak and Canyon Creek.¹⁰⁰

Through the years, Reeth continued to seek investors for his mining properties, but without success. In 1937, when in his seventies, he appealed to the Territory for assistance in improving the Kisaralik River route to Canyon Creek. Fred J. Spach, an assistant engineer with the ARC, met Reeth on July 20, to discuss the proposal. Contrary to local rumors that Reeth was a "looney old Finn," Spach found the man to be highly educated with a talent for map-making. Reeth told Spach that he wanted a number of bridges constructed on the route. The proposed 80-mile route extended east from Akiak and required 40-foot bridges across Otter Creek (Mile 8), Nukluk Creek (Mile 30), Clear Creek (Mile 33), Swift Creek (Mile 45), Pass Creek (Mile 58) and Gold Creek (Mile 73). The route would tap Reeth's quartz claims on Clear Creek, where the ore was assayed at \$2.00 to \$3.00 a ton, and his Golden Gate Hydraulic Mine at Mile 53. The route would also connect to gold mines on Marvel Dome and Bear Creek. If Reeth was correct in his views, Spach wrote, a road could be built from Akiak to Canyon Creek at "very little expense" and "would open a highly mineralized section both in placer and quartz."¹⁰¹

The ARC subsequently decided not to build a road up the Kisaralik River valley because mining in the area did not developed sufficiently to warrant the expense. H. M. “Big Hans” Hansen of Bethel, agreed with the decision. Hansen, who knew the area well, reported there was little mining in the area and miners working at Canyon Creek relied upon airplanes to access their property. A winter trail already existed to Canyon Creek, he wrote. Instead of following the Kisaralik River, the trail cut across the flats to Columbia Creek and then up that creek before swinging around to Crooked Creek. Hansen discounted Reeth’s opinions on the need for a road, and claimed that Reeth did not own “a foot of ground in that vicinity.” Hansen said that while it was true that Reeth had taken six or seven men into the area in 1919, he had not done any mining there since 1921. Hansen stated that Reeth was an educated man, but to local residents he was “not only looney but a nuisance and a poor neighbor with a specialty of writing to people like President Roosevelt, Henry Ford and others in the same class.” Hansen added that in 1930, Reeth convinced the sister of a Navy admiral to visit his Golden Gate property. The visit was a disaster; “my, such a headache.... She couldn’t get the [power boat] *Tupper* to leave fast enough,” Hansen wrote. All that the Canyon Creek miners needed and wanted, Hansen claimed, was a seventy-five-foot bridge across Crooked Creek.¹⁰²

A party consisting of two U.S. Department of Agriculture range inspectors and a local reindeer herder acting as a guide used an open river boat with an outboard motor to travel up the Kisaralik River in July 1930. The purpose of the trip was to determine the suitability of the drainage as a boundary for a reindeer herding area. The group started at Bethel, made its way up the Kuskokwim, then up the Kisaralik River for 20 miles from its mouth, and then back down stream. One of the range inspectors noted in his report:

The best means of travel other than by air during the summer is by the use of motorboat as many of the streams entering the Kuskokwim River are navigable. However, to observe the ranges properly, it is necessary to cover the areas adjacent these streams on foot.¹⁰³

Recent Native Use of the River Documented in Native Allotment Files

Native fishermen, hunters and trappers have used wooden skiffs with outboard motors on the Kisaralik River from at least the mid-1950s to access areas now managed as the Yukon Delta NWR for subsistence activities. Boats with aluminum hulls became common in the 1970s. A few Natives have also used skin boats to descend the Kisaralik River into the 1980s. Information documenting Native use of the river in the post World War II years leading up to 1959 and the years after Alaska became a state comes from federal and state records. The first source consists of Native allotment applications adjudicated by BLM under the Native Allotment Act of 1906.

The BLM began collecting information in the 1970s to adjudicate Native allotment applications filed by local Natives that have fished, hunted and picked berries along the Kisaralik River. The Natives used power boats to access favorite spots for hunting,

trapping, fishing and berry picking along the river. These favorite spots, through custom, developed into exclusive use areas. The federal government recognized many of these allotments and transferred title to the sites to the applicants. Nineteen Native allotment applications were filed on the portion of the Kisaralik River within the Yukon Delta NWR between river Mile 29 and Mile 74.

At least eight of the Natives who applied for and used these parcels during the open season in the 1950s, 1960s, 1970s and 1980s traveled up the Kisaralik River to their allotment each year in small boats powered by outboard motors. One of the allotment applicants was Betty (Messer) Nicolai, who began using a parcel (FF-17098) during 1960 in Secs. 22 and 23, T. 8 N., R. 65 W., SM. The parcel is on the south side of the Kisaralik River in the vicinity of river mile 35 (Figure 2). She used the land each year from June to September “for subsistence,” for fishing, hunting and berry picking. She also used the land as a fish camp.¹⁰⁴ “Access to [the] tract by [the] applicant,” according to a BLM field report on the allotment, was “by boat up the Kisaralik.”¹⁰⁵

Four Natives have allotments on the north side of the Kisaralik River (river miles 46-48.5) in the vicinity of the confluence with Nukluk Creek (Figure 3). Robert Lindsey of Bethel began using his parcel (AA-82717-A) during 1956 in Sec. 31, T. 8 N., R. 63 W., SM (Mile 46). His family accessed the parcel at first in the winter from Bethel, beginning when Robert was 5 years old. In the 1960s, he traveled to the parcel in a wooden boat with an outboard motor to fish each summer. In later years, he used a jet boat for summer access.¹⁰⁶ Joseph Venes of Bethel began using his parcel (AA-84005) in 1957 in Secs. 29, 30, 31, and 32, T. 8 N., R. 63 W., SM (Mile 47), next to Robert Lindsey’s allotment. Venes and his family used the parcel from July 1 to August 1 each year for fishing and from August 20 to October 1 each year for moose hunting. He accessed the parcel by boat in the summer.¹⁰⁷ Richard Hoffman began using his parcel (AA-84048) during 1962. It is located between the Kisaralik River (Mile 48) and Nukluk Creek in Secs. 4 and 33, Tps. 7 N. and 8 N., R. 63 W., SM. Hoffman used the parcel for fishing each year from July 1-15 and hunting and trapping each year between September and March. He accessed the parcel from Bethel “by boat until 2001,” according to the BLM field report, “when the Kisaralik River depth began to fall.”¹⁰⁸ Donald Venes of Bethel began using his parcel (AA-84004) in 1964 in Secs. 29 and 32, T. 8 N., R. 63 W., SM (Mile 48.5). He used the site from July through August each year for fishing and during early fall each year for hunting moose caribou, ptarmigan and rabbits. Venes accessed the parcel by boat in the summers.¹⁰⁹

Three other Natives used boats to travel up the Kisaralik every year to their allotments located at river Miles 62, 69 and 74. James R. Hoffman of Bethel began using his parcel (AA-83408-A) with his father in the early 1960s. It is located on the Kisaralik River between Clear and Quartz creeks (river Mile 62), in Secs. 20 and 21, T. 6 N., R. 63 W., SM (Figure 4). Hoffman used the parcel alone or with his brother “seasonally for subsistence activity” from June to October each year starting in 1965. He accessed it by a boat with outboard motor for fishing and hunting birds, moose and caribou. He continued using the land until 1968-1971, when he was in the military. He resumed

using the parcel after 1971.¹¹⁰ In recent years, Hoffman has accessed the parcel by jet boat by way of the Kuskokwim and then up the Kisaralik or by airplane.¹¹¹

Oscar Alexander of Bethel has a parcel (AA-84046) at Mile 69 on the Kisaralik River, located in Sec. 14, T. 5 N., R. 63 W., SM, between Quartz Creek and Golden Gate Falls (Figure 4). He first went to the parcel with his father in the 1950s. He has used it since 1963, except while he served in the U.S. Navy. Alexander used the land each summer from July 1 to October 1 for fishing and hunting. His “access to the parcel,” according to a BLM field report, was “attained by boat” from Bethel.¹¹²

In 1967, Nils P. Sara of Bethel started going with his parents in the summer to camp and pick berries on a parcel on the Kisaralik River just downstream from Swift Creek at Golden Gate Falls (AA-84009-B). The parcel is located in Secs. 21 and 28, T. 5 N., R. 62 W., SM (Mile 74, Figure 5). Mr. Sara used the land several weeks each summer for 6 years. He began using it on his own in the 1970s when he was in his early thirties.¹¹³ He primarily used the parcel for subsistence berry picking, fishing, duck hunting, and camping. According to a BLM field report, Sara stated “that he accessed this parcel by raft along the Kisaralik River which flows to Golden Gate Falls from April through August.”¹¹⁴ Another Native allotment (FF-17922-B) is located adjacent to Sara’s allotment. The owner of FF-17922-B began using the land for winter hunting in the 1960s and accessed it by dog sled and later by snow machine.¹¹⁵

Native Travel on the Kisaralik River Documented in Subsistence Studies

While Native allotment files provide information about use and access to specific parcels of land along the Kisaralik River within the boundaries of the Yukon Delta NWR, the files provide little information about the types of water craft that local Natives use to travel on the river or how far up the river they travel. Subsistence studies conducted by employees of the Alaska Department of Fish and Game (ADF&G) shed additional light on the types of water craft used and other areas along the Kisaralik River accessed by Natives for subsistence purposes.

Residents of Kwethluk are one of several groups of villagers who travel on the Kisaralik River. According to an ADF&G subsistence study of the village published in 1991, boats used by Kwethluk residents “served many purposes and functioned as multiple use vehicles” for most families engaged in salmon fishing, moose hunting, wood gathering, or basic transportation. Villagers used a variety of boat designs, construction materials, and dimensions for traveling to the uplands on the Kwethluk and Kisaralik rivers, and for traveling between Kwethluk and their salmon fishing camps. Boats used for subsistence activities ranged in length from 16 to 24 feet; 58 percent of the boats were 20 feet or more in length. The majority of the boats 20 feet or longer (86 percent) were wooden, and overall 56 percent of the boats were made of wood. The remainder of the boats had aluminum hulls. Almost all of the boats 18 feet or less had aluminum hulls. Wooden boats were built by individuals, often assisted by other villagers who were experienced

boat builders. Wooden boats were constructed from plywood and lumber purchased from the Kwethluk Native Store or from Swanson's in Bethel. Some boats had plywood sides and bottoms. Some had plywood sides and wooden plank bottoms. And others had plank sides and plank bottoms. Aluminum boats, some with welded hulls, others with riveted hulls, were usually purchased from one of the stores in Kwethluk, Bethel, or one of the surrounding communities. Locally made wood boats cost less than aluminum boats of comparable size. Residents reported that wooden boats last between four and ten years. Aluminum boats require a higher capital investment, but reportedly lasted up to 20 years. In addition to their longer life, aluminum boats were relatively maintenance free. Purchasers of aluminum boats had a limited selection--in terms of boat length, width and depth--to choose from. Homemade wooden boats offered the owner more flexibility in design and various combinations of length, width and depth. When repairs were necessary, wooden boats were repaired in Kwethluk. Repairs to aluminum boats, such as welding, had to be done in Bethel or another place having specialized equipment.¹¹⁶

The sizes of outboard motors used by Kwethluk residents varied depending on the size of the boat. Outboard motors owned by households having salmon fishing camps ranged in size from 10 to 115 horsepower. Thirty-two percent of the motors used were 30 horsepower or smaller, 24 percent ranged between 31 and 66 horsepower, and 40 percent ranged between 66 and 100 horsepower. There were only four motors of 100 horsepower or greater. The most popular size motors were 25, 40 and 70 horsepower. Kwethluk residents reported that outboard motors usually lasted from one to ten years, but on average were expected to last about four years.¹¹⁷

Residents of Kwethluk have also built skin boats to descend the Kisaralik River in the years since World War II. Families from Kwethluk traveled to the mountains on foot in the winter where the men hunted brown bear, moose, caribou and feral reindeer, and the women and children trapped squirrels and snared small game. After they dried the meat, in the spring each group made its way to the nearest river, such as the Kisaralik, Kwethluk, Eek or Kanektok, where they built skin covered, wooden-framed boats called *angyaqatet*.

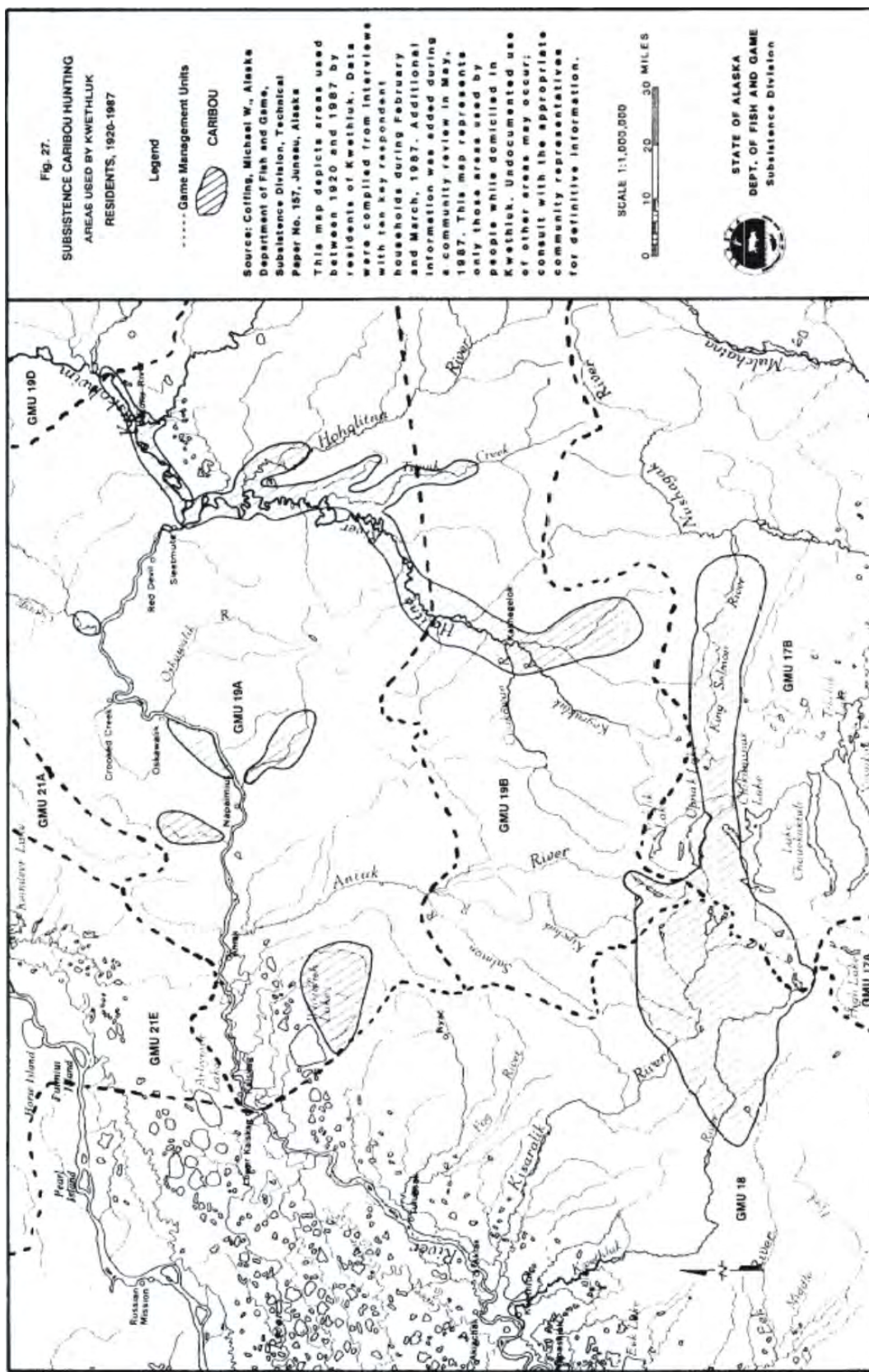
Families left their various camps to rendezvous with other families to build *angyaqatet* and then floated downstream to their spring camp, salmon fishing camp, or Kwethluk. These boats varied in size but were shaped similar to the shallow, bowl-like skin boats still being built and used in the 1980s. Wooden frames made of spruce or cottonwood were first lashed together. After the frame was completed, skins that had been sewn together were stretched over the frame, hair side in, and lashed over the gunwales to the inside frame. The skins were usually those of caribou, reindeer, moose, brown bear, or seal. Some families traded for seal skins, which they brought with them each year, specifically for this purpose. These boats were capable of carrying several people, their gear, dried meat, and furs. Sometimes canoes made of birch bark were also used to tow one of these boats. The trip was often dangerous

and the skin boats punctured easily. Swift water carried the rafts downstream at a relatively rapid speed.¹¹⁸

It took families approximately three days to descend the river and reach their salmon fishing camps. Other families continued on downstream to spring hunting camps for waterfowl and muskrat. People remember being at their salmon fishing camps by about the 10th of June.

A few Kwethluk families continued to build skin boats into the 1980s, using them to descend the Kisaralik and other nearby rivers. Caribou, which are found at higher elevations in the mountains, are generally not available to Kwethluk hunters using boats along rivers which empty in the Kuskokwim, such as the Kisaralik, Kwethluk and Kasigluk rivers (Figure 17). Kwethluk residents flew in airplanes during late March or early April to traditional camps in the mountains near the headwaters of the Kwethluk, Kisaralik, Aniak and Nushagak rivers. There they fished, hunted, and trapped for a few weeks, harvesting lake trout, Dolly Varden, grayling, brown bear, caribou, moose, beaver, otter, muskrat, ptarmigan, porcupine, and parka squirrels. Men and women from several different households usually made this trip. Men hunted the surrounding countryside on foot, looking for caribou, brown bear, moose and furbearers, while women concentrate on harvesting parka squirrels and small game. Some of the meat from the harvest was dried into jerky while other meat was prepared and eaten in camp. People often remained in the field for a few weeks, returning to Kwethluk as breakup proceeds. The hunters returned from the mountains bringing back the meat with them using skin boats which they built using hides of caribou, brown bear, or moose. “This mode of transportation, which has been used by people hunting in the mountains for many years, was still sometimes used in spring from 1986 to 1991,” according to biologist Michael Coffing. “Between one to three skin boats were build each year, however, some years skin boats were not used.”¹¹⁹ These boats, like those made by previous generations of Kwethluk hunters, were made from materials gathered from the land. A boat frame, consisting of planks and ribs made of balsam poplar, was covered with un-tanned hides of brown bear, caribou, or moose, often sewn together in combination.¹²⁰ The skin boats were used to transport the people, camping gear, dried meat and other items obtained from subsistence hunting, fishing, and gathering activities, back to Kwethluk by floating down the Kisaralik and Kwethluk rivers. “One of these boats,” according to an ADF&G report, “built in 1987, measured approximately 14 feet long, 8 feet wide and was 20 inches deep amidship.”¹²¹

Some families from Kwethluk had their spring camps along the Kisaralik and Kasigluk rivers. At spring camp, they harvested whitefish, pike, waterfowl, and muskrats. Towards the end of May, families harvested smelt and sheefish. By the second week of June they moved to their summer fishing camps. Kwethluk residents remembered salmon fishing camps along the Kisaralik and other rivers, but no salmon fishing camps still existed in 1986 on the Kisaralik River. Individuals from Kwethluk also reported harvesting salmon from the Kisaralik River for subsistence using rod and reel gear. During June and July, people from Kwethluk took trips up the Kisaralik River to harvest



grayling, rainbow trout, Dolly Varden and northern pike using rod-and-reel gear (Figure 18). In mid-July, people began to travel by river to berry picking areas to harvest salmonberries and blueberries. The Kisaralik has been one of the primary berry picking areas for Kwethluk residents. Berry picking areas extend up the river well into the Yukon Delta NWR, and Kwethluk residents accessed these areas by boat and on foot. Families that were unable to harvest enough berries sometimes bought berries from other people. In late August, hunters began traveling by boat to moose hunting areas along the Kisaralik and lakes near the headwaters of the Kisaralik Rivers. Other resources they harvested during these trips included black and brown bear, beaver, muskrat, otter, ruffed and spruce grouse, ducks, cranes, geese, salmon, several species of freshwater fish, berries, and wood. Some hunters made several trips, others stayed out until the first of October.¹²²



Figure 18. A Native with an outboard motor boat on the lower Kisaralik River, August 2008. Photo courtesy of <http://www.flickr.com/photos/imagesoflife/sets>.

Akiachak residents also use waterways throughout the Kuskokwim region, including along the Kisaralik River (Figure 19), as primary access routes to subsistence harvest areas during periods of open water (mid-May through mid-October). People from Akiachak often travel great distances to harvest large game, especially during the fall and early spring.¹²³ In the years 1988-1997, Akiachak residents fished for salmon for subsistence purposes on the Kisaralik River up to a point several miles beyond Quartz Creek (Mile 67). They also harvested blackfish, cisco, Dolly Varden, Arctic grayling and rainbow trout in the Kisaralik River, lake trout in Kisaralik Lake, and whitefish, cisco,

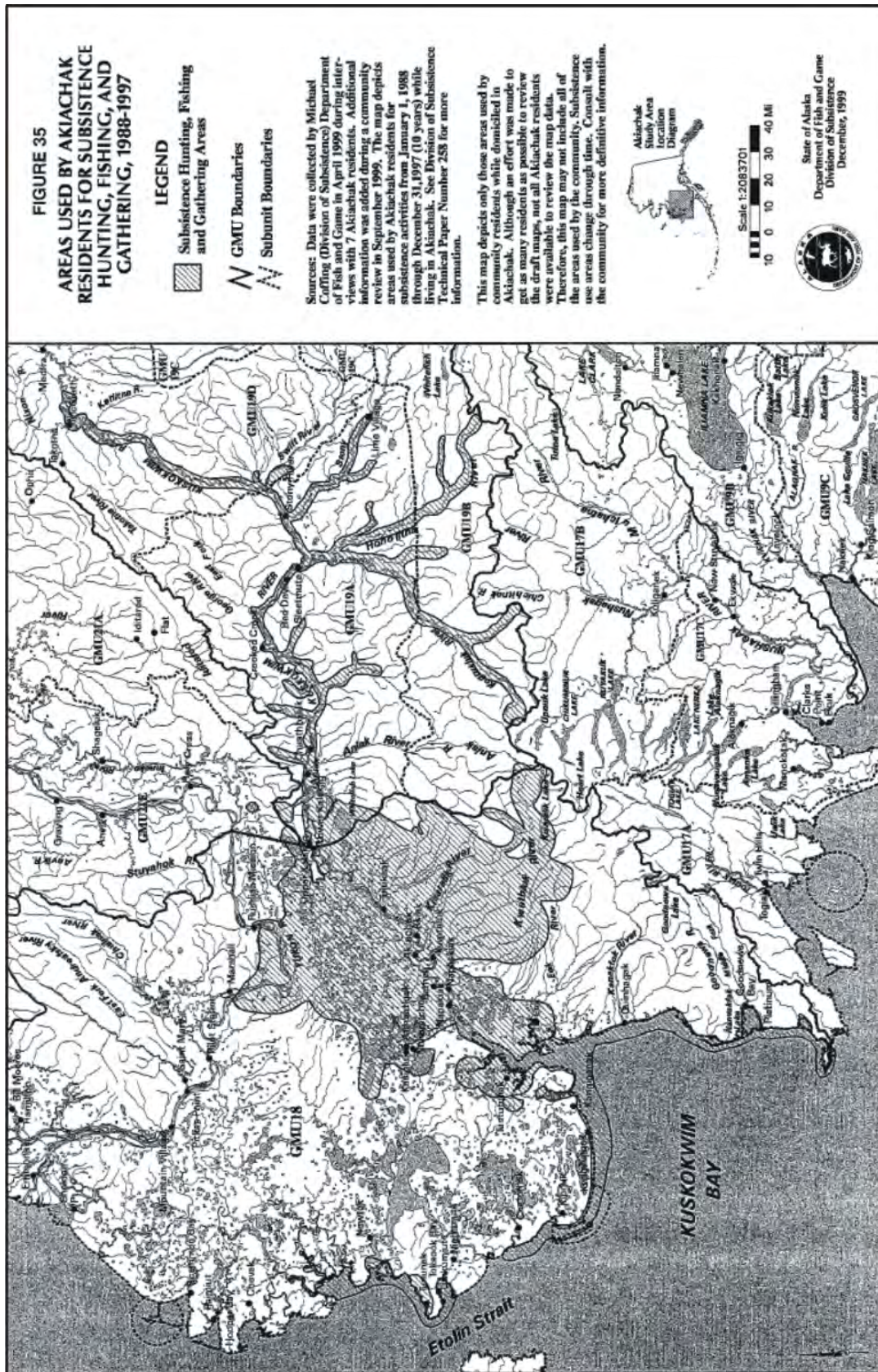


Figure 19. Map showing areas used by Akiachak residents for subsistence hunting, fishing and gathering, 1988-1997. Reprinted from Michael Coffing, et. al., *Subsistence Harvest and Use of Wild Resources in Akiachak*, p. 157.

smelt, blackfish, pike, burbot, sheefish, sucker, lamprey and stickleback in the lower Kisaralik River.¹²⁴ Akiachak residents harvested berries and plants during the summer and fall throughout parts of the middle Kisaralik River area, from the mouth of the river up into the lower portion of the Refuge and in the area between Quartz Creek and Golden Gate Falls. They also gathered wood on the lower Kisaralik River up to about the western boundary of the Refuge.¹²⁵

Residents of Akiachak hunted moose mainly in August and September. They hunted the entire length of the Kisaralik River, including around Kisaralik Lake, but no Akiachak residents reported harvesting moose around Kisaralik Lake during 1988-1997. They used boats to access the Kisaralik River drainage, which accounted for 26 moose (25 percent) of the 106 moose harvested by Akiachak residents. The Natives often took the butchered animal back to their hunting camp where the pieces were hung to form a dry surface. The meat was kept cool and dry and then transported home by boat.¹²⁶ They also hunted bears mainly in August and September while hunting for moose along riparian corridors of rivers and streams accessible by boat. They hunted black bears on the Kisaralik River upstream up to and including Quicksilver Creek in the years 1988-1997. Akiachak residents also hunted brown bear on the Kisaralik River drainage up to Upper Falls. Most of the hunting occurred during fishing and berry picking in the summer and fall when access was by boat, although some brown bear hunting occurred in the spring.¹²⁷ Akiachak residents hunted caribou in the fall on the Kisaralik, Kasigluk, Tuluksak, Kwethluk and Akulikutak river drainages. "Extreme low water during the fall season can make access to portions of some of these rivers and associated tributaries difficult," according to an ADF&G subsistence study. "Akiachak hunters are especially adept at finding their way around or over shallow areas. High water does not necessarily make travel up these rivers any easier, as the rivers are swift, divided into several channels and are strewn with sweepers and hidden obstacles." Caribou meat harvested in the fall was butchered in the field into large pieces. "Once the surface is dry, the meat can be packed in the boat and taken home."¹²⁸ Trapping of fur bearing animals and hunting of small game animals also occurred throughout the Kisaralik area, but much of that activity occurred in the winter when access was by snow machine.¹²⁹

In a memorandum dated November 7, 1997, a BLM official noted heavy Native subsistence use on the Kisaralik and Kasigluk rivers. The Natives, he observed, used 18 to 24-foot aluminum boats with 25 to 40 horsepower outboard motors. "The Native allottees, mainly from Kwethluk and Akiak, rely heavily on these waterbodies to reach traditional harvest areas."¹³⁰ (Attachment 18) When a major mining company took an option on mining claims around Kisaralik Lake, local Native officials condemned mining in the area as a threat to subsistence activity on the upper Kisaralik River. In early 2007, Gold Crest Mines of Spokane, Washington announced plans to fly in a small drill rig to do testing on hard rock claims that its subsidiary, Kisa Gold, purchased from a local prospector in the area around Kisaralik Lake. Villages up and down the Kuskokwim River quickly passed resolutions opposed to mining exploration in the Kisaralik region, which they said is a vital traditional hunting and fishing area. "Our livelihood depends

on that lake,” said George Guy, business manager of Kwethluk, Inc., the local village corporation. When he spoke of livelihood, he explained, he meant subsistence.¹³¹

The lower Kisaralik River is traveled by residents of Bethel, Akiachak, Akiak, and Tuluksak in motorboats for sport-fishing, hunting, gathering and camping. The river also provides summer and fall access to many Native allotments along the river.¹³² Between Mile 0 and Mile 29 the river is easily negotiated by outboard motor boats, and the braided portion from Mile 29 to Mile 45 can usually be negotiated by jet boats. According to U.S. Fish and Wildlife personnel, power boats cannot get through Golden Gate Falls.¹³³ The number of water craft using the lower Kisaralik River became so significant in the late 1970s that BLM employees proposed a continuous easement on both banks of the river from its mouth to the forks in Sec. 13, T. 9 N., R. 67 W., SM (Mile 10), and a linear easement on the banks and bed of the river from the forks upriver through the area selected by the Village of Akiak (upstream to the east boundary of Sec. 12, T. 8 N., R. 65 W., SM, Mile 29). The purpose of the proposed easement was “to provide public use on waters having highly significant present recreational use.”¹³⁴ The proposed easement was later dropped when BLM changed its rule making to exclude easements for recreational purposes.

Most Natives and recreational fishermen from Bethel use boats on the lower part of the river during July.¹³⁵ During mid-summer, they do not take boats up the Kisaralik beyond Nutluck Mountain, according to one long-time user of the river. In the fall, however, Natives travel farther up the river beyond Golden Gate Falls to hunt caribou and gather berries. Caribou season opens about August 10th, which is when the Natives start going to the upper portion of the river to hunt. They use “Lund” boats with 40 horsepower outboard motors to ascend the river to Upper Falls.¹³⁶ On September 9, 2001, two men from the mid-west that were rafting on the Kisaralik “saw a group of four Yupik boats come by” them on the river. The men in the raft were camped above the confluence of the river with Clear Creek in the vicinity of Mile 57. “It was the same group [of four Native boats] that we had seen several times [further upstream] during the trip,” one of the rafters noted. “The boats looked heavily loaded, perhaps with caribou or blueberries.”¹³⁷ According to several people with extensive experience on the river, Natives using power boats commonly go through Golden Gate Falls in the late summer and fall and continue up stream to Upper Falls. It is very difficult, if impossible to traverse the Upper Falls with a power boat.¹³⁸

Government Studies and Use of the Kisaralik River Since 1959

In the mid-1970s, state and federal employees began gathering data on the Kisaralik River. Some of the data was collected while traveling on the river in boats and rafts. In a navigability report dated November 3, 1975, a BLM employee reported, on the basis of “personal observation,” that summer usage of the Kisaralik River by “local subsistence” and “recreational” users was “heavy.” He noted that motor boats were used on the river from May through October to access public lands.¹³⁹ (Attachment 26)

ADF&G surveyed the lower 52 miles of the Kisaralik River by boat during June and July of 1976 to inventory fish resources. In a report published the following year, ADF&G characterized the Kisaralik River as “an important sport fishing stream in the lower Kuskokwim River.” ADF&G employees observed fishermen, mainly from Bethel and villages upstream, on the Kisaralik on weekends in late July and August. Rainbow trout, grayling, char and silver salmon were the most important sport species being taken by fishermen, according to the ADF&G report, and most fishing being done on the river was from just downstream from the present western boundary of the Yukon Delta NWR (Mile 29) to Golden Gate Falls (Mile 74). “Access is by boat only,” although the report noted that there was an old airstrip and cabin near the confluence of the Kisaralik and Nukluk creek at (Mile 48).¹⁴⁰

Employees from the BLM floated the Kisaralik River in August 1976 as part of a study of the river as a potential candidate for inclusion in the National Wild and Scenic River system. Ross Kavanagh and Dennis Money wrote lengthy descriptions of the trip.¹⁴¹ Kavanagh’s report included information about use of the river that he obtained from Rae Baxter, an ADF&G employee stationed at Bethel. Kavanagh wrote that the Kisaralik River attracts both subsistence and sport fishermen, as well as hunters. Residents of Kwethluk, Bethel, Akiak, Tuluksak, and Akiachak filed applications for Native allotments along the river, but Kavanagh wrote that only the people of Kwethluk fished the river for salmon to an “appreciable extent.” Residents of closer villages, according to Kavanagh, preferred to fish the Kuskokwim River and tributaries nearer their villages. The people of Kwethluk used their allotments “primarily for recreational purposes such as sport fishing and to conduct other food gathering activities such as berry picking,” Kavanagh added. Salmon fishing for subsistence purposes “commonly occurs at or near the river mouth and extends one or two miles upstream.” The Natives, he wrote, seldom fished for salmon farther upriver.¹⁴²

According to Kavanagh, the main attraction of the river was sport fishing. He wrote that Baxter told him that the river was “the summer playground of a large number of Bethel and nearby village residents” who fished for Arctic char, Dolly Varden and rainbow trout. The river reportedly received more sport fishing pressure than even the Kanektok River. Fishermen traveled to the river during the summer by boat and airplane. People ascended the river in boats with outboard motors a considerable distance, perhaps as far as the stretch below Quartz Creek, which was considered to be the “prime rainbow trout habitat of the Kisaralik River drainage.” Under average water conditions, Kavanagh wrote, it was usually possible to ascend the river in a riverboat to the vicinity of an airplane landing strip and wanigan (a wood-frame storage building on skids) in the south-east corner of T. 8 N., R. 64 W., SM (Mile 45, Figure 3). If the water stage was high, as was often the case in mid-June, a riverboat could be taken much further up the river. Kavanagh referred to an “unconfirmed report” of one riverboat ascending the river to the “Lower Falls” beyond the Golden Gate Falls. Few if any jet boats, he added, had operated on the river.¹⁴³

Sportsmen also used airplanes to reach fishing spots on the river, according to Kavanagh. Airplanes such as Piper Super Cubs were believed to land on a short airstrip located in the southeast corner in T. 8 N., R. 64 W., SM. Over the years, stream bank erosion had considerably reduced the length of the airstrip. Floatplanes were used to ferry hunters and fishermen to Kisaralik Lake and a small lake [Ice Box Lake, SE corner of Sec. 17, T. 3 N., R. 62 W., SM] situated within one and one-half miles of Upper Falls. According to Kavanagh, it was “common practice” for floatplanes to land on the small lake, where sportsmen could then hike down to the falls. Air charter operators at Bethel reported almost no floatplane landings on the river above the “Upper Falls,” but believed it possible to land a floatplane on the river immediately above and for some distance below the airstrip. They indicated that floatplanes may have landed on the lower reaches of the river in order to pick up people who had floated down the river from the airstrip area.¹⁴⁴

During June 14 and 21, 1977, BLM employees conducted two raptor surveys over the Kisaralik River using a helicopter. Clayton M. White and Douglas A. Boyce concentrated on the thirty-seven-mile stretch of the river bordered by bluffs from a point about eleven miles above the mouth of Quicksilver Creek to a point about two miles above the mouth of Nukluk Creek (Figures 3-5). At the time of the survey, they observed that the river “was running high and was filled from bank to bank,” and that “the current was clearly faster than that of the rivers we examined in this region, and would have made a float trip hazardous.”¹⁴⁵ Early in the summer of 1979, D. N. Weir and several other BLM employees also conducted a raptor survey along the Kisaralik, presumably in a helicopter. Later in the summer, they descended the river in a rubber boat, but details concerning the float trip are not available.¹⁴⁶

David Dapkus of the U.S. Heritage Conservation and Recreation Service led a float trip down the Kisaralik River in July 10-19, 1978. The expedition also included Pat Beckley, Cary Brown, Bob Ward, and John Beck of the BLM, Robert Weinhold of the USF&WS, and Mike Rodak of the Alaska State Division of Parks. The party put in at Kisaralik Lake and used two 13-man Avon rafts. With a strong wind (fifteen to twenty miles per hour) at their backs throughout the first day, the party floated to a point about one-quarter of a mile below the mouth of the North Fork. In a report, Dapkus characterized the river from Kisaralik Lake to the mouth of Gold Creek as “easy Class I water on the International Whitewater Scale.” Below Gold Creek, the river was a “mixture of Class I and II (Figure 20) followed by all Class II and finally one Class III rapid” located upstream of the mouth of the North Fork. “The river offered good floating with a raft, kayak, or canoe for the intermediate to expert canoeist,” Dapkus concluded.¹⁴⁷

As the party floated down to the Upper Falls, the river flowed in a channel about one hundred feet wide with a current ranging from 3 to 5 miles per hour. The water was about three feet deep and, in places, six feet deep. Dapkus wrote that the river was filled with large boulders “the size of a kitchen stove.” Dapkus classified this stretch of the river as Class I and II on the International Whitewater Scale. At Upper Falls, the party made a “relatively easy portage” of approximately 350 feet over a tundra-covered hill on the south side of the river. The Upper Falls, wrote Dapkus, actually consisted of



Figure 20. A raft on the upper Kisaralik River above Upper Falls, August 2008.
 Photo courtesy of <http://www.flickr.com/photos/imagesoflife/sets>.

two falls about 150 feet apart. The first falls apparently dropped about six feet over boulders the size of "small cars" and Dapkus classified the first falls as Class II rapids. The second falls consisted of two vertical drops--one four feet and the other six feet. Large boulders, the size of small cars, blocked the river at this point, forcing most of the water to flow through a six-foot wide chute. "About half of the river's volume," Dapkus wrote, "flows at right angles into a vertical rock wall on the left side of the canyon and bounces back into a group of rocks. The other half pours at right angles into the first half. Three very large rocks lie about six inches under all this water." Dapkus believed it could be run with an unloaded boat and he classified the second falls as Class VI water.¹⁴⁸

On the descent of the river from Upper Falls to the mouth of Quicksilver Creek, the river flowed in a channel ranging from 75 to 100 feet wide with a "fast" current. Water depths varied from 2 to 6 feet. Dapkus classified this stretch of the river as Class II on the International Whitewater Scale. From the mouth of Quicksilver Creek to a point about 3 miles below Golden Gate Falls, the river followed a twisting course, flowing through low rock canyons with fifty-foot high walls. The river channel, occasionally broken by small islands, was about 100 feet wide and the water about 4 feet deep with occasional pools of water ten feet deep. The party successfully floated an "easy Class III rapid" about two miles before reaching the Golden Gate Falls. The group had to portage around the Golden Gate Falls as the river constricted to a width of 25 feet as it flowed through a

small gorge with three very sharp bends. Large boulders "the size of small cars" were scattered in the river from bank to bank and the water was about 15 feet deep. After passing through the Golden Gate Falls, the party came upon an old cabin in poor condition located on the right bank of the river. They also met two men and a woman in a twenty-foot Grumman canoe who had left Bethel on June 1 on a journey up the Kisaralik River to Kisaralik Lake. Once they reached the lake, the three people intended to portage to the Tikchik Lake system and proceed to Dillingham.¹⁴⁹

Below Golden Gate Falls, the party floated through a picturesque area in which the river channel was 100 to 125 feet wide, with numerous islands and a few large boulders in the channel. The water was 2 to 3 feet deep with pools ten feet deep, and flowed at about 3 miles per hour. The party experienced no difficulties in descending this stretch of the river. Dapkus classified this stretch of the river as Class I, but added that the occurrence of sweepers required caution. Once out of the foothills, the river flowed in a braided course through several small channels twenty-five to fifty feet wide. The party frequently encountered sweepers, especially twelve-foot willow trees in the river. "A boater must be careful to avoid these sweepers," Dapkus noted, "particularly on the numerous tight turns in this section." The water was 1 to 3 feet deep with pools of 6 or more feet, and the current was three to four miles per hour. Upon reaching the lowlands, Dapkus wrote: "It was difficult to locate where we were due to the lack of noticeable tributaries and other landmarks." Sweepers were more numerous and there were downed trees on gravel bars. The river took on a meandering character and the current slowed to about two miles per hour; sweepers continued to be a hazard. A floatplane picked up the party on July 19, three miles short of the mouth of the river. The group had floated the river in "eight easy days" and Dapkus believed it could be accomplished in five days. He thought the river was best suited for rafts and kayaks, as the river offered "a variety of whitewater mostly Class II mixed with Class I, but also some Class III." The "only real hazards" to navigation, he noted, were the Upper Falls and sweepers on the lower stretches of the river.¹⁵⁰

Engineering consultants conducted a reconnaissance survey on the Kisaralik in 1980 to evaluate a potential dam site on the river to provide hydroelectric power to Bethel and villages in the Yukon-Kuskokwim delta. The engineering firm identified the Lower Falls at river Mile 81 as a suitable location for a rock fill dam 315 feet high. The dam would have created a reservoir with a storage capacity of 716,000 acre-feet of water. The engineering firm recommended construction of a winter road from the Kuskokwim River to the dam site to transport construction equipment, materials, and supplies. An airstrip near the dam was also proposed to provide year-round access to the site. The proposal for the dam, which was not built, did not envision use of the Kisaralik River in summer or winter as a route to transport people or freight to the dam site.¹⁵¹

In 1980, Congress passed the Alaska National Interest Lands Conservation Act (ANILCA, PL 96-487), which directed that 12 rivers in Alaska, including the Kisaralik, be studied as possible additions to the National Wild and Scenic Rivers system. The U.S. Department of the Interior sponsored a float trip down the Kisaralik River during the

summer of 1981 for the purpose of collecting information about the Kisaralik's potential as a Wild and Scenic River. The interagency study team included Jack Mosby of the National Park Service (NPS), Tom and B.J. Aldrich, David Hesne, and Dave Dall of the USF&WS, and Rae Baxter of the Alaska Division of Fish and Game. The group used a 12-foot raft and a 13-foot raft, each equipped with a 4½-horsepower outboard motor. They started at Kisaralik Lake and proceeded downstream to the Kuskokuak Slough, classifying whitewater conditions and general characteristics of the water body on their journey. A summary of the six-day expedition, based on a report written by Jack Mosby shortly after the trip, is summarized in C. Michael Brown's 1985 Kuskokwim Regional Report.

The party began the float trip down the river on August 5. The river was generally braided to the mouth of Gold Creek. On two occasions the party was forced to line the rafts to avoid shallow areas and willow sweepers. They encountered "a mixture of Class I and II whitewater." Below Gold Creek, the river nearly doubled in size. The party stopped at a USGS gauging station located about a mile upstream of Upper Falls. At the Upper Falls, the men made a portage on the left "about 400 feet up and over a fairly well used trail and put in just below the second rapid." The upstream drop consisted of Class III rapids, which, according to one member of the group, "could be run, but the downstream rapid pours onto a series of rocks making it impassable for boats." The group observed several salmon and grayling making their way upstream through a secondary channel only one foot wide.¹⁵²

After passing the Upper Falls, the party floated down the river to Golden Gate Falls. Below the mouth of Quicksilver Creek, the river entered a canyon area in which the water was 100 to 150 feet wide, 2 to 3 feet deep, and flowed with a current of about four miles per hour. When they reached Lower Falls, they found no real falls due to the high water level, "just a narrow constriction of the river corridor." About one mile upstream of Swift Creek, the party floated through "an 'S' shaped Class II-III rapid." They also floated through Golden Gate Falls, which Mosby described as "an 'S' shaped 25-yard long rapid (Class III) with 10 foot – 25 foot vertical rock walls." Below Golden Gate Falls, the river left the foothills and became extremely braided with numerous sweepers. The river became muddy and after another 10 miles the channels merged into one. Nine miles farther downstream, the river split into two, with most of the water flowing in the left or south channel. The party used outboard motors to drive the rafts down the last stretch of the river. Reflecting on the six-day journey, Mosby concluded that the river offered "moderate white water and excellent fishing." The upper section of the river, he said, was accessible by floatplane on Kisaralik Lake. The lower reaches were accessible to Golden Gate Falls by riverboat.¹⁵³

In February 1984, NPS published a draft report, entitled *Kisaralik River, Alaska, Draft Wild and Scenic River Study*, based in part on the 1981 interagency expedition. The study concluded that "the entire river is floatable by raft or kayak and includes a moderate amount of whitewater and riverboat access to Upper Falls." Although fishery values on the river were not deemed outstanding, the study concluded that "salmon-spawning

areas... are important to local, commercial and subsistence fishing,” and there were important sport fishing waters for rainbow trout in the middle river area up to Golden Gate Falls. The NPS study found that the lower river area was used by people from the vicinity of Bethel, who gain access by riverboat in the summer. “Riverboat access, depending on water conditions, is possible upstream to Upper Falls, the report noted.”¹⁵⁴

The NPS study found that access to the Kisaralik River during the summer was generally by riverboat or floatplane. “Riverboats can usually reach Golden Gate Falls, and a jet boat recently reached Upper Falls...,” the study noted. “Travel down the river from the headwaters is usually by canoe, kayak or raft, with occasional portages, depending on water levels.” The first two miles from the mouth of the river was commonly used for subsistence fishing, while the entire river area was used for hunting, fishing, trapping, gathering berries and firewood, camping, picnicking, photography, boating and guiding. The NPS study considered recreational use as low in the early 1980s, with 8 to 10 groups of four persons each floating the Kisaralik each season. Local residents conducted sport fishing in the lower and middle river, including people from Akiak, Kwethluk and Bethel. During the open water months, local residents of Bethel, Kwethluk, Akiak, and Tuluksak traveled up the Kisaralik River by riverboat to hunt moose and bear, sport fish, and camp. Most of this occurred downstream of Golden Gate Falls, except for fall grizzly bear hunting. The upstream area received some use from fishermen, hikers and float boaters flying into Kisaralik Lake, or a small lake just upstream of Upper Falls. Sport fishing, the study noted,

is often combined with floating. The lower part of the river, because of accessibility, provides a recreational fishery for Bethel area residents and visitors. Bethel and other village residents commonly travel each summer by riverboat past the lower meandering section of the river into the prime rainbow trout habitat, generally downstream of Golden Gate Falls. Boats with outboard motors are usually used for fishing access.¹⁵⁵

The NPS study concluded that the Kisaralik River and surrounding area offered “out-standing opportunities for kayaking and rafting.” The water was almost always moving at a comfortable speed (3-4 mph), and there were long stretches of “exciting, yet readily navigable rapids.” The study characterized most rapids as class II, but two short class III rapids and one class IV (a low falls) provide added attractions for floaters, and the falls were easily portaged for those who were not inclined to run the falls. “The river can be floated by kayak and raft at normal water levels.”¹⁵⁶

This investigator requested information from the Yukon Delta NWR on use of the Kisaralik River by USF&WS personnel, including when trips occurred, the size of boats and motors, the number of people in each party, and areas visited along the river.¹⁵⁷ An agency employee replied that most boat use by USF&WS personnel on the Kisaralik River has been in conjunction with ADF&G for resource surveys, although there have not been many of these trips. No other information on the agency’s use of boats or rafts on the river was provided.¹⁵⁸ Inquiries to ADF&G and research in USF&WS published

documents turned up six raft trips in which USF&WS and ADF&G staff floated the Kisaralik together while inventorying resources along the river. During August 1981, three USF&WS staff, a NPS representative and an ADF&G biologist floated the river using a 12-foot raft and a 13-foot raft with a 4.5 horsepower outboard motor (see page 50 above). USF&WS and ADF&G employees made two trips down the river in July 1979 and another in August 1979. The three parties floated from Golden Gate Falls to the refuge boundary catching and recording fish. Two anglers used a raft on July 8-12, nine anglers floated in four rafts on July 11-19, and ten anglers floated in four rafts on August 6-16.⁵ USF&WS and ADF&G staff floated the Kisaralik River on August 14-15, 2000 and on September 27, 2000. The number of people and type of watercraft involved were not specified in the report.⁶

Recreational and Commercial Rafting on the Kisaralik River

Books and internet sites on rafting and kayaking rate the Kisaralik River as “an exciting whitewater trip for experienced to intermediate paddlers.” The Kisaralik’s whitewater occurs in its upper 45 miles and is characterized by fast water flowing down rocky channels and canyons, as well as three waterfalls. This section is rated Class I to Class II, with three short sections of Class III to IV rapids--Upper Falls, the S-Turn (Lower Falls) and Golden Gate (a narrow stretch of rapids where the river narrows dramatically to squeeze through a slot canyon)--and a very short Class II to Class III rapid about 4 miles downstream of Gold Creek. The short Class III-Class IV rapids can be portaged. Once through Golden Gate and out of the mountains, the river slows and braids into multiple channels for the next 50 miles, descending in elevation and meandering through low wetlands. Since the character of the lower 15 miles of the river is silty, braided and meandering, many rafters prefer to be picked up at Mile 21, the confluence of Kasigluk River.¹⁵⁹

The first documented recreational rafting on the Kisaralik River occurred during the summer of 1973, when two sons of Carl Lundy, a teacher at Bethel, successfully rafted the river. In 1974 they attempted to descend the river in a canoe and lost everything. They reportedly ate spawning salmon to survive and were rescued three or four weeks after the accident.¹⁶⁰ Two years later, a BLM employee observed a large boulder in the river several miles below Kisaralik Lake that had “an aluminum canoe wrapped around it like a corkscrew.” The BLM employee wrote that local residents reported that the two survivors of the 1974 accident took more than fifty days to walk to the airstrip area below Nukluk Creek where an air charter operator rescued them. Despite the unfortunate experience of these two people, the BLM official wrote in 1977, “[i]t is quite possible...

⁵ Ken C. Harper, Jeffry F. Bromaghin and Steve P. Klosiewski, *Rainbow Trout Abundance in the Kisaralik River, Yukon Delta Wildlife Refuge, Alaska 1997*. Alaska Fisheries Technical Report No. 78, U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office, Kenai, Alaska, 2005, p. 3.

⁶ Paul Salomone and Ken Harper, *Site Surveys for Kuskokwim River Basin Salmon Assessment Projects*. Regional Information Report No. 3A02-03, Fishery Information Services Division Project FIS 00-030, Kenai, 2002, pp 4-5.

in fact probable, that there have been several [other] successful undocumented float trips traversing the entire river drainage.”¹⁶¹ Knik Kanoers and Kayakers wrote the BLM on September 18, 1975 that Bethel resident Cal Lensink confirmed that the Kisaralik River had been run by recreational paddlers, but it is unclear if Lensink was referring to the Lundy brothers or other recreational paddlers.¹⁶² (Attachment 27)

Three to four private groups rafted the Kisaralik River in 1979 and the number of rafting groups using the river increased to between 8 and 10 groups annually in the early 1980s. The number of people participating in these raft trips is unknown, but government estimates range from 32 to less than 100 people annually (Table 3). White water enthusiasts were drawn to the Kisaralik River for its scenic views, lively white water, abundant fishing and hunting opportunities. In 1983, a group of four people from Bethel, including John McDonald, rafted the Kisaralik River. This was McDonald’s first raft trip on the river, and during the journey he made a film for public television, *Alaskan River* (Figure 21), which is available for purchase in DVD format from YUK.com.¹⁶³ The broadcast of this video on public television, commercial sales of the video, and publication of the NPS study on the Kisaralik as a potential candidate as a National Wild and Scenic River likely increased interest in rafting on the river.

Reports of sport fishing and rafting opportunities on the river attracted the attention of commercial guides, who rafted the river themselves and then sought to conduct guided raft trips on the Kisaralik River. Local Native and recreational rafting on the river, prompting USF&WS to initiated studies to obtain data on user groups and develop a management plan to deal with impacts on the 66 miles of the river that flows through the Yukon Delta NWR. USF&WS biologists surveyed the fishery resources in the Kisaralik River basin from June 9 to September 13, 1986. They found sport fishing effort and public use of the river to be “light.” The biologists counted only 79 people associated with 5 rafts, 21 boats and 2 airplanes on the river. The biologists carried out four of their surveys using aircraft, three surveys using river rafts and eight surveys using jet boats. Interviews indicated that 24 percent of the people encountered on the river were sport fishing, 20 percent were rafting, 16 percent were berry picking, 42 percent were camping, 14 percent were subsistence fishing, and 42 percent were engaged in unknown activities. Many were engaged in more than one activity. The biologists estimated only 69 angler days of use on the river in 1986, and a specific effort had to be made to locate anglers. The authors of the study concluded that sport fishing pressure on the Kisaralik River was less than that experienced on popular western Alaskan rivers. Commercial fishing was not allowed on the Kisaralik, but among sports fishermen and Natives, Coho salmon was the most frequently captured s complained about increased sport fishing species, followed by Arctic grayling, Dolly Varden and rainbow trout. Subsistence anglers targeted chum and Chinook salmon in the lower Kisaralik River. Sport fishing for salmon, Dolly Varden and Arctic grayling occurred throughout the river, and rainbow trout fishing occurred primarily from the Upper Falls down steam to the braided area of the river. Although the number of anglers observed was low, the biologists concluded that “the Kisaralik River is one of the most popular sport fishing rivers on the Yukon Delta NWR.”¹⁶⁴

Table 3: Non-Guided Raft Traffic on the Kisaralik River.

Year	Number of Groups	Number of People	Source
1973	1	2	BLM (1974)
1974-1978	---	---	(Data Not Available)
1979	3-4 *	Less than 100 *	USF&WS;
1980	8-10 *	32-40 *	NPS;
1981	8-10 *	32-40 *	NPS;
1982	7 *	24 *	Harper, Bromaghin & Klosiewski;
1983	---	---	(Data Not Available)
1984	8-10 *	Less than 100 *	USF&WS;
1985	8	Unknown	USF&WS;
1986	9-12 *	Less than 100 *	USF&WS;
1987	---	---	(Data Not Available)
1988	---	---	(Data Not Available)
1989	---	---	(Data Not Available)
1990	10	Unknown	USF&WS; Harper, Bromaghin & Klosiewski;
1991	11	Less than 100 *	USF&WS;
1992	11	Less than 100 *	USF&WS;
1993	10-12	---	USF&WS;
1994	1	4	Paul Jackson
1995	20	Unknown	USF&WS; State of Alaska; Harper, Bromaghin & Klosiewski;
1996	32	148	USF&WS; State of Alaska; Harper, Bromaghin & Klosiewski;
1997	---	---	(Data Not Available)
1998	1	4	Paul Jackson
1999	---	---	(Data Not Available)
2000	29	110	Kuskokwim Wilderness Adventures;
2001	21	123	Kuskokwim Wilderness Adventures;
2002	18	50	Kuskokwim Wilderness Adventures;
2003	18	71	Kuskokwim Wilderness Adventures;
2004	---	---	(Data Not Available)
2005	1	8	Windknots; (other data Not Available)
2006	---	---	(Data Not Available)
2007	---	---	(Data Not Available)
2008	---	---	(Data Not Available)

Based on data provided by: BLM (1974); NPS (1984); USFS/Yukon Delta NWR (1993, 1997), State of Alaska correspondence (1998);¹⁶⁵ Harper, Bromaghin and Klosiewski (2005); Windknots (2006);¹⁶⁶ Paul Jackson (2009); and John McDonald of Kuskokwim Wilderness Adventures (2009);

* = an agency estimate of the number of parties and/or people.



Figure 21. Rafting the Kisaralik River, 1983. Image from “Alaskan River” DVD, courtesy of KYUK TV Productions, Bethel.

During 1987, USF&WS held public hearings and gathered additional information for a comprehensive management plan for the Yukon Delta NWR. In the public hearings, many local residents expressed concerns that sports hunters and fishermen waste meat, leave trash, and take game that local people need for food. Opposition to guiding was expressed by those who felt it would bring too many outsiders to the area. A number of other people expressed interest in establishing commercial guiding operations on the Kisaralik and other rivers on the refuge.

In its “Final Comprehensive Conservation Plan,” issued in January 1988, the USF&WS concluded that commercial sport fishing operations on these rivers could result in conflicts with subsistence users and have impacts on fish populations from overfishing. Increased use on the Kisaralik and other rivers could also result in other impacts such as disturbance of raptor populations, additional human contact with the grizzly bear population found along the rivers, increased littering, increased trespass on private lands, and potential degradation of the riparian zone from human waste and increased use. “The Kisaralik River,” the Plan document stated, “has the highest combined diversity and density of nesting raptors in Alaska, with gyrfalcons, rough-legged hawks, and golden eagles being the most common.”¹⁶⁷ A small number of non-locals traveled to the refuge

for sport fishing (probably less than 500 visitor days per year). The primary rivers used by these sports anglers were the Kisaralik, Andreafsky and Kwethluk. Most of this use was related to recreational floating and other boating activities. The Kisaralik was one of only five rivers on the refuge with an identified rainbow trout fishery. A small number of recreationalists (less than 500 visitors per year) floated rivers on the refuge. Most floating activity occurred on the Yukon, Kisaralik and Andreafsky rivers. The USF&WS described five alternatives for long-term management of the Yukon Delta NWR. Recreational activities would be permitted throughout the refuge under all of the alternatives, but “commercial guiding/outfitting [would be] permitted on a site-specific basis subject to reasonable regulation.”¹⁶⁸

After the refuge conservation plan was completed, the USF&WS began creating a management plan specifically for the Kisaralik River in 1988. A management plan was deemed necessary to protect river resources from the potential effects of increased river floating and to avoid user conflicts similar to those that had arisen elsewhere in Alaska. The agency held public meetings in Akiachak, Kwethluk, Akiak, Bethel and Anchorage in 1989 and issued a *Draft Management Plan and Environmental Assessment for the Kisaralik River* in 1993. The plan described all local use on the river as recreation and emphasized that the river “is used by recreationists for hunting, fishing, floating, power boating, hiking, photography, wildlife viewing, sightseeing and camping.” Local residents sport fished primarily in the lower Kisaralik River and Kisaralik Lake. Recreational users also traveled the lower sections of the river by power boat to hunt moose and bear. “Most of this use occurs downstream of Golden Gate Falls. The largest recreational use of the river within the refuge is floating, mainly by non-local visitors.”¹⁶⁹

The draft management plan characterized the Kisaralik River as “the most heavily used recreational river on the refuge by both local residents and non-local visitors.” Recreational use included “float trips originating from Kisaralik Lake and motor boat use on the lower area of the river.” Estimates of float trips increased from 3 to 4 groups in 1979, to 9 to 12 parties in 1986, and 11 parties of 3 to 14 people in each of 1991 and 1992 (Table 3). The number of “floaters” on the river was estimated at “less than 100 per year.”¹⁷⁰ Under the draft management plan, the agency established a permit system for recreational guides on the river. Several guides requested permits to conduct guided float trips, but the agency declined to issue any permits, citing potential conflicts between user groups and concern that increased use levels on the river could adversely affect nesting raptors and fisheries on the river. The draft plan effectively prohibiting recreational guiding on the river, but did not restrict private recreational use.¹⁷¹

The agency released its *Draft Plan and Environmental Assessment* for the Kisaralik River for review in December 1993 and accepted public comments through April 1994. It held meetings in Akiachak, Akiak, Bethel and Kwethluk in 1994 and again in Akiak in early 1995. Because of the complex pattern of land ownership surrounding the Kisaralik River and comments received from local residents and the State, USF&WS attempted to implement a cooperative management plan. An informal working group was created and two workshops were held, but due to different priorities, the participants, according to

USF&WS, were unable to complete a cooperative plan.¹⁷² Refuge staff placed a register for floaters to sign at Kisaralik Lake in July 1995. Seventeen groups that floated the river during a six-week period from late July to early September signed the register. At least three groups floated the river before the register was installed. In 1996, refuge volunteers at Kisaralik Lake contacted 30 groups of river floaters from June 26 to September 13. Refuge staff in Bethel contacted another two groups that ran the river before the volunteers were on site.¹⁷³

One of the guides that contacted the refuge requesting a permit to conduct guided float trips on the Kisaralik River was Paul Allred, owner of Ouzel Expeditions, Inc. in Girdwood. Allred, who has been a professional white-water guide in Alaska for 32 years, floated the Kisaralik River for recreation one or two times in the 1980s or early 1990s. Allred wrote to the Alaska Department of Natural Resources in 1994 that he had applied to the Yukon Delta NWR “for the past 10 years for a permit to operate commercial sport fishing float trips within their boundaries” on the Kisaralik, Kwethluk and Andreafsky rivers. “For many years,” he wrote,

they have told me that they can’t give me a permit to operate our trips there because they have no plan of operation. Each year they have told me that they will be getting a plan ready very soon. Each year they have not been able to do this. It seems like an insurmountable job for them. I wrote to them again this year. I called them again. They have a new head administrator. He seems to want to get the process under way.¹⁷⁴
(Attachment 28)

As in previous years, the Yukon Delta NWR did not issue a permit to Allred in 1994 to conduct guided raft trips on the Kisaralik. He turned his attention to doing guided raft trips on other water bodies, such as the Aniak, Kwethluk and Kanektok rivers in the Kuskokwim drainage, Talachulitna and Lake Creek in the Susitna River drainage, and various rivers in Katmai National Park and the Arctic National Wildlife Refuge.¹⁷⁵

Paul Jackson, owner of Quest Expeditions, also applied for a permit to guide commercial rafting trips on the Kisaralik. The refuge refused to grant him a permit. The agency told him, according to Jackson, that it did not want commercial trips because they would disturb raptors and harlequin ducks. Jackson thought that explanation was disingenuous, as he had witnessed refuge staff using helicopters to do raptor counts. The use of helicopters, in Jackson’s opinion, was far more invasive to the birds than float trips.¹⁷⁶ In a letter to the Alaska Department of Natural Resources dated February 15, 1994, Jackson asked if a permit was even necessary in view of the State’s determination on May 1990 that the river was navigable. “I have been told by the Refuge that my company cannot conduct commercial float trips without a Special Use Permit,” he wrote,

which they will not be issuing until after they have completed their River Management Plan this summer. I have read the Draft Management Plan for the Kisaralik River and it appears that there probably will be no more

than 2-3 permits issued by the refuge to guiding operations. I am proceeding with the process for one of those permits, but believe my chances will be slim as there are 20 individuals/businesses interested in the permits and ANILCA gives local preference.”¹⁷⁷

The Yukon Delta NWR adopted its final Kisaralik River Management Plan in 1997. The purpose of the plan was “to identify how river floating will be managed during the next 5 to 10 years” on refuge lands. The goal of the management plan was to “provide high quality fish and wildlife oriented public use opportunities including education and interpretation,” while the objectives were to

conserve fish and wildlife resources and their habitats in their natural diversity...; protect water quality, provide continued subsistence use of fish, wildlife, and other resources in the Kisaralik River corridor; provide recreation in a pristine, natural and wild setting; [and] monitor fish and wildlife habitats and populations and public use.”¹⁷⁸

The final management plan concluded that “the Kisaralik River is the most heavily used recreational river on the Yukon Delta National Wildlife Refuge, by both local residents and non-local visitors.” Recreational use was defined as “float trips originating from Kisaralik Lake and motor boat use on the lower reaches of the river.”¹⁷⁹

Before adopting the final plan, the agency considered allowing two guided float trips per week (with a guiding season beginning August 1) and an allocation of 50 percent of the float use to guided rafters and 50 percent to non-guided rafters. The USF&WS gave three reasons for its “decision to not authorize guiding on the Kisaralik River.” They were: “(1) public use without guiding is now above the level anticipated in the draft plan for both guided and non-guided use; (2) in response to public comments; and (3) the decision to authorize guiding is discretionary....” Non-guided float use tripled, according to the final plan document, from an estimated 10 to 12 trips per year in 1993 to a documented minimum of 32 trips in 1996. “All policies pertaining to guided river floating” in the final plan “were deleted and the no action alternative for guided river floating is adopted (i.e. no guided river floating).” The only significant change between the 1993 draft and the 1997 final plan, which “applies mainly to river floaters,” was “the decision to not authorize guiding on the Kisaralik River.”¹⁸⁰

In further elaboration on its decision, the Yukon Delta NWR stated that many local residents, tribal governments, and native corporations expressed opposition to commercial use of the Kisaralik River. “Refuge staff were concerned that river floating could increase on the Kisaralik River as it had on rivers within the Togiak Refuge and that such increases in use would result in significant adverse effects to the resources of the area.” Agency officials stated that there were “documented resource concerns about the effects of river floater on nesting raptors and harlequin duck brood rearing,” leading the Refuge to believe that it was prudent to not increase public use and the associated impacts on these resources by authorizing guided use. While compatible forms of public

recreation, such as river floating, were encouraged on national wildlife refuges, the agency ruled that

authorizing new commercial use is strictly at the discretion of the Service. Unlike on some adjacent river systems, guiding is not an established use on the Kisaralik River. While numerous guides have expressed an interest in guiding, demand for guided services on the Kisaralik is not established. Very similar guided opportunities are available on the Kanektok and Goodnews Rivers in Togiak Refuge and on numerous other rivers in Alaska. Having a river without commercial use will provide further diversity of opportunities for private river floaters. It will also allow the refuge to continue to minimize restrictions on these private floaters.¹⁸¹

The final management plan concluded that “this decision is not irreversible.” If “monitoring determines that resource concerns are adequately addressed by current management, the refuge could authorize guiding in the future” after the 5 to 10 year life of the plan.¹⁸²

Use of the Kisaralik River by sports fishermen has increased in the years following adoption of the Kisaralik River management plan. Reasons for the increase include the growth of sport-fishing on rivers statewide and expansion of sport fishing into western Alaska. Kisaralik Lake, the headwaters of Kisaralik River, is accessible from Dillingham, Anchorage and Bethel, where the number of air taxi operators with floatplanes has increased in recent years. Motor boat use in the lower river by sport and subsistence users has grown along with the local population. Bethel, for example, has grown from 3,681 residents in 1984 to just under 6,000 in 2003. Angling effort on the Kisaralik River increased during 1994, and the river was listed in the statewide angler survey for the first time.¹⁸³ According to surveys conducted by ADF&G, the average angler effort on the Kisaralik River between 1983 and 2005 was 1,377 anglers per year. The average angler effort on the river between 1995 and 2004 was 1,512 anglers per year; between 2000 and 2004 the average angler effort was 1,862 anglers per year.¹⁸⁴

Sport fishing for rainbow trout on the Kisaralik River increased most dramatically in the 1980s and early 1990s, but has tapered off in recent years (Table 4). The rainbow trout population in the Kisaralik River was healthy enough in 1997 that ADF&G recognized upper sections of the river as special rainbow trout waters under the Southwest Alaska Rainbow Trout Management Plan. The agency allowed the use of only unbaited, single-hook, artificial lures, but local anglers reported good-to-excellent catches of rainbow trout in Kisaralik River. Catch and release regulations were in place on the river from 1998 through 2003. Regulations adopted after 2003 allow for the harvest of two trout per day, with only one 20 inches or greater in length.¹⁸⁵ The Kisaralik River has also grown into one of the largest Chinook salmon sport fisheries in the Kuskokwim region in recent years.¹⁸⁶ Increased sport angling on the Kisaralik of other fish species in recent years includes Chum Salmon, Arctic grayling, northern pike and sheefish (Table 4). The Kisaralik River is the second largest grayling sport fishery in the Kuskokwim River,

**Table 4. Subsistence Harvest and Sport Fish
Angling on the Kisaralik River, 1995-2004**

Type Fish	Angling 1995 to 2004		Angling 2000 to 2004		Degree of Change
	Harvest	Sport	Harvest	Sport	
Chinook Salmon	31	476	38	609	Increase
Coho Salmon	224	1,921	233	1,915	Stable
Chum Salmon	2	578	3	800	Increase
Sockeye Salmon	26	82	26	82	Stable
Rainbow Trout	52	3,026	37	2,796	Moderate Decline
Dolly Varden/ Arctic Char	283	3,354	316	3,530	Stable
Arctic Grayling	169	3,922	185	4,600	Increase
Northern Pike	12	136	2	172	Increase
Sheefish	0	5	0	6	Increase
Lake Trout	26	92	11	43	Decline

Data from Chythlook, *Fishery Management Report for Sport Fisheries in the Kuskokwim...2003-2005*, pp. 61, 67, 71, 75, 77, 79, 81, 83, and 85.

behind the Aniak River.¹⁸⁷ The increase in angling, particularly sport fishing, has drawn public attention to the river¹⁸⁸ and spawned commercial ventures to provide services to anglers and recreational river runners. Natives from Akiak cater to sports fishermen through the operation of the Akiak Village Lodge on the lower river at Mile 12.¹⁸⁹

Recreational rafting increased on the Kisaralik River in the years following adoption of the Kisaralik River management plan (Figure 22). Paul Jackson floated the river four times for recreation in the 1990s. The trips occurred in 1992, 1994, 1996 and 1998, usually in July. On each trip, he used a 14-foot raft with a rowing frame and was accompanied by three other people. On each trip, his party portaged Upper Falls using the left bank on one trip and the right-bank the other three times.¹⁹⁰ John McDonald rafted the river several times in the late 1980s and early 1990s.

In the absence of guided raft trips on the Kisaralik River, public demand for gear and transportation to and from the river prompted the creation of a new form of commercial rafting in which outfitters supplied the boats, gear and transportation so that recreational rafters could float the river in large numbers. John McDonald started commercially outfitting rafters on the Kisaralik River in 1993. Based in Bethel, McDonald and six partners operating as Kuskokwim Wilderness Adventures (KWA) began providing boats, gear and chartered flights from Bethel to Kisaralik Lake. KWA picked up the rafters on the lower end of the river and took them back to Bethel by boat. Steve Powers, operating as Papa Bear Adventures in Bethel, also began outfitting clients with rafts and gear in the 1990s and flying them to Kisaralik Lake. Like KWA, his business picked the clients up on the lower river.



Figure 22. Two people fishing from a raft on the Kisaralik River while another person steers the raft from the rowing platform. Photo courtesy of WadersOn.com at http://www.waderson.com/images/fishing_holidays/372b.1369-kisaralikriver.htm.

KWA competed with Papa Bear Adventuress in outfitting recreational trips down the Kisaralik River until 1998, when the two businesses decided to work together doing what each does best. Since that time, Papa Bear has supplied outfits to the rafters and flown them to Kisaralik Lake. KWA, which was already doing guided sports fishing in boats on the lower Kisaralik River, has done the pickups of rafters and brought them back to Bethel by boat. For about 10 years, Papa Bear has been the main scheduler for this non-guided raft outfitting business and has flown about 99% of the rafters on the Kisaralik and Kwethluk rivers. KWA picks up about 95% of the water raft groups at the end of their float on the lower Kisaralik and Kwethluk rivers. From July to September, people raft mostly for rainbow and silver fishing. A few rafting clients are hunters, but there are so many bears that if a hunter killed a caribou early in the trip he would be bothered by bears on the way down the river and the meat might go bad.¹⁹¹

KWA picked up 29 groups (accounting for 110 people) near the mouth of the river in 2000, all of whom started at Kisaralik Lake (Table 3). The number KWA picked up gradually declined to 18 groups (and 71 people) in 2004,¹⁹² the last year for which KWA had statistics available. According to McDonald, the number of raft trips that have taken place on the Kisaralik has been stable over last 6-8 years, but outfitters expect the number

to decline in 2009 due to the nation-wide economic recession. KWA has boats that take fishermen from Bethel to the lower Kisaralik for sports fishing. While there, the KWA boats pick up water rafters completing their raft trips. KWA crews pick up a group of rafters on the Kisaralik and Kwethluk rivers approximately every other day during the summer. The pickup boats go approximately 30 miles up from the mouth of each river. They are 20-foot Wooldridge aluminum boats with 150 horsepower prop outboards (Figure 23). It takes 2 hours to transport the rafters back to Bethel by boat.¹⁹³



Figure 23. Wooldridge power boats used by Kuskokwim Wilderness Adventures (KWA) for sport fish charters and picking up rafters on the lower Kisaralik River. Photo downloaded from <http://www.kuskofish.com/images/sidephotos/boats>.

Another element of KWA's business on the Kisaralik River is transporting sport fish anglers by boat from Bethel to the river and then back to Bethel. The company has a state commercial permit for a tent camp site in the braided section of the Kisaralik River below "Golden Gate Falls," a prime rainbow trout fishing area. The camp site, located on a gravel bar in the river, is used only three weeks a year. The company uses six jet boats with U.S. Coast Guard 6-pack licenses that take people up the river to the camp to fish for rainbow trout. KWA uses small jet boats from camp to go as far up river as Nukluk Mountain and Nukluk Creek. The jet boats are 16-foot flat bottom boats with 40-horsepower jet outboards.¹⁹⁴

While Papa Bear Adventures outfits most of the float trips down the Kisaralik River each year, a small number of other commercial businesses also outfit rafters for trips on the river. Rob Kinkaid, of Aniak Air Guides, has dropped off clients on the Kisaralik River for float trips, but most of his business is dropping off, outfitting and guiding on rivers closer to Aniak such as the Salmon, Kipchuk, Holitna, Hoholitna and Aniak rivers. He outfitted two trips on the Kisaralik River about 5 years ago, using 14-foot rafts.¹⁹⁵ It was unclear whether he had a guide present in the rafts on the Kisaralik River trips or he just supplied the gear and the air transportation to the Kisaralik and back to Aniak. Paul Allred of Ouzel Expeditions, Inc., who does guided raft trips throughout the state, stated that he knew that other commercial guides conduct a few raft trips on the Kisaralik River

each year without permits, but he would not name the guides. He said sometimes there are guides present in the rafts on those trips, but there were not supposed to be any guides.¹⁹⁶ Marty Decker of Frontier Outfitters in Anchorage reportedly outfits 4-5 raft trips down both the Kisaralik and Kwethluk rivers each year. He would not say if guides are present in the rafts.¹⁹⁷

According to Gene Peltola, the manager of the Yukon Delta NWR, Papa Bear and Renfros' Alaskan Adventures of Bethel (Figure 24) have federal special use permits for drop offs along the Kisaralik River within the refuge, and at Icebox Lake and Kisaralik Lake. The permittees are not allowed to put guides on the rafts. They drop off the clients by airplane and pick them up by boat. KWA picks up floaters at the end of their trip, but they do not need a permit because they operate outside of the refuge.¹⁹⁸



Figure 24. Renfro's Alaskan Adventures dropping off recreational rafters at Kisaralik Lake, August 26, 2008. Photo by Oden W. Jahn, downloaded from picasaweb.google.com/1h/photo/pwLIGY_XnDVFE6FSEHTwhw.

In addition to recreational rafters who are “outfitted” by commercial businesses, an unknown number of recreational rafters bring their own rafts and gear to float the Kisaralik. Some of these rafters arrange transport through Papa Bear Adventures, Renfros' Alaskan Adventures or use air charter businesses. The ADF&G described rafting on the Kisaralik River on its website in 2009 as “a popular float trip of intermediate duration for the experienced rafter” that takes 5-6 days from Kisaralik Lake

to the mouth of the river. The agency described the upper river as “swift, with long stretches of shallow rocky rapids. There are four short Class III rapids and a small waterfall that are all easily portaged along the bank.” The agency recommended a raft with a rowing frame, and noted that aircraft charter services are available from Aniak, Bethel or Dillingham, and that local riverboat services are available for pick up in the lower river.¹⁹⁹

The 1997 final management plan for the Kisaralik River stated that the decision to ban commercial rafting on the river might be revisited in the future depending on monitoring of rafting use by refuge staff. This investigator requested information from the Yukon Delta NWR on non-commercial use of the river by rafters, subsistence and sport fish anglers, hunters and other people who traveled the river since the early 1980s. Also requested was information on the size of boats and rafts and the number of people in each party, if known.²⁰⁰ The Refuge staff replied that it only keeps records on commercial activities and the only rafting allowed under the management plan is non-commercial. Boating and rafting on the river without guides present in the raft is a recreational, non-commercial activity; therefore no permits are required. The Refuge, therefore, has “no records for a non-permitted activity.”²⁰¹ Only one commercial outfitter provided statistics on the number of raft groups and people picked up on the river during the last decade (and only for the years 2000-2003), so there are no comprehensive figures available on the number of recreational rafters that have used the river during each of the last 12 years (see Table 3, page 53). Since the Yukon Delta NWR has not monitored recreational rafting on the Kisaralik River since 1997, it appears unlikely that the agency will reconsider its prohibition on commercial rafting on the river in the future.

VI. Summary

Over the years, the BLM has made a number of navigability determinations on portions of the Kisaralik River using four different criteria (See Table 1, page 17). In 1982, the BLM determined the river navigable from its mouth upstream to the forks at Mile 9.5, citing “travel, trade and commerce” and determined the remaining portion of the river within the Akiak Village selection area from Mile 9.5 to Mile 29 as non-navigable. In 1989, the BLM determined several interconnecting sloughs crossing Native allotments along a northern branch of the river between Mile 9.5 and Mile 17 navigable under the “one person kayak” criterion, but reversed that decision in 2006 based on “air photographs.” The BLM determined the upper Kisaralik River navigable in 1990 from Mile 99 to 114.5 on lands previously conveyed to the State, using the criterion of suitability “for inflatable rafts, canoes, and larger water-craft with a payload of about a thousand pounds or more.” The agency used the same criterion and air photographs in 1997 and 2000 to determine the river non-navigable through a number of Native allotments between Mile 29 and Mile 76. The agency has made no call on navigability on 66 miles of the river within the Yukon Delta NWR because that portion of the river was not in a conveyance selection. This patchwork of decisions resulted in the BLM determining the extreme lower end and much of the upper end of the river navigable, a

portion of the lower end (from Mile 9.5 to Mile 29) non-navigable, and portions of the river in the Yukon Delta NWR non-navigable where the river crosses Native allotments. The BLM has not addressed the navigability of Kisaralik Lake and the Kisaralik River from the outlet of the lake at Mile 116 to Mile 114.5.

The State of Alaska's position, as set forth in 1998, is that the entire river was navigable at statehood and thus state-owned. "Documentation shows many generations," one state official wrote to BLM,

relying on the system for subsistence and recreation to supply economic support to the communities. Hunters, fishermen, and trappers have used the river for many years. It is also used for hiking, photography, power boating, wildlife viewing, camping, and canoe or kayak trips. There are several accounts and pictures of float trips and excursions accessing the river from different put-in points and rafting down the river from Kisaralik Lake.²⁰² (Attachment 18)

In terms of physical characteristics, the entire length of Kisaralik River can be floated in a kayak, canoe or inflatable raft. Generally the river moves at 3 to 4 miles per hour, except in flood stages. Rapids from Class II, III and IV exist in the upper portion of the river, although most are Class II. There are three falls in the upper portion of the river that, depending on water levels, may require portaging. Each of the falls has well established trails for that purpose. Golden Gate Falls at Mile 74 and Lower Falls at Mile 81 have been navigated by power boats going upstream in high water. Power boats are not known to have gone up Upper Falls at Mile 90. Local outfitters and several government studies report that the river is accessible by power boats from its mouth to Upper Falls (Mile 90), depending on water levels. The river is in its natural and ordinary condition since the time of statehood and no natural or man-made changes have occurred since 1959 that would prevent use of the Kisaralik River to transport goods.

The Kisaralik River has a long history of use. Information compiled in this report documents three types of use of the Kisaralik River during the historic period prior to statehood. In the first type of historic use, generations of local Natives from Akiak and Kwethluk built skin boats to float down the Kisaralik River in the spring during the years prior to World War II. This tradition of floating down the river after the spring hunt faded in Akiak in the 1940s as teachers in the village school objected to children being absent from the classroom for prolonged periods to participate in the spring hunts. Kwethluk residents continued to use skin boats to descend the Kisaralik and other nearby rivers up to 1959 on an intermittent basis. Natives also used canoes to travel up the river where they harvested fish, game and berries. They used canoes and skin boats to transport themselves back to their villages where they used some of the resources for their own sustenance and distributed the rest for ceremonial, sharing, partnership, trade and commercial exchange.

The second type of historic use consists of power boats that carried mining equipment, supplies and men up the Kisaralik River as far as present-day Mile 29. Miners used overland trails to carry their equipment farther up the river to mining claims above Golden Gate Falls. In 1919, the power boat *Alaska* carried 20 tons of equipment, supplies and six men from Bethel to Herman Reeth's camp on the lower portion of the Kisaralik River. Reeth's camp was located near the present-day Mile 29, just downstream from the abandoned fishing village site of Nunalenhak. Other prospectors used inflatable rafts to descend the river, as depicted in the photograph of two men rafting through Golden Gate Falls in 1921 (Figure 15, page 32). In 1930, Reeth ascended the Kisaralik River in a power boat to show his mining properties to a potential investor, but it is unclear how far up the river the vessel went. U.S. Department of Agricultural inspectors used an open boat with an outboard motor to ascend and descend the lower 20 miles of the Kisaralik River in 1930.

The third type of pre-statehood use of the river includes local Natives who ascended the river in boats with outboard motors each year in the 1950s to access exclusive use areas (later identified as Native allotments). Those exclusive use areas are along portions of the river now within the Yukon Delta NWR near the confluence with Nukluk Creek (Mile 48). The Natives used boats to travel up the river where they harvested fish, game and berries. They also used boats to transport themselves back to their villages where they used some of the resources for their own sustenance and distributed the rest for ceremonial, sharing, partnership, trade and commercial exchange.

Since statehood (1959), four different types of groups have taken boats up or floated rafts down the Kisaralik River. The first type of use is travel by Natives on the river in skiffs with outboard motors and skin boats to conduct subsistence activities. At least six people representing different families have been granted Native allotments along the river within the Yukon Delta NWR. These people traveled up and down the river every year to conduct subsistence activities at their allotment sites from the 1960s to the present. These allotment sites are located starting at Mile 31 and extending upstream to Golden Gate Falls (Mile 74). Residents of Kwethluk have traveled overland to the Kisaralik Lake area in the late winter/early spring to hunt. After breakup, they built skin boats much as their ancestors had. They filled the boats with their tools, meat and family members and floated back down the river to their village. In recent decades, Natives from Kwethluk and Akiak travel in the summer by outboard and jet boats along the lower and middle reaches of the river to conduct subsistence fishing, hunting and gathering berries. In the fall, they travel by boat to the upper reaches of the river as far as Upper Falls to hunt caribou, moose and bear. They use the boats to carry the meat back to their villages, where it is distributed among families in the villages.

The second type of post-statehood use of the Kisaralik is the use of power boats and rafts for recreational sport fishing. This activity includes guided and non-guided angling from power boats and unguided raft trips starting at Kisaralik Lake and ending on the lower part of the river. In 1975, a BLM employee characterized the number of motor boats used on the river as "heavy" from May to October to access public lands. An ADF&G

study in 1976 characterized the Kisaralik as “an important sport fish stream in the lower Kuskokwim River.” A decade later, ADF&G biologists concluded that while the relative number of anglers found on the river was low, the river “is one of the most popular sport fishing rivers in the Yukon Delta NWR.” While boats with outboard motors are most often used for sport angling, sport fishing is often combined with recreational rafting on the river. The number of groups rafting the river grew from one party in 1973, to 8-10 parties in the early 1980s, to 29 parties reported by a single outfitter in 2000. The number of “floaters” on the river grew from 30 to 40 in the 1980s to more than 100 each year in 2000 and 2001. USF&WS characterized the Kisaralik in 1993 as “the most heavily used recreational river on the [Yukon Delta NW] refuge by both local residents and non-local visitors.” In 1997, the agency prohibited guided rafting in part because recreational rafting activity had tripled on the river.

The third type of use of the river since 1959 consists of federal and state government sponsored float and power boat trips to study the river. At least five government expeditions using rafts were conducted from 1976 through 1981. Several of these expeditions were for the purpose of evaluating the Kisaralik as a possible candidate for designation as a National Wild and Scenic River. ADF&G employees also have traveled on the river numerous times using rafts and power boats, starting in 1976, to study fish resources. USF&WS conducted a number of power boat and raft trips to inventory resources and human use along the river while developing the Kisaralik River Management Plan adopted in 1997. In the last decade USF&WS and ADF&G have combined resources to study resource on the river.

A fourth type of post 1959 use consists of members of the public floating the Kisaralik River in rafts for recreation. The Yukon Delta NWR does not authorize commercial rafting operations on the Kisaralik River. The agency adopted a management plan for the Kisaralik River “that applies mainly to river floaters within the Yukon Delta National Wildlife Refuge portion of the Kisaralik River.” The purpose of the plan was to protect river resources from over use and to avoid user conflicts. In adopting the plan in a record of decision dated March 1997, the refuge manager decided “to not authorize guiding on the Kisaralik River.”²⁰³ However, guides in the area established commercial outfitting businesses that cater to these recreationalists, supplying them with boats, equipment and transportation, flying them to Kisaralik Lake and retrieving them up by power boats at the lower river. The overall number of clients they have outfitted on the Kisaralik is unknown, but 86 groups consisting of 354 people (Table 3, page 53) rafted the river from 2000 through 2003 using commercially outfitted 12-foot and 14-foot rafts.

Endnotes

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