United States Department of the Interior

BUREAU OF LAND MANAGEMENT
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In Reply Refer To:
1864 (AK927)

MAR 2 6 2012

Memorandum

To: File FF-94683 (1864)

From: Navigable Waters Specialist (AK9272) Ralph H. Barner

Subject: Federal Interests in Lands Underlying the Tanana River, Alaska[1]

On March 10, 2006, the State of Alaska (State) filed an application with the Bureau of Land Management (BLM) for a recordable disclaimer of interest (RDI) for lands underlying the Tanana River from its mouth, at the Yukon River, to its head (the confluence of the Nabesna and Chisana rivers).[2] Lands underlying the river in the former Tetlin Native Reserve and the Fort Wainwright Military Reservation were excluded from the application. The State asserted title to "all submerged lands within the bed of the Tanana River including all sloughs, braids and channels between the ordinary high water lines of the left and right banks of the Tanana River." On October 12, 2011, the State withdrew those lands within Executive Order (EO) 8020 (December 2, 1938)/Dyke Range from its application.

The State asserts that it is the owner of the lands underlying the Tanana River (excluding the reaches described above) under title navigability law. If the river is navigable in fact and in law, then title to the lands underlying the water bodies passed to the State at the time of statehood, on January 3, 1959. If a water body is not navigable, and the State is the riparian landowner, then the State claims ownership of the submerged lands under riparian law. Authorities cited by the State in support of its application include the Equal Footing Doctrine, the Submerged Lands Act of 1953, the Alaska Statehood Act, the Submerged Lands Act of 1988, "or any other legally cognizable reason."

This document covers the entire length of the river; however, for the purposes of navigability it only addresses the portions contained within the state's application. Further, it assesses the merits of the State's RDI application which identifies Federal interests, if any, in the lands

[1] The initial research and original draft report, "Federal Interests in Lands Underlying the Tanana River, Alaska," was prepared by C. Michael Brown, former Senior Navigable Waters Specialist.

[2] See Michael L. Menge, Commissioner, Alaska Department of Natural Resources, to Henri Bisson, BLM State Director, March 10, 2006, file FF-094683 (1864), Alaska State Office, BLM Records.

underlying the Tanana River and summarizes the history of BLM navigability determinations for the river and the evidence of commercial navigation. In support of its application, the State submitted numerous references to published historical and scientific documents, BLM memoranda as well as historical reports containing evidence relating to the navigability of the Tanana River.[3] These references have been cited in this memorandum where appropriate.

Background Information

Located in Interior Alaska, the Tanana River (approximately 582 miles) is the third longest river in Alaska.[4] From its head at the confluence of the Nabesna and Chisana Rivers near Northway, the river flows northwesterly to the Yukon River near Tanana. The river drains an area of approximately 44,000 square miles (500 square miles are in Canada).

For the purposes of this report, the "Lower Tanana" is defined as the Tanana River from its mouth upstream to the confluence of one of its tributaries, the Chena River (near Fairbanks). The "Upper Tanana" is defined as the Tanana River upstream from the Chena River confluence to the Tanana River headwaters at the confluence of the Nabesna and Chisana rivers.

Fairbanks is the second largest town in Alaska, surpassed only by Anchorage, and is located along the Chena River. Founded in 1902 as a gold rush town, Fairbanks quickly became the commercial center of Interior Alaska. At the time of Statehood, Fairbanks and vicinity had a population of approximately 20,000 people.[5] Two military bases, Fort Wainwright, and Eielson Air Force Base, are located nearby. In the year 2010, the population of the Fairbanks North Star Borough was 97,581 (31,535 in Fairbanks proper).[6]

Fairbanks is also the transportation hub of Interior Alaska. Besides having the largest airport in the region, it is the terminus of Alaska's three principal highways and the Alaska Railroad. The historic Richardson Highway extends from Valdez on Prince William Sound in the Gulf of Alaska to the community of Big Delta (river mile 318) on the Tanana River and follows that river to Fairbanks.[7] The history of the highway properly begins with the Klondike Gold Rush of 1897-98 when thousands of people disembarked ships at Port Valdez and began the overland trek on the "all-American route" to the Klondike gold fields on the Upper Yukon River in Canada. The Valdez Trail, as the highway was originally known, crossed the Tanana River at Tanana Crossing (now Tanacross) and continued northerly to the new town of Eagle, located on the Yukon River a short distance west of the United States-Canada boundary.
Following the Fairbanks gold rush (early 1900s), the Alaska Road Commission, a federal road-building agency, relocated the Valdez Trail westward so that it crossed the Tanana River at Big Delta and extended it to Fairbanks. (The Tanana Crossing-Eagle segment of the trail was

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[3] Alaska Department of Natural Resources (DNR), "Tanana River Bibliographic References," March 10, 2006, 11 pp. See also DNR, "Tanana River Navigability Determinations," March 10, 2006, 2 pp.
[4] Only the Yukon and Kuskokwim rivers are longer.
[5] In the late 1960s and early 1970s, the Fairbanks area population surged to over 47,000 as construction of the Trans-Alaska oil pipeline began.
[6] State of Alaska Department of Labor and Workforce Development; U.S. Census Bureau Statistics
[7] The Trans-Alaska Pipeline, constructed in the 1970s, generally follows the Richardson Highway and Tanana River from Big Delta to Fairbanks.

practically abandoned.) Until a 784-foot-long bridge was constructed over the river at Big Delta in 1966, travelers and vehicles crossed the river on a government-operated ferry.[8]

The Alaska Railroad crosses the Tanana River over a 700-foot-long bridge at the town of Nenana (river mile 152).[9] The United States government constructed this railroad from Seward, a tidewater port, to Anchorage in Cook Inlet and thence north to Nenana and Fairbanks during the years 1915 to 1923. A major purpose of the railroad was to provide year-round access to Interior Alaska and its vast network of navigable waters and thereby promote agricultural and industrial developments. Before the railroad was built, Interior Alaska during the long winter months was practically isolated. However, after the railroad, the Fairbanks area witnessed an increase in mining activities which continued until America's entry into the Second World War.

The Alaska Highway (or Alcan Highway), the only road linking Alaska with the continental United States, extends from Dawson Creek in Canada to the Richardson Highway at Delta Junction, near Big Delta. Completed in 1942, the road was constructed by the U.S. Army for military purposes. In the event that the enemy prevented ships on the west coast from safely reaching Alaska's ports, the highway could be relied upon for year-round access to Interior Alaska. From the International Boundary to Big Delta, the highway follows the Tanana River, making this reach accessible by motorized vehicles for the first time in history. The highway crosses the Tanana River at river mile 509 over a 946-foot-long bridge constructed in 1944.[10] In the late 1960s and early 1970s, the State of Alaska constructed the George Parks Highway. The highway generally follows the course of the Alaska Railroad from Knik Arm in Cook Inlet to Fairbanks. Like the Alaska Railroad, it also crosses the Tanana River at Nenana over a bridge, which was completed in 1967 and is 1,307-feet-long.[11]

Outside the Fairbanks area, small towns and villages are located along the various highways, with most located along the Richardson and Alaska Highways. Nenana, Big Delta, Ft. Greely, and Tok are the principal non-native communities. Seven Athabascan Indian villages are located in the Tanana River basin. Two (Manley Hot Springs and Nenana) are located along the Lower Tanana River. The remaining villages are located along the Upper Tanana River (in upstream order): Healy Lake, Dot Lake, Tanacross, Tetlin, and Northway. In 1960 the population of these five villages was 605. Tanacross, the site of the first Episcopalian mission in the Upper Tanana district, has long been the largest village.

Land Status and BLM Navigability Determinations[12]

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[8] State of Alaska, "2007 Bridge Inventory Report." The 784-foot bridge consists of a single 400-foot main span with four spans. Vertical clearance at high water is nine feet; at low water, twenty-two feet. See also Grumman, 3-35.

[9] The bridge provides clearance of from 45 feet to 59 feet, depending upon high and low water levels. Grumman, 3-35.

[10] At high water clearance is 20.5 feet. Two bridge piers are located in the bed of the Tanana River. Grumman, 3-36.

[11] Horizontal clearance is 480 feet. At high water clearance is 40 feet. One bridge pier is located in mid-stream. Grumman, 3-35.

[12] Land status analyses based on BLM's current master title plats.

The Tanana River flows through 106 townships. Since Alaska Statehood, most unreserved lands in this area have been conveyed out of Federal ownership. The lands were conveyed to Native corporations under the Alaska Native Claims Settlement Act (ANCSA) and the State of Alaska under the Mental Health Enabling Act and the Alaska Statehood Act. Today, Native village corporations and Doyon, Limited, the Native regional corporation, are the principal private landowners along the river. The United States, however, continues to retain lands in the Fort Wainwright Military Reservation, the Dyke Range Impact Area, and the Tetlin National Wildlife Refuge.

Federal Reserves and Withdrawals

There have been, or currently are, four Federal reserves, reservations, or withdrawals abutting or encompassing the Tanana River and channels: Tetlin Native Reserve, the Fort Wainwright Military Reservation, the Dyke Range Impact Area, and the Tetlin National Wildlife Refuge.

Tetlin Native Reserve, Executive Order No. 5365 (June 10, 1930)
The Tanana River flows through the former reserve a distance of approximately 31 miles (roughly the distance between the mouths of Kalutna River and Porcupine Creek). The Tetlin Native Reserve is the only one of its kind in the Tanana basin. Created by Executive Order (EO) No. 5365 in 1930, the reserve's exterior boundaries were surveyed as U.S. Survey No. 2547. EO 5365 was revoked upon the passage of ANCSA and the lands therein were subsequently patented to the Tetlin Native Corporation.[13]

Ft. Wainwright Military Reservation, Executive Order No. 8847 (August 8, 1941)
The Fort Wainwright Military Reservation (now Tanana Flats Training Area), near Fairbanks, was created by EO No. 8847 on August 8, 1941 for use "as an aerial bombing and gunnery range."[14] The southeastern area of the reservation encompasses approximately three miles of the Tanana River.

Dyke Range Impact Area, Executive Order No. 8020 (December 2, 1938) and Public Land Order No. 1521 (October 2, 1957)
The Dyke Range Impact Area was created by EO 8020 on December 2, 1938. The Tanana River flows through the Dyke Range Impact Area, a land withdrawal approximately 15 miles upriver (southeasterly) from Fairbanks. Approximately three miles of the Tanana River bed are affected by Executive Order (EO) No. 8020.

Tetlin National Wildlife Refuge

The Tetlin National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service, encompasses the headwaters and the upper 49 miles of the Tanana River. This refuge was created through the passage of the Alaska National Interest Lands Conservation Act (1980).

Current status of Riparian Lands

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[13] Patent No. 50-81-0152.
[14] See also correction signed on November 8, 1955, and published in the *Federal Register* on November 15, 1955.

The U.S. Army Corps of Engineers (USACE) manages lands in Sec. 19, T. 4 S., R. 4 E., FM, for the Chena River Flood Control Project.[15] The largest tracts of land under the BLM's jurisdiction are located in the lower reaches of the river not far upstream of the Yukon River. All of the lands along this reach are selected or conveyed either under ANCSA or the Alaska Statehood Act.

Federal riparian lands along the Upper Tanana River are located in five townships: T. 15 N., R. 18 E., Tps. 16 N., Rs. 16, 17 and 18 E., and T. 21 N., R. 8 E., Copper River Meridian (CRM). The U.S. Fish and Wildlife Service manages the federally-owned riparian lands along the Tanana River in all these townships except T. 21 N., R. 8 E., CRM, which is managed by the BLM. Nearly all of the federal riparian lands are selected by Native corporations under ANCSA or the State under the Statehood Act.[16] There are also numerous Native allotments located along the Tanana River. Nearly all the Native allotments are surveyed, and the river was meandered, segregating the uplands from the riverbed.

Alaska Native Claims Settlement Act Land Conveyances

Besides the Tetlin Native Corporation, seven village corporations and one regional corporation own lands along the Tanana River. The village corporations (and corresponding village names) are: Bean Ridge Corporation (Manley Hot Springs), Dot Lake Corporation (Dot Lake), Mendas Cha-Ag Native Corporation (Healy Lake), Northway Natives Incorporated (Northway), Tanacross, Incorporated (Tanacross), Toghotthele Corporation (Nenana), and Tozitna, Limited. (Tanana). Doyon, Limited. is the regional corporation.

Since 1980 the BLM has issued 29 Interim Conveyances (IC) for riparian land (surface and subsurface) to these corporations. In 22 conveyances the BLM issued decisions incorporating the agency's determination that the Tanana River was navigable and excluding the lands underlying the river from the proposed conveyance area. These ICs excluded the Tanana River as a navigable water body, either by name in the legal description of the conveyed lands or by reference to a "navigability map."[17] (These are copies of U.S. Geological Survey quadrangle maps on which navigable water bodies are shaded or identified by an "N" in mid-channel.)

IC Nos. 1044 (Northway Natives, Incorporated), 1576 (Toghotthele Corporation) and 2136 (Dot Lake Native Corporation) conveyed the uplands along the Tanana River to Native corporations without specific reference to the navigability of the river.[18] The lands conveyed by IC No. 1044 abut the Tanana River in T. 16 N., R. 17 E., FM, and in Tps. 15 and 16 N., R. 18 E., FM; by IC No. 1576, in T. 4 S., R. 8 W., FM; and by IC No. 2136, in Tps. 23 N., Rs. 5 and 7 E., as well as

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[15] See BLM case file FF-091151 (1861).

[16] The lands are located in Sec. 27, T. 15 N., R. 18 E., CRM (F14912-B); Secs. 11-15, T. 16 N., R. 16 E., CRM (F19155-20); Secs. 15, 22-27, 34-36, T. 16 N., R. 17 E., CRM (Sec. 15 is F-14912-B; remainder in Tetlin NWR); Sec. 35, T. 21 N., R. 8 E., CRM (F-22481).

[17] IC Nos. excluding navigable waters by name, include: 221, 222, 277, 278, 296, 297, 364, 365, 489, 490, 353 and354. IC Nos. excluding navigable waters by "navigability map" include: 604, 605, 824, 825, 964, 965, 1038, 1039, 1247, and 1248.

[18] IC Nos. 1045 and 1575 conveyed the subsurface estates. In the decisions for these conveyances, the BLM made navigability determinations only for water bodies located on the lands to be conveyed.

T. 22 N., R. 7 E., CRM. The IC documents and the associated decision documents make no reference to the navigability of the Tanana River.

Although government surveyors meandered the Tanana River throughout T. 4 S., R. 8 W., FM, and Tps. 23 N., Rs. 5 and 7 E., and T. 22 N., R. 7 E., CRM, and segregated the submerged lands from the uplands, there is no indication on the plat or field notes to indicate whether the river was meandered because of its size or because of its navigability status. The Tanana River in the Northway selection area is different. In 1981, the Alaska Native Claims Appeal Board settled the question of the Tanana River's navigability in T. 16 N., R. 17 E., CRM, and in Tps. 15 and 16 N., Rs. 18 E., CRM. The Board determined that the Tanana River in the Northway selection area was navigable.[19]

IC Nos. 1451 (Tanacross) and 1452 (Doyon) and 1461 (Tozitna) and 1462 (Doyon) as well as the associated decision documents refer to navigable waters in general, stating that they would be identified at the time of survey.[20] The following language appeared in the IC's: "Excluded from the above-described lands herein conveyed are the submerged lands if any up to the ordinary high water mark, beneath rivers 3 chains wide (198 feet) and wider and lakes 50 acres and larger, which are meanderable according to the 1973 Bureau of Land Management Manual of Surveying Instructions, as modified by Departmental regulation 43 CFR 2650.5-1. These submerged lands and navigable waters will be identified at the time of survey."[21] It is not entirely clear from this statement whether navigable waters more than three chains in width would be identified by name or by some other means. It could be that these larger water bodies would simply be meandered and segregated from the uplands without any mention as to their navigability status.

In IC Nos. 1492 (Tozitna) and 1493 (Doyon) and 1508 (Tanacross) and 1509 (Doyon) and the associated decision documents, the BLM again deferred navigability determinations to the time of survey, but the agency also made it clear that those navigability determinations were only for water bodies less than the meanderable size.[22] The following language appears in the IC: "Excluded from the above-described lands herein conveyed are the submerged lands up to the ordinary high water mark, beneath rivers 3 chains wide (198 feet) and wider and lakes 50 acres and larger, which are meanderable according to the 1973 Bureau of Land Management Manual of Surveying Instructions, as modified by Departmental regulation 43 CFR 2650.5-1, and navigable waters, if any, of lesser size. These submerged lands and navigable waters will be identified at the time of survey."[23]

Alaska Statehood Act and the Mental Health Enabling Act Land Conveyances

Under the Alaska Statehood Act and the Mental Health Act, the State selected lands along the Tanana River in 78 townships. In nearly all cases, the BLM issued appealable decisions granting

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[19] Alaska Native Claims Appeal Board, *Appeal of Northway Natives*, August 5, 1981, ANCAB VLS 78-57, 6 ANCAB 13.

[20] Lands conveyed by IC Nos. 1451 and 1452 abut the Tanana River in T. 18 N., R. 13 E., CRM; and by IC Nos. 1461 and 1462 in Tps. 3 N., Rs. 20 and 21 W., FM, Alaska.

[21] IC No. 1461, June 5, 1990, F-14944-B.

[22] Lands conveyed by IC Nos. 1492 and 1493 abut the Tanana River in T. 4 N., R. 22 W., FM; and by IC Nos. 1508 and 1509 in Tps. 18 N., Rs. 10 and 11 E., and in T. 19 N., R. 9 E., CRM, Alaska.

[23] IC No. 1492, March 12, 1991, F14944-A (2651).

tentative approval (TA) or patent to the riparian lands (including islands). Most early decisions (approximately 37) issued in the 1960s and 1970s did not include a navigability determination for the Tanana River.[24] Beginning in the late 1970s, however, BLM's decisions to convey lands usually included a statement that the Tanana River was navigable. We have found approximately 33 decisions issued in the late 1970s and in the 1980's which affirmatively stated that the Tanana River is navigable. In at least three instances the BLM issued a "Notice" to the State after issuance of a TA that the Tanana River was navigable and, as a result, the "water acreage" would not be charged against the State's entitlement. These notices did not contain an appeal clause.[25] Since then, the BLM has issued few decisions regarding ownership of lands underlying the Tanana River. We have found three such decisions issued during the 1990s. Two contain a statement that the Tanana River is navigable; one is silent about the river's navigability status.[26]

The State continues to have selections on riparian lands under the BLM's management. The riparian lands are located near the Chena River, in T. 3 S., R. 2 E., FM (F-024657), and in Sec. 32, T. 1 S., R. 8 W., FM (F-026792). The BLM has determined that the Tanana River is navigable in T. 1 S., R. 8 W., FM, but has not yet made a navigability determination for the Tanana River in T. 3. S., R. 2 E., FM.[27]

Evidence of Commerce

The history of the Tanana River as a highway of commerce is well documented. In summarizing this history, it is useful to discuss first the Lower Tanana River and then the Upper Tanana River. These two reaches of the river are as different physically as they are historically. The Lower Tanana is that reach from the Yukon River to the confluence with Chena River; the Upper Tanana is that reach from the Chena River to the river's head at the confluence of the Nabesna and Chisana rivers.

Lower Tanana River (Mouth/Yukon River to Confluence with Chena River)

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[24] During the 1960's, the lands underlying the Tanana River were not segregated from uplands in tract surveys and the submerged lands were not excluded from TAs and patents to the State. The submerged land acreage was also charged against the State's entitlement. Later, under the Secretary's submerged land policy, the BLM recalculated the submerged land acreage, amended the survey plats, and deducted the submerged land acreage from charges against the State's acreage entitlement.
During the late 1970s and through the 1980s, the BLM consistently determined that the Tanana River was navigable on State TAd or patented lands in nearly half of these townships. These determinations were not incorporated into appealable decisions. Nor has the BLM issued decisions on the navigability of the river in the remaining townships.

[25] See files F-028008, F-027659, F-024657. In 1963, for example, the BLM issued a Decision granting TA to lands, including lands underlying the Tanana River, in T. 13 S., R. 15 E., FM. The Decision also contained this statement: "When the official plat of survey is filed patent will issue excluding navigable water acreage." The decision did not identify the navigable waters. In 1982, the BLM issued a "Notice" to the State that the Tanana River had been determined to be navigable in the township.

[26] Decisions incorporating navigability determinations were issued on May 23, 1990 for T. 18 N., R. 14 E., CRM (F-028038) and T. 20 N., R. 8 E., CRM (F028158). A decision issued on November 17, 1992, for T. 6 S., R. 3 E., FM (F-034579) did not include a navigability determination.

[27] Marion L. England, Natural Resource Specialist, Land Report, May 28, 1980, and Jules Tileston, Chief, Division of Resources, to State Director, August 5, 1980, and Robert E. Sorenson, Chief, Branch of Lands and Minerals Operations, Decision, March 11, 1981, file F-026792 (2627), BLM records.

Flowing northwesterly approximately 229 miles to the Yukon River through a wide valley averaging 50 to 60 miles in width, the Lower Tanana River has been (and is) the most heavily used reach by commercial boat operators. The majority of commercial boat traffic occurred as far upstream as the Chena River, on the banks of which Fairbanks is located. Wide meanders, a well-defined channel, and vegetated islands are characteristic of this reach. The river is wide, approximately 4,500 feet wide at the Chena River and 3,900 feet wide where it empties into the Yukon. The Tanana River falls at an average rate of 2.5 feet per mile, and its velocity has been estimated at 4 feet per second.[28] The river's average stream flow near its mouth is estimated as 37,000 cubic feet per second.[29] While frozen for approximately six months of the year, the river is usually open for navigation from mid-May to late October.

Until the early 1920s, Fairbanks was almost entirely dependent upon steamboats, barges, and gasoline-powered riverboats for the transportation of passengers, food, equipment, and materials from the states. Most of this traffic went over two routes. Marine vessels discharged passengers and freight at Skagway in southeast Alaska or at St. Michael near the mouth of the Yukon River.[30] As the tidewater terminus of the White Pass & Yukon Railway, Skagway provided year-round access to the navigable waters of the Upper Yukon at Whitehorse. With the opening of navigation (which occurs earlier than on the Lower Yukon), steamboats and barges hauled passengers and freight from Whitehorse or Dawson down the Yukon River and thence up the Tanana River. Later in the season, Lower Yukon riverboats arrived from St. Michael. Many of these boats succeeded in navigating the Tanana River to the Chena River and up that river a short distance to Fairbanks. If this was not practicable, the Tanana Mines Railway (renamed the Tanana Valley Railroad in 1907) was used to haul freight from Chena at the mouth of Chena River to Fairbanks and the nearby gold mining camps.

With the completion of the Alaska Railroad in 1923, the government town of Nenana (river mile 169), located approximately 60 miles downstream of the Chena River, replaced Fairbanks as the most important river port in Interior Alaska. Constructed and operated by the federal government, the Alaska Railroad provided a year-round link from the ice-free port of Seward to the navigable waters of Interior Alaska at Nenana. The railroad, which was also extended to Fairbanks over the line of the Tanana Valley Railroad, immediately captured the bulk of passenger traffic and freight shipments to and from Interior Alaska. As the large navigation companies withdrew from the field, the railroad entered the navigation business by providing barge services from Nenana to downstream points on the Tanana River, as well as on the Lower Yukon River as far downstream as Marshall. Independent riverboat men continued to operate on the Lower Tanana River, transporting passengers and cargo to towns, villages, and mines only accessible by smaller boats (e.g., launches) and barges. In addition, the White Pass Route continued to operate the steamer *Yukon* on the Whitehorse-Nenana run, a popular trip (called the "Golden Tour") among tourists until the outbreak of the Second World War. From the West Coast of the States and Canada, tourists traveled to Skagway by ship, to Whitehorse by railroad, and to Nenana by riverboat. From Nenana, they could take the railroad to Seward where they

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[28] Grumman, 4-28 and 4-29.

[29] Grumman, 2-70.

[30] Passengers and mail were also landed at Valdez or Cordova in Prince William Sound. Valdez was the tidewater port of the Valdez-Fairbanks trail. Cordova was the tidewater port of the Copper River & Northwestern Railway, which was connected by trail to the Valdez-Fairbanks trail at the railroad station of McCarthy.

booked passage on ships to the states or, if desirous of a longer trip, board the train to Fairbanks. Train connection were made with buses operating on the Richardson Highway to the ports of Valdez or Cordova in Prince William Sound.[31]

The Alaska Railroad riverboat service continued in operation until the mid-1950s. Each year the railroad barged thousands of tons of groceries, mining equipment, petroleum products, building materials, and heavy machinery down the Lower Tanana River and the Yukon River. Tonnages for the period 1933 to 1954 ranged from a low of 2,482 tons in 1933 to a high of 17,365 in 1945. In the period 1950 to 1954, tonnages rose from 6,155 tons to 10,655 tons. During the twenties and early thirties, the railroad's principal boats were the steamers *Gen. Jacobs* and the *Alice*. In 1933, the *Gen. Jacobs* was replaced by the new palatial steamer, the *Nenana*.[32] Both the *Nenana* and the *Alice* were retired in the early fifties. In 1955, the railroad's floating equipment included the MV *Tanana* (120' long), MV *Yukon* (120' long), and steamer *Nenana* (238' long), in addition to numerous barges (29 to 44 feet long).[33]

In 1955, the railroad quit the riverboat business; the Yutana Barge Lines entered the field and purchased the MV *Tanana* and MV *Yukon*.[34] Other commercial operators with headquarters at Nenana included the Peterson Navigation Company and Inland Riverways, Inc. These companies transported passengers and cargo from Nenana to military bases and villages along the Yukon River. Cargo consisted mainly of petroleum products, groceries, and hardware. Several trips were made each year to the Lower Yukon (e.g., Marshall) and five trips to Fort Yukon on the Upper Yukon.[35] In 2005 the assets of the Yutana Barge Lines were sold to Crowley Maritime Corporation.[36]

The Federal Aviation Administration and its predecessors also operated freight boats on the Lower Tanana River. From 1942 to the mid-1950s, the agencies annually transported groceries and fuel by boat and barge to its radio stations at Lake Minchumina in the headwaters of the Kantishna River and at Bettles on the Upper Koyukuk River.[37] Thereafter, the agency used cargo airplanes to supply its stations.

After the Second World War, riverboat travel on the Lower Tanana River again became a popular tourist attraction. In 1950 Jim Binkley started a tourist business called Arctic Alaska Travel Service, and offered trips on the Chena and the Lower Tanana Rivers in the 40-foot launch *Godspeed*, which was capable of carrying 26 passengers. Several years later, he built the stern wheel riverboat *Discovery* for round-trips from Fairbanks to Nenana. He then purchased the towboat *Yutana* from Yutana Barge Lines and after extensive renovations, renamed it the

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[31] To reach Cordova, travelers had to catch the Copper River & Northwestern Railway at Chitina.

[32] *Fairbanks Daily News-Miner* (FDNM), May 15, 1933, 5.

[33] Grumman, 3-27.

[34] FDNM, November 20, 1957, 90. The steamer *Alice* was "retired." The railroad eventually sold the steamer *Nenana*. It is presently at Alaskaland, a historical park in Fairbanks.

[35] See Selkregg, 301, for photo of barge, tugboat, at Nenana.

[36] See "Ruby Marine Launches Triple-Screw Tug: Yukon"; and Bodony, "Ruby Marine Enters the Yukon River Barge Business."

[37] It is not known exactly when the FAA's annual voyages ceased. Lindsay cited the year 1954; Collins, 1955. See Gudgel-Holmes 1979, 110; and Warren "Slats" Lindsay to Mr. and Mrs. Holmes, July 4, 1982, in Gudgel-Holmes.

Discovery II. The local newspaper reported in 1968 that the 85-foot *Yentna* had been added to the fleet, but this report has not been corroborated. According to Wikipedia, the tour boat Discovery III, launched in 1987, was the next addition.[38] The tour company operates large riverboats on the Chena and the Lower Tanana Rivers to the present day.

Upper Tanana River (Confluence of Chena River to Head/Confluence of Nabesna and Chisana Rivers)

Early in the Alaska gold rush era, the Upper Tanana River was successfully tested as a potential highway of commerce. Unlike on the Lower Tanana River, heavy commercial boat traffic did not immediately develop on this reach of the river. Steamboat captains seldom visited this reach, partly because there was little demand for their services and because the costs and risks of navigating the reach between Fairbanks and Big Delta were high. Large quantities of wood were required to fuel these steamboats making them costly to operate, especially on such a fast river. Hidden snags as well as rocks in the shallow, turbid, and fast waters could potentially tear a hole in the hull and were a constant worry to steamboat captains.

The reach between Big Delta (confluence of the Delta River at river mile 318) and the Chena River was regarded by experienced riverboat operators as especially difficult to navigate. This reach, a distance of 89 miles, is the steepest for the entire river, falling at an average rate of 4.9 feet per mile. It is also one of the most braided sections of the entire river. Five miles below Delta River, the Tanana is up to 10,500 feet wide. At the Chena River, it is approximately half that width.[39] One observer wrote of this reach: "Bank erosion is constantly taking place, as is accretion. Many trees lie beached on gravel bars throughout. When surveyed in July 1974, during what our helicopter pilot, Gary Stryker, said was a relatively high stage, the waters appeared to be boiling, very turbulent, with large up-wellings." The current is fast, estimated at 5.5 miles per hour.[40]

Above the Delta River, the Upper Tanana, approximately 264 miles long, is approximately 500 to 1,000 feet in width and falls an average of 2.9 feet per mile. The river follows the eastern side of a relatively narrow valley. Between Johnson River and Delta River, the river is highly braided and ranges in width from 700 feet to 2,700 feet. River velocity was estimated at between 8 and 12 feet per second.[41] After flying down this reach in a helicopter in July 1974, an employee of Grumman Ecosystems, Inc. recorded his observations of this reach:

> The Tanana River in this reach is varied in character. The only consistent characteristics are its large volume and heavily silted waters. There are relatively few areas where the river is confined to one channel; most sections are braided, and several are extremely braided. However, the main channel of main flow was always recognizable during the July 1974 helicopter reconnaissance. The flow was very powerful and in

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[38] FDNM, July 1, 1950, 7. June 5, 1952, 11, and April 29, 1968, 6; Hedrick and Savage, 92; see also website en.wikipedia.org/wiki/Riverboat_Discovery. In 1950 Binkley advertised the MS *Godspeed* as a pleasure launch available for picnic parties. A photo of tourists on the *Godspeed* appears in the FDNM, July 12, 1951, 1. Photos of the *Discovery* appeared in the FDNM, May 25, 1960, 1, and June 10, 1960, 5.

[39] Grumman, 4-10 and 4-26.

[40] Grumman, 4-28 and 4-29.

[41] Grumman, 4-12 and 4-13.

some instances, standing waves were evident, especially where constricted (Cathedral Rapids). Many trees lie beached on small islands throughout this reach, while many of the larger islands were vegetated.

Important landmarks in the area include Tetlin Lake and Cathedral Bluffs. Situated in a broad lowland area of numerous bogs and small lakes, Tetlin Lake, which empties into the Tanana through Tetlin River, is the largest lake in the Upper Tanana district. At Cathedral Bluffs, below Tanacross and above Robertson River, the river is constricted in a narrow (one-quarter mile wide) valley for a short distance.

Rather than chronicle the history of commercial freight boats on the Upper Tanana, it will suffice to describe two significant events in that history as well as the fur traders' operations. The 1905 voyage of the steamer *Ella* was the first test of the Upper Tanana as a potential commercial highway. During the Chisana gold rush of 1913, riverboat captains further demonstrated that freight boats of different sizes and power could be taken up the river. Finally, the fur traders of the 1920s and 1930s proved that gasoline-powered launches could be successfully operated on the Upper Tanana.

Steamer Ella's Voyage of 1905

In 1905, the steamboat *Ella* ascended the Tanana River from its mouth to its head, thereby becoming the first large boat to make the voyage successfully. Launched on May 20, 1905, at Whitehorse, Yukon Territory, the stern wheel, gas-burning boat was 120 feet long with a 26-foot beam and a draft of 11 inches.[42] Henry Bratnober, a mining engineer, had the boat especially built for the voyage. Having prospected several potentially rich copper and gold deposits in the headwaters of the White and Copper Rivers, Bratnober wanted to determine whether the Tanana River was a practicable route of transportation to these finds.

Few details are known about the voyage itself. Bratnober was accompanied by Carl F. Whitham, D. C. "Bud" Sargent, and George C. Wilson, all of whom were to play important roles in the discovery and development of mines in the headwaters of the Chisana and Nabesna rivers. (Whitham eventually developed an important hard-rock mine on the Upper Nabesna, and Wilson held valuable placer gold properties on the Upper Chisana.) The boat did not carry cargo, except supplies, on its maiden voyage. According to historian Cole, the men experienced great difficulties in ascending the river, but eventually reached the mouth of the Nabesna River on July 24, 1905. The boat was then taken up the Nabesna River for a distance of 10 to 15 miles. The men spent the winter there, transporting their outfits over the river ice to Camp Creek on the upper reaches of Nabesna River. The following spring, the steamboat returned to the Lower Tanana River, where it was engaged in moving freight for mining and trading companies.[43] It never returned to the Upper Tanana.[44]

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[42] *Dawson Daily News*, June 22, 1905, 2.

[43] Cole 1979, 41; Brown 1979, 23. In 1906 the steamboat was reported at Chena, unloading 250 pounds of freight for the Tanana Trading Company, which operated on the Kantishna River.

[44] Bratnober ultimately decided that the Tanana River was not the best route to the mining properties on the Chisana and Nabesna Rivers. In subsequent years, he and his associates used overland routes from Valdez and Cordova in Prince William Sound by way of Gulkana on the Valdez trail in traveling and transporting supplies to the prospects.

After the voyage of the *Ella*, few commercial freighters ventured up the Tanana River beyond the Chena River. Prospectors, miners, missionaries, and traders occasionally hired freight boats like the steamer *White Seal* to transport them and large quantities of supplies, trade goods, and equipment to the Salcha River, Tenderfoot Creek, Big Delta, and various Indian villages farther upriver.[45] Furthermore, the Army occasionally used the steamer *Gen. J.W. Jacobs* to transport supplies and equipment to Big Delta, where the Valdez-Fairbanks Trail crossed the Tanana River and the U.S. Signal Corps maintained an important telegraph station. Usually these trips were made once a year.[46] (The Alaska Road Commission also operated a ferry across the Tanana River at Big Delta until the State of Alaska built a bridge over the river in the 1960s.)

Chisana Gold Rush of 1913

The second major test of the Upper Tanana River as a commercial waterway occurred during the Chisana Gold Rush of 1913. Several transportation companies and many private parties from Fairbanks and other mining camps on the Lower Tanana River set out to the new strike on the upper reaches of the Chisana River in stern wheel and side-wheel steamboats, gasoline launches, and poling boats. Perhaps as many as 300 people left Fairbanks for the new camp of Chisana in July, August and September 1913. The Northern and American-Yukon Navigation Companies, the principal navigation companies in Interior Alaska, captured some of this travel exacting a $200 fare and an agreement to help cut wood for the steamboats. Freight rates were $250 to $350 per ton with a limit on outfits of 1,000 pounds per man. In return, as they were uncertain how far the river was navigable for their boats, the companies promised to transport the prospectors and their outfits upriver as far as possible.[47]

As many as 21 riverboats (excluding poling boats) participated in the Chisana stampede. Four boats—the *Reliance*, the *Tetlin*, the *Marathon*, and the *Mabel*[48] succeeded in reaching the head of the Tanana River (confluence of the Nabesna and Chisana Rivers). The Northern Navigation Company's *Reliance*, with 56 passengers, was the largest boat ever to reach that point. It made the round-trip from Fairbanks in 12 days. Perhaps as many as six boats—the *Tana*, the *Samson*, the *S. & S.*, the *Martha Clow*, and possibly the *Zodiak* and the *Shushana*—reached points above Tanacross before forced into winter quarters. The remainder wintered at lower river points or returned to Fairbanks. By early spring, it was determined that the Chisana field was not as rich or extensive as first supposed, and the navigation companies quit the Upper Tanana River. Their steamboats returned to Fairbanks following breakup in the spring of 1914, never to return to the Upper Tanana River.[49]

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[45] In 1908, for example, the steamer *White Seal* landed miners' freight at the mouth of the Salcha River. *Tanana Tribune*, September 10, 1908, 4; *Fairbanks Daily Times*, September 23, 1908, 2. In 1909 the Bureau of Education, then considering a proposal to open a schoolhouse in the Upper Tanana district, learned that "the 'White Seal' is the only boat which goes to Tanana Crossing, and makes not more than two trips during the summer. The freight charges from Fairbanks to Tanana Crossing are about $200.00 per ton." See George Boulter letter, January 14, 1909.

[46] FDNM, August 23, 1920, 1, and August 23, 1921, 4.

[47] Brown 1979, Pg. 24.

[48] The *Mabel* was a 40-foot sternwheeler, owned by Martin Moran and Clarence O'Flannigan of Iditarod. In the fall of 1913 she made the trip from Fairbanks to Gasoline City on the Chisana River in 23 days, pushing a 40-foot barge. Brown 1979, 22-23.

[49] Cole 1979, 20; Brown 1979, 25

Fur Traders and Freight Boats, 1914-40

After the Chisana Gold Rush, fur traders regularly operated freight boats on the Upper Tanana River. From Big Delta, they transported supplies and trade goods to trading posts at all the principal Indian villages--Healy River, Tanana Crossing (Tanacross), Tetlin, and Nabesna where some 300 Indians and less than a dozen white men lived. The traders also carried mail and freight to the Episcopalian mission at Tanana Crossing and later to government schools at Tanana Crossing and Tetlin. Each spring the freighters transported furs downriver to Big Delta where the furs were loaded onto trucks for shipment to Fairbanks.

By the early 1920s, freighters no longer had to navigate the reach between Fairbanks and Big Delta. After the First World War, the Alaska Road Commission systematically improved the Richardson Road so that the Richardson Highway Transportation Company and others could operate a truck and bus stage service between Big Delta and Fairbanks. Riverboat operators used Big Delta as a jumping-off point to the Upper Tanana, relying on trucks to transport passengers, mail, trade goods, provisions and the like between Fairbanks and Big Delta. Each year after the trapping season, riverboat men discharged tons of furs from the Upper Tanana at Big Delta for shipment by truck to Fairbanks. Rather than relying upon wood for power, freighters began to operate gas-powered launches on a regular basis. This transportation system continued until the 1940s with the outbreak of World War II and the construction of the Alaska Highway and large airfields. Trucks and cargo planes then replaced freight boats in the district.

Fur traders with headquarters at Healy River usually chartered freight boats to deliver their trade stock. These traders included, successively, W.H. Newton (1907-24), Emil Hammer (1924-37), and Ted Lowell (1937-42).[50] For example, W.H. Newton, who also operated a post at Tanana Crossing from 1912 to 1914,[51] chartered the steamer *Tetlin* in 1911; the steamer *Tana* in 1912; the steamer *White Seal* and the steamer *Atlas* in 1916, Charles Maxfield's launch in 1918, and the steamer *Reliance* in 1919.[52] Most newspaper articles about these trips rarely mentioned the amount of tonnage delivered to a trading post. However, in 1911, a newspaper reported that Newton had twelve tons of freight barged upriver by the steamer *Tetlin*. The trip was difficult as the men had to line the boat through stretches of high and swift water.[53]

Traders at Tanana Crossing, Tetlin, and Nabesna usually owned and operated their own freight boats. Captain James A. Northway is considered to be the first trader in the Tetlin area.

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[50] Fairbanks Daily News Miner (FDNM), May 4, 1926, 1, FDNM, January 4, 1938, 8; FDNM, November 24, 1942, 6; Wold 1988, 156-165.

[51] Newton opened the Tanana Crossing post in the same year that the Episcopalian mission was started. In fact, Newton and his family and the Episcopalian missionaries were on Captain Wallace Langley's steamer, the *Tana*. The steamer left Fairbanks on July 27 and reached Healy River on August 8. The boat was unable to reach Tanana Crossing with some 30 tons of cargo. The freight was unloaded on the riverbank. After this trip, Captain Langley was quoted as saying, "it was the first trip of the Tana to the waters of the upper Tanana, and . . . it would be the last one, too." The boat encountered a stiff current of 10 mph in places. Near the mouth of George Creek, above Healy River, it took an hour to make a half mile. The missionaries were transported by poling boat to Tanana Crossing. Fairbanks Daily Times (FDT), July 24 (p. 4), 27 (p. 2), August 15 (p. 2), and August 5 (p. 4), 1912.

[52] FDT, July 22, 1919 (p. 1), September 28, 1916 (p. 1); and FDNM, July 16, 1918, 3, and July 25, 1919, 1.

[53] FDT, July 27 (p. 3), July 28 (p. 2), and August 2, (p. 4), and August 13, 1911 (p. 4).

Northway arrived at Tetlin with his steamer, the *Roughneck*, about 1909. He staked out a trading post site along the Tetlin River, and spent the winter trading with the Indians and prospecting the area. This may have been his only trip to Tetlin by boat. The following year, Northway planned to return to Tetlin with his steamboat, renamed the *Tetlin*. However, while on a trip with freight for the trader W. H. Newton and several prospectors at Healy River, he ran the steamboat aground and was unable to refloat it until the following spring. In later years, Northway returned to the Tetlin area several times, but not by boat. Instead he traveled over the Valdez Trail to Gulkana and thence to Nabesna River and Tetlin by horse. While he traded with the Tetlin Indians, he appeared to be more interested in performing assessment work on his mining claims in the area. After the Chisana Gold Rush, Northway left the Upper Tanana for Cook Inlet, where the federal government had established its headquarters for the construction of the Alaska Railroad. During the construction years, Northway operated a store at Girdwood and later a roadhouse at Kern Creek. He died in 1923 on the steamer *Little Delta* en route to Tanana Crossing where he planned to establish a fur trading business.[54]

After the First World War, at least four traders with riverboats were operating on the upper reaches of the Tanana. They include Captain Clarence D. O'Flannigan, John K. Hajdukovich, Milo Hajdukovich, and Herman Kessler. All owned and operated freight boats. Aside from furs and trade goods, the freighters carried mail and supplies to the mission at Tanana Crossing as well as prospectors' outfits.

By 1921 Captain Clarence D. O'Flannigan (died 1950), who had taken the steamboat *Mabel* to the Upper Tanana during the Chisana gold rush in 1913, was operating stores at Tanana Crossing, Tetlin, and Nabesna.[55] In 1916, on a freighting trip to Tanana Crossing, he lost the steamer *Atlas* in an accident near the Little Delta River. In 1920 he owned and operated the new steamboat, the *Nabesna*, on the Upper Tanana. In 1928 he also used a poling boat with an outboard motor. He commented to a Fairbanks newspaper reporter that the round-trip used to take an average of 29 days, however, now with the poling boat he could travel the 200 miles upriver in 51 hours and return in 12 hours. In 1929, in poor health, he sold his three posts to Milo Hajdukovich. Milo also purchased a gas boat for freighting purposes. It is not known whether he also purchased the steamer *Nabesna*.[56] In the early 1930's he sold his interests to his cousin John K. Hajdukovich.

By the early 1930s, John K. Hajdukovich and Herman Kessler dominated the trade in the Upper Tanana. Hajdukovich, a Montenegrin who owned a roadhouse at McCarty (Big Delta), probably entered the Upper Tanana fur trade in the early 1920s. His principal posts were located at Tanana Crossing and Tetlin. Herman Kessler, a German, started trading with the Nabesna and Tanana Crossing Indians around 1921. He also had a post near the mouth of Gardiner Creek, a tributary of the Chisana River, where he traded mostly with the Scottie Creek band of Indians.[57]

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[54] McKennan 1959, 25; Guedon 1974, 13. FDT, September 19, 1912, 1; FDNM, September 13, 1923, 4; and "Sourdough Notes," *The Pathfinder*, IV(December 1922): 16.

[55] O'Flannigan's engineer, Dave Early, operated the Nabesna post until his death in 1927.

[56] FDT, September 23, 1916, 1 and September 28, 1916, 1; FDNM, September 22, 1916 , 1, September 7, 1920, September 8, 1920, 1, February 20, 1922, 4, August 17, 1927 , 1, June 18, 1928, 8, January 17, 1930, 8, May 15, 1930, 8, December 15, 1930, 5, February 25, 1950, 1. FDNM June 11, 1930; John Hajdukovich letter to Theodore Lowell, July 15, 1931.

[57] McKennan 1959, 26.

Both traders owned and operated freight boats. By 1936 Kessler and Hajdukovich each had two large boats and various smaller boats.[58] One of Kessler's boats was described by the Fairbanks newspaper as a large motor boat with a capacity of about ten tons. According to Cole, Kessler had a 40-foot freight boat with a 50-horsepower Redwing engine.[59] One of Hajdukovich's two boats may have been 50 feet long; the other, 55 feet long. Ted Lowell, who worked for Hajdukovich from 1929 to 1935, recalled that the trader regularly used a 30-foot freight boat with a 12-horsepower kicker on the Upper Tanana and Chisana Rivers.[60] In 1938, the Fairbanks newspaper reported Hajdukovich using a 40-foot launch to transporting supplies to Healy River.[61]

Each year the traders probably transported 100 to 200 tons of supplies to the Upper Tanana villages, returning to Big Delta with furs valued in the thousands of dollars.[62] In 1926 John Hajdukovich claimed that 50 to 60 thousand dollars in furs were annually exported from the Upper Tanana district.[63] In 1930 an official with the U. S. Bureau of Education visited the Upper Tanana district and reported that the traders charged $120 a ton to haul from Fairbanks to Tanana Crossing. At that time, small gas boats capable of carrying three tons of freight were used on the Upper Tanana, the trip from Big Delta to Tanana Crossing usually taking eight to ten days.[64] In 1938, a representative of the American Association of Indian Affairs, Inc., visited the Upper Tanana district and reported that the cost of transportation was "excessively high" at $100 a ton. One trader claimed that it cost $140 a ton.[65]

Following the outbreak of World War II, the Upper Tanana's isolation was forever altered. The Civil Aeronautics Administration constructed a large airfield at Northway (1941), and the Army built the Alaska Highway (1942) and established stations at Northway and Big Delta. Readily accessible by automobile and airplane, the Upper Tanana villages (except Tetlin[66]) no longer had to rely upon the traders to transport supplies and furs with their freight boats. By 1948, both Hajdukovich and Kessler had quit the fur trading business because of low prices and competition.[67]

Sloughs, Braids, and Channels

The State of Alaska applied for "all sloughs, braids and channels between the ordinary high water lines of the left and right banks of the Tanana River." It is not necessary to determine

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[58] Cole 1979, 30. Cole pointed out an undated document in the John Hajdukovich archives in UAF listing J.H.'s boating equipment. He listed nine boats, including four poling boats, and three gas boats. Cole 1979, 29.
[59] FDNM, June 29, 1935, 4; and Cole 1979, 30.
[60] A photograph of the Big Delta ferry and John Hajdukovich's power boating Endicott 1928, 63.
[61] FDNM, August 16, 1938, 7.
[62] In the fall of 1937, Kessler and Hajdukovich operated their four boats, relaying some 100 tons of freight from Big Delta to Tanacross. FDNM, September 13, 1937, 3. The local Fairbanks newspaper often reported the two traders hauling freight up the Tanana River to Tanana Crossing and other villages.
[63] John Hajdukovich letter to the Officer in Charge, Washington-Alaska Military Cable and Telegraph System, Valdez, March 27, 1926.
[64] Beck 1930, 29-30.
[65] Burge 1938, 35.
[66] Tetlin is still accessible only by boat in summer and by airplane year-round. Guedon 1974, 19-20.
[67] Frank Chapados memo, October 24, 1949.

whether any specific slough, braid or channel was used, or was susceptible to use, for travel, trade, and commerce at the time of statehood. As a general rule, if the river was navigable in fact, and if the waters of the river flow through the sloughs, braids and channels at the time of statehood, then the sloughs are an integral part of the navigable river and are thus navigable as well. If the lands underlying these waters were not reserved by the United States, then title to the lands underlying the waters transferred to the State at the time of statehood under title navigability law and is subsequently governed by riparian law.

Conclusion and Recommendation

The Federal test of navigability is found in *The Daniel Ball*, 77 U.S. (10 Wall.) 557 (1870). The U.S. Supreme Court stated: "Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water."

In assessing the navigability of inland water bodies, the BLM relies upon this test as well as Federal statutes, Federal case law, and the advice of the Interior Department's Solicitor's Office. Relevant Federal statutes include the Submerged Lands Act of 1953 and the Submerged Lands Act of 1988. The Supreme Court's most recent decision on title navigability, *PPL Montana, LLC v. Montana*, 565 U.S. ___ (2012), summarizes and explains the proper interpretation of *The Daniel Ball* criteria. Associate Solicitor Hugh Garner's memo of March 16, 1976, ("Title to submerged lands for purposes of administering ANCSA") and Regional Solicitor John Allen's memo of February 25, 1980 ("Kandik, Nation Decision on Navigability") provide valuable guidance on applying title navigability law in Alaska. In cases concerning prestatehood reservations, BLM uses the established criteria set out and applied by the Supreme Court in two Alaska cases, *Alaska v. United States,* 545 U.S. 75 (2005) ("*Glacier Bay*") and *United States v. Alaska*, 521 U.S. 1 (1997) ("*Arctic Coast*"/"*Dinkum Sands*").

After reviewing the State of Alaska's application, the riparian land status, the Federal land withdrawals, the historic record as set forth above, and the legal guidance, we conclude that the Tanana River in its entirety was navigable, or was susceptible to use for travel, trade and commerce at the time of statehood. The State's application did not include the river segments withdrawn by EO 8020 (Dyke Range Impact Area), EO 8847 (Aerial Bombing and Gunnery Range) and EO 5365 (Tetlin Native Reserve); therefore, this report does not address the status of the submerged lands described in these withdrawals.

Therefore, title to the bed of the river, as described in the State's application and subsequent amendment, transferred to the State of Alaska upon the date of Statehood, January 3, 1959.

Attachment – Bibliography

ATTACHMENT
BIBLIOGRAPHY

"Alaska Railroad Public Hearing, Tanana and Yukon Rivers Service, Fairbanks, Alaska, April 21, 1949." FY 46-63 Riverboats, file 420.10, Box 90401, Records of the Alaska Railroad, Record Group 322, Federal Record Center. Microfiche copy in writer's files.

Beck, E. J. "Report of Official Visit to Upper Tanana and Copper River Valleys, Dec. 28, 1929 to February 14, 1930," March 4, 1930, File Special Cases—John Hajdukovich, Information on Upper Tanana Indians, 1930-32, General Correspondence Files, Alaska Division, Records of the Bureau of Indian Affairs, Record Group 75, National Archives, Washington, D.C.

Bodony, Tom. "Ruby Marine Enters the Yukon River Barge Business," Radio KIYU Newsroom, at www.kiyu.com/news0307_1. (November 22, 2010)

Boulter, George. Letter to Commissioner of Education, January 14, 1909. File Ketchumstock-4, 1909, Alaska Division Files, Box 2, Entry 806, Record Group 75, National Archives, Washington. Microfiche copy in writer's files.

Brown, C. Michael. "Navigable and Non-Navigable Water Bodies in the Northway Area, Eastern Alaska," March 16, 1979. Unpublished manuscript in writer's files.

Burge, Moris. "Report of field Representative: Indians of the Upper Tanana Region of Alaska, September 1938," American Association on Indians Affairs, Inc., October 25, 1938, Mallinckrodt Collection, Western Historical Manuscript Collection, University of Missouri-St. Louis, MO.

Chapados, Frank. Memorandum, October 24, 1949, File 920.2 Trapping (Tetlin, Tanacross, Northway), Juneau Area Office, FRC 1603, Records of the Bureau of Indian Affairs, Record Group 75, Federal Record Center, Seattle, Washington. Microfiche in writer's files.

Cole, Terrence M. "Historic Use of the Chisana and Nabesna Rivers, Alaska." Unpublished. Manuscript, Alaska Resources Library and Information Services, Anchorage, May 1979.

Cole, Terrence M. *E. T. Barnette: The Strange Story of the Men Who Founded Fairbanks.* Anchorage: Alaska Northwest Publishing Company, 1981.

Endicott, H. W. *Adventures in Alaska.* New York: F. A. Stokes Co., 1928.

Fairbanks Daily News-Miner, 1916-1976.

Fairbanks Daily Times, 1911-16.

Grauman, Melody. The *Last Frontier: A History of the Yukon Basin of Canada and Alaska.* Albuquerque: University of New Mexico, 1985.

Gudgel-Holmes, Dianne. *Ethnohistory of Four Interior Alaskan Waterbodies* [Upper Kuskokwim, Nenana-Wood River; Kantishna River, Nowitna River]. State Department of Natural Resources, Division of Research and Development. August 1979.

Gudgel-Holmes, Dianne. Records, Kantishna Oral History Project, 1910-1984, Archives and Special Collections, University of Alaska, Anchorage.

Guedon, Marie-Francoise. *People of Tetlin, Why Are You Singing?* Mercury Series, Ethnology Division Paper No. 9. Ottawa: National Museum of Man, 1974.

Grumman Ecosystems, Inc. *Report on Navigability of Streams Tributary to the Tanana River, Alaska.* Bethpage, New York: The Corporation, 1975.

Hajdukovich, John. Letter to the Officer in Charge, Washington-Alaska Military Cable and Telegraph System, Valdez, March 27, 1926, frames 359-60, roll 139, Governors' Records, Microfilm Publication M939, National Archives, Anchorage.

Hajdukovich, John. Letter to Theodore Lowell, July 15, 1931, Land Papers File, John Hajdukovich Papers, Delta Historical Society, Alaska.

Hedrick, Basil, and Susan Savage. *Steamboats on the Chena: The Founding and Development of Fairbanks, Alaska.* Fairbanks, Alaska: Epicenter Press, 1988.

Hovis, Logan. "Compilation of Alaska and Yukon Territory (Canada) Newspaper Articles Relating to the Kantishna Gold Rush, 1905-06." Unpublished report, 2006.

McKennan, Robert A. *The Upper Tanana Indians.* Yale University Publication in Anthropology, No. 55. New Haven: Yale University Press, 1959.

Nenana News, 1916-23.

Orth, Donald J. *Dictionary of Alaska Place Names.* U.S. Geological Survey, Professional Paper 567. Washington: Government Printing Office, 1967.

"Ruby Marine Launches Triple-Screw Tug: Yukon," in *Professional Mariner*, June 20, 2007, at www.professionalmariner.com.

Selkregg, Lidia L. *Alaska Regional Profiles: Yukon Region.* Anchorage: Arctic Environmental Information and Data Center, 1976.

"Sourdough Notes," *The Pathfinder*, IV(December 1922): 16.

State of Alaska, Department of Transportation and Public Facilities, Bridge Section. "2007 Bridge Inventory Report." Juneau, Alaska. www.dot.state/ak/stwddes/desbridge/assets/pdf/2007bridgeinventory.

U.S. Bureau of Land Management, Alaska State Office, Records (ANCSA and State Selection serialized files).

U.S., Congress, House of Representatives. *Harbors and Rivers in Alaska. Letter from the Secretary of the Army. . . .* (33d. Congress, 2d sess., H. Doc. No. 414) Washington: Government Printing Office, 1954.

Wold, Jo Anne. *The Way It Was: Of People, Places and Things in Pioneer Interior Alaska.* Anchorage: Alaska Northwest Publishing Co., 1988.