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UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ALASKA

STATE OF ALASKA, Plaintiff, v. UNITED STATES OF AMERICA; CHICKEN VENTURES, LLC, an Alaska limited liability company; GEORGE W. SEUFFERT, SR.; GEORGE W. SEUFFERT, JR. Defendants.	CIVIL ACTION NO: 3:12-cv-00114-SLG **STATE OF ALASKA'S MOTION FOR SUMMARY JUDGMENT; ALTERNATIVE MOTION TO ESTABLISH LAW OF THE CASE; AND MEMORANDUM OF LAW IN SUPPORT**

Pursuant to Federal Rules of Civil Procedure 7 and 56, the State of Alaska moves for summary judgment, or in the alternative, to establish the law of the case.

INTRODUCTION

The State of Alaska ("state" or "Alaska") seeks to quiet title to the submerged land underlying much of the Mosquito Fork of the Fortymile River ("Mosquito Fork").[1] The state owns the submerged lands at issue because the Mosquito Fork, an otherwise unremarkable

[1] Complaint, Dkt., 1, ¶ 19; Exhibit A (Map of Mosquito Fork Area). This does not include portions of the river for which the state is the upland owner and there is no dispute as to ownership. *See* Complaint, Dkt. 1, ¶ 19.

Alaska river with a history of commercial use and physical characteristics that allow for trade and travel, was navigable-in-fact at the time Alaska entered the Union in 1959.

A "navigable-in-fact" river is a river that was (1) used, or was susceptible of being used; (2) in its natural and ordinary condition; (3) as a highway of commerce, over which trade and travel could be conducted; in (4) the customary modes of trade and travel on water.[2] The parties agree that the Mosquito Fork remains in its natural and ordinary condition. In addition, the parties generally agree on the Mosquito Fork's physical characteristics and hydrologic condition; its record of historic use; its record of post-statehood use; as well as the fact that the river is boatable for varying lengths of time during the open water season for various types of watercraft. The parties also generally agree on the types of watercraft that existed and were available for use at the time of statehood.

The parties disagree, however, on how to apply the navigability for title test. Under the law as set forth by the Supreme Court, applied by the Ninth Circuit, and recognized by the United States on other rivers in Alaska, "trade and travel" includes the buying and selling of commodities, including transportation for hire; the freighting of goods; and travel for an economic purpose, such as to prospect, mine, or to buy and sell commodities. Navigability only requires a showing that these activities could have occurred at statehood. Moreover, navigability does not require a long, continuous record of use, if the proponent of navigability demonstrates that the river *could have* been used for commerce at the time of statehood.

The generally agreed upon factual record shows that prospectors, miners, and explorers used the Mosquito Fork as a route of travel pre-statehood, and that a number of users including recreationalists (sightseers, hunters, fisherman, explorers), government workers, and miners continue to use the river post-statehood. The parties also agree that the following watercraft have been used on the Mosquito Fork and that versions of these watercraft existed in Alaska pre-statehood: canoes, airboats, poling boats, flat-bottom riverboats, and inflatable rafts. The boats used post-statehood are meaningfully similar to the boats used pre-statehood as they all have similar draft or water-depth requirements. This factual record establishes that the state is entitled to summary judgment on its claims.

In the alternative, the Court should establish the law of the case for trial as follows: (1) trade and travel includes the buying and selling of commodities, transportation for hire, as

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[2] *PPL Montana v. Montana*, 132 S.Ct. 1215, 1228 (2012).

well as travel without significant freight for the purpose of engaging in commerce; (2) river navigation need not be long, continuous, or without difficulty to demonstrate navigability; (3) navigability does not require a showing of actual use of the channel for trade and travel, merely a showing that trade and travel could have occurred; and (4) relevant watercraft include watercraft in existence pre-statehood that were capable of purposeful travel and modern watercraft with similar draft requirements.

FACTUAL BACKGROUND

A. Orientation to the portions of the Mosquito Fork at issue.

The Mosquito Fork drainage basin lies southwest of Chicken, Alaska and covers approximately 1,120 square miles.[3] From its headwaters, the river flows 140 river miles northeast to its confluence with the Dennison Fork. The Mosquito and Dennison Forks merge to form the South Fork of the Fortymile River, which flows into the Fortymile River and eventually drains into the Yukon River.[4] The United States has conceded that the portion of the Mosquito Fork from its confluence with the Dennison Fork upstream to its confluence with Chicken Creek, spanning river miles ("RM") 0 to 1.2, is navigable-in-fact.[5] The non-Federal Defendants conceded the navigability of the river from approximately RM 1.2 to 1.55 under the settlement agreement and stipulated final judgment.[6] The portions at issue include approximately RM 1.55 through 38, 39 through 44, and 53.5 through 80.5. RM 80.5 is just upstream from the river's confluence with Wolf Creek. The excluded sections of the river between RM 1.55 and 80.5 are portions of the river where the state is the upland owner, and, therefore, there is no dispute over the state's ownership of the submerged lands.

B. The physical characteristics and hydrologic condition of the Mosquito Fork.

The state and the United States, and their respective experts, generally agree about the physical characteristics and hydrologic conditions of the Mosquito Fork.

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[3] Exhibit B, at 21 (Expert Report of Dr. Robert A. Mussetter, Revised March 27, 2015 ("Mussetter Revised Report")); Exhibit C, at 11 (Expert Report of Dr. Hill, Macheel, Schwarz, Vohden ("Hill Report")).

[4] Complaint, Dkt. 1, ¶¶ 17–20; U.S. Answer, Dkt. 12, ¶¶ 17–20; Exhibit B, at 21 (Mussetter Revised Report); Exhibit C, at 11 (Hill Report).

[5] Complaint, Dkt. 1, ¶ 34; U.S. Answer, Dkt. 12, ¶ 34; Exhibit D (Navigability Determination for the Fortymile River Basin, June 29, 1983 ("1983 Determination"), Bates Stamp US-MFR0016426–US-MFR0016430).

[6] Settlement Agreement Between Plaintiff and Non-Federal Defendants, Dkt. 19.1; Stipulated Final Judgment (State and non-Federal Defendants only), Dkt. 44.

The open water season—when the river is not frozen—typically occurs from late-April or early-May through mid- to late-October.[7] The basin receives on average fifteen inches of precipitation with over seventy percent of that occurring as rainfall during the open water season.[8] "High water occurs each spring during the maximum runoff period, usually in May. Ordinary high water typically continues through June and part of July, dropping off gradually to a fall low, normally in late July or August. Rains also raise water levels for short periods."[9]

The area from RM 82 downstream to approximately RM 60 is generally known as the Mosquito Flats.[10] This portion of the river has a flat gradient—averaging a drop of approximately three feet per mile ("fpm")—and meanders over a bed primarily composed of sand and fine to medium gravel.[11]

Below Mosquito Flats to approximately RM 35, the river's gradient is generally four to five fpm.[12] Between approximately RM 35 to the Taylor Highway Bridge the river's gradient is about fourteen fpm.[13] The entirety of the river below Mosquito Flats is generally a "riffle-pool" reach with pools averaging between five to ten feet deep.[14] The bed material for the sections of the river downstream of Mosquito Flats consists of cobbles and boulders of various sizes.[15]

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7 Exhibit B, at 21 (Mussetter Revised Report).

8 Exhibit B, at 21 (Mussetter Revised Report).

9 Exhibit E, at 4 (Navigability of Mosquito Fork Fortymile River ("Draft Navigability Determination"), Basner Dep. Exhibit 11, Bates Stamp US-MFR0038031–US-MFR0038042).

10 Exhibit E, at 3 (Draft Navigability Determination).

11 Exhibit B, at 44 (Mussetter Revised Report); Exhibit F, at 12 (Kostohrys, J., Sterin, B., and Hammond, T. 1999, Water Resources of the Fortymile National Wild and Scenic River, Alaska, Stream gaging data, 1989–1995 ("Kostohrys Report")) ("[T]he upper portions of the drainage, especially the Dennison, Mosquito and Middle Forks, flow sluggishly on relatively flat headwater valleys dotted with lakes, sloughs and marshlands."); *see also* Exhibit E, at 4 (Draft Navigability Determination). As a comparison, the considerably steeper Nation River, which has been determined navigable, has an average gradient of fifteen to twenty fpm from its headlands to the mouth. The Kandik, another steeper but navigable river, drops a total of 500 feet in thirty-seven miles (averaging over 13 fpm). *Appeal of Doyon Limited*, 4 ANCAB 50, 86 I.D. 692, 712 (1979) ("*Kandik-Nation Decision*").

12 Exhibit B, at 24 (Mussetter Revised Report); Exhibit H, at 14 (BLM River Management Plan, Fortymile River, December 1983 ("1983 BLM Mgmt. Plan")) (attached without the Appendix).

13 Exhibit B, at 24 (Mussetter Revised Report); Exhibit H, at 14 (1983 BLM Mgmt. Plan).

14 Exhibit B, at 59 (Mussetter Revised Report); Exhibit H, at 14 (1983 BLM Mgmt. Plan).

15 Exhibit B, at 18–19 (Mussetter Revised Report); Exhibit H, at 14, 16, & 23 (1983 BLM Mgmt. Plan). A "riffle-pool reach generally consists of long pools of deeper water separated by

Below the Taylor Highway Bridge the gradient is approximately eight fpm.[16] As the Mosquito Fork flows past the community of Chicken (where the segment that the United States concedes is navigable begins), the bed material becomes finer and the stream spreads out into multiple channels.[17] The river returns to a more defined channel prior to joining the Dennison Fork.[18]

During the course of discovery, both parties' experts developed flow duration curves to characterize the range and duration of flows that occur during the open-water season on an average annual basis.[19] A flow duration curve provides the percentage of time a certain discharge (cubic feet per second or "cfs") will be equaled or exceeded on a particular river. For example, a 99% exceedance is close to the lowest daily flow during the period of record; 99% of the flows are higher and 1% are lower. Conversely, a 1% exceedance is close to the highest daily flow; 1% are higher, 99% are lower.[20] Although the experts' curves differ slightly, for the purposes of this litigation, the state will stipulate to the use of the curve developed by the United States' expert, Dr. Mussetter. As an example, using Mussetter's flow duration curve, the river will flow at 350 cfs or more at the Taylor Highway Bridge 70% of the time.[21] The relevance of this information is discussed in more detail below.

C. Pre-statehood use of the Mosquito Fork.

Much like the Mosquito Fork's character and conditions, the state and federal experts do not significantly disagree regarding historic use of the Mosquito Fork, starting long before statehood. There are multiple documented reports of watercraft being used on the disputed section of the Mosquito Fork pre-statehood. The earliest known use of the river by non-natives occurred in the late 1880s when Walter H. Pierce and thirty-one other prospectors pulled boats

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short riffle sections. Exhibit I, at 14 (Expert Witness Report of Drs. Whittaker & Shelby ("Whittaker and Shelby Report")).

16 Exhibit H, at 16–17 (1983 BLM Mgmt. Plan).

17 Exhibit H, at 16–17 (1983 BLM Mgmt. Plan); Exhibit F, at 12 (Kostohrys Report) ("As it approaches Chicken, the valley widens and the Mosquito Fork gradient decreases as the river meanders and braids into several channels upstream of the confluence with the Dennison Fork.").

18 Exhibit H, at 17 (1983 BLM Mgmt. Plan).

19 Exhibit B, at 49 (Mussetter Revised Report); Exhibit C, at 73 (Hill Report).

20 Exhibit I, at 8 (Whittaker and Shelby Report).

21 Exhibit B, at 58 (Mussetter Revised Report).

up the Mosquito Fork as far as Mosquito Flats (RM 60–82).[22] They reached the Mosquito Flats in late June or early July, left their boats, and hiked overland to the Tanana River. Later that season, the group returned to their boats and continued downstream on the Mosquito Fork. Although Pierce did not name the fork on which he traveled, as discussed by the United States' historian, C. Michael Brown ("Brown"), "'the description of the route of travel and the surrounding geography is consistent with the conclusion that Pierce made a journey through the Mosquito Flats.'"[23]

In 1898 and 1899, Robert Steel and his brother Tom traveled the Valdez-Eagle route to the Upper Yukon.[24] They eventually met two other prospectors and walked from Lake Mansfield to the Mosquito Fork, where they built a boat, and traveled downstream on the Mosquito Fork from Mosquito Flats (RM 60–82) to the South Fork. Steel later recalled that once they reached the Mosquito Fork, "from there on it was easy, all downstream to the Forty-Mile River."[25]

As noted by Brown in his expert report, the Steel brothers "were likely in the vanguard of a larger group of prospectors on the Valdez-Eagle trail" and probably reached the Mosquito Fork in the spring of 1899.[26] Another known trip during this time period included that of Shad Reid and his party. As documented in Reid's diary, they began construction of their boat on May 28, 1899 and three days later "moved down river about 9 miles[,] watter [sic] good for boating."[27] The group spent ten days prospecting in the vicinity of Indian Creek (RM 56.5) before boating downstream to Ketchumstuk Creek (RM 37.5), where they set up camp and prospected in the area. While at Ketchumstuk, natives reported that an individual had drowned farther down the river. On June 26, Reid, F.W. Kramer, and the Jacobson and Dun parties, left Ketchumstuk by boat and traveled downstream to Chicken. Reid reported in his diary: "Watter [sic] shallow and on the ripples we found it hard to get our boats over[,] sometimes requiring all

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22 Exhibit J, at 67–68 (Expert Report of C. Michael Brown, Alaska's Fortymile River and its Mosquito Fork ("Brown Mosquito Fork Report")); Exhibit K, at 25–26 (Expert Report of Dr. Buzzell, History of Use of the Mosquito Fork of the Fortymile River ("Buzzell Report")).

23 Exhibit J, at 68 (Brown Mosquito Fork Report).

24 Exhibit J, at 68–69 (Brown Mosquito Fork Report); Exhibit G, at 97–98 (Deposition Transcript Excerpts, Brown Dep. at 109:21–110:19); Exhibit K, at 37–38 (Buzzell Report).

25 Exhibit J, at 69 (Brown Mosquito Fork Report); Exhibit K, at 39 (Buzzell Report).

26 Exhibit J, at 69 (Brown Mosquito Fork Report).

27 Exhibit K, at 39 (Buzzell Report); Exhibit J, at 69 (Brown Mosquito Fork Report) (discussing Reid party trip).

hands to get the boat over."[28] On the following day, the parties reached a camp three miles below Ketchumstuk. Reid reported "only 2 men left here [and] all the others gone down river." [29] The men spent the following day repairing their boats. By July 1, they had made it downstream to camp at the mouth of Gold Creek, and on July 6, the parties had reached the mouth of Chicken Creek. Along the reach from Gold Creek (RM 24.75) to Chicken Creek (RM 1.25), Reid reported some difficulty boating the river. He wrote: "[W]orked all day boating down the river[,] had to walk and pull the boats most all the way."[30]

In spring 1899, Basil Austin and Nels Seaver also traveled the Valdez-Eagle Trail. They arrived by foot to Ketchumstuk Village on May 1 where they met the Rolf brothers who were building a boat to travel down the Mosquito Fork.[31] Basil and Seaver continued by foot to Chicken, and while staying in Chicken, saw several boats on the Mosquito Fork.[32] On May 22, Austin noted that "three Copper River men came down in a boat from above," and a few days later, another party reported one of their men drowned when their boat struck a rock and overturned upstream.[33] About a month after seeing them in Ketchumstuk, Austin and Seaver saw the Rolf brothers pass by in a boat. Austin reported that the brothers "had a very bad time getting down the Mosquito Fork on account of low water, were thoroughly discouraged, and going down the Yukon to St. Michaels and back home to Iowa."[34]

In 1899, another prospector named H.S. Conger made it to Gold Creek (RM 24.75) on foot.[35] While camping at Gold Creek in August, Conger saw multiple boats descending the Mosquito Fork from upstream. Although he believed the "[w]ater was too low for boating," he reported seeing "four more men" pass them on the river in boats and also noted that a husband and wife had left by boat the day before.[36]

In addition to the documented instances during the Klondike Gold Rush, Art Purdy, a longtime resident of the area, reported that he had helped line a boat up the Mosquito Fork to

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28 Exhibit K, at 39 (Buzzell Report); Exhibit J, at 69 (Brown Mosquito Fork Report).
29 Exhibit K, at 39 (Buzzell Report); Exhibit J, at 69 (Brown Mosquito Fork Report).
30 Exhibit J, at 69 (Brown Mosquito Fork Report); Exhibit K, at 39 (Buzzell Report).
31 Exhibit J, at 69 (Brown Mosquito Fork Report); Exhibit K, at 39 (Buzzell Report).
32 Exhibit J, at 69 (Brown Mosquito Fork Report).
33 Exhibit J, at 69–70 (Brown Mosquito Fork Report).
34 Exhibit J, at 70 (Brown Mosquito Fork Report); Exhibit K, at 40 (Buzzell Report).
35 Exhibit J, at 70 (Brown Mosquito Fork Report); Exhibit K, at 41 (Buzzell Report).
36 Exhibit J, at 69 (Brown Mosquito Fork Report); Exhibit K, at 40 (Buzzell Report).

Ketchumstuk Creek in 1918.[37] He also stated that prior to World War II, "there was a fair amount of freight and commerce going up and down" the South Fork.[38] Similarly, William "Bill" Bayless, another longtime resident of the area, testified that two of his uncles—Robert and Richard Roberts—freighted goods for hire on the South Fork and the Mosquito Fork both before and after World War II.[39] After World War II, the Roberts brothers primarily freighted during the spring and fall as they were busy mining throughout the remainder of the summer.[40]

Two instances stood out to Bayless. The first—which likely occurred in 1947 given Bayless's age—involved the Roberts brothers poling upstream to Mitchel's Ranch to retrieve the gear of two men who had likely traveled during the winter over the old telegraph trail from Tanacross.[41] The men had built a boat near Mitchel's Ranch (RM 65), but it was too small to carry their gear.[42] Upon arriving in Franklin, they gave Bayless the small boat and hired Bayless's two uncles to take a poling boat upstream to retrieve the remainder of their gear.[43] It took two separate trips to get the gear; the Roberts brothers transported it down from Mitchel's Ranch to Steel Creek.[44] In the second instance, the Roberts brothers took Bayless upstream with them to Ketchumstuk village (RM 37.5) to retrieve another person's gear.[45] Bayless reported that the river was shallow in some places and his uncles had to get out and pull the boat through the riffles.[46] Bayless's mother, Alice Bayless, kept a diary during this timeframe.[47] Although she did not specify where they were going or how much gear they were taking, in a diary entry for August 31, 1935, she writes: "Bob and Dick put old Jim in the boat and poled him up."[48]

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37 Exhibit J, at 69 (Brown Mosquito Fork Report); Exhibit K, at 77–78 (Buzzell Report).

38 Exhibit K, at 77 (Buzzell Report).

39 Exhibit L, at 20–21 (Deposition Transcript Excerpts, Bayless Dep. at 43:13–44:21); *see also* Exhibit K, at 100 (Buzzell Report) (Figure 72 is a picture of the uncles' poling boat).

40 Exhibit L, at 21 (Deposition Transcript Excerpts, Bayless Dep. at 44:8–44:21).

41 Exhibit L, at 10–12 (Deposition Transcript Excerpts, Bayless Dep. at 33:3–35:1).

42 Exhibit L, at 10–12 (Deposition Transcript Excerpts, Bayless Dep. at 33:3–35:1).

43 Exhibit L, at 10–13 (Deposition Transcript Excerpts, Bayless Dep. at 33:3–36:13); *see also* Exhibit K, at 99 (Buzzell Report) (Figure 71 is a picture of the boat given to Bayless).

44 Exhibit L, at 12–13 (Deposition Transcript Excerpts, Bayless Dep. at 35:20–36:8).

45 Exhibit L, at 23–24 (Deposition Transcript Excerpts, Bayless Dep. at 46:13–47:7).

46 Exhibit L, at 24 (Deposition Transcript Excerpts, Bayless Dep. at 47:8–47:2).

47 Exhibit M, at 19 (Expert Rebuttal Report by Buzzell ("Buzzell Rebuttal Report").

48 Exhibit M, at 19 (Buzzell Rebuttal Report); *see also* Exhibit N (Excerpt from Bayless Diary).

The last known documented pre-statehood trip occurred when William "Jack" Clark and three other individuals attempted to freight supplies upstream to a drilling outfit. As reported in the newspaper, the river was "very high" and about eight miles upstream from the mouth of the Dennison Fork, Jack Clark jumped out of his boat, landed in a deep pool and drowned.[49]

D. Post-statehood boat use on the Mosquito Fork.

The parties also agree that boat use on the Mosquito Fork continued post-statehood, with BLM documenting a substantial portion of this use. Sometime between 1963 and 1968, Hugh "Bud" Fate and Ralph Prude took a twenty-four-foot-long and three-foot-wide wooden riverboat with a lift from the Taylor Highway Bridge up the Mosquito Fork to a little past Ketchumstuk (RM 37.5) to moose hunt.[50] The trip occurred in the fall, and they used a thirty-five horsepower outboard motor.[51] Including people and gear, Fate estimates he had approximately 900 to 1,000 pounds in the boat during the trip.[52] On the lower section of the river, Fate recalls the river being "pretty rocky" with "pretty big boulders."[53] Although they hit a number of rocks and sheared two motor pins—which they repaired—the two hunters never had to get out of the boat to drag or leave the river to portage around any obstacles.[54] Replacing a pin was not difficult, according to Fate.[55] The boater simply pulled the boat over, knocked the old pin out and put in a new shear pin and kept going.[56] Fate typically carried six spare pins for a boating trip.[57]

Fate testified going downstream was not much different than going upstream as the current was not strong enough to harm or impair their ability to steer the boat.[58] Although this

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[49] Exhibit J, at 71 (Brown Mosquito Fork Report); Exhibit G, at 105 (Deposition Transcript Excerpts, Brown Dep. at 117:13–117:23); Exhibit K, at 92 (Buzzell Report).

[50] Exhibit O, at 8, 16–17 (Deposition Transcript Excerpts, Fate Dep. at 8:3–8:7; 17:8–18:14).

[51] Exhibit O, at 8, 16–18 (Deposition Transcript Excerpts, Fate Dep. at 8:3–8:7; 17:25–18:1).

[52] Exhibit O, at 18–19 (Deposition Transcript Excerpts, Fate Dep. at 19:23–20:5).

[53] Exhibit O, at 20– 21 (Deposition Transcript Excerpts, Fate Dep. at 21:14–22:4).

[54] Exhibit O, at 21–22 (Deposition Transcript Excerpts, Fate Dep. at 22:19–23:22).

[55] Exhibit O, at 22 (Deposition Transcript Excerpts, Fate Dep. at 23:6–23:14).

[56] Exhibit O, at 31, 12–3 (Deposition Transcript Excerpts, Fate Dep. at 32:7–32:14, 13:14–14:3).

[57] Exhibit O, at 22, 12–13 (Deposition Transcript Excerpts, Fate Dep. at 23:7–23:14, 13:14–14:3).

[58] Exhibit O, at 22–23 (Deposition Transcript Excerpts, Fate Dep. at 23:25–24:17).

was the only time Fate had traveled by boat on the Mosquito Fork, he visited the area other times via trails. On one trip, he encountered an individual that traveled to Ketchumstuk by boat.[59]

Anne Purdy, a local resident, documented a trip in June of 1961.[60] Skip and Paul Kinkstealer attempted to go upstream from the Taylor Highway Bridge in their motor boat. As described by Purdy, the trip went well for a while but then the river became too shallow and the men were forced to walk back to Chicken.[61]

In 1991, BLM conducted several interviews documenting post-statehood use on the Mosquito Fork.[62] Charlie Warbelow, a Fortymile Air pilot, stated that he had been flying people to Mosquito Flats for about thirty years.[63] He estimated that he flew three parties each summer to the Mosquito Flats area, often landing on a large lake known as "L Lake" (RM 74.5). The parties primarily used inflatable rafts, but some brought canoes, and they would float downriver to the Taylor Highway Bridge or even further downstream. One party was a group of four that included Harry Rodgers. The party successfully hunted a moose in the Mosquito Flats (RM 60–82), and with four individuals, the moose, and gear, the party successfully floated downstream to the Taylor Highway Bridge in a fourteen-foot raft.[64] Although no portaging was necessary, due to the weight of the raft, the party had to pull it over riffles in several places. Rodgers reported "no obstruction too difficult to pass" and stated that he intended to make the trip again.[65]

Tanacross resident Silas Solomon reported to BLM that he had "used a canvas canoe on the river from around Ketchumstuk." He also stated that he believed other types of boats could be used on the river up to Mitchel's ranch (RM 65), although he acknowledged shallow stretches and occasional rocks downstream of Chicken Creek.[66] Kenny Thomas, also of Tanacross, reported to BLM that he saw a raft carrying several men and gear on the river near Ketchumstuk

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59 Exhibit O, at 15, 29 (Deposition Transcript Excerpts, Fate Dep. at 16:17–16:2, 30:10–30:22).

60 Exhibit J, at 73 (Brown Mosquito Fork Report).

61 Exhibit J, at 73 (Brown Mosquito Fork Report); Exhibit K, at 133–34 (Buzzell Report).

62 Exhibit P (1991 BLM Interview Report); Exhibit G, at 118 (Deposition Transcript Excerpts, Brown Dep. at 130:15–130:17).

63 Exhibit P, at 5 (1991 BLM Interview Report).

64 Exhibit P, at 7 (1991 BLM Interview Report).

65 Exhibit P, at 7 (1991 BLM Interview Report).

66 Exhibit P, at 7 (1991 BLM Interview Report).

(RM 37.5).[67] Danny Granguard, an employee with Alaska Department of Fish and Game, reported to BLM that he witnessed people canoeing and rafting from "L Lake" (RM 74.5) down the Mosquito Fork during flyovers taken of the river during the course of his employment. Jon Martiniuk informed BLM that he had taken a loaded canoe on the Mosquito Fork as far upstream as Mitchel's Ranch (RM 65), and that on multiple occasions during various years he traveled upstream to Gold Creek (RM 24.75) in a thirteen-foot boat with a jet motor.[68]

BLM interviews also document trips taken by BLM Outdoor Recreation Planner Lon Kelly and BLM employee Jim Sisk. Kelly and a seasonal employee helicoptered into the Kechumstuk area in 1982 and floated downstream to the Taylor Highway Bridge in a canoe.[69] Based on his experience, Kelly reported that "there is no question that the river is very floatable from Ketchumstuk Creek [(RM 37.5)] in a canoe during normal water levels."[70]

Sisk took two trips. In 1984, he canoed the river from Gold Creek (RM 24.75) during a period of low water. He had to drag the canoe much of the way and "portage around one extremely shallow section of the lower river, but encountered no insurmountable obstructions." Sisk made his second trip in 1986, when he canoed from Moose Creek (RM 21.5). The river was higher and he found this trip to be a "nice easy float" as he "could maneuver around the lower rocky area . . . with no problem."[71]

In addition to the reports of use originating upstream of the Taylor Highway Bridge, BLM interviews also document several instances of use that occurred at or downstream of the bridge. Those include: (1) a trip by BLM Realty Specialist Kathy O'Reilly-Doyle from the bridge in an unknown watercraft; (2) a trip by Steve Peterson in an inflatable raft from Chicken; (3) a trip by BLM Hydrologist Mac Wheeler in a fifteen-foot Avon raft; (4) multiple trips from Tanacross resident Fred Terwilliger downstream from Chicken in a canoe, rubber raft, and skiff; and (5) a trip by Ron Warbelow and three other adults in a canoe in July 1982.[72]

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67 Exhibit Q, at 1 (Navigable Waters on Mosquito Fork Forty Mile River, May 10, 1991 ("BLM Follow-up Interview Report"), Bates Stamp US-MFR0016290–USMFR0016292).

68 Exhibit Q, at 2 (BLM Follow-up Interview Report).

69 Exhibit P, at 2, 7 & 9 (1991 BLM Interview Report (page 8 of the interview report is missing or does not exist)); Exhibit R (Forty Mile Float Trips Trip Report, Bates Stamp US-MFR0016361–US-MFR0016363).

70 Exhibit P, at 7 (1991 BLM Interview Report).

71 Exhibit P, at 4–5 (1991 BLM Interview Report).

72 Exhibit P, at 2–9 (1991 BLM Interview Report).

In a letter received by the state and provided to BLM, Clyde Baldwin reported traveling upstream to Ketchumstuk (RM 37.5) in an eighteen-foot "jonboat" with 40 and 50 horsepower jet units on multiple trips from 1985 through 1991.[73]

Both BLM and the state have taken more recent trips that originated above the bridge. In June or July 2000, Kevan Cooper, a Reality Specialist with BLM, and an archeology technician, floated in a fourteen-foot raft from Ketchumstuk (RM 37.5) to the Taylor Highway Bridge.[74] In addition to the two individuals, they had a cooler, tents, and other gear allowing them to travel three or four days.[75] Cooper testified that although there were rock gardens in the lower stretch of the river, the rock gardens did not prevent them from proceeding downstream.[76]

The second trip occurred over four days in June 2012. Six BLM employees floated sixty-four river miles from Mitchel's Ranch to Chicken Creek in two sixteen-foot rafts and one paddle raft (similar to an open canoe).[77] Each raft had approximately 1,200 to 1,400 pounds and the paddle raft included approximately 600 to 700 pounds.[78] Kevan Cooper, Jack Frost, and Ralph Basner were deposed about their experience. Cooper and Frost did not recall any boat drags,[79] and Basner testified that they touched rocks and boulders at times, but they never had to get out of the boat.[80]

State personnel from the Department of Natural Resources ("DNR") boated portions of the Mosquito Fork in 2009, 2011, 2012, and 2013.[81] In 2009, a team of three DNR employees floated from RM 45 downstream to Chicken Creek in thirteen-foot and fourteen-foot inflatable rafts. Each raft held approximately 1,000 pounds of gear plus team members, and during this trip

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[73] Exhibit S (Letter from Dennis Daigger to Mike Brown with Attachment, Bates Stamp US-MFR0016185–US-MFR0016186). A jonboat is generally considered a flat-bottom boat made of wood, fiberglass, or aluminum. *See* Exhibit I, at 26 (Whittaker and Shelby Report) (Figure 2 provides a graphic that depicts a typical jonboat).

[74] Exhibit T, at 5, 8–10 (Deposition Transcript Excerpts, Cooper Dep. at 5:11–5:15, 8:11–10:5).

[75] Exhibit T, at 8–10 (Deposition Transcript Excerpts, Cooper Dep. at 8:11–10:5).

[76] Exhibit T, at 11–12 (Deposition Transcript Excerpts, Cooper Dep. at 11:23–12:17).

[77] Exhibit U, at 9–11 (U.S. Responses and Objections to State of Alaska's First Request for Admission and Set of Interrogatories).

[78] Exhibit U, at 9–11 (U.S. Responses and Objections to State of Alaska's First Request for Admission and Set of Interrogatories).

[79] Exhibit T, at 19 (Deposition Transcript Excerpts, Cooper Dep. at 23:3–23:5); Exhibit V, at 10 (Deposition Transcript Excerpts, Frost Dep. at 44:17–44:23).

[80] Exhibit W, at 9 (Deposition Transcript Excerpts, Basner Dep. at 27:5–27:23).

[81] Exhibit C, at 81–87 (Hill Report).

they did not drag rafts or portage gear.[82] In August 2011, another team of three DNR employees boated the Mosquito Fork from just above the confluence with Wolf Creek (RM 80.5) downstream to Chicken Creek.[83] The team traveled in a fifteen-foot raft and a sixteen-foot cataraft, each outfitted with six horsepower "kicker" motors and approximately 1,200 pounds of gear, not including individuals.[84] Although some logs had to be removed either by hand or chainsaw, this did not prevent the team from proceeding downstream. They had to drag the boats a couple of times during this trip.[85]

In August 2012, a team of ten individuals, including state employees and consultants, boated the river from Wolf Creek to the Taylor Highway Bridge.[86] Watercraft included a fourteen-foot raft, fifteen-foot raft, sixteen-foot cataraft, and eighteen-foot cataraft. The boats were loaded with 900–1,300 pounds each (including passengers) and equipped with five and six horsepower kicker motors.[87] The water level on the 2012 trip (220 cfs) was the lowest of any of the known trips with quantifiable water levels. At the beginning of the trip, a smaller team motored upstream from the camp near L Lake (RM 75) to Wolf Creek. During this segment of upstream travel, one or more of the boaters had to get out of the boat about 45 times when the water was not deep enough to operate the outboard against the current.[88] This resulted in an average of nine drags per mile.[89]

Moving downstream, boaters left the boat twice for an average of 0.4 drags per mile. Traveling downstream from L Lake to above Ketchumstuk (RM 56), the team removed eight wood obstacles and had twenty-two boat drags (0.6 drags per mile). A majority of the drags were approximately five yards long, but a few were between twenty and thirty yards. According to the state's consultants, this segment of the river "has long reaches of deeper water sufficient to run

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82 Exhibit C, at 81 (Hill Report).

83 Exhibit C, at 82–83, 89–95 (Hill Report); Exhibit Y, at 10 (Deposition Transcript Excerpts, Steinberger Dep. at 17:7–17:14).

84 Exhibit C, at 82–83 (Hill Report); Exhibit Y, at 10, 11–26 (Deposition Transcript Excerpts, Steinberger Dep. at 17:7–17:14, 18:13–32:14); Exhibit I, at 21 (Whittaker and Shelby Report) (defining "kicker" motor as a motor that is usually ten horsepower or less).

85 Exhibit Y, at 10–26 (Deposition Transcript Excerpts, Steinberger Dep. at 17:7–32:14).

86 Exhibit C, at 84–85 (Hill Report).

87 Exhibit I, at 23 (Whittaker and Shelby Report).

88 Exhibit I, at 27 (Whittaker and Shelby Report).

89 Exhibit I, at 27 (Whittaker and Shelby Report). For purposes of this analysis, a drag is defined as getting out to lighten the boat or drag it over the obstacle. Exhibit I, at 8 (Whittaker and Shelby Report).

motors" even at the water level experienced in 2012. "In between these deeper reaches, cobble riffles were generally too shallow for motor use, although most were passable by tilting the motor and rowing/paddling." From Ketchumstuk to the Taylor Highway Bridge (approximately thirty-four river miles), the team had to drag the boat sixty-four times or an average of 1.9 boat drags per mile.[90] Most of the boat drags were short, but some may have been as long as 100 yards.[91] Within this segment, "[r]eaches of deeper water sufficient to run motors were less frequent and shorter," and "long cobble riffles were too shallow for motors."[92] The boat drags did not prevent the team from moving downstream and no obstacles required a portage.[93]

The fourth trip taken by the state occurred in September 2013, and participants included two state consultants and two DNR employees.[94] The team traveled in a fifteen-foot raft—loaded with approximately 1,100 pounds including three passengers—and a sixteen-foot cataraft—loaded with approximately 950 pounds including one passenger—from Ketchumstuk (RM 37.5) downstream to Chicken Creek (RM 1.2).[95] The raft had a kicker motor.[96] The water level for the 2013 trip was approximately 100 cfs higher (330 cfs) than the water level experienced in 2012.[97] From Ketchumstuk to the Taylor Highway Bridge, the team experienced thirty-six boat drags—an average of 1.1 per mile—and they were noticeably shorter than the drags experienced in 2012.[98]

In addition to the BLM interviews, BLM trips, and state trips, state consultants also interviewed several individuals that traveled downstream on the Mosquito Fork post-statehood. Kelly Bahl and another individual traveled downstream from L Lake in 2011 in an eighteen-foot cataraft. They added the weight of a large moose near Kechumstuk and did not need to drag the boat at any point. Bahl also traveled the river in 2013 via a raft. For this trip, he reported some drags, but none longer than fifty feet. Hunters Mike Mida and George Douslair traveled from

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90 Exhibit I, at 28 (Whittaker and Shelby Report).
91 Exhibit Z, at 10–11 (Deposition Transcript Excerpts, Whittaker Dep. at 105:10–106:16).
92 Exhibit I, at 28 (Whittaker and Shelby Report).
93 Exhibit Y, at 25– 39 (Deposition Transcript Excerpts, Steinberger Dep. at 32:17–46:15). A portage is defined as "carrying the boat out of the channel to proceed." Exhibit I, at 8 (Whittaker and Shelby Report).
94 Exhibit C, at 86–87 (Hill Report).
95 Exhibit C, at 86–87 (Hill Report); Exhibit I, at 22 (Whittaker and Shelby Report).
96 Exhibit C, at 86–87 (Hill Report).
97 Exhibit I, at 28 (Whittaker and Shelby Report).
98 Exhibit I, at 30 (Whittaker and Shelby Report).

L Lake to the bridge twice, once in 2008 and then again in 2010. In 2008, they traveled in a thirteen- to fourteen-foot raft carrying gear and two moose. They experienced mostly short drags between Ketchumstuk (RM 37.5) and Gold Creek (RM 24.75), and, due to a mistake in a lower boulder garden, became stuck on a rock for approximately thirty minutes.

The 2010 trip occurred via an eighteen-foot cataraft and required no boat drags. Mida and Douslair canceled a planned trip in 2009 due to low water conditions on advice from Fortymile Air. Larry Bartlett floated the river in a sixteen-foot inflatable canoe in 2002 and reported some dragging, and in 2014, a group of seven people, including Jake Timms, floated from approximately RM 30 in pack rafts. During the pack raft trip some boaters had to get out of their boats in some riffles while others were able to "bump through."[99]

State consultants also interviewed several users that have traveled upstream on the river above the bridge. Danny Grandguard traveled upstream from the Taylor Highway Bridge in a thirteen-foot sport boat with a thirty horsepower jet in 2011 and 2012. In 2012, a lower water trip compared to the 2011 trip, Grandguard traveled fifteen miles upstream of the bridge to the Moose Creek (RM 21.5) area. In other years, he has gone as far upstream as Ketchumstuk. Grandguard also reported seeing jet-equipped jonboats on the river during hunting season. Bronk Jorgonson boated the river in 2008 and 2010 in an eighteen-foot airboat with an approximate load of 1,000 pounds, and Raleigh Cline traveled to Ketchumstuk in a sixteen-foot jonboat with thirty-five horsepower jet in 2004 and 2005. Dean Olivera has boated the river since 1991, taking many trips to Bullion Creek (RM 9.5), Old Man Creek (RM 12), and Gold Creek (RM 24.5). On at least one occasion he traveled as far upstream as Kechumstuk. Olivera has traveled in a twenty-foot jonboat with a ninety horsepower jet and sixteen to seventeen-foot jonboats with forty-five and sixty horsepower jets. He has also used twelve- to fourteen-foot jonboats with a ten horsepower prop outboard to travel six to seven miles upstream to mine and prospect. Sheldon Maier operated a fourteen-foot jonboat with a forty horsepower jet unit on the Mosquito Fork from the early 1990s through approximately 2006. He has taken that boat, as well as a sixteen-foot jonboat with fifty horsepower jet upstream to about two miles past Gold Creek (RM 24.5). In mid-September 2011, Maier floated downstream in a canoe filled with approximately

[99] Exhibit I, at 31–32 (Whittaker and Shelby Report).

600 to 700 pounds of moose meat. In addition, other users reported using hovercraft to travel upstream on the river.[100]

E. The United States repeatedly finds the Mosquito Fork boatable.

In 1980, as part of the Alaska National Interest Conservation Act ("ANILCA"), portions of the Mosquito Fork downstream from the vicinity of Kechumstuk were incorporated into the National Wild and Scenic River System.[101] The segment of the river from Kechumstuk to Ingle Creek is designated as a wild river area and the portion of the river from the Taylor Highway Bridge to its confluence is designated as scenic. BLM currently manages the Mosquito Fork pursuant to the Fortymile River Management Plan ("1983 RMP").[102] Under that plan, the agency recognizes the section designated as wild as a "larger 'floatable' segment" and describes it as "quite remote, with little summer use, offering excellent opportunities for a primitive experience."[103] Even at "low water the river is floatable . . . with difficulty."[104]

The segment of the river below the Taylor Highway Bridge (deemed navigable by BLM) is designated scenic, and the 1983 RMP describes scenic segments within the Fortymile drainage as "relatively large streams that lend themselves to floating by rafts and canoes."[105] Specific to this portion of the Mosquito Fork, the 1983 RMP describes it as shallower than other reaches and states that "canoes and rafts must constantly maneuver to avoid rocks at most water levels."[106]

In 1983, the Alaska State Office of BLM issued an administrative decision ("1983 Navigability Finding") which concluded that the Mosquito Fork—from its confluence with the Dennison Fork to its confluence with Chicken Creek—is navigable for title purposes. The agency explained that "[t]his stretch served as an important highway of commerce until about 1908, as an auxiliary and useful highway of commerce until the 1930s, and, as further substantiated by current recreational and mining use, as a potential highway of commerce at the date of Statehood."[107] BLM then purported to find the remainder of the Mosquito Fork—from its confluence with Chicken Creek to its headwaters—non-navigable. The agency did so despite its

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100 Exhibit I, at 31–32 (Whittaker and Shelby Report).
101 16 U.S.C. § 1274(a)(48).
102 Complaint, Dkt. 1, ¶ 29; U.S. Answer, Dkt. 12, ¶ 29.
103 Exhibit H, at 12 (1983 BLM Mgmt. Plan).
104 Exhibit H, at 14 (1983 BLM Mgmt. Plan).
105 Exhibit H, at 15 (1983 BLM Mgmt. Plan).
106 Exhibit H, at 16 (1983 BLM Mgmt. Plan).
107 Exhibit D, at 1 (1983 Determination).

acknowledgment of the multiple instances of pre-statehood use (discussed in Section C above) on the section of the river it was considering.[108]

BLM's and the United States' retained experts in this case acknowledge that the physical characteristics of the Mosquito Fork between RM 0 to RM 1.2 (deemed navigable) and RM 1.2 upstream (deemed non-navigable) are similar. During his deposition, the United States' expert, Mussetter, testified that he did not have any data suggesting that the flows in the area of RM 0 to RM 3.3 were any different than the flows upstream of RM 3.3. He believes the characteristics of these two sections of the river are similar.[109] Moreover, in a letter written by Brown, the United States' retained historian in this case—who at the time was the chief of BLM's navigability section—Brown states the stream's "width and gradient [upstream of RM 1.2] is not significantly different from navigable sections [(RM 0 to RM 1.2)].[110]

In the late 1980s or early 1990s, BLM reevaluated its navigability determination on the Mosquito Fork in light of the Ninth Circuit's decision on the Gulkana River's navigability.[111] BLM's navigability section—of which Brown was then the chief—considered whether the Mosquito Fork was usable or susceptible to use for "small boats," including "inflatable rafts, canoes and jetboats, among other craft."[112] Applying those standards, BLM's navigability section reached a conclusion that the Mosquito Fork—from its confluence with Chicken Creek (RM 1.2) upstream to its confluence with Wolf Creek (RM 80.5)—was navigable.[113] Evidence considered in support of this draft finding of navigability included the evidence of pre-statehood use (discussed in Section C above), evidence of post-statehood use—particularly that collected

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108 Exhibit D, at 1–5 (1983 Determination).

109 Exhibit AA, at 41–43 (Deposition Transcript Excerpts, Mussetter Dep. at 214:24–216:5).

110 Exhibit BB, at 2 (Title Navigability Law and Wild and Scenic Rivers, January 28, 1991, Brown Dep. Exhibit 9, Bates Stamp US-MFR0000245–US-MFR0000246); *see also* Exhibit G, at 114–16 (Deposition Transcript Excerpts, Brown Dep. at 126:1–128:21). The state's retained hydrologist and geomorphologist opines that the lower portion of the river (RM 0 to RM 3.3) may be more difficult to navigate then the section upstream of RM 3.3. *See* Exhibit CC, at 14–15 (Expert Witness Rebuttal Report of Jonathan Fuller ("Fuller Rebuttal Report")). This conclusion comports with BLM's own documents. *See* Exhibit H, at 16–17 (1983 Determination) (below Chicken the river braids); Exhibit F, at 12 (Kostohrys Report) ("As it approaches Chicken, the valley widens and the Mosquito Fork gradient decreases as the river meanders and braids into several channels upstream of the confluence with the Dennison Fork.").

111 Exhibit G, at 110–11 (Deposition Transcript Excerpts, Brown Dep. at 122:21–123:3).

112 Exhibit G, at 111–13 (Deposition Transcript Excerpts, Brown Dep. at 123:10–125:5).

113 Exhibit G, at 111 (Deposition Transcript Excerpts, Brown Dep. at 123:18–123:24); Exhibit E (Draft Navigability Determination).

through BLM's interviews (discussed in Section D)—as well as the river's physical characteristics (discussed in Section B).[114] BLM never finalized this navigability determination.[115] In addition, in a memorandum from Brown dated January 28, 1992, he states that BLM's navigability section "would agree that [the] Mosquito Fork was navigable."[116]

In 2012, BLM filed an application with DNR to maintain a certain instream flow rate on the reach of the Mosquito Fork extending three miles downstream of the Taylor Highway Bridge (RM 3.5) upstream to the river's confluence with Gold Creek (RM 24.5). BLM seeks to reserve 90% of the median flow rates from June through August for the purpose of "boating" (760 cfs in June, 357 cfs in July, and 325 cfs in August).[117] According to Mussetter's flow duration curves, these flows are met or exceeded approximately 40%, 58%, and 60% of the open water season.[118]

F. The standards applied by the United States to determine the navigability of other rivers in Alaska.

BLM's navigability section in Alaska researches and prepares navigability determinations for the purpose of identifying potentially navigable waters on lands identified for conveyance under the Alaska Native Claim Settlement Act, the Alaska Statehood Act, the Native Allotment Act, and several other public land laws.[119] In addition, the navigability section reviews applications filed by the State of Alaska for recordable disclaimers of interest ("RDI") on potentially navigable waters. If BLM agrees with the state's application and finding that a waterway was navigable-in-fact at statehood, it issues a recordable disclaimer of interest clearing the state's title to the submerged land.[120]

From 1983 to 1995, the United States' retained expert, Brown, was the chief of BLM's navigability section.[121] He reviewed navigability determinations prepared by others in the

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114 Exhibit G, at 117–19 (Deposition Transcript Excerpts, Brown Dep. at 129:23–131:1); Exhibit E (Draft Navigability Determination).

115 Exhibit G, at 111–12 (Deposition Transcript Excerpts, Brown Dep. at 123:25–124:11).

116 Exhibit DD (Memo Dated January 28, 1992, Brown Dep. Exhibit 10, Bates Stamp US-MFR0016123); Exhibit G, at 116–17 (Deposition Transcript Excerpts, Brown Dep. at 128:24–129:7).

117 Exhibit EE, at 8 (Application for Reservation of Water, received September 25, 2012 ("BLM Instream Flow Application")).

118 Exhibit B, at 54 (Mussetter Revised Report).

119 Exhibit G, at 9–10 (Deposition Transcript Excerpts, Brown Dep. at 9:10–10:15).

120 Exhibit G, at 20 (Deposition Transcript Excerpts, Brown Dep. at 20:4–20:15).

121 Exhibit G, at 17, 19 (Deposition Transcript Excerpts, Brown Dep. at 17:2–17:4; 19:20–19:23).

section. In 1995, Brown left his position as chief to take a position as a senior navigable water specialist.[122] In this role, he primarily worked on BLM's RDI program.[123] Brown served as a senior navigable water specialist until his retirement in 2009.[124] He is now the United States' expert historian in this case.

During his deposition, Brown testified that a memorandum prepared in 1980 by then Regional Solicitor for BLM, John M. Allen ("Allen Memo"), served as BLM's "fundamental guideline" for the definition of "trade and travel" in preparing navigability determinations until the district court's 1987 decision in *Alaska v. United States*[125] finding the lower 30 miles of the Gulkana River in Alaska navigable. The Ninth Circuit subsequently affirmed that decision.[126] For a short time period, BLM sought to apply the standards articulated in the Gulkana decisions.[127] However, the agency later concluded that the Gulkana River decision only applied to "Gulkana and similar rivers" and returned to applying the Allen Memo.[128] In forming his opinions in this case, Brown testified he applied the standards articulated in the Allen Memo.[129]

The Allen Memo developed standards based on a decision by the Alaska Native Claims Appeal Board ("ANCAB" or "Board") finding the Kandik and Nation Rivers in Alaska navigable.[130] The Kandik and Nation Rivers are located in the Middle Yukon area and the Board adopted the decision of the Administrative Law Judge ("ALJ") that commercial craft in the Middle Yukon were "'capable of carrying 1,000 lbs of freight.'"[131] The Allen Memo provides that

> it is safe to conclude that conditions in the Middle Yukon area are similar to those throughout much of Alaska. Accordingly, until the guidelines are

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122 Exhibit G, at 19 (Deposition Transcript Excerpts, Brown Dep. at 19:20–19:23).
123 Exhibit G, at 20 (Deposition Transcript Excerpts, Brown Dep. at 20:4–20:10).
124 Exhibit J, at 95–98 (Brown Mosquito Fork Report).
125 662 F. Supp. 455 (D. Alaska 1987).
126 *Alaska v. Ahtna, Inc.*, 891 F.2d 1401, 1404 (9th Cir. 1989) ("*Gulkana Appeal*").
127 Exhibit G, at 34–35, 42–43, 74–75 (Deposition Transcript Excerpts, Brown Dep. at 41:15–42:13, 54:23–55:12, 86:20–87:18).
128 Exhibit G, at 113, 119 (Deposition Transcript Excerpts, Brown Dep. at 125:1–125:25, 131:3–9).
129 Exhibit G, at 35 (Deposition Transcript Excerpts, Brown Dep. at 42:15-42:17).
130 Exhibit FF, at 1 (Kandik, Nation Decision on Navigability, February 25, 1980 ("Allen Memo"), Basner Dep. Exhibit 10); *see also Kandik-Nation Decision*, 86 I.D. at 692.
131 Exhibit FF, at 2 (Allen Memo).

> further revised, flat bottomed boats capable of carrying 1,000 lbs of freight should be considered the lower limit of commercial river crafts.[132]

Brown testified during deposition that BLM had not revised the Allen Memo guidelines.[133] He also testified that "there isn't much different" between the Upper Yukon—where the Mosquito Fork is located—and the Middle Yukon.[134] Nevertheless, despite this guideline, which Brown purported to follow in developing his opinion, Brown concludes that a navigability finding on the Mosquito Fork depends on the ability to navigate certain watercraft with a carrying capacity of at least 2,000 pounds, double that required by the Allen Memo.[135]

The Allen Memo also provides that periods of low water, where only several inches of water may flow over gravel bars, does not preclude a finding of navigability.[136] Nor does the fact that the river is frozen for seven months of the year preclude a finding of navigability.[137] On this issue, Brown testified that in preparing navigability recommendations, BLM generally considered one-third of the navigation season to be adequate. In other words, BLM would recommend a finding of navigability if the river was navigable for a period that amounted to one-third of the five-months the river was not frozen.[138]

G. The types of boats available for use pre-statehood.

As with the Mosquito Fork's physical and hydrologic conditions and use pre- and post-statehood, the parties generally agree on what watercraft existed in Alaska pre-statehood and were available for use. The types of watercraft available included:

Poling Boats: Boatmen primarily used poling boats in shallow rivers and streams, and they were prevalently used in Alaska during the gold rush through the end of the Second World War.[139] Both parties' experts rely on a description of the poling boat provided by Alfred H. Brooks, a pioneer in Alaska with the United States Geological Survey ("USGS")

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132 Exhibit FF, at 3 (Allen Memo).
133 Exhibit G, at 41 (Deposition Transcript Excerpts, Brown Dep. at 53:6–53:8).
134 Exhibit G, at 41 (Deposition Transcript Excerpts, Brown Dep. at 53:20–53:24).
135 Exhibit HH, at 85 (Expert Report of C. Michael Brown, Commercial and Personal Use Boats in the Upper Yukon River System: A History ("Brown Boat Report")); Exhibit B, at 10 (Mussetter Revised Report).
136 Exhibit FF, at 3 (Allen Memo).
137 Exhibit FF, at 3 (Allen Memo).
138 Exhibit G, at 119–21 (Deposition Transcript Excerpts, Brown Dep. at 131:12-133:8); Exhibit GG (Navigability of the Fortymile River, February 24 1992, Brown Dep. Exhibit 11, Bates Number US-MFR0016623–US-MFR0016624).
139 Exhibit HH, at 45 (Brown Boat Report); Exhibit K, at 49–51 (Buzzell Report).

during the gold rush era.[140] As Brooks described it, a poling boat is "20 to 30 feet long, and at midship its bottom measured from 12 to 20 inches, with tapering sides, giving it two and a half to three feet of beam at the gunwale. Though tapering rapidly at boat ends, it is usually built with snub nose at both bow and stern."[141] The experts also found accounts of longer poling boats, ranging from thirty-two to thirty-six feet long.[142] Poling boats were propelled by men in the boats using poles and/or by men standing on the riverbanks or streams using ropes to track the boats upstream.[143] In an account cited by Brown, T.A. Rickard reported poling boats drawing from seven to eight inches of water carrying between 1200 and 1500 pounds.[144] According to Mussetter, the approximately twenty-foot long poling boat he analyzed would draft eight inches with a 1,000 pound load going upstream and twelve inches with a 2,000 pound load.[145] Going downstream, he estimates the boat would require about thirteen and sixteen inches respectively.[146]

Launches, Tunnel Boats, and Riverboats: Launches, tunnel boats, and riverboats were all functionally similar in that they were all developed to run in shallow rivers with riffles and hidden navigational hazards.[147] As described by Brown, a launch "is a small motorboat that is open or has the 'forepart of the hull covered[,]'" but as used in the Upper Yukon region, a launch generally included any riverboat with a motor and propeller.[148] A launch was generally

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140 Exhibit HH, at 45 (Brown Boat Report); Exhibit K, at 49 (Buzzell Report).

141 Exhibit HH, at 39 (Brown Boat Report); Exhibit K, at 49 (Buzzell Report). For reference, Buzzell's report contains several images of poling boats. *See* Exhibit K, at 37, 41, 49, 50, 60, 63, and 64–66.

142 Exhibit HH, at 46 (Brown Boat Report).

143 Exhibit HH, at 39 (Brown Boat Report); Exhibit K, at 49 (Buzzell Report).

144 Exhibit HH, at 41 (Brown Boat Report); *see also* Exhibit K, at 161 (Buzzell Report) (stating that a poling boat carrying 1,000 pounds would displace between six to twelve inches of water).

145 Exhibit B, at 72, 76 (Mussetter Revised Report). A 3-dimensional surface model of the poling boat Dr. Mussetter analyzed can be found in Figure 56 on page 61 of his revised report.

146 Exhibit B, at 72, 76 (Mussetter Revised Report). The state does not concede the scientific validity, methodology, or applicability of Mussetter's analysis. As a limited example, Mussetter's numbers fail to account for basic boat handling skills and how a boat would actually move through the water in a river like the Mosquito Fork. Mussetter's calculations, however, are taken at face value for the purpose of summary judgment because the river is navigable-in-fact under applicable case law even using Mussetter's faulty approach, as discussed in Section H below.

147 Exhibit HH, at 12–16 (Brown Boat Report).

148 Exhibit HH, at 12 (Brown Boat Report) (quoting *Webster's Dictionary*).

flat-bottom, but a tunnel boat had a tunnel in the cavity of the stern where the drive shaft and propeller were located. By having "the propellers inside the cavity, there was less risk of damage to the propellers from hitting rocks, gravel, or sunken logs."[149] A "riverboat" was a term often used to describe a flat-bottomed riverboat with a lift.[150] Essentially, a riverboat is a launch with a lift.[151] "The 'lift' allowed a pilot to quickly raise an outboard motor in order to float over a submerged log or rock or short reaches of shallow riffles, thereby avoiding damage to the propeller or, in the case of riffles, the need to get out of the boat and push or tow it across the riffles."[152]

The United States' historian concedes that launches, tunnel boats, and riverboats of all sizes were a customary form of travel in Alaska prior to statehood.[153] Smaller boats—considered by Brown to be less than twenty-eight feet in length—were used for inner-village travel, travel to medical facilities in other villages, travel to fish camps, and travel to hunting and trapping grounds.[154] Only larger boats—boats over twenty-eight feet in length—are considered by Brown to be boats customarily used for trade *and* travel, i.e. suitable for demonstrating navigability-in-fact prior to statehood because they were typically used for freighting purposes.[155]

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149 Exhibit HH, at 13 (Brown Boat Report); Exhibit G, at 63–64 (Deposition Transcript Excerpts, Brown Dep. at 75:18–76:17).

150 Exhibit HH, at 16 (Brown Boat Report).

151 Exhibit G, at 66–67 (Deposition Transcript Excerpts, Brown Dep. at 78:16–79:6).

152 Exhibit HH, at 16 (Brown Boat Report); *see also* Exhibit II, at 1– 3 ("'Horse Troughs' with Motors," *Alaska Sportsman*, May 1960) (pictures depicting a flat-bottom riverboat with a lift); Exhibit K, at 119 (Buzzell Report) (Figure 91 is a picture of a riverboat with an outboard motor lift).

153 Exhibit HH, at 4, 12–18 (Brown Boat Report); Exhibit G, at 54–55, 69 (Deposition Transcript Excerpts, Brown Dep. at 66:7–67:25, 81:11–81:14).

154 Exhibit HH, at 12–16 (Brown Boat Report); Exhibit G, at 54–55 (Deposition Transcript Excerpts, Brown Dep. at 66:7–67:25).

155 Exhibit G, at 55–55, 69 (Deposition Transcript Excerpts, Brown Dep. at 66:7–67:25, 81:11–81:14); Exhibit HH, at 12–18 (Brown Boat Report); Exhibit B, at 62 (Mussetter Revised Report). The state does not concede to Brown's conclusions as to what size boats were used or could have been used in commerce, i.e. trade and travel. Brown's approach does not comport with the established precedent on what constitutes commerce in making navigability determinations (and is wholly inconsistent with BLM's longstanding approach). *See, e.g. Oregon v. Riverfront Protection Ass'n*, 672 F.2d 792, 794 (9th Cir.1982) (holding that log drives are relevant to title navigability). As with Mussetter's analysis, the state's summary judgment argument does not require the Court to directly reject Brown's work to determine the Mosquito Fork is navigable-in-fact.

Based on Mussetter's analysis, typical wooden boats with these characteristics that are twenty-eight feet in length would have a draft of 8.2 inches with a 2,000 pound cargo load when sitting level in still water.[156] With additional considerations, including a motor projecting below the hull of the boat, as well as a reverse pitch when traveling upstream and a plunging effect when traveling downstream, that draft increases to 13.9 inches.[157]

George E.M. Gustafson, a former BLM employee that provided testimony during the Gulkana River litigation, stated that through the 1940s and 1960s flat-bottomed riverboats measured from fourteen to thirty-feet long, with the common size being twenty to twenty-four feet in length. He had used a BLM-owned boat of this type to conduct field examinations on the Salcha River, at times transporting up to eight BLM employees and supplies for a week-long trip. He further testified that "[o]perating the motor without a lift on the larger riverboats of this type required a water depth of one to one and a half feet, whereas the boat could be operated in six to eight inches of water using the motor lift."[158]

Scows: A scow is a "'large flat-bottomed boat with broad square ends used chiefly for transporting bulk material.'" They varied from seventeen to one hundred feet in length and six to twenty-four feet in width.[159] Brown concedes that scows with a carrying capacity of at least a ton were customary modes of trade *and* travel in Alaska prior to statehood.[160]

Jet Boats: According to Brown, inboard jet boats were introduced to Alaska in the late 1950s and today are "widely used in Alaska to navigate shallow rivers and streams."[161] The Copper River Cannery Co-op imported the first known jet-proposed marine boat in 1958; it drew fourteen inches of water and had a load capacity of at least 10,000 red salmon.[162] Also in 1958, the *Anchorage Times* reported that the State Police borrowed a "jet-propelled shallow draft boat" from two Anchorage men to retrieve the body of a hunter in a river in the Portage area. The two Anchorage men later demonstrated the boat's capabilities in Sand Lake and Big Lake in 1959. It was a sixteen-foot fiberglass Buehler Turbocraft that reportedly could be launched in eight

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156 Exhibit B, at 69 (Mussetter Revised Report).
157 Exhibit B, at 72 (Mussetter Revised Report).
158 Exhibit JJ, at ¶ 2 (Affidavit of George E. M. Gustafson).
159 Exhibit HH, at 37 (Brown Boat Report).
160 Exhibit G, at 27 (Deposition Transcript Excerpts, Brown Dep. at 30:3–30:12).
161 Exhibit HH, at 52 (Brown Boat Report); Exhibit G, at 82–83 (Deposition Transcript Excerpts, Brown Dep. at 94:25–95:2).
162 Exhibit HH, at 52 (Brown Boat Report).

inches of water and run in five inches. The Buehler Turbocraft as well as the Kermath Hydrojet were also used in the Fairbanks area in the late 1950s. In April 1957, the *Fairbanks News-Miner* published an ad for the sale of a boat with a Kermath Hydrojet.[163] In September 1959, the *Fairbanks Daily News-Miner* published a photo of a Buehler Turbocraft running the Chena River.[164]

It is widely believed that Dick Stallman of California invented the first outboard jet unit in the early 1960s.[165] The outboard jet unit was "'a snail-shaped housing replacing the lower unit of propeller housing on the outboard motor.'"[166] The forward edge of the intake scoop mounted flush with the bottom of the boat and the trailing edge only extended one-and-a-half inches lower. Reportedly, with these outboard jet units attached, boats could run in three inches of water over gravelly river bottoms or rocks.[167]

As recognized by Brown "[n]ews of the new jet-propelled boats spread quickly in Alaska."[168] As pleasure boating continued to grow as a sport in Interior Alaska in the 1950s and 1960s, "[l]ight and durable aluminum boats were introduced in the early 1950s" and their demand in the urban areas grew quickly. "The boats were used not only by hunters and fishermen, but also by water skiers, tourists, and others, on shallow rivers and streams as well as lakes."[169]

Bob Compeau—a boat dealer in Fairbanks—launched an advertising campaign for the Buehler Turbocraft in 1960.[170] Compeau claimed that these boats were more easily transportable than "'any other type of power boat'" and "'wherever you can beach a canoe you can beach a Buehler Turbocraft, too!'"[171] That same year, Compeau also started advertising the new Berkeley single state, turbine type jet drive.[172]

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163 Exhibit HH, at 54 (Brown Boat Report).
164 Exhibit HH, at 55 (Brown Boat Report).
165 Exhibit HH, at 53 (Brown Boat Report) (stating the invention occurred in 1963); Exhibit K, at 127(Buzzell Report) (stating the invention occurred in 1960).
166 Exhibit HH, at 53 (Brown Boat Report).
167 Exhibit HH, at 53 (Brown Boat Report).
168 Exhibit HH, at 54 (Brown Boat Report).
169 Exhibit HH, at 54 (Brown Boat Report).
170 Exhibit HH, at 17, 55 (Brown Boat Report).
171 Exhibit HH, at 55 (Brown Boat Report).
172 Exhibit HH, at 55 (Brown Boat Report).

Brown's review of the *Fairbanks Daily News-Miner* classified ads in the early 1960s shows that boats were listed for sale ranging from sixteen-feet to thirty-two feet in length. People in the rural areas of Alaska also took notice of these boats. Alan Innes-Taylor of Eagle concluded that the turbo-jet "'should prove extremely useful for Alaskan rivers, especially the side streams which are frequently swift and shallow.'"[173] By the early 1960s, there is evidence of a jet unit in Fort Yukon, Huslia, as well as Aniak.[174] The Army at Fort Greely also started testing the Kermath Hydrojets and Buehler Turbocrafts in the 1960s for possible military use.[175] Brown's report documents additional evidence of jet boat use in Alaska during the 1960s and 1970s.[176]

Inflatable Rubber Rafts: As recognized by Brown, "[i]nflatable rubber rafts became a popular mode of recreational travel among urban Alaskans after World War II."[177] Prior to statehood, these were surplus military rafts that were used for "hunting, sight-seeing, and exploration" and were easily transportable by car and airplane[178] Brown also references a description of the inflatable raft provided by "Doc" Huffman, who lived at Paxon Lake year-round from 1941 to 1980 and provided testimony during the Gulkana River litigation.[179] He stated that the "'inflatable boats were 9 to 12 feet long and very wide. These boats were similar to the Avon-type river rafts of today, although today's rafts have an improved bow and stern and stronger rubberized fabric.'"[180]

In an affidavit provided during the Gulkana River litigation, Gustafson stated that he typically used a seven-man inflatable raft that was ten to eleven-feet long. They would place a sheet of plywood on the floor for stability and the rafts were "capable of carrying well in excess of 1,000 pounds of people, moose meat and personal supplies on week-long hunting trips."[181]

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173 Exhibit HH, at 56 (Brown Boat Report).
174 Exhibit HH, at 56–57 (Brown Boat Report).
175 Exhibit HH, at 56 (Brown Boat Report).
176 Exhibit HH, at 57–60 (Brown Boat Report).
177 Exhibit HH, at 60 (Brown Boat Report); *see also* Exhibit G, at 84 (Deposition Transcript Excerpts, Brown Dep. at 96:16–96:25) ("I think [rubber rafts] were customary modes of travel. . . . Every recreationist owned an inflatable raft, but I think there were enough of them to be viewed as fairly common in the area.").
178 Exhibit HH, at 60 (Brown Boat Report).
179 Exhibit HH, at 61 (Brown Boat Report).
180 Exhibit HH, at 61 (Brown Boat Report) (quoting Exhibit KK, at 3–4 (Signed Statement of Lafayett L. "Doc" Huffman, December 7, 1982)); *see also* Exhibit HH, at 59 (Brown Boat Report) (quoting Gustafson Deposition Testimony during Gulkana litigation).
181 Exhibit JJ, at ¶ 4 (Affidavit of George E. M. Gustafson).

Airboats: The parties agree that airboats were used in Alaska pre-statehood for hunting purposes.[182] An airboat is a "'shallow-draft boat driven by an airplane propeller and steered by an airplane rudder.'"[183] They were introduced into Alaska's urban centers after the Second World War. The boats only drew inches of water and appealed to moose hunters as an alternative to traditional riverboats. Brown cited evidence of airboats being used on the Chena, Salcha, Kashwitna, McLaren, Little Susitna, Knik River, and Alexander Creek prior to statehood.[184] In addition, based on his "random survey," he found almost a dozen ads for airboats being sold in the *Fairbanks Daily News-Miner* between 1956 and 1964. During the late 1950s and early 1960s, Lenard Patnode offered airboat trips for hunting and fishing; he claimed to have charged his clients $25 per trip and an additional $15 for hauling meat.[185]

Canoes: "For much of the twentieth century, canoes were a common sight on rivers, streams, and lakes in Interior Alaska and in Canada's Yukon Territory."[186] They were used by natives to travel from camps and villages to trading posts, missions, and mining camps, as well as by prospectors, miners, government officials, and others to travel on rivers and streams to explore, hunt, fish, recreate, and to travel from one camp to another.[187] Aluminum canoes started flooding the urban market between 1945 and 1950, and they were easy to transport by car or truck on the road and highway system.[188]

According to Alfred Brooks, as recognized by Brown, the Peterborough canoe—a wooden canoe—was popular among USGS explorers during the earlier part of the twentieth century. Brooks states that "'the Peterborough is an admirable swift water boat, carries a large cargo, and is so light it can be portaged a long distance.'"[189] The models varied in size from seventeen to twenty-four feet, and although "'[i]n river navigation, punctures by snags or rocks of thin cedar planking are not uncommon, . . . these are quickly and permanently repaired by

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182 Exhibit HH, at 102–104 (Brown Boat Report).

183 Exhibit HH, at 74 (Brown Boat Report) (quoting *Webster's Dictionary*).

184 Exhibit HH, at 74 (Brown Boat Report).

185 Exhibit HH, at 74–75 (Brown Boat Report).

186 Exhibit HH, at 76 (Brown Boat Report); Exhibit G, at 87 (Deposition Transcript Excerpts, Brown Dep. at 99:8–99:15) (stating that canoes were commonly used for travel in the Upper Yukon area pre-statehood).

187 Exhibit HH, at 76 (Brown Boat Report).

188 Exhibit G, at 88 (Deposition Transcript Excerpts, Brown Dep. at 100:12–100:12).

189 Exhibit HH, at 76 (Brown Boat Report). For reference, Buzzell's report contains a picture of a Peterborough canoe. *See* Exhibit K, at 45 (Buzzell Report).

strips carried for the purpose.'"[190] According to a brochure published by the Peterborough Canoe Company, a seventeen-foot version of the canoe would have a ten-inch draft when carrying 950 pounds and a twelve-inch draft when carrying 1250 pounds.[191] The nineteen-foot version would draft ten inches with 1400 pounds and twelve inches with 1800 pounds.[192]

Post World War II wooden canoes fell into disuse as aluminum canoes gained in popularity.[193] "In the years 1945 to 1975, aluminum canoes manufactured by Grumman, Aerocraft, Alumacraft, Valco, and Old Towne were popular in the Fairbanks area."[194] Outboard motors—some with lifts—were often used on canoes with square sterns.[195] According to Brown, a launch could "carry a larger load than a canoe without drawing more water than the canoe."[196]

Rowboats and Kayaks: Rowboats were customarily used for travel in the Upper Yukon prior to statehood.[197] Brown also found several instances of pre-statehood use of manufactured kayaks on the Upper Yukon pre-statehood."[198] "[A]s early as 1937, these boats were particularly favored by recreationists who enjoyed long floating trips down the Yukon River and certain tributaries."[199] Depending on the model, there is evidence of load capacities between 750 and 1,200 pounds.[200]

H. The parties agree that the Mosquito Fork is boatable throughout much of the open water season.

Although their approaches differed, the United States' and the state's experts both analyzed how often a user can travel on the Mosquito Fork river in watercraft carrying a certain load with varying depth requirements.[201] This concept—the ability to travel by boat on the

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190 Exhibit HH, at 76 (Brown Boat Report).

191 Exhibit K, at 44–45 (Buzzell Report) (citing Exhibit LL (Excerpt of Brochure from Peterborough Canoe Company, Bates Stamp SOA-MF030097)).

192 Exhibit K, at 44–45 (Buzzell Report) (citing Exhibit LL (Excerpt of Brochure from Peterborough Canoe Company, Bates Stamp SOA-MF030097)).

193 Exhibit HH, at 77 (Brown Boat Report).

194 Exhibit HH, at 79 (Brown Boat Report).

195 Exhibit HH, at 79 (Brown Boat Report).

196 Exhibit HH, at 88 (Brown Boat Report).

197 Exhibit G, at 90 (Deposition Transcript Excerpts, Brown Dep. at 102:5–102:11).

198 Exhibit G, at 90 (Deposition Transcript Excerpts, Brown Dep. at 102:12–102:21).

199 Exhibit HH, at 83 (Brown Boat Report).

200 Exhibit HH, at 83–86 (Brown Boat Report).

201 *See generally* Exhibit B (Mussetter Revised Report); Exhibit I (Whittaker and Shelby Report).

river—is generally referred to by the parties' experts as "boatability."[202] The United States already conceded that the Mosquito Fork from its confluence with the Dennison Fork upstream to its confluence with Chicken Creek (RM 0 to 1.2) is navigable-in-fact.[203] In addition to this section, the United States' expert, Dr. Mussetter, testified during his deposition that the portions of the river from RM 36 to RM 55 and upstream of RM 60 "are certainly more boatable" and that he would not offer the opinion that they are non-navigable.[204] In his opinion, the Mosquito Fork from RM 60 upstream to just above its confluence with Wolf Creek at RM 80.5 offers "flow depths, even at fairly low flows, [that] are reasonably substantial." Although "[t]here are some challenges to navigation in those regions relating to woody debris and so on, [there is] nothing there that in [his] opinion would preclude use of the criteria boats."[205] Regarding the section of the river from RM 36.3 to RM 55, Mussetter states that this portion is "a relatively flatter gradient than the other reaches. It has less obstructions . . . and so it's more boatable than the reaches that I have the opinion that they're not navigable."[206] The parties therefore agree on the boatability of the Mosquito Fork from RM 0 to RM 3.3, RM 36.3 to RM 55, and RM 60 to RM 80.5.

In their analysis, the state's experts—Drs. Whittaker and Shelby—specified the minimum flow needed in the Mosquito Fork for three types of trips: low flow trips, improved boatability trips, and clear channel trips.[207] Their opinion on the minimum flow needed for these types of trips is based on in-person river reconnaissance and travel during the 2012 and 2013 DNR trips, interviews of other Mosquito Fork users, and Whittaker and Shelby's experience on other rivers. A "low flow trip" allows for "transportation on the river to access recreation opportunities." They involve "moderate difficulty (with a few boat drags per mile in critical reaches)," but the

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202 *See* Exhibit B, at 15–16, 81–84 (Mussetter Revised Report); Exhibit I, at 8 (Whittaker and Shelby Report).

203 Complaint, Dkt. 1, ¶ 34; U.S. Answer, Dkt. 12, ¶ 34; Exhibit D (1983 Determination). Although Chicken Creek enters the Mosquito Fork at RM 1.2, and RM 1.2 to 1.55 is covered by the settlement agreement with the non-Federal defendants (Dkt. 19.1), Mussetter appears to believe that the United States has conceded navigability upstream to RM 3.3. *See* Exhibit B, at 44 (Mussetter Revised Report); Exhibit AA, at 41–42 (Deposition Transcript Excerpts, Mussetter Dep. at 214:24–215:13). The reason for this discrepancy is unclear.

204 Exhibit AA, at 10–11 (Deposition Transcript Excerpts, Mussetter Dep. at 23:19–24:21).

205 Exhibit AA, at 12 (Deposition Transcript Excerpts, Mussetter Dep. at 25:3–25:10).

206 Exhibit AA, at 12 (Deposition Transcript Excerpts, Mussetter Dep. at 25:3–25:10).

207 Exhibit I, at 8, 38 (Whittaker and Shelby Report).

river is still used to hunt, fish, or explore the wilderness.[208] An improved boatability trip "involve[s] less difficulty than low flow trips, with fewer and shorter boat drags in critical reaches."[209] A clear water channel trip "involve[s] little difficulty due to shallow water, with few or no boat drags."[210]

Whittaker and Shelby take into consideration that various types of watercraft may be used on the Mosquito Fork.[211] Non-motorized boats—rafts, kayaks, canoes, catarafts, poling boat etc.—were typically run without motors to float downstream, but it is possible to add a small kicker motor to facilitate upstream travel.[212] Motorized boats—motorized rafts, jonboats with a prop motor, jonboats with a jet unit, etc.—include boats that are typically run with larger motors (greater than ten horsepower) at faster speeds.[213] Based on field measurements from numerous flow-recreation projects, as well as field work for this study, Whittaker and Shelby estimate that all non-motorized craft would have a similar clear channel need, i.e. the depth and width needed to float freely. Carrying a load of about 1,000 pounds, Whittaker and Shelby estimate that a non-motorized boat traveling aligned with the channel would require a channel of eight feet wide and eight inches deep and eighteen feet wide and eight inches deep if floating sideways.[214] Motorized boats, including non-motorized boats equipped with a kicker motor, would require the same width but would require a depth of sixteen inches to float freely.[215]

Considering the information gathered on river reconnaissance trips, as well as during interviews, Whittaker and Shelby conclude non-motorized watercraft (eight-inch draft) require 250 cfs for low flow trips, 350 cfs for improved boatability trips, and 450 cfs for clear channel trips. Using Mussetter's flow duration curve, these flows exist on the Mosquito Fork 77%, 68%, and 58% percent of the open water season.[216] Motorized watercraft (sixteen-inch draft) require 350 cfs for low flow trips, 400 for improved boatability trips, and 500 for clear channel trips.

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208 Exhibit I, at 8, 38 (Whittaker and Shelby Report).
209 Exhibit I, at 8, 38 (Whittaker and Shelby Report).
210 Exhibit I, at 8 (Whittaker and Shelby Report).
211 Exhibit I, at 21–26 (Whittaker and Shelby Report).
212 Exhibit I, at 21 (Whittaker and Shelby Report).
213 Exhibit I, at 21 (Whittaker and Shelby Report).
214 Exhibit I, at 23 (Whittaker and Shelby Report). This is also depicted via graphic in Figure 1 on page 25 of Exhibit I.
215 Exhibit I, at 24 (Whittaker and Shelby Report). This is also depicted via graphic in Figure 2 on page 25 of Exhibit I.
216 Exhibit I, at 37–38 (Whittaker and Shelby Report).

These flows exist on the Mosquito Fork 68%, 62%, and 55% of the time. In other words, in the opinion of Whittaker and Shelby, users can travel on the Mosquito Fork in watercraft requiring at least sixteen inches of draft at least 68% of the open water season. As a comparison, the flow DNR experienced during its 2012 trip (220 cfs) from Wolf Creek to the Taylor Highway Bridge falls slightly below what Whittaker and Shelby consider a "low boatability trip." Although there were drags, some longer than others, the ten passengers in four boats all carrying about 1,000 pounds successfully traveled downstream. Based on Mussetter's flow duration curve, the flow experienced during the 2012 trip is met or exceeded 81% of the time.[217]

The United States' expert, Mussetter, took a different approach but nevertheless reached somewhat similar results regarding how often the Mosquito Fork is boatable. Mussetter never put a boat onto the water of the Mosquito Fork; instead his team used hydraulic computer models for eight study sites that he considers representative of the riffles and shallow rapids in the portion of the Mosquito Fork at issue.[218] Using these models only, with no on the ground experience, Mussetter provides an opinion as to the minimum discharge required to operate watercraft carrying loads of 1,000 to 2,600 pounds and requiring a draft of eight, twelve, and fifteen inches.[219] Mussetter's analysis defines a boatable day as a day in which the boat will not hit, brush against, or even touch a rock in the Mosquito Fork.[220] In other words, in order for Mussetter to find a boatable day on the Mosquito Fork, his computer model must indicate that the boat will float free and clear through the study site, i.e. pass through with no difficulties whatsoever.

Mussetter's shallowest study area is identified as Site P8 and is located at approximately RM 7.7.[221] Under his most limiting assumption—that a boat would touch the highest rock within his study area—Mussetter concludes that Site P8 would have a boatable flow for a boat with an eight-inch draft during 46% of the open water season.[222] When he assumes the boater will miss

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217 Exhibit B, at 54 (Mussetter Revised Report).

218 Exhibit AA, at 41–46 (Deposition Transcript Excerpts, Mussetter Dep. at 214:11–214:14); *see also* Exhibit B, at 10 (Mussetter Revised Report).

219 *See* Exhibit B, at 10–11 (Mussetter Revised Report).

220 Exhibit AA, at 34 (Deposition Transcript Excerpts, Mussetter Dep. at 200:9–200:12, 201:14–201:25).

221 Exhibit B, at 16, 76 (Mussetter Revised Report); Exhibit AA, at 27 (Deposition Transcript Excerpts, Mussetter Dep. at 190:17–190:21).

222 Exhibit B, at 79, 85 (Mussetter Revised Report).

the highest rock but touch the second highest rock, Mussetter concludes Site P8 would have a boatable flow for the same boat during 69% of the open water season.[223] This is notably similar to the flow (350 cfs) that Whittaker and Shelby conclude is required for an improved boatability trip for non-motorized boats.[224]

Mussetter identifies Site P9 (RM 3.3)–located at the Taylor Highway Bridge—as the second most difficult study site.[225] At this location, Mussetter opines that an eight-inch draft boat will have sufficient flow either 72% or 81% of the open water season, depending on whether he assumes the boater will touch the first or second-highest rock respectively. Similarly, for a fifteen-inch boat, Mussetter's number-crunching shows sufficient flow for 46% or 71% of the open water season.[226]

Comparing Sites P8 and P9, Mussetter's analysis for a boat drafting fifteen-inches finds a sufficiently boatable flow at Site P8 for 25% to 35% of the open-water season, which is considerably less frequent than anywhere else that Mussetter looked.[227] Unsurprisingly, the state experts and Mussetter agree that the flow Mussetter deems boatable at Site P8 for this bigger boat would be far in excess of a clear-channel trip for the entire remainder of the Mosquito Fork segments at issue here.[228]

STANDARD OF REVIEW

Summary judgment is appropriate "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law."[229] "At the summary judgment stage, facts must be viewed in the light most favorable to the nonmoving party only if there is a 'genuine' dispute as to those facts."[230] "Where the record taken as a whole

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223 Exhibit B, at 79, 85 (Mussetter Revised Report).
224 Exhibit I, at 37 (Whittaker and Shelby Report).
225 Exhibit B, at 15 (Mussetter Revised Report).
226 Exhibit B, at 85 (Mussetter Revised Report).
227 Exhibit B, at 79, 85 (Mussetter Revised Report).
228 Exhibit B, at 85 (Mussetter Revised Report) (comparing the flows required for P8 versus the next most limiting study area); Exhibit AA, at 27–30 (Deposition Transcript Excerpts, Mussetter Dep. at 190:17–193:2); Exhibit MM, at 10 (Revised Expert Witness Rebuttal Report of Drs. Whittaker and Shelby).
229 Fed. R. Civ. P. 56.
230 *Scott v. Harris*, 550 U.S. 372, 380 (2007) (citing Fed. R. Civ. P. 56(c)).

could not lead a rational trier of fact to find for the nonmoving party, there is no 'genuine issue for trial.'"[231]

In ruling on summary judgment, "the judge's function is not . . . to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for trial … [T]here is no issue for trial unless there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party. If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted."[232]

"'[T]he mere existence of *some* alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no *genuine* issue of *material* fact.' When opposing parties tell two different stories, one of which is blatantly contradicted by the record, so that no reasonable jury could believe it, a court should not adopt that version of the facts for purposes of ruling on a motion for summary judgment."[233]

Summary judgment motions must also be reviewed in the context of the applicable substantive law, such as navigability jurisprudence in this case.[234] "Issues of fact do not preclude summary judgment unless they are material to the substantive claim at issue; that is, unless they might affect the outcome of the suit under the governing law."[235]

ARGUMENT

A. The state holds title to riverbeds underlying navigable-in-fact waterways.

The state's claim to the lands underlying the Mosquito Fork arises under the Equal Footing Doctrine and the Submerged Lands Act of 1953,[236] which provide that title ownership to the lands underneath navigable waters within the boundaries of the respective states vests in the states.[237] The Submerged Lands Act applies to Alaska through the Alaska Statehood Act.[238]

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231 *Scott*, 550 U.S. at 380 (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586–587, (1986)).

232 *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249-50 (1986) (citations omitted); *accord Summers v. Teichert & Son, Inc.*, 127 F.3d 1150, 1152 (9th Cir. 1997).

233 *Scott*, 550 U.S. at 380 (citing *Anderson*, 477 U.S. at 247–248 (1986) (emphasis original)).

234 *Moreland v. Las Vegas Metro. Police Dep't*, 159 F.3d 365, 369 (9th Cir. 1998), *as amended* (Nov. 24, 1998) (citations omitted).

235 *Id.*

236 67 Stat. 29 (1953) (codified at 43 U.S.C. §§ 1301–1356a).

237 *Gulkana Appeal*, 891 F.2d at 1404 (citing *Pollard's Lessee v. Hagan*, 44 U.S. (3 How.) 212, 228–29 (1845)); *accord Utah Div. of State Lands v. United States*, 482 U.S. 193, 196 (1987); *United States v. Alaska*, 437 F.2d 1081, 1084 (9th Cir.1971); 43 U.S.C. § 1311(a).

Accordingly, there is only one relevant question for the Court to resolve to determine that title to the bed of the Mosquito Fork passed to Alaska at statehood: Whether the portions of the Mosquito Fork at issue are, in fact, navigable waters.[239] The U.S. Supreme Court set forth a navigability test for rivers that has remained essentially unchanged in this context for over a century:

> 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.[240]

For title to have passed to Alaska, the Mosquito Fork must have been navigable at the time of statehood, meaning that regardless of the actual use of the river, the river must have been susceptible to use as a highway for commerce.[241]

1. A waterway capable of use for purposeful travel is also capable of being used as a highway for commerce.

Title navigability does not require a showing of historical commercial use; rather, a state may prove navigability for title purposes by providing evidence that the river was "susceptible of being used" as a highway of commerce at the time of statehood. This is not a new concept; the U.S. Supreme Court recognized and applied a susceptibility analysis as early as 1931 in determining portions of the Colorado, Green and Grand rivers navigable despite the limited extent and nature of navigation on the rivers.[242] The United States took a position—similar to the position of its historian in this case—that these rivers were non-navigable because "the uses of the rivers have been more of a private nature than of a public, commercial sort."[243] The Court

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238 Alaska Statehood Act, § 6(m), 72 Stat. 343 (1958); *see* also *Gulkana Appeal*, 891 F.2d at 1404 (citations omitted).

239 The United States has not claimed any pre-statehood withdrawal that would defeat Alaska's title to the Mosquito Fork. *See Utah*, 482 U.S. at 197 & 208 (finding that congress may defeat a future state's title to submerged lands through a pre-statehood withdrawal or conveyance).

240 *The Daniel Ball*, 77 U.S. (19 Wall.) 557, 563 (1870); *accord PPL Montana*, 132 S.Ct. at 1215; *Utah v. United States*, 403 U.S. 9 (1971); *United States v. Utah*, 283 U.S. 64 (1931); *Gulkana Appeal*, 891 F.2d at 1401; *Alaska v. United* States, 662 F. Supp. 455 (1987) ("*Gulkana Trial*").

241 *Gulkana Appeal*, 891 F.2d at 1404 (citing *Utah*, 283 U.S. at 75, 83).

242 *Utah*, 283 U.S. at 64.

243 *Id.* at 82.

rejected this argument, stating "[t]he extent of existing commerce is not the test."[244] Instead, [t]he question of that [sic] susceptibility in the ordinary condition of the rivers, rather than of the mere manner or extent of actual use, is the crucial question."[245]

In a case that addressed the navigability of the Great Salt Lake, the evidence of use consisted of "nine boats used from time to time to haul cattle and sheep from the mainland to one of the islands or from one of the islands to the mainland."[246] The United States again took the position that this evidence was not relevant or sufficient because the owners transported the livestock themselves rather than hiring a freighter used for the purposes of making money.[247] Again, the Court rejected this argument: who transported the livestock was an "irrelevant detail. The lake was used as a highway and that is the gist of the federal test."[248] Moreover, although the use may have been "sporadic" and "short," this use proved that the lake had the physical characteristics necessary to allow it to provide a channel over which trade and travel could have occurred.[249]

Similarly, during the *Gulkana Appeal*, Ahtna argued that the "principal uses of the Gulkana have always been recreational, and that recreational uses do not support a finding of navigability."[250] Relying on the Supreme Court's decision in *Utah*, the Ninth Circuit rejected this argument, concluding that "[i]t is not essential that the river be used for the transportation of water-borne freight by a carrier whose purpose is to make money from the transportation."[251] "The test is whether the river was susceptible of being used as a highway for commerce at statehood, not whether it was actually so used."[252]

The issue in the *Gulkana Appeal* was whether guided fishing and sightseeing trips on the Gulkana River were relevant to determining whether the river was navigable for title purposes.[253] Not only did the Ninth Circuit conclude they were relevant for purposes of susceptibility, but it also concluded guided recreational use is commercial and "conclusive evidence of the lower

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244 *Id*.
245 *Id*.
246 *Utah*, 403 U.S. at 11.
247 *Id*.
248 *Id*.
249 *Id.* at 12.
250 *Gulkana Appeal*, 891 F.2d at 1405.
251 *Id.* at 1404.
252 *Id* at 1405.
253 *Id.*

Gulkana's susceptibility for commercial use at statehood."[254] "To deny that this use of the River is commercial because it relates to the recreation industry is to employ too narrow a view of commercial activity."[255] The basis for the court's determination was agreement by the parties that (1) the Gulkana River remained in its natural and ordinary condition since statehood; and (2) watercraft customary at the time of statehood included powered boats with a load capacity of 1,000 lbs.[256] Therefore, the type of use occurring on the river post-statehood—a substantial industry of guided fishing and sightseeing trips—*could have* occurred in the type of watercraft that existed pre-statehood "with minor modifications due to a more limited load capacity and rudimentary technology."[257]

The Supreme Court reaffirmed the application of the susceptibility analysis articulated in *Utah* and the *Gulkana Appeal* in *PPL Montana*,[258] its most recent decision on title navigability. There, the Court held that evidence of present-day, recreational use may be used to establish a river's "susceptibility to use" if (1) the watercraft used are "meaningfully similar to those in customary use for trade and travel at the time of statehood; and (2) the river's post-statehood condition is not materially different from its physical condition at statehood." [259] The ultimate question being whether "trade and travel *could have* been conducted 'in the customary modes of trade and travel on water,' over the relevant river segment 'in [its] natural and ordinary condition.'"[260]

Applying the standards articulated by the courts in *Utah* and the *Gulkana Appeal*, as affirmed by the Supreme Court in *PPL Montana*, the Mosquito Fork is navigable if the physical conditions are such that trade and travel *could* have occurred in watercraft used for travel at the time of statehood. Given that guided sightseeing and fishing trips are commercial, evidence that these trips could occur on the Mosquito Fork is relevant to determining its navigability. Moreover, the state does not need to prove that guided sightseeing and fishing trips (or other

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254 *Id.*
255 *Id.*
256 *Id.*
257 *Id.*
258 132 S.Ct. at 1215.
259 *Id.* at 1233. For the purposes of this litigation, the United States concedes that the Mosquito Fork remains in its natural and ordinary condition. Exhibit NN (United States Supplemental Response to State of Alaska's Request for Admission No. 1).
260 *Id.* (quoting *Utah*, 283 U.S. at 82).

forms of commerce) actually have occurred on the river; merely that they *could* occur. In other words, evidence of trips on the river in similar watercraft, with a similar load as what would be used on a guided recreational trip is relevant as it shows that guided trips *could* occur.

2. A river's ability to provide a channel for "useful commerce" does not require a showing of a threshold amount of use, but depends on the needs of the area it serves.

The Supreme Court has long held that a river's navigability for title purposes depends on its capability to afford a channel for "useful commerce."[261] The concept of "useful commerce" or "commercial reality" appeared in the Court's 1926 decision in *Holt State Bank*, when it emphasized that "navigability does not depend on the particular mode in which such use is or may be had—whether by steamboats, sailing vessels or flatboats—nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the stream in its natural and ordinary condition affords a channel for useful commerce."[262] In that case, the Court considered the navigability of Mud Lake in Minnesota. In its natural and ordinary condition, Mud Lake was from three to six feet deep.[263] "Early visitors and settlers in that vicinity used the river and lake as a route of travel, employing the small boats of the period for the purpose."[264] Merchants "used the river and lake in sending for and bringing in their supplies."[265] In seasons of drought there was difficulty in getting the boats through the lake, and, toward the end of each growing season, vegetation in the lake gradually impaired the movement of boats.[266] Nevertheless, despite the difficulties and limited amount of navigation, the Court still concluded that the evidence required a finding of navigability.[267]

In *Utah*, the Supreme Court quoted the above language in *Holt State Bank* and noted its precedent in *The Montello*, where it stated that "'the true test of the navigability of a stream does not depend on the mode by which commerce is, or may be, conducted, nor the difficulties

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261 *Id.* (stating that navigability "concerns the river's usefulness for trade and travel, rather than for other purposes" (internal quotation marks omitted); *id.* at 1234 (stating that navigability cannot "be so brief that it is not a commercial reality"); *United States v. Holt State Bank*, 270 U.S. 49, 56 (1926) ("channel for useful commerce"); *Utah*, 283 U.S. at 86; *Gulkana Appeal*, 891 F.2d at 1404 n.3.

262 *Holt State Bank*, 270 U.S. at 56.

263 *Id.*

264 *Id.* at 57.

265 *Id.*

266 *Id.*

267 *Id.*

attending navigation.'"[268] Responding to the United States' argument regarding the "absence of historical data showing the early navigation of these waters by Indians, fur traders, and early explorers," the Court noted the lack of settlement in the area, lack of access to the rivers, as well as a combination of "many other facts" that explains the lack of use.[269] Pre-statehood navigation on the Green and Colorado rivers started in 1869, with a second trip in 1871, followed by a third trip seventeen years later in 1889. After 1889, there "were a large number of enterprises, with boats of various sorts, including rowboats, flatboats, steamboats, motorboats, barges and scows, some being used for exploration, some for pleasure, some to carry passengers and supplies, and others in connection with prospecting, surveying, and mining operations."[270] The Court then rejected the United States' contention that "consideration of future commerce is too speculative to be entertained."[271] It held that because "the title of a state depends upon the issue, the possibilities of growth and future profitable uses are not to be ignored."[272] A state's ownership will not be denied "because the location of the rivers and the circumstances of the exploration and settlement of the country through which they flowed had made recourse to navigation a late adventure or because commercial utilization on a large scale awaits future demands."[273]

The *Utah* court also addressed the concept of "useful commerce" as relates to impediments and difficulties in navigation. The United States argued that the sections of the rivers in dispute were not navigable because a number of impediments to navigation, including logs, rapids, riffles in certain parts, as well as sandbars, shallow depths, and the instability of the channel.[274] Again, the Court rejected this argument as "the mere fact of the presence of such sandbars causing impediments to navigation does not make a river nonnavigable."[275] The question is whether the river affords a channel for "useful commerce" although it may have difficulties resulting from natural barriers such as sandbars and rapids.[276]

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268 *Utah*, 283 U.S. at 76 (quoting *Montello*, 20 Wall. 430, 441).
269 *Id.* at 81.
270 *Id.* at 81–82.
271 *Id.* at 83.
272 *Id*.
273 *Id.* at 81.
274 *Id.* at 84.
275 *Id.* at 82.
276 *Id.* at 86.

The Ninth Circuit followed this precedent in the *Gulkana Appeal* as well as in *Oregon v. Riverfront Protection Association* ("*Riverfront Protection*"), when it stated that "[a] river's use 'need not be without difficulty, extensive, or long and continuous' for the river to be a highway for commerce."[277] In *Riverfront Protection*, the court decided the navigability of the McKenzie River and the use considered was log drives that typically occurred from April through mid-June.[278] They could not occur during the high-water period of November through March because the river was "too swift, deep, and dangerous," nor could they occur during the low-water period of July through October because of "bars, rapids, boulders, and shoals."[279] Nevertheless, despite the limited season, log drives had occurred on the McKenzie River during three months of the year for seventeen years. The Ninth Circuit found this sufficient to conclude the McKenzie was used as a "highway for useful commerce."[280]

The U.S. Supreme Court's most recent navigability decision, *PPL Montana*, did not change the previous century of caselaw providing that travel need not be long or continuous, or without difficulty.[281] Nor did that case change the factors a court considers in determining a stream's usefulness as a transportation corridor, including remoteness, access, population, and other elements that relate to whether the stream could serve as a useful highway for commerce.[282]

In *PPL Montana*, the Court also reaffirmed that "a river need not be susceptible of navigation at every point during the year, [but] neither can th[e] susceptibility be so brief that it is not a commercial reality."[283] Further, the evidence must show that the river is actually useful for trade and travel; the use presented cannot solely consist of users dragging their boats in or alongside the river.[284] As an example of a river not useful for commerce the Court cited *United States v. Oregon.*[285] There, the only evidence of boat use on the lake included that of four

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277 *Gulkana Appeal*, 891 F.2d at 1404 (citing *Riverfront Protection Ass'n*, 672 F.2d at 794).
278 *Riverfront Protection*, 672 F.2d at 795.
279 *Id.*
280 *Id.* at 796.
281 *Accord Utah*, 283 U.S. at 76; *Holt State Bank*, 270 U.S. at 56; *Montello*, 20 Wall. at 441; *Gulkana Appeal*, 891 F.2d at 1401; *Riverfront Protection*, 672 F.2d at 794.
282 *Accord Utah*, 283 U.S. at 81; *Holt State Banks*, 270 U.S. at 56.
283 *PPL Montana*, 132 S. Ct. at 1234; *accord Utah*, 283 U.S. at 86; *Holt State Banks*, 270 U.S. at 56; *Riverfront Protection*, 672 F.2d at 796.
284 *PPL Montana*, 132 S. Ct. at 1233.
285 295 U.S. 1 (1935).

trappers and some duck hunters that used canoes and rowboats requiring three to six inches of draft.[286] Despite these shallow drafts, the users *always* experienced extreme difficulty on the trips, including boat drags of several hundred yards and water vegetation that was "impenetrable at many points."[287] In such a situation—where the lake was ordinarily unusable for travel via watercraft—the Court concluded the waterbody did not satisfy the test for navigability.[288]

In *PPL Montana*, the Court also cited, with approval, its decision in *Appalachian Electric Power Company*.[289] Similar to its decisions in *Holt State Bank* and *Utah*, the *Appalachian Electric Power* court held that it is not

> necessary for navigability that the use should be continuous. The character of the region, its products and the difficulties or dangers of the navigation influence the regularity and extent of the use. Small traffic compared to the available commerce of the region is sufficient. Even absence of use over long periods of years, because of changed conditions, the coming of the railroad or improved highways does not affect the navigability of rivers in the constitutional sense.[290]

Applying these long established principles, courts, administrative bodies, and BLM have found many rivers navigable despite conditions that present much more difficulty than the Mosquito Fork as will be shown below. These navigable rivers include:

- McKenzie River, Oregon: As discussed above, the Ninth Circuit found a portion of the McKenzie River navigable based on its ability to float "thousands of logs," even though shallow areas and sand bars made the transport difficult:

> it took substantial logging crews an average of from thirty to fifty days to complete a log drive down the 32-mile reach at issue. Unfavorable

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286 *Id.* at 20–21.

287 *Id.* at 21.

288 *Id.* (stating that users "customarily encountered" substantial difficulties on the water).

289 *PPL Montana,* 132 S. Ct. at 1233 (citing *United States v. Appalachian Electric Power Co* 311 U.S. 377 (1940), *superseded on other grounds as recognized by Rapanos v. United States*, 547 U.S. 715, 723 (2006)).

290 *Appalachian Electric Power Co*., 311 U.S. at 409–10 (citations omitted); *see also Puget Sound Power & Light Co. v. Fed. Energy Regulatory Comm'n*, 644 F.2d 785, 789 (9th Cir. 1981) (citing *Appalachian Electric Power Co*., 311 U.S. at 405–406 ("It is not the size of articles transported in commerce that establishes the navigable character of a waterway. Navigability depends upon the stream's usefulness as a transportation mechanism for commerce. 'It is obvious that the uses to which the streams may be put vary from the carriage of ocean liners to the floating out of logs; that the density of traffic varies equally widely from the busy harbors of the seacoast to the sparsely settled regions of the Western mountains. The tests as to navigability must take these variations into consideration.'").

> circumstances could increase this time to over ninety days. Intractable log jams had to be broken up with dynamite. Too much rain caused uncontrollable flooding; too little exposed gravel bars, boulders, and shoals. Crews might spend three or four days moving logs across a single gravel bar. But notwithstanding such difficulties, thousands of logs and millions of board feet of timber were driven down the river.[291]

The McKenzie River was used in this manner for less than three months per year.[292]

- Kandik and Nation Rivers, Alaska:[293] ANCAB adopted the recommendation of the administrative law judge ("ALJ") and found the Kandik and Nation Rivers navigable from the border to their confluence with the Yukon River.[294] The Nation, the smaller of the two rivers, is a sometimes braided and sometimes meandering stream.[295] It has a pool-riffle character where the deep areas are four to five, sometimes six-feet deep, but gravel bars that often run completely across the river separate these deep areas.[296] In August 1978, there were approximately 135 shallow areas in a thirty-five mile stretch of the Nation River (an average of 3.8 per mile).[297] During the same month, the Kandik River had seventy shallow areas in a forty-seven mile stretch (an average of 1.48 per mile). Commercial use of the rivers was "extremely limited" and consisted only of "trapping, trading and the transport of supplies and furs by the few trappers on the rivers and the supplying of goods and mail to the International Boundary Commission."[298] On appeal to ANCAB, BLM argued that because the rivers' "water levels fluctuate, they are hazardous, and only canoes, lightly loaded, can navigate them, because they are interspersed at various points by gravel bars or log jams."[299] The ALJ and ANCAB rejected this argument because "the presence of gravel bars, riffles, or occasional log jams in themselves do not make the rivers nonnavigable."[300]

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291 *Riverfront Protection Ass'n*, 672 F.2d at 795.
292 *Id.*
293 *Kandik-Nation Decision*, 86 I.D. at 692.
294 *Id.* at 707.
295 *Id.* at 711.
296 *Id.* at 706.
297 *Id.* at 711–12.
298 *Id*. at 723.
299 *Id.* at 706.
300 *Id.* at 706. Years after this decision, the state filed suit in Federal district court to quiet title to the Kandik and Nation rivers. *Alaska*, 201 F.3d at 1156. The district court granted the state relief, issuing a judgment on the pleadings. On appeal, the court noted with approval the factual findings of the ALJ. *Id.* at 1157–58.

- Black River, Alaska: On October 24, 2003, BLM issued an RDI disclaiming the United States' interest in most of the Black River.[301] The RDI was based on a report and recommendation prepared by Brown—who at the time was a BLM navigable water specialist.[302] As set forth in Brown's recommendation, travel on the navigable portion of the Black River was often difficult and dependent on water levels. Travelers would sometimes get stranded in shallow water. "Once, the worst year, it was a month before rains released them.[303] One trapper described having to use "relays" to get their heavy loads upstream and over shallows in the falls. A relay is when they would unload and take smaller loads across the riffles.[304]

3. Relevant watercraft include all watercraft in existence pre-statehood that were capable of useful commerce as well as all post-statehood watercraft that are "meaningfully similar."

As discussed above, navigability does not depend on whether the river was actually used as a highway of commerce at the time of statehood; rather, the relevant inquiry is whether the river *could have* provided a useful channel for commerce. This distinction is important not only when considering the level of use on a waterway, but also what watercraft is relevant for making that determination ("criterion watercraft"). Title navigability requires a waterway to provide a highway for trade and travel via the *customary modes of trade and travel* on water. What qualifies as a customary mode of trade and travel on water is not limited to the type of watercraft that actually traveled on that particular waterway prior to or at the time of statehood. This is evident from the long established precedent holding that actual use of a waterway is not required.

What qualifies as a "customary mode of trade and travel" depends on what *could have* traveled the river at the time of statehood. This includes watercraft capable of useful commerce that existed pre-statehood as well as modern watercraft that are "meaningfully similar."[305] The important point being that if modern watercraft "permit[s] navigation where historical watercraft would not," then use of that particular watercraft provides no evidentiary value as to whether that waterway *could have* been used at the time of statehood. Alternatively, if modern watercraft are

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301 Exhibit G, at 61 (Deposition Transcript Excerpts, Brown Dep. at 73:13–73:22); Exhibit OO (Letter dated October 24, 2001 and RDI, Brown Dep. Exhibit 5).

302 Exhibit G, at 60–61 (Deposition Transcript Excerpts, Brown Dep. at 72:18–73:11); Exhibit PP (Navigability of Black River, Northeast Alaska ("Brown Black River Report"), Brown Dep. Exhibit 4).

303 Exhibit PP, at 8 (Brown Black River Report).

304 Exhibit PP, at 8 n.26 (Brown Black River Report).

305 *PPL Montana*, 132 S. Ct. at 1233.

meaningfully similar, meaning they have a similar load capacity as historical watercraft—allowing them to serve as a vehicle for similar types of commercial activity—and a similar draft—allowing them to travel on waterways with similar physical characteristics—then use of that modern watercraft is evidence that this waterway *could have* served as a channel for useful commerce at the time of statehood. If the modern watercraft can travel the river then a meaningfully similar historic watercraft could have also traveled the river.[306]

The United States' historian's opinion that the relevant watercraft for determining the navigability of the Mosquito Fork is limited to twenty-eight foot long (or longer) poling boats and riverboats with an outboard motor that have a carrying capacity of 2,000 pounds is not even supported by BLM's own policy and guidelines, much less the law or the facts of this case. Brown's conclusion is based on his definition of "trade and travel," which he limits solely to the freighting of goods.[307] He does not consider evidence of "buying and selling," such as transportation for hire, using a waterway to travel between villages for services, guided hunting and fishing trips, or prospecting evidence of "trade and travel" relevant to making a navigability determination.[308] He also considers any evidence of hunting, fishing, prospecting, or travel between communities as "personal use" and not relevant for determining whether a waterway is capable of serving as a useful channel for commerce.[309] Brown also ignores the Ninth Circuit's decision in *Riverfront Protection* by not considering log drives as relevant commercial activity because they are floating logs and not hauling them by "barge or steamboat."[310]

The United States has taken this position before. In *Utah*, it "insist[ed] that uses of the [Colorado, Green, and Grand] rivers ha[d] been more of a private nature than of a public, commercial sort."[311] The Court responded "[t]he extent of existing commerce is not the test."[312] The United States "'strongly contest[ed]' the Special Master's finding that the Great Salt lake was navigable because the use was not 'by a carrier for the purpose of making money' and not

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306 *See Gulkana Appeal*, 891 F.2d at 1405 (concluding that watercraft in existence at statehood could have supported modern commercial activity).

307 Exhibit G, at 28–29, 33 (Deposition Transcript Excerpts, Brown Dep. at 31:17–32:10, 40:8–40:19).

308 Exhibit G, at 45–51 (Deposition Transcript Excerpts, Brown Dep. at 57:21–63:8).

309 Exhibit G, at 45–51 (Deposition Transcript Excerpts, Brown Dep. at 57:21–63:8).

310 Exhibit G, at 51 (Deposition Transcript Excerpts, Brown Dep. at 63:5–63:11).

311 283 U.S. at 82.

312 *Id.*

for the business of 'carrying water-borne freight.'"[313] The Court found that to be an "irrelevant detail," concluding the "lake was used as a highway and that is the gist of the federal test."[314]

The Ninth Circuit recognizes that "navigability is a flexible concept and '[e]ach application of [the *Daniel Ball* test] . . . is apt to uncover variations and refinements which require further elaboration.'"[315] It therefore "liberally construe[s] the phrase 'customary modes of trade and travel on water,' taking into account transportation methods in use at the time of statehood."[316] In the *Gulkana Appeal*, the appellants challenged the district court's finding of navigability because the "principal uses of the Gulkana have always been recreational, and that recreational uses do not support a finding of navigability."[317] The court found the argument "unpersuasive" because (1) the test is whether the river was susceptible of being used as a highway for commerce and recreational use is relevant to determining susceptibility; and (2) guided recreational use (transportation for profit) is commercial activity.[318] In addition, contrary to the standard Brown attempts to employ in this case, the court also found that modern day inflatable rafts were meaningfully similar to boats customarily used at the time of statehood, which included powered boats with a load capacity of approximately 1,000 pounds.[319] There is no basis to ignore the Ninth Circuit's decision or conclude it "only applies to the Gulkana River" as the United States' experts attempt to do in this case.

Brown's opinion similarly runs counter to the factual findings of the ALJ, as adopted by the Board in the Kandik-Nation decision, as well as multiple other navigability cases.[320] After considering evidence on the issue, including testimony and a written report prepared by Brown, the ALJ concluded that the "boats used by . . . trappers included pole boats, tunnel boats, and outboard river boats, capable of carrying 1,000 pounds of freight and commonly used on other

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313 *Utah*, 403 U.S. at 11.

314 *Id.*

315 *Alaska v. United States*, 754 F.2d 851, 854 (1985) (addressing the navigability of Slope Bucket Lake in Alaska (quoting *Appalachian Electric Power Co.*, 311 U.S. at 406)).

316 *Id.*

317 *Gulkana Appeal*, 891 F.2d at 1405.

318 *Id.*

319 *Id.*

320 In *Alaska*, 201 F.3d at 1161-62, the United States argued that the Board made the final decision for the Department of the Interior in the *Kandik-Nation Decision* and its decision became the position of the Department.

rivers in Alaska to freight supplies."[321] In *Utah*, the Court considered the use of rowboats;[322] in *Puyallup Tribe of Indians v. Port of Tacoma*, the district court declared the Puyallup River navigable based on the Indians' use of fishing boats and canoes;[323] in *Northwest Steelheaders Association, Inc. v. Simantel*,[324] the Oregon Court of Appeals considered dugout canoes, which typically drafted six to eight inches of water and were used by Native American tribes for fishing, travel, and trade in determining the John Day River navigable, and in *Oregon v. Tidewater Contractor, Inc.*,[325] the district court considered canoes built by Natives and requiring between six and eight inches of water to float freely in finding the Chetco River in Oregon navigable.[326] The load capacity of a watercraft cannot be the determining factor of whether a watercraft qualifies as a criterion craft when the Ninth Circuit has previously held that a log drive during three months of the year is sufficient to establish a river navigable.[327]

This Court need not decide whether users actually used specific categories of watercraft to engage in commercial activity. Instead, it need only decide whether a particular watercraft existed at or near the time of statehood and therefore could have engaged in commercial activity. "Trade and travel" is a much broader concept than the freighting goods or the carrying capacity of the boat. For instance, as set forth in Buzzell's rebuttal report, prospecting was and remains a very important commercial activity in Alaska.[328] Although some prospectors may have loads exceeding 1,000 pounds, they may not. Similarly, a miner leaving his mining camp may have a load of equipment exceeding 1,000 pounds, or he simply may leave with little weight but an amount of gold with great value. The prospector and the miner—whether or not they had loads exceeding 1,000 pounds—were using the river as a highway of commerce and engaged in "trade and travel." Nevertheless, for the purposes of this motion, and because the Ninth Circuit and the Board have already decided that a load of 1,000 pounds qualifies as a commercial load, the state will apply that standard.

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321 *Kandik-Nation Decision*, 86 I.D. at 703.
322 283 U.S. at 82.
323 525 F. Supp. 65, 71–72, *aff'd*, 717 F.2d 1251 (9th Cir. 1983).
324 112 P.3d 383, 392 (Or. Ct. App. 2005).
325 No. 93-6017-HO (D. Or. 1994); Exhibit X, at 6–7, 13 ("Chetco River Order").
326 112 P.3d 383, 392 (2005).
327 *Riverfront Protection*, 672 F.2d at 795.
328 Exhibit M, at 3–5 (Buzzell Rebuttal Report).

In addition to pole boats, launches, tunnel boats, riverboats, and scows—which the parties agree were customarily used for trade and travel prior to statehood[329]—the parties also agree that the following watercraft were customarily used for travel prior to statehood: canoes, rafts, rowboats, and kayaks. Brown also agrees that airboats were used for travel prior to statehood, and that they were commonly used by moose hunters. The undisputed evidence also shows that models of each category of watercraft were capable of carrying up to 1,000 pounds.[330]

The United States contends that jet boats did not become a customary form of travel in Alaska until sometime after statehood.[331] Nevertheless, Brown admits that jet boats were found in both Anchorage and Fairbanks prior to statehood, in the late 1950s. He also admits that they were a customary mode of travel in Anchorage and Fairbanks in the early 1960s and in rural Alaska in the late 1960s.[332] In addition, the ALJ in the found that at the time of the decision (1979), jet boats were in common use and had been for the past seven to eight years.[333] The capability of jet boats is meaningfully similar to the type of boats that existed pre-statehood. Although they may have allowed for faster travel, their draft requirements were similar to pole boats, canoes, airboats and even riverboats with a lift.[334] Therefore, use of a jet boat on a waterway is relevant as it shows that other types of watercraft could have been used.

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329 Brown contends pole boats fell into disuse at the time of statehood, but nevertheless agrees that they were customarily and traditionally used for trade and travel sometime prior to statehood. Exhibit G, at 26–28 (Deposition Transcript Excerpts, Brown Dep. at 29:3–31:3).

330 Exhibit HH, at 4, 10, 13, 16, 37, 39, 41, 45, 47, 50, 65, 67, 74, 77–80, 83, 88.

331 Exhibit G, at 82–83 (Deposition Transcript Excerpts, Brown Dep. at 94:20–95:14).

332 Exhibit G, at 82–83 (Deposition Transcript Excerpts, Brown Dep. at 94:20–95:15).

333 86 I.D. at 718.

334 *See, e.g.* Exhibit HH, at 54 (Brown Boat Report) (quoting a statement that a Buehler Turbocraft could be "launched in 8 inches and goes like a proverbial bat in five inches less"); Exhibit I, at 24 (Whittaker and Shelby Report) (stating that a jonboat with a jet drive—depending on the size of the motor—may draft fourteen inches at slower speed and twelve inches on step); *id.*, at 31 (stating that one user reported that his jonboat with a jet required three to five inches over gravel bars and six inches over boulders; another user required that all jonboats required four to six inches when on step); *id.* (reporting an interview where user stated that airboat drafts about six inches); *Northwest Steelheaders Association*, 112 P.3d at 392 (a canoe requires between six to eight inches); Exhibit X, at 6–7, 13 ("Chetco River Order") (finding that a shovel-nose canoe requires between six and eight inches); Exhibit K, at 161 (Buzzell Report) (stating that a poling boat carrying 1,000 pounds would displace between six and twelve inches); Exhibit B, at 72, 76 (Mussetter Revised Report) (concluding that a poling boat carrying 1,000

B. The Mosquito Fork is navigable-in-fact and summary judgment awarding ownership of the submerged lands to the state is warranted.

The undisputed facts demonstrate that the portions of the Mosquito Fork at issue, from RM 3.3 to RM 80.5, are navigable-in-fact warranting summary judgment in favor of the state. [335] The historical record by itself is sufficient to warrant a finding of navigability. The historians generally agree the following events took place on the Mosquito Fork: (1) in the late 1880s, Pierce and 31 prospectors pulled boats upstream to the Mosquito Flats and subsequently floated downstream; (2) in 1899, the Steel brothers, prospectors, traveled downstream via boat from the Mosquito Flats; (3) in 1899, Reid and his party of prospectors traveled downstream from somewhere above Ketchumstuk; (4) in 1899, the Rolfe Brothers traveled downstream from Ketchmstuck; (5) in 1899, Austin, while in Chicken, witnesses several boats traveling downstream on the Mosquito Fork; (6) in 1918, Purdy lined a boat upstream to Ketchumstuk, and (7) Clark drowns on the Mosquito Fork attempting to freight material eight miles upstream on the Mosquito Fork. Brown contends these trips are not relevant because they occurred for "personal use;" however, that is a legal conclusion already rejected by a long line of Supreme Court precedent. In addition, Bayless testified during deposition that his uncles, the Roberts brothers, freighted material downstream from Mitchel's Ranch and Ketchumstuk in their pole boats both before and after World War II. Although some of these trips presented difficulties in the form of low water and gravel bars, travel on a navigable river need not be without difficulty.[336]

The post-statehood use of the river is also undisputed. This includes multiple canoe and rafting trips taken by BLM and DNR employees from above Ketchumstuk and mostly carrying loads in excess of 1,000 pounds. It includes use by recreational users, including hunters, who often access the river via float plane to L Lake (RM 74.5) and then float downstream via raft, caterafts, and canoes. Again, these users often had loads well in excess of 1,000 pounds. In addition, the undisputed record of post-statehood use includes jet boat users travelling upstream as far as Ketchumstuk (RM 37.5) to access various points along the river.

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pounds would require between six to twelve inches); Exhibit JJ, at ¶ 2 (Affidavit of George E. M. Gustafson) (testifying that a riverboat with a lift can operate in six to eight inches of water).

[335] The segments between RM 38 and 39 and RM 44 through 53.5 are not at issue in this case because ownership of the underlying bed is undisputed. Complaint at ¶ 19, Dkt. 1.

[336] *See Gulkana Appeal*, 891 F.2d at 1404.

Although the United States does not dispute that these trips occurred—most of the trips either involved BLM or were documented in BLM interviews—it contends that the trips are not relevant because the trips occurred for "personal use" or in watercraft not customarily used for "trade and travel." This argument simply has no basis in the law. The trips involving rafts with loads of more than 1,000 pounds—all four of the DNR trips, the BLM trips in 2000 and 2012, and multiple hunting trips taken by private parties—are the very same type of trips, in the very same type of watercraft, that the Ninth Circuit based its finding of navigability on in the *Gulkana Appeal*. Even if the trips did not involve a commercial guide, the very fact that they occurred demonstrates that guided hunting and fishing trips could occur on the Mosquito Fork. In fact, Brown admits that if the *Gulkana* decision applies to the Mosquito Fork, and inflatable rafts, canoes, and jet boats are relevant, then the Mosquito Fork is navigable.[337]

A finding of navigability is further supported by Brown's own analysis. He concludes that launches are a customary and traditional watercraft. He further concludes that launches require the same draft as a canoe, but can carry more weight.[338] The United States has repeatedly found that the Mosquito Fork navigable for canoes.[339] Given that canoes and launches require the same draft, the ability to navigate the river via canoe demonstrates that this river can also be navigated by a launch. Navigability does not depend on actual commerce. It depends on whether the river *could have* been used as a useful channel for commerce at the time of statehood.

The United States' hydrologist, Mussetter, bases his opinion on the incorrect assumptions provided to him by Brown: navigability depends on showing the river is boatable by either a twenty-eight foot long pole boat or a twenty-eight foot long riverboat with an outboard motor carrying at least 2,000 pounds.[340] Nevertheless, he provides the results his model would produce if he assumed a criterion watercraft with an eight- inch draft (the draft required by a pole boat carrying 1,000 pounds). Under an eight-inch draft assumption, Mussetter's number crunching shows that his shallowest study area is boatable 46% of the open water season. He reaches this conclusion even though he is assuming that the boat operator would not be able to navigate the

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337 Exhibit G, at 112 (Deposition Transcript Excerpts, Brown Dep. at 124:1–124:21); Exhibit E (Draft Navigability Determination); Exhibit BB (Title Navigability Law and Wild and Scenic Rivers).

338 Exhibit HH, at 88 (Brown Boat Report).

339 *See* Exhibit H (1983 BLM Mgmt. Plan); Exhibit EE (BLM Instream Flow Application).

340 Exhibit B, at 10 (Mussetter Revised Report); Exhibit AA, at 19–20 (Deposition Transcript Excerpts, Mussetter Dep. at 166:25–167:10).

boat to miss the highest rock or that navigability requires a clear channel with absolutely no touches—unreasonable assumptions not supported by the law. If Mussetter applied a standard that allowed for some difficulty—as allowed by Supreme Court and Ninth Circuit precedent—that number would undoubtedly be much higher. Indeed, even if Mussetter assumes the boater misses the highest rock, but touches the second highest rock, his shallowest reach is navigable 69% of the open water season.[341] This is well above the one-third standard applied by BLM in its previous navigability determinations for other rivers in Alaska.[342]

Applying the correct legal principles, the multiple trips on this river for which there is no *genuine* issue of material fact, as well as the United States' own hydrologists modeling results, show that the Mosquito Fork was used and was capable of being used at the time of statehood as a highway of commerce. Summary judgment in favor of the state is warranted for the entire portion of the Mosquito Fork at issue.

C. Even if the Court does not grant summary judgment on the entire portion of the Mosquito Fork at issue, summary judgment is nevertheless warranted on segments where the state's evidence is unrebutted.

In the event the Court does not grant summary judgment on the entire portion of the Mosquito Fork at issue, summary judgment should be granted in favor of the State for RM 1.2 to 3.3, 36.3 to 55, and 60 to 80.5 because the United States can offer no evidence that these segments are non-navigable and, therefore, cannot contest the state's evidence detailed above that these portions of the Mosquito Fork are navigable.

Mussetter is the United States' sole designated expert on "navigability of the reach of the Mosquito Fork at issue in this suit…."[343] Mussetter's revised report expresses no opinion regarding the navigability of the Mosquito Fork from RM 1.2 to 3.3, Ketchumstuck Creek (RM 36.3) to 55 or from RM 60 to 80.5.[344] In describing the only cross-section ("Site PN") he studied within these two areas, Mussetter stated that "a competent boatman should be able to navigate through this relatively low velocity reach without significant challenges."[345] The report's purported "boatability" analysis addressing required flow depths excludes any mention

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341 Given that this is the shallowest reach analyzed by Mussetter, the other sections of the river will have even a higher percentage of boatable days assuming an eight-inch draft.

342 *See* Exhibit G, at 120 (Deposition Transcript Excerpts, Brown Dep. at 132:4–132:25)

343 United States' Final Witness List, Dkt. 59, at 3.

344 Exhibit B, at 11 (Mussetter Revised Report).

345 Exhibit B, at 44 (Mussetter Revised Report).

of these areas or Site PN.[346] Moreover, at his deposition, Mussetter specifically stated that he would not testify that these segments of the river are non-navigable.[347]

The state's evidence, summarized in the facts section above, applies as strongly to these two sections of the Mosquito Fork as it does to the sections of the river that Mussetter contends are less boatable. Against the body of evidence compiled by the state, the United States has only an expert who will not testify regarding these sections of the river. Accordingly, there is no factual dispute and summary judgment should be granted as to RM 1.2 to 3.3, 36.3 to 38, 39 to 44, 53.5 to 55, and 60 to 80.5.

CONCLUSION

Navigability-for-title requires a showing that a waterway, in its natural and ordinary condition, was capable of providing a useful channel for commerce at the time of statehood. After extensive discovery, the parties generally agree on the factual record, which demonstrates that miners, prospectors, and explorers traveled the Mosquito Fork pre-statehood; that recreationalists, government officials, miners, and prospectors continue to travel the Mosquito Fork post-statehood; and post-statehood travel has occurred in meaningfully similar watercraft to what existed pre-statehood. Travel on the Mosquito Fork can occur regularly, for a majority of the open water season, even if there may be some difficulty at times.

The best factual argument for the United States shows a river that is navigable 46% to 71% of the open-water season with potential difficulty in exactly one spot mere feet wide among dozens of river miles. That analysis, flawed though it may be, is more than sufficient to demonstrate the Mosquito Fork is navigable-in-fact.

The United States and its experts ignore established Supreme Court and Ninth Circuit precedent, and treat the Mosquito Fork differently than other rivers deemed navigable in Alaska. There is no genuine issue of material fact as to the boatability of the Mosquito Fork under a properly applied navigability test and the state is therefore entitled to summary judgment.

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346 Exhibit B, at 72–85 (Mussetter Revised Report).

347 Exhibit AA, at 10–11 (Deposition Transcript Excerpts, Mussetter Dep. at 23:10–24:24).

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Certificate of Service
This is to certify that on this date, a copy of the foregoing documents and Exhibits A-PP will be served electronically via ECF on the following:

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Dean K. Dunsmore

Rachel K. Roberts

William E. Gerard

/s/ Jessica Moats Alloway 06/01/2015
Date