# RC 2

## ALASKA DEPARTMENT OF FISH AND GAME

## STAFF COMMENTS ON
## COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE
## REGULATORY PROPOSALS
## COMMITTEE OF THE WHOLE–GROUPS 1 - 5

## FOR THE ARCTIC-YUKON-KUSKOKWIM MANAGEMENT AREAS

## ALASKA BOARD OF FISHERIES MEETING
## ANCHORAGE, ALASKA

**January 15–19, 2019**

Regional Information Report 3A18-05

The following staff comments were prepared by the Alaska Department of Fish and Game (department) for use at the Alaska Board of Fisheries (board) meeting, January 15 – 19, 2019. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

## Acronyms and Abbreviations

The following acronyms and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Commercial Fisheries, Sport Fish, and Subsistence: All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

**Weights and measures (metric)**

| | |
|---|---|
| centimeter | cm |
| deciliter | dL |
| gram | g |
| hectare | ha |
| kilogram | kg |
| kilometer | km |
| liter | L |
| meter | m |
| milliliter | mL |
| millimeter | mm |

**Weights and measures (English)**

| | |
|---|---|
| cubic feet per second | $ft^3/s$ |
| foot | ft |
| gallon | gal |
| inch | in |
| mile | mi |
| nautical mile | nmi |
| ounce | oz |
| pound | lb |
| quart | qt |
| yard | yd |

**Time and temperature**

| | |
|---|---|
| day | d |
| degrees Celsius | °C |
| degrees Fahrenheit | °F |
| degrees kelvin | K |
| hour | h |
| minute | min |
| second | s |

**Physics and chemistry**

| | |
|---|---|
| all atomic symbols | |
| alternating current | AC |
| ampere | A |
| calorie | cal |
| direct current | DC |
| hertz | Hz |
| horsepower | hp |
| hydrogen ion activity (negative log of) | pH |
| parts per million | ppm |
| parts per thousand | ppt, ‰ |
| volts | V |
| watts | W |

**General**

| | |
|---|---|
| Alaska Administrative Code | AAC |
| all commonly accepted abbreviations | e.g., Mr., Mrs., AM, PM, etc. |
| all commonly accepted professional titles | e.g., Dr., Ph.D., R.N., etc. |
| at | @ |
| compass directions: | |
| east | E |
| north | N |
| south | S |
| west | W |
| copyright | © |
| corporate suffixes: | |
| Company | Co. |
| Corporation | Corp. |
| Incorporated | Inc. |
| Limited | Ltd. |
| District of Columbia | D.C. |
| et alii (and others) | et al. |
| et cetera (and so forth) | etc. |
| exempli gratia (for example) | e.g. |
| Federal Information Code | FIC |
| id est (that is) | i.e. |
| latitude or longitude | lat or long |
| monetary symbols (U.S.) | $, ¢ |
| months (tables and figures): first three letters | Jan,...,Dec |
| registered trademark | ® |
| trademark | ™ |
| United States (adjective) | U.S. |
| United States of America (noun) | USA |
| U.S.C. | United States Code |
| U.S. state | use two-letter abbreviations (e.g., AK, WA) |

**Acronyms**

| | |
|---|---|
| Acceptable Biological Catch | ABC |
| Alaska Board of Fisheries | board |
| Alaska Department of Fish and Game | department /ADF&G |
| Amount Necessary for Subsistence | ANS |
| Alaska Wildlife Troopers | AWT |
| Biological Escapement Goal | BEG |
| Central Gulf of Alaska | CGOA |
| Coded Wire Tag | CWT |
| Commercial Fisheries Entry Commission | CFEC |
| Cook Inlet Aquaculture Association | CIAA |
| Customary and Traditional | C&T |
| Department of Natural Resources | DNR |
| Demersal Shelf Rockfish | DSR |
| Emergency Order | EO |
| Guideline Harvest Level | GHL |
| Gulf of Alaska | GOA |
| Global Positioning System | GPS |
| Individual Fishing Quota | IFQ |
| Local Area Management Plan | LAMP |
| Lower Cook Inlet | LCI |
| Mean Low Water | MLW |
| Mean Lower Low Water | MLLW |
| No Data | ND |
| National Marine Fisheries Service | NMFS |
| National Oceanic and Atmospheric Administration | NOAA |
| Nick Dudiak Fishing Lagoon | NDFL |
| North Pacific Fishery Management Council | NPFMC |
| Optimum Escapement Goal | OEG |
| Pelagic Shelf Rockfish | PSR |
| Prince William Sound | PWS |
| Prior Notice of Landing | PNOL |
| Private Nonprofit Salmon Hatchery | PNP |
| River Mile | RM |
| Special Harvest Area | SHA |
| Sustainable Escapement Goal | SEG |
| Trail Lakes Hatchery | TLH |
| Upper Cook Inlet | UCI |
| Western Gulf of Alaska | WGOA |

*REGIONAL INFORMATION REPORT 3A18-05*

# ALASKA DEPARTMENT OF FISH AND GAME

# STAFF COMMENTS ON COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE REGULATORY PROPOSALS COMMITTEE OF THE WHOLE–GROUPS 1-5 FOR

# ARCTIC-YUKON-KUSKOKWIM FINFISH

# ALASKA BOARD OF FISHERIES MEETING ANCHORAGE, ALASKA

# JANUARY 15 – 19, 2019

by
Alaska Department of Fish and Game

Alaska Department of Fish and Game
Division of Commercial Fisheries
333 Raspberry Road
Anchorage, AK 99518-1565

December 2018

# ABSTRACT

This document contains Alaska Department of Fish and Game (department) staff comments on commercial, sport, subsistence, and personal use finfish regulatory proposals for the Arctic-Yukon-Kuskokwim Management Areas. These comments were prepared by the department for use at the Alaska Board of Fisheries (board) meeting, January 15–19 in Anchorage, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Key words: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, Arctic-Yukon-Kuskokwim, finfish, management, management plan, regulatory proposals, inriver, commercial fisheries, personal use, sport, guided sport, subsistence, bag limits, possession limits, king, sockeye, coho, chum, pink, salmon

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## *Summary of department positions on regulatory proposals for the Arctic-Yukon-Kuskokwim Management Areas, January 15-19, 2019.*

| Proposal No. | Department Position | Issue |
|---|---|---|
| 63 | O | Expand closed waters, adopt a minimum size limit, and reduce bag limit in the Chatanika Harvest Area subsistence pike fishery. |
| 64 | O | Expand closed waters, adopt a minimum size limit, and reduce bag limit in the Chatanika Harvest Area subsistence pike fishery. |
| 65 | O | Expand closed waters, adopt a seasonal bag and possession limit, and allow retention of only 2 fish greater than 30 inches in length in the Chatanika Harvest Area subsistence pike fishery. |
| 66 | N | Expand closed waters in the Chatanika Harvest Area subsistence pike fishery. |
| 67 | N | Expand closed waters in the Chatanika Harvest Area subsistence pike fishery. |
| 68 | N | Eliminate closed waters in the Chatanika Harvest Area subsistence pike fishery. |
| 69 | N/O | Modify management triggers in the Minto Flats Northern Pike Management Plan. |
| 70 | O | Modify the size limit for lake trout in Fielding Lake to a maximum of 28 inches or less. |
| 71 | O | Repeal the size limit for lake trout in Fielding Lake. |
| 72 | O | Allow catch-and-release fishing only for Arctic grayling in the Upper Chatanika River drainage from the Elliot Highway campground upstream. |
| 73 | O | Allow harvest of Arctic grayling less than 12 inches in a portion of the Chena River from June 1 to July 15. |
| 74 | S | Extend the period during which Arctic grayling 12 inches or less in size may be retained in the Delta Clearwater drainage. |
| 75 | S | Increase the bag and possession limit for northern pike in all lakes and flowing waters of the Chisana River drainage. |
| 76 | N | Increase the sport fishing season for northern pike to year-round in Volkmar lake. |
| 77 | S | Open sport fishing for northern pike in Little Harding Lake. |
| 78 | O | Allow only single hooks when sport fishing for northern pike in Minto Flats. |
| 79 | O | Modify the bag and possession limits for stocked species in Dune Lake. |
| 80 | S | Increase the bag and possession limit in Koole Lake for all stocked species combined from five to 10. |
| 81 | O | Increase the AYK Regional bag and possession limit for coho and chum salmon. |
| 82 | S | Allow sport fishing for salmon and nonsalmon species within the Toklat River drainage year-round. |
| 83 | S | Allow subsistence and sport fishing for salmon and nonsalmon species within in the Toklat River drainage year-round. |
| 84 | S | Repeal the Tanana River Area rainbow trout regulations. |
| 85 | S | Update the list of stocked waters in regulation. |
| 86 | NA | Allow hook and line attached to a rod or pole to be used under subsistence regulations to catch nonsalmon species in the Kaltag, Nulato, and Old Village (or Rodo) rivers year-round. |

**N = Neutral; S = Support; O = Oppose; NA = No Action, WS = Withdrawn Support**

***Summary of department positions on regulatory proposals for the Arctic-Yukon-Kuskokwim Management Areas, January 15-19, 2019.***

| Proposal No. | Department Position | Issue |
|---|---|---|
| 87 | N/S | Allow the use of drift gillnets for subsistence fishing throughout the Yukon River. |
| 88 | S | Eliminate any use of the livebox as an intermediate step of releasing king salmon from a fish wheel. |
| 89 | N/S | Allow retention of king salmon in the Yukon River by emergency order in dip nets and beach seines during times of king salmon conservation in subsistence and commercial fisheries. |
| 90 | O | Reduce the subsistence closure time prior to the opening of commercial fishing in Yukon Districts 1-3 and Subdistrict 4-A from 24 hours to six hours. |
| 91 | O | Reduce the period of subsistence closure prior to and after commercial openings to six hours in Yukon Districts 1-3. |
| 92 | N/O | Restrict gillnet mesh to a maximum of 6 inches in Districts 4, 5, and 6 for subsistence and commercial fisheries. |
| 93 | O | Repeal the requirement to remove the tips of the tail fin of subsistence-taken salmon on the Yukon River. |
| 94 | O | Allow the taking of the first king salmon entering the Yukon River for religious and ceremonial use for all Yukon River Yup'ik people. |
| 95 | N | Gillnet specifications for Yukon River District 5 between the ADF&G marker near Waldron Creek and Hess Creek. |
| 96 | N | Allow subsistence fall chum salmon fishing seven days per week in all of District 5 of the Yukon Area once a fall chum salmon commercial fishery is opened. |
| 97 | N/O | Divide Yukon River District 2 into two subdistricts at the upstream boundary of Statistical Area 334-22. |
| 98 | O/N | Require that commercial gillnets of 6-inch or smaller mesh be limited to a maximum of 50 meshes deep, and gillnets greater than 6-inch mesh be restricted to 45 meshes deep in Districts 4-6. |
| 99 | N | Allow the use of beach seine gear during all commercial openings in Districts 1-3 in summer and fall seasons. |
| 100 | N/O | Require all commercial fish wheels to have a maximum basket dimension of 5 feet by 8 feet (40 square feet), and a dipping depth of no more than 6 feet. |
| 101 | N/S | Replaces the set closure dates for all fall season commercial fisheries within the Yukon Area with a closure specified by emergency order. |
| 102 | O | Include the waters of the Pastolik and Pastoliak rivers in District 1 of the Yukon Area. |
| 103 | O | Allow commercial fishing within 500 yards of the mouths of the of Pastolik and Pastoliak rivers (Figure 102-2) as part of District 1 of the Yukon Area. |
| 104 | O | Allow commercial salmon fishing in the lower three river miles of the Pastolik and Pastoliak rivers, as part of the Yukon Area District 1. |
| 105 | O | Modify Kuskokwim River subsistence gillnet specifications and operation during times of king salmon conservation. |
| 106 | N | Reduce the distance that must separate subsistence set gillnets in tributaries of a portion of the Kuskokwim River. |
| 107 | S | Add dip nets as a legal gear type for subsistence salmon fishing within the Kuskokwim Area. |
| 108 | S | Specify that operation of each set gillnet or drift gillnet must be performed or assisted by a Commercial Fisheries Entry Commission permit holder in the Prince William Sound Area commercial salmon fishery. |
| 109 | O | Close the marine waters immediately adjacent to the mouth of the Kuskokwim River to subsistence fishing during times of king salmon conservation. |

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***Summary of department positions on regulatory proposals for the Arctic-Yukon-Kuskokwim Management Areas, January 15-19, 2019.***

| Proposal No. | Department Position | Issue |
|---|---|---|
| 110 | N | Close all fishing in non-salmon spawning rivers of the Kuskokwim River within five miles of the confluence during times of king salmon conservation. |
| 111 | O | Increase maximum gillnet mesh size to 8 inches for Kuskokwim commercial salmon fishing and set maximum gillnet mesh size at 8 inches in the subsistence salmon fishery. |
| 112 | S | Allow subsistence fishing with dip net gear in the Kuskokwim River during times of king or coho salmon conservation. |
| 113 | N | Allow 6-inch or less mesh gillnets in the Kuskokwim River subsistence fishery prior to June 1. |
| 114 | O | Restrict gillnets in the Kuskokwim River subsistence fishery to 6-inch or less mesh from June 1–25 only if necessary, with rolling closures based on king salmon run-timing. |
| 115 | N | Allow subsistence fishing for non-salmon fish with 8-inch or smaller gillnets in the Tuntutuliak, Tagayarak, Kialik, and Johnson rivers 100 yards upstream from their confluences with the Kuskokwim River, when salmon fishing is closed. |
| 116 | N | Keep the confluences of the Johnson, Kialiq, Kinak, Tagyaraq, and Pailleq rivers open to subsistence fishing with gillnets during times of subsistence salmon closures. |
| 117 | N | Keep the waters of Pailleq Slough open to subsistence fishing for non-salmon species with gillnets 100 yards upstream of its confluence with the Kuskokwim River during times of subsistence fishing closures. |
| 118 | O | Close sport fishing for king salmon for the entire Kuskokwim River drainage when other king salmon fisheries are closed to the taking of king salmon. |
| 119 | O | Close sport fishing for king salmon on the Aniak River above Doestock Creek when other fisheries in the Kuskokwim River drainage are closed to taking king salmon. |
| 120 | O | Close sport fishing to all fish species and recreational rafting on the Kwethluk, Kasigluk, and Kisaralik rivers from May 1 to October 31 during times of salmon conservation within the Kuskokwim River drainage. |
| 121 | O | Close guided fishing in the Aniak River on weekends and would limit the number of people in guided boats to four. |
| 122 | O | Require non-utilized parts of a salmon carcass (e.g., tail and viscera) to be retained. And first be offered to dog mushers and garden groups before requiring disposal by burying them away from communities or discarding the parts mid-river away from shore. |
| 123 | N/S | Repeal Norton Sound Subdistrict 1 Tier II subsistence chum salmon fishery. |
| 124 | N/S | Repeal the Subdistrict 1 (Nome) chum salmon management plan in the subsistence finfish section and readopt in the commercial salmon fishery section with modified seasons. |
| 125 | N | Change the start of the commercial fishing season in Norton Sound Subdistrict 1 (Nome) from after July 1 to on or after June 20. |
| 126 | N/S | Repeal the restriction on the length of commercial salmon fishing periods in Norton Sound Subdistrict 1 (Nome). |
| 127 | N/O | Port Clarence District guideline harvest range, management plan, and Pilgrim River subsistence salmon fishery. |
| 175 | S | Align regulations for sport fishing services and sport fishing guide services in fresh and salt waters and update guide registration and reporting requirements. |
| 176 | S | Align regulations within the Southeast King Salmon Management Plan with the provisions of the new 20192028 Pacific Treaty annex. |
| 177 | N | Add purse seine and drift gillnet as allowed gear types in the Crawfish Inlet Terminal Harvest Area (THA). |
| 178 | S | Allow chum salmon to be taken by drift gillnets after August 2 in Yukon River Subdistrict 4-A downstream from the mouth of Stink Creek. |

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# COMMITTEE OF THE WHOLE - GROUP 1: TANANA SUBSISTENCE AND SPORT FISHING (23 PROPOSALS)

## CHATANIKA NORTHERN PIKE SUBSISTENCE (7 PROPOSALS)

### PROPOSAL 65 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** John Morack.

**WHAT WOULD THE PROPOSAL DO?** This expands the current closed area from 1 mile to 2 miles in the Chatanika Harvest Area (CHA; includes 15 river miles of the Chatanika River upstream of Goldstream Creek) for subsistence fishing through the ice for northern pike; establishes a seasonal bag and possession harvest limit of the first 10 northern pike caught in the CHA, and, of the first 10 fish caught, allows retention of only 2 fish greater than 30 inches in length.

**WHAT ARE THE CURRENT REGULATIONS?** Subsistence fishing through the ice is closed for northern pike on the Chatanika River in the area 1 mile upstream of the confluence with Goldstream Creek. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the CHA. The subsistence bag limit is 10 northern pike per day, with 20 fish in possession per household in the CHA. In the remainder of Minto Flats and the Tolovana River drainage, there is no harvest limit. Based on the management plan, if inseason subsistence harvest reports indicate 1,500 northern pike have been harvested in the CHA from January 1 until the waters are free of ice, the subsistence fishery will close for the remainder of the spring in the CHA. If the harvest reports exceed 750 northern pike by May 31, then the sport fishing bag limit is reduced from 5 to 2 fish during the following June 1 – October 14 open season in the Minto Flats area. There is no size limit on fish retained in the subsistence fishery. Subsistence fishing with hook and line gear is limited to fishing through the ice only, and in the CHA only single hooks may be used. There are no regulations prohibiting catch-and-release while subsistence or sport fishing. Sport fishing for northern pike in the Tolovana River drainage, which includes the CHA, is open from June 1 to October 14 and the bag and possession limit is 5 fish per day, only 1 of which may be 30 inches or longer. In the CHA, sport fishing is limited to single-hooks during the open season.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Increasing the closed area beyond the current 1-mile closure would decrease the primary winter subsistence fishing area and the harvest of northern pike may decrease, as occurred in 2017 when the 3-mile closure was in effect. The proposed winter subsistence fishing household bag and possession limits would be limited to a seasonal limit of 10 fish, which could potentially be more restrictive than sport fishing regulations which have a bag and possession limit of 5 northern pike with 1 over 30 inches in length with no annual limit (5 AAC 74.044 (b)(2)(A&B). “Seasonal limit” would need to be defined, as it is currently not defined in regulation. The proposal would also introduce size restrictions to the subsistence harvest, which may further reduce harvest. Catch-and-release while subsistence fishing would be eliminated, requiring fishermen to retain the first 10 fish caught, with retention of only 2 fish over 30 inches. As written, it is unclear if fishermen would be in violation if more than 2 of the first 10 fish caught were over 30 inches and released. A size limit may reduce the harvest of large northern pike.

**BACKGROUND:** The CHA includes 15 river miles of the Chatanika River between the confluence of Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area (Figure 65-1). The CHA is popular for northern pike subsistence fishing through the ice due to the concentration of an overwintering northern pike population and good winter trail access. Most fishing occurs a few miles upstream of the current 1-mile closed area between January and April. Regulations for the subsistence fishery in the CHA started in 1987. Since 2003, participation in the subsistence fishery has shifted from predominantly rural Minto community residents to predominantly Fairbanks North Star Borough residents. In 2010, the board established a household subsistence bag limit of 10 northern pike per day, with 20 fish in possession in the CHA. This area is open to sport fishing from June 1 to October 14, and the bag and possession limit is 5 fish per day, only 1 of which may be 30 inches or longer. A 3-mile closed area for the winter subsistence northern pike fishery in the CHA upstream of Goldstream Creek was created in the 2017 season and then modified and reduced to 1 mile for the 2018 season.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and Tanana River Area sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests from the CHA are required to be reported on a weekly basis . When reported harvest exceeds 750 northern pike, the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or longer, for the remainder of the calendar year (open season June 1 – October 14). The winter subsistence fishery within the CHA shall be closed by emergency order until ice out if the subsistence harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded only in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average total subsistence harvest from the Minto Flats Complex is 526 fish and the recent average sport fishing harvest from the complex is 424 fish, with a total average harvest of 953 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though the department has not conducted a formal creel survey to accurately document age, sex, and length of subsistence harvest. In 2018, the department opportunistically collected 101 samples from subsistence fishermen: > 98% of fish harvested were > 24 inches and 35% were > 30 inches in length (Figure 65-3). Approximately 1,700 fish were sampled by the department from the overwintering population using similar hook-and-line gear in March of 2018: ~74% were > 24 inches and 17% were greater than 30 inches. In 2009, sampling of the overwintering population was also conducted and 10 of 306 (3%) were > 30 inches. Previous abundance studies in Minto Flats have shown that virtually all northern pike > 30 inches total length are females.

During the spring of 2018, the department conducted an abundance study for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Of this estimated CHA population, an estimated 14,565 northern pike resided in the Minto Lakes study area during the summer of 2018. This increase in abundance of northern pike in Minto Lakes since 2009 is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes Complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy for abundance in the entire Minto Flats Complex. Based on radiotelemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The preliminary 2018 harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA (Table 65-2). Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA compared to 2018 when 744 fish were harvested and 525 were released.

The CHA is the most significant of the 3 known overwintering areas for northern pike within Minto Flats. Telemetry studies have shown that 100% of fish utilizing Minto Lakes overwinter within the CHA and are concentrated in the four miles upstream of Goldstream Creek. In 2016, the board amended a proposal to close a popular 3-mile area upstream of Goldstream Creek to subsistence fishing through the ice with the intent of reducing the harvest of overwintering northern pike and large, pre-spawning females.

The 3-mile closure was in place for 1 season in 2017, during which a record low of 21 fish were harvested with half as many permits issued (93 permits) as the previous year (Table 65-1, Figure 65-2). The Fairbanks Fish and Game Advisory Committee then submitted an out-of-cycle proposal in 2017 to change the 3-mile closed area to 1 mile stating that the closure in the primary harvest area resulted in the unintended consequence of not providing a reasonable opportunity for subsistence. The board adopted the proposal and reduced the 3-mile closure to a 1-mile closure in the CHA. With the 1-mile closure in the 2018 season, preliminary subsistence reports indicated the 2018 northern pike harvest was the second highest observed since 2011 in the CHA (Table 65-1, Figure 65-2). Based on sampling, nearly all (>95%) overwintering fish were likely outside of the 1-mile closed area during March of 2018.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. The department **SUPPORTS** the proposal with modification to require CHA permit holders to keep the first 10 fish caught (i.e., catch-and-release fishing is not allowed) only. The department has continued concerns about the integrity of the sex and size composition of the northern pike population in Minto Flats because of the selective harvest of long-lived female northern pike that are highly concentrated in the CHA during winter. Eliminating the release of caught fish back into the water will also eliminate hooking mortality, which can be more severe under ice fishing conditions and the use of bait.

Based on stock assessments conducted since 1996, the selective sport harvest in Minto Flats and the selective harvest in the Chatanika Harvest Area (CHA) has affected the abundance, sex, and size composition of northern pike in Minto Lakes. Most notable was the low abundance of northern

pike >24 inches in 2009 that was preceded by years of high harvests in the CHA and a period of low water levels. Based on the abundance of northern pike observed in the CHA in 2018, average harvest levels since 2010 have been sustainable relative to the abundance of fish >24 inches.

However, the number of CHA subsistence permits issued has increased notably since 2015. If future average harvests regularly approach the 1,500 fish threshold, the selective harvests of female northern pike would not be sustainable, particularly if low to normal water levels return. Fishing through the ice selects for female northern pike because they are more aggressive than male northern pike at this time of year; however, requiring subsistence users to keep their first ten fish would help to distribute harvest across a greater range of sizes and ages.

Should the board consider extending the closed area, the department can provide telemetry data that may aid in determining the amount of closed area necessary to provide protection to a certain percentage of the overwintering population. The distribution of northern pike within the CHA varies annually. Prior research indicates that between 4 and 68% of pike may overwinter within the first 3 miles upstream of Goldstream Creek on the Chatanika River. Since 2009, between 2 and 32% of pike have overwintered within the first mile upstream of Goldstream Creek. Sport fishing for northern pike in the Tolovana River drainage, which includes the CHA, is closed October 15-May 31.

The board should consider whether adoption of this proposal still provides a meaningful priority for the subsistence fishery, and a reasonable opportunity for success in taking northern pike for subsistence uses.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of northern pike for subsistence uses.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes; less than 5% of the northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 65-1.–Harvest and population estimates of northern pike in Minto Flats Complex[a], 1993-2018.

| Year | Subsistence Permits Issued | CHA Harvest [b] | Minto Flats Harvest (includes CHA prior to 2011) | Total Subsistence Harvest | Sport Angler Days | Total Sport Harvest | Total Harvest by All Users |
|---|---|---|---|---|---|---|---|
| 1993 | 31 | – | 767 | 767 | – | 3,420 | 4,187 |
| 1994 | 48 | – | 995 | 995 | – | 9,489 | 10,484 |
| 1995 | 55 | – | 1,068 | 1,068 | – | 4,480 | 5,548 |
| 1996 | 74 | – | 1,616 | 1,616 | 7,990 | 2,716 | 4,332 |
| 1997 | 88 | – | 1,344 | 1,344 | 7,655 | 1,246 | 2,590 |
| 1998 | 70 | – | 431 | 431 | 3,768 | 772 | 1,203 |
| 1999 | 54 | – | 400 | 400 | 7,064 | 1,098 | 1,498 |
| 2000 | 34 | – | 352 | 352 | 4,212 | 390 | 742 |
| 2001 | 50 | – | 214 | 214 | 2,454 | 654 | 868 |
| 2002 | 32 | – | 521 | 521 | 4,815 | 650 | 1,171 |
| 2003 | 119 | – | 966 | 966 | 4,555 | 1,284 | 2,214 |
| 2004 | 99 | – | 393 | 393 | 4,650 | 1,390 | 1,783 |
| 2005 | 79 | – | 386 | 386 | 5,047 | 2,052 | 2,438 |
| 2006 | 101 | – | 788 | 788 | 4,050 | 1,204 | 1,992 |
| 2007 | 118 | – | 1,837 | 1,837 | 5,656 | 1,809 | 3,646 |
| 2008 | 146 | – | 1,339 | 1,339 | 2,840 | 386 | 1,725 |
| 2009 | 113 | – | 560 | 560 | 4,892 | 873 | 1,433 |
| 2010 | 96 | – | 115 | 115 | 3,327 | 609 | 724 |
| 2011 | 70 | 70 | 30 | 100 | 3,090 | 422 | 522 |
| 2012 | 73 | 73 | 452 | 525 | 4,036 | 412 | 937 |
| 2013 | 77 | 154 | 77 | 231 | 3,406 | 382 | 613 |
| 2014 | 106 | 377 | 101 | 478 | 4,261 | 597 | 1,075 |
| 2015 | 120 | 516 | 249 | 765 | 2,229 | 372 | 1,137 |
| 2016 | 201 | 855 | 165 | 1,020 | 2,911 | 196 | 1,216 |
| 2017 | 93 | 21 | 116 | 137 | 5,426 | 586 | 723 |
| 2018[c] | 167[c] | 744[c] | ND | 744[c] | ND | ND | ND |
| Total: | 2,314 | 2,810 | 15,282 | 18,092 | 98,334 | 37,453 | 54,801 |
| 2013-2017 Average | 119 | 385 | 142 | 526 | 3,647 | 427 | 953 |

*Note*: ND = no data, CHA = Chatanika Harvest Area.

[a] Minto Flats Complex includes Minto Flats lakes and flowing waters, Tolovana River drainage, and the Lower Chatanika River.

[b] Chatanika Harvest Area (CHA) fishing location has been documented on permits since 2011. Prior to 2011, fishing occurred in the CHA but fishing location was not specified on permits.

[c] Data are preliminary and are based on weekly call-ins and returned permits. Permits expired 12/31/2018.

Table 65-2.–Estimated northern pike abundance in the Minto Lakes Study Area (MLSA), 1996-2018, and with the Chatanika Harvest Area (CHA) in 2018.

| | | ≥ 400mm (~16 in)[a] | | ≥ 600mm (~24 in) | | ≥ 720 mm (~30 in) | |
|---|---|---|---|---|---|---|---|
| Year | Area | Abundance | SE | Abundance | SE | Abundance | SE |
| 1996 | MLSA-B | 23,850 | 7,799 | 7,616 | 883 | - | - |
| 1997 | | 16,547 | 1,754 | 3,251 | 174 | 672 | 48 |
| 2000 | MLSA-B | - | – | 5,331 | 1,152 | - | - |
| 2003 | MLSA-B | 25,227 | 4,529 | 7,683 | 2,347 | 1,405 | 288 |
| 2008[a] | MLSA-A[b] | 16,045 | 3,132 | 2,219 | 397 | 958 | 362 |
| | MLSA-B | 9,854 | 1,701 | 2,092 | 448 | 635 | 635 |
| 2018[c] | CHA | | | 19,943 | 2,537 | 3,098 | 510 |
| | MLSA-A | | | 14,569 | 2,034 | 2,380 | 432 |

*Source*: Roach 1997, 1998; Scanlon 2001, 2006; Joy 2009; Albert and Tyres *In prep*.

Note: SE = standard error.

[a] Estimated abundance of northern pike 400–600 mm FL are biased, and the magnitude of this is unknown.

[b] In 2008, the geographical size of the study area was expanded and is referred to as “Area A.” “Area B” is the same study area that was used during 1996–2003.

[c] 2018 data is preliminary.

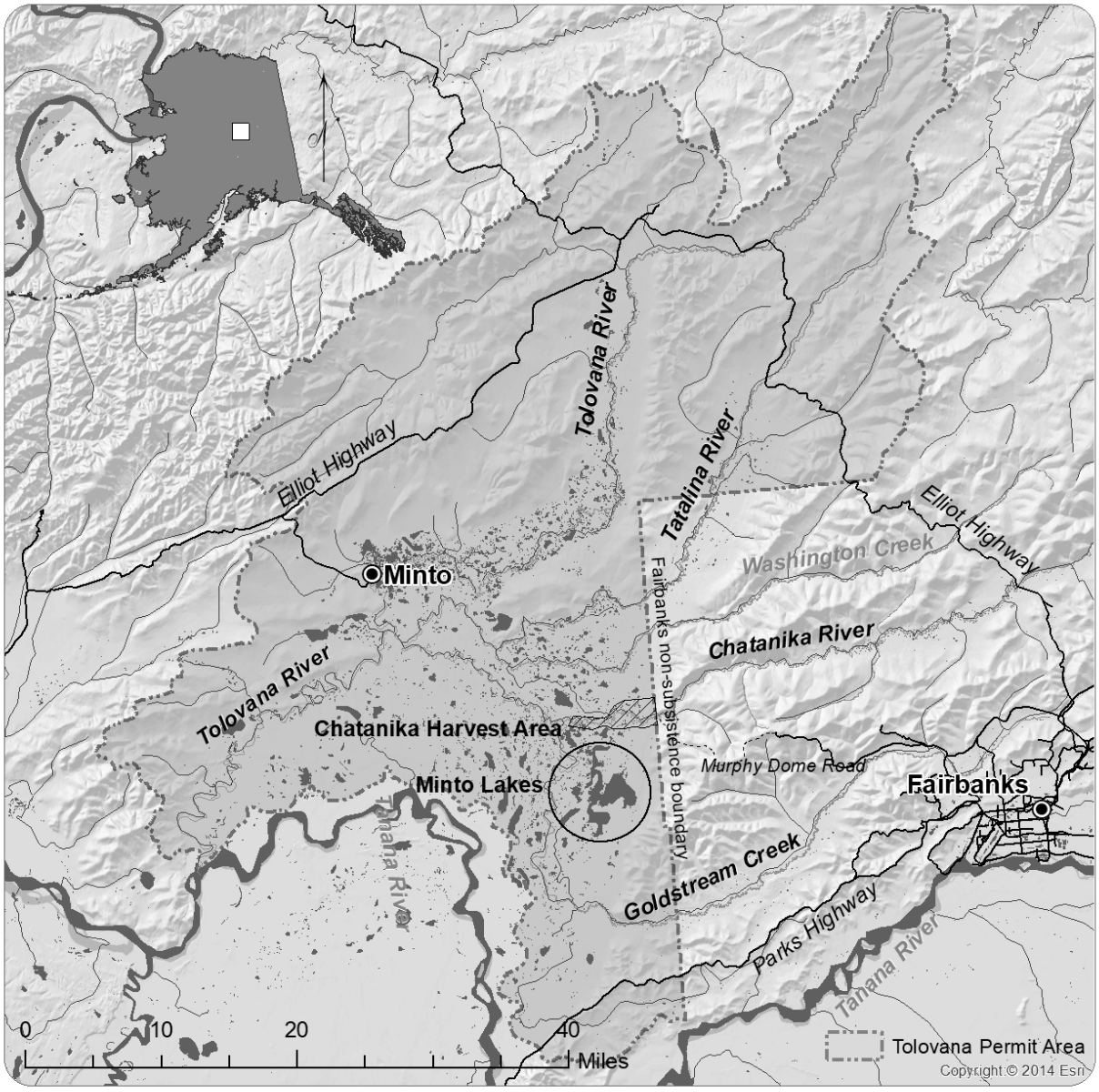



Figure 65-1.–Map of Tolovana subsistence permit area, Minto Lakes, and the Chatanika harvest area within the Minto Flats Complexa.

[a] Minto Flats Complex includes Minto Flats lakes and flowing waters, Tolovana River drainage, and the Lower Chatanika River

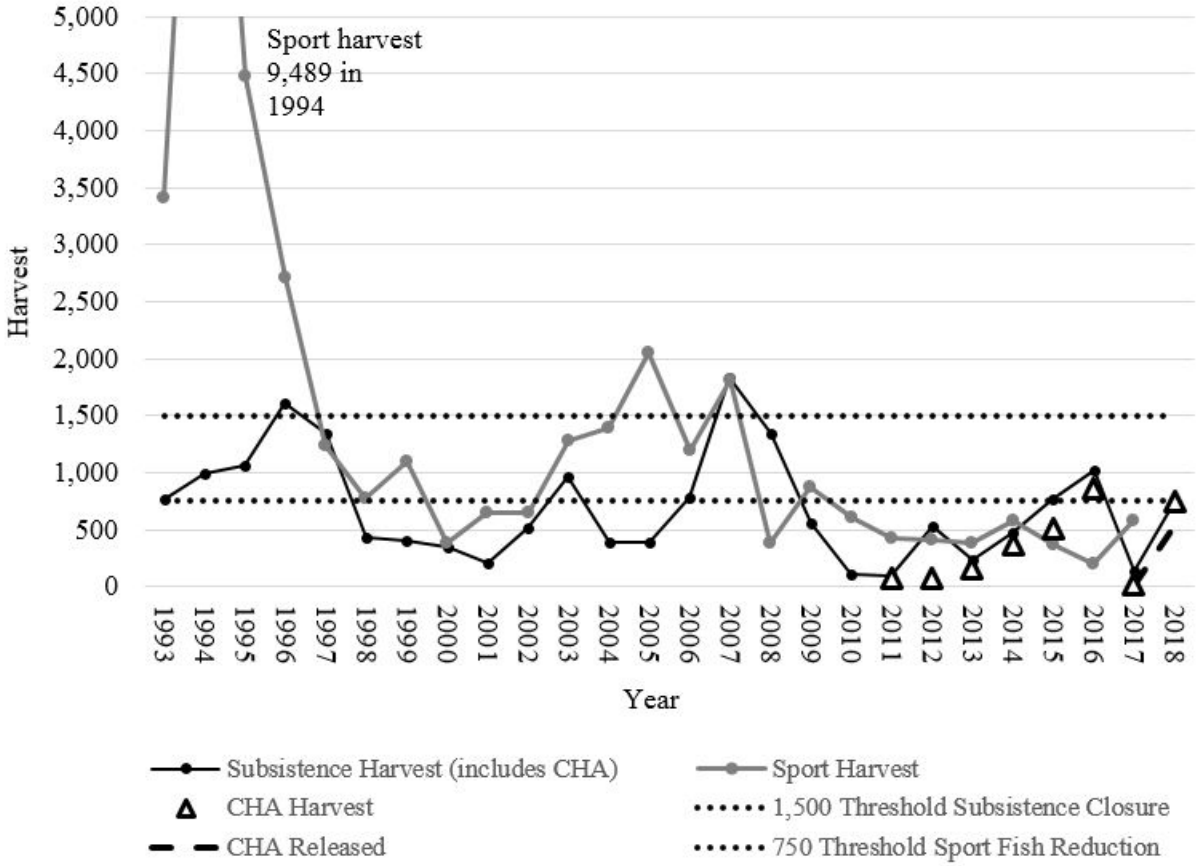



Figure 65-2.–Subsistence and sport fishery harvest of northern pike in Minto Flats Complex, 1993-2018.

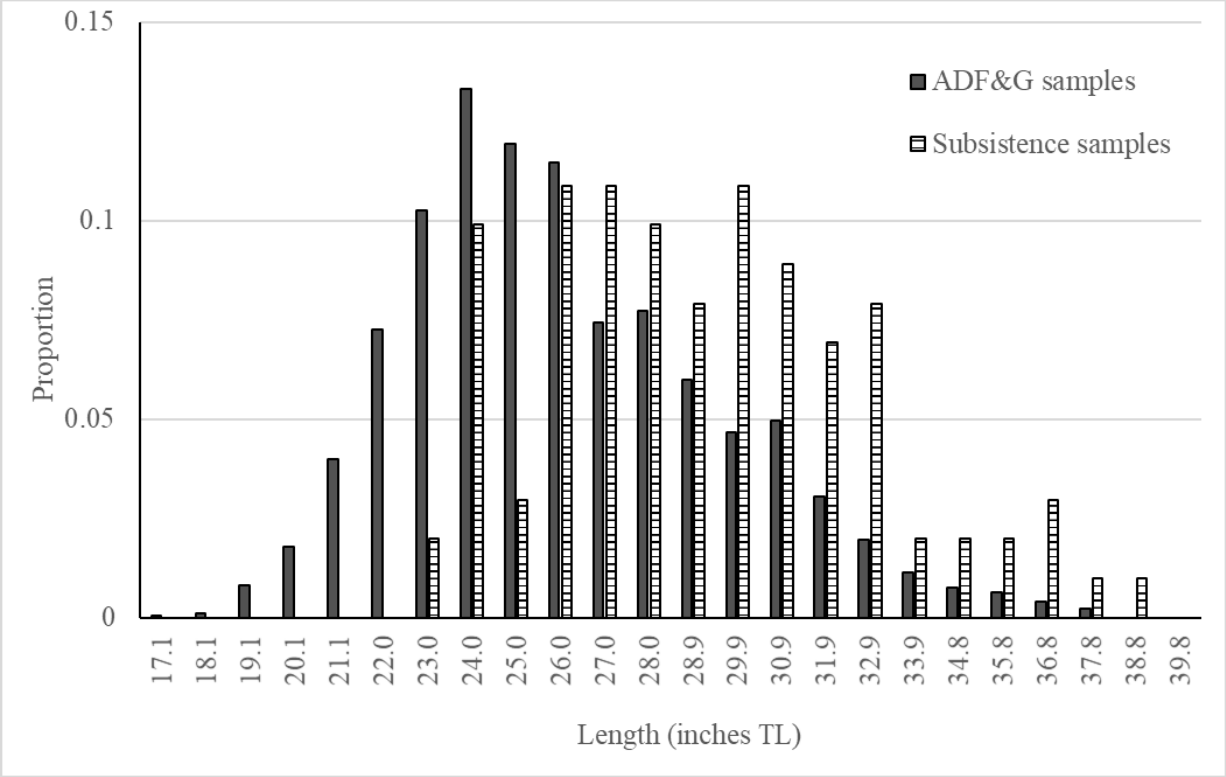



Figure 65-3.–Length composition of northern pike captured by hook and line in the CHA during March 2018 (n = 1,734) and harvested by subsistence users during February and March (n = 101) in the CHA during 2018.

## PROPOSAL 63 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** Minto Nenana Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** This expands the current closed area from 1 mile to 3 miles in the Chatanika Harvest Area (CHA; includes 15 river miles of the Chatanika River upstream of Goldstream Creek) for subsistence ice fishing for northern pike; reduces the subsistence bag limit from 10 northern pike to 5 northern pike per day in the CHA; and establishes a size limit where only 1 fish can be greater than 30 inches in length.

**WHAT ARE THE CURRENT REGULATIONS?** Subsistence ice fishing is closed for northern pike on the Chatanika River in the area 1 mile upstream of the confluence with Goldstream Creek. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the CHA. The subsistence bag limit is 10 northern pike per day with 20 in possession per household in the CHA. In the remainder of Minto Flats and the Tolovana River drainage, there is no harvest limit. Based on the management plan, if inseason subsistence harvest reports indicate 1,500 northern pike have been harvested in the CHA from January 1 until the waters are free of ice, the subsistence fishery will close for the remainder of the spring in the CHA. If the harvest reports exceed 750 northern pike, then the sport fishing bag limit is reduced from 5 to 2 fish for the remainder of the calendar year in Minto Flats. There is no size limit on fish retained in the subsistence fishery. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single hooks may be used. Sport fishing for northern pike in the Tolovana River drainage, which includes the CHA, is open from June 1 to October 14 and the bag and possession limit is 5 fish per day, only 1 of which may be 30 inches or longer. In the CHA, sport fishing is limited to single-hooks during the open season.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** By increasing the closed area beyond the current 1 mile, the primary winter subsistence fishing area would be smaller and the subsistence harvest of northern pike may decrease, as occurred in 2017 when a 3-mile closure was in effect. The proposed winter subsistence fishing household bag and size limits would be similar to summer sport fishing regulations which have a bag and possession limit of 5 northern pike, with 1 over 30 inches in total length (5 AAC 74.044 (b)(2)(A&B)). The harvest of northern pike may decrease if the bag limit is reduced. A size limit may reduce the harvest of large northern pike.

**BACKGROUND:** The CHA includes 15 river miles of the Chatanika River between the confluence of Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area (Figure 65-1). The CHA is popular for northern pike subsistence fishing through the ice due to the concentration of an overwintering population and good winter trail access. Most fishing occurs a few miles upstream of the current 1-mile closed area between January and April. Regulations for the subsistence fishery in the CHA started in 1987. Participation in the subsistence fishery has shifted from predominantly rural Minto community residents to predominantly Fairbanks North Star Borough residents since 2003. In 2010, the board established a household subsistence bag limit of 10 northern pike per day, with 20 in possession in the CHA. This area is open to sport fishing from June 1 to October 14 and the bag and possession limit is 5 fish per day, only 1 of which may be 30 inches or longer. A 3-mile closed area for the winter subsistence northern pike fishery in the CHA upstream of Goldstream Creek was created in the 2017 season then modified and reduced to 1 mile in the 2018 season.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests are required to be reported weekly in the CHA, and when reported harvest exceeds 750 northern pike the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or more in length, for the remainder of the calendar year. The winter subsistence fishery within the CHA is closed by emergency order until ice out if the harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average subsistence harvest is 526 fish and the recent average sport fishing harvest is 424 fish, with a total average harvest of 950 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though a creel survey to accurately document age, sex, and length of subsistence harvest has not been conducted. In 2018, the department opportunistically collected 101 samples from subsistence fishermen; these indicated an average fork length of 28.5 inches. Previous abundance studies have shown that virtually all northern pike >30 inches total length are females in Minto Flats.

During the spring of 2018, an abundance study was conducted for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Similarly, 14,565 northern pike were estimated in the Minto Lakes study area and this increase is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy for abundance in the entire Minto Flats wetland complex. Based on radio telemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The preliminary 2018 harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA (Table 65-2). Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA compared to 2018 where 744 fish were harvested and 525 were released.

The CHA is the most significant of the 3 known overwintering areas for northern pike within Minto Flats. Telemetry studies have shown that 100% of tagged fish utilizing Minto Lakes overwinter within the CHA and are concentrated in the four miles upstream of Goldstream Creek. In 2016, the board amended a proposal to close a popular 3-mile area upstream of Goldstream Creek to subsistence ice fishing upstream of Goldstream Creek which would reduce with the intent of reducing the harvest of overwintering northern pike and large, pre-spawning females.

The 3-mile closure was in place for 1 season in 2017, during which a record low of 21 fish were harvested with half as many permits issued (93 permits) as the previous year (Table 65-1, Figure 65-2). The Fairbanks Fish and Game Advisory Committee then submitted an out-of-cycle proposal in 2017 to change the 3-mile closed area to 1-mile stating that the closure in the primary harvest area resulted in the unintended consequence of not providing a reasonable opportunity for subsistence. The board adopted the proposal and reduced the 3-mile closure to a 1-mile closure in the CHA. With the 1-mile closure in the 2018 season, preliminary subsistence reports indicated the 2018 northern pike harvest was second largest since 2011 (Table 65-1, Figure 65-2). Based on sampling, nearly all (>95%) overwintering fish were likely outside of the 1-mile closed area during March of 2018.

**DEPARTMENT COMMENTS:** The department **OPPOSES** further restrictions to bag limits and the current open area since current harvest levels appear to be sustainable based on the 2018 abundance study in the CHA. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single hooks may be used. Sport fishing for northern pike in the Tolovana River drainage, which includes the CHA, is closed October 15-May 31.

Earlier research indicates that between 4 and 68% of pike may overwinter within the first 3 miles upstream of Goldstream Creek on the Chatanika River. Preliminary results indicate that in 2018, estimated northern pike abundance and size are greater than in 2008. The board should consider whether adoption of this proposal would still provide a meaningful priority for the subsistence fishery and a reasonable opportunity for success in taking northern pike for subsistence uses.

Proposals 64 and 65 are similar to this proposal.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of northern pike for subsistence uses.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes; less than 5% of the northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 64 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** Evan Wheeler.

**WHAT WOULD THE PROPOSAL DO?** This expands the current closed area from 1 mile to 2 miles in the Chatanika Harvest Area (CHA; includes 15 river miles of the Chatanika River upstream of Goldstream Creek) for subsistence ice fishing for northern pike; reduces the subsistence bag limit from 10 northern pike to 5 northern pike per day in the CHA; and establishes a size limit where all fish greater than 30 inches in length must be released.

**WHAT ARE THE CURRENT REGULATIONS?** Subsistence ice fishing is closed for northern pike on the Chatanika River in the area 1 mile upstream of the confluence with Goldstream Creek. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the CHA. The subsistence bag limit is 10 northern pike per day, with 20 in possession per household in the CHA. In the remainder of Minto Flats and the Tolovana River drainage, there is no harvest limit. Based on the management plan, if inseason subsistence harvest reports indicate 1,500 northern pike are harvested in the CHA from January 1 until the waters are free of ice, the subsistence fishery will close for the remainder of the spring in the CHA. If the harvest reports exceed 750 northern pike, then the sport fishing bag limit is reduced from 5 to 2 fish for the remainder of the calendar year in Minto Flats. There is no size limit on fish retained in the subsistence fishery. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single-hooks may be used. There are no regulations prohibiting catch-and-release while subsistence or sport fishing. Sport fishing for northern pike in the Tolovana River drainage, which includes the CHA, is open from June 1 to October 14 and the bag and possession limit is 5 fish per day, only 1 of which may be 30 inches or longer. In the CHA, sport fishing is limited to single hooks during the open season.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** By increasing the closed area beyond the current 1 mile, the primary winter subsistence fishing area would be smaller and the harvest of northern pike may decrease, as occurred in 2017 when a 3-mile closure was in effect. The proposed winter subsistence fishing household bag would be similar to summer sport fishing regulations which have a bag and possession limit of 5 northern pike, with 1 over 30 inches in length (5 AAC 74.044 (b)(2)(A&B). The size limit would be more restrictive than sport fishing. The harvest of northern pike may decrease if the bag limit is reduced. A size limit may reduce the harvest of large northern pike.

**BACKGROUND:** The CHA includes 15 river miles of the Chatanika River between the confluence of Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area (Figure 65-1). The CHA is popular for northern pike subsistence fishing through the ice due to the concentration of an overwintering population and good winter trail access. Most fishing occurs a few miles upstream of the current 1-mile closed area between January and April. Regulations for the subsistence fishery in the CHA started in 1987. Participation in the subsistence fishery has shifted from predominantly rural Minto community residents to predominantly Fairbanks North Star Borough residents since 2003. In 2010, the board established a household subsistence bag limit of 10 northern pike per day, with 20 in possession in the CHA. This area is open to sport fishing from June 1 to October 14 with a bag and possession limit is 5 fish per day, only 1 of which may be 30 inches or longer. A 3-mile closed area for the winter subsistence northern pike fishery in the CHA upstream of Goldstream Creek was created in the 2017 season then modified and reduced to 1 mile in the 2018 season.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory

actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests are required to be reported weekly in the CHA, and when reported harvest exceeds 750 northern pike the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or more in length, for the remainder of the calendar year. The winter subsistence fishery within the CHA is closed by emergency order until ice out if the harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average subsistence harvest is 526 fish and the recent average sport fishing harvest is 424 fish, with a total average harvest of 950 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though a creel survey to accurately document age, sex, and length of subsistence harvest has not been conducted. In 2018, the department opportunistically collected 101 samples from subsistence fishermen; these indicated an average fork length of 28.5 inches. Previous studies have shown that virtually all northern pike >30 inches total length are females in Minto Flats.

During the spring of 2018, an abundance study was conducted for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Similarly, 14,565 northern pike were estimated in the Minto Lakes study area and this increase is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy for abundance in the entire Minto Flats wetland complex. Based on radio telemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The preliminary 2018 harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA (Table 65-2). Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA, compared to 2018 when 744 fish were harvested and 525 were released.

The CHA is the most significant of the 3 known overwintering areas for northern pike within Minto Flats. Telemetry studies have shown that 100% of tagged fish utilizing Minto Lakes overwinter within the CHA and are concentrated in the four miles upstream of Goldstream Creek. In 2016, the board amended a proposal to close a popular 3-mile area upstream of Goldstream Creek to subsistence ice fishing upstream of Goldstream Creek which would reduce the harvest of overwintering northern pike and large, pre-spawning females.

The 3-mile closure was in place for 1 season in 2017, during which a record low of 21 fish were harvested with half as many permits issued (93 permits) as the previous year (Table 65-1, Figure 65-2).

The Fairbanks Fish and Game Advisory Committee then submitted an out-of-cycle proposal in 2017 to change the 3-mile closed area to 1 mile stating that the closure in the primary harvest area resulted in the unintended consequence of not providing a reasonable opportunity for subsistence. The board adopted the proposal and reduced the 3-mile closure to a 1-mile closure in the CHA. With the 1-mile closure in the 2018 season, preliminary subsistence reports indicated the 2018 northern pike harvest was the second highest observed since 2011 in the CHA (Table 65-1, Figure 65-2). Based on sampling, nearly all (>95%) overwintering fish were likely outside of the 1-mile closed area during March of 2018.

**DEPARTMENT COMMENTS:** The department **OPPOSES** further restrictions to bag limits and the current open area since current harvest levels appear to be sustainable based on the 2018 abundance study in the CHA. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single hooks may be used. Sport fishing for northern pike in the Tolovana River drainage, which includes the CHA, is closed October 15-May 31.

Earlier research indicates that between 4 and 68% of pike may overwinter within the first 3-miles upstream of Goldstream Creek on the Chatanika River. Preliminary results from an abundance study in 2018 indicate a greater total number of fish and fish that are larger in size compared to 2008. The board should consider whether adoption of this proposal would still provide a meaningful priority for the subsistence fishery and a reasonable opportunity for success in taking northern pike for subsistence uses.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of northern pike for subsistence uses.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes, less than 5% of the northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 66 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** Marvin Hassebroek.

**WHAT WOULD THE PROPOSAL DO?** This expands the closed area from 1 mile to 3 miles in the Chatanika River above the Goldstream Creek confluence during the winter subsistence fishery for northern pike.

**WHAT ARE THE CURRENT REGULATIONS?** Subsistence ice fishing is closed for northern pike on the Chatanika River in the area 1 mile upstream of the confluence with Goldstream Creek. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the Chatanika Harvest Area (CHA; includes 15 river miles of the Chatanika River upstream of Goldstream Creek). The subsistence bag limit is 10 northern pike per day, with 20 fish in possession per household in the CHA. In the remainder of Minto Flats and the Tolovana River drainage, there is no harvest limit. Based on the management plan, if inseason subsistence harvest reports indicate 1,500 northern pike have been harvested in the CHA from January 1 until the waters are free of ice, the subsistence fishery will close for the remainder of the spring in the CHA. If the harvest reports exceed 750 northern pike, then the sport fishing bag limit is reduced from 5 to 2 fish for the remainder of the calendar year in Minto Flats. There is no size limit on fish retained in the subsistence fishery. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single hooks may be used.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** By increasing the closed area from 1 to 3 miles, the primary winter subsistence fishing area would be smaller and the harvest of northern pike will decrease, as occurred in 2017 when the 3-mile closure was in effect.

**BACKGROUND:** The CHA includes 15 river miles of the Chatanika River between the confluence of Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area (Figure 65-1). The CHA is popular for northern pike subsistence fishing through the ice due to the concentration of an overwintering population and good winter trail access. Most fishing occurs a few miles upstream of the current 1-mile closed area between January and April. Regulations for the subsistence fishery in the CHA started in 1987 and it was closed for 1 spring season in 2007 due to harvest reaching the management threshold of 1,500 fish. Participation in the subsistence fishery has shifted from predominantly rural Minto community residents to predominantly Fairbanks North Star Borough residents since 2003. In 2010, the board established a household subsistence bag limit of 10 northern pike per day, with 20 in possession in the CHA. A 3-mile closed area for the winter subsistence northern pike fishery in the CHA upstream of Goldstream Creek was created in the 2017 season then modified and reduced to 1 mile in the 2018 season.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests are required to be reported weekly in the CHA, and when reported harvest exceeds 750 northern pike the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or more in length, for the remainder of the calendar year. The winter subsistence fishery within

the CHA is closed by emergency order until ice out if the harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average subsistence harvest is 526 fish and the recent average sport fishing harvest is 424 fish, with a total average harvest of 950 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though a creel survey to accurately document age, sex, and length of subsistence harvest has not been conducted. In 2018, the department opportunistically collected 101 samples from subsistence fishermen; these indicated an average fork length of 28.5 inches (Figure 65-3). Previous abundance studies have shown that virtually all northern pike >30 inches total length are females in Minto Flats.

During the spring of 2018, an abundance study was conducted for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Similarly, 14,565 northern pike were estimated in the Minto Lakes study area and this increase is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy for abundance in the entire Minto Flats wetland complex. Based on radio telemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The preliminary 2018 harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA (Table 65-2). Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA compared to 2018 where 744 fish were harvested and 525 were released.

The CHA is the most significant of the 3 known overwintering areas for northern pike within Minto Flats. Telemetry studies have shown that 100% of fish utilizing Minto Lakes overwinter within the CHA and are concentrated in the four miles upstream of Goldstream Creek. In 2016, the board amended a proposal to close a popular 3-mile area upstream of Goldstream Creek to subsistence ice fishing with the intent of reducing the harvest of overwintering northern pike and large, pre-spawning females. The 3-mile closure was in place for 1 season in 2017, during which a record low of 21 fish were harvested with half as many permits issued (93 permits) as the previous year (Table 65-1, Figure 65-2). The Fairbanks Fish and Game Advisory Committee then submitted an out-of-cycle proposal in 2017 to change the 3-mile closed area to 1-mile stating the closure in the primary harvest area resulted in the unintended consequence of not providing a reasonable opportunity for subsistence. The board adopted the proposal and reduced the 3-mile closure to a 1-mile closure in the CHA. With the 1-mile closure in the 2018 season, preliminary subsistence reports indicated the 2018 northern pike harvest was the second highest observed since 2011 in the CHA (Table 65-1). Based on sampling, nearly all (>95%) overwintering fish were likely outside of the 1-mile closed area during March of 2018.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. Prior research indicates that between 4 and 68% of northern pike may overwinter within the first 3 miles upstream of Goldstream Creek on the Chatanika River. Preliminary results from an abundance study in 2018 indicate a larger abundance and fish are larger in size compared to 2008. The board should consider whether adoption of this proposal still provides a meaningful priority for the subsistence fishery, and a reasonable opportunity for success in taking northern pike for subsistence uses.

Proposals 67 and 68 are similar to this proposal.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of northern pike for subsistence uses.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes; these northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 67 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** James Dieringer.

**WHAT WOULD THE PROPOSAL DO?** This expands the closed area from 1 mile to 3 miles in the Chatanika River above the Goldstream Creek confluence during the winter subsistence fishery for northern pike.

**WHAT ARE THE CURRENT REGULATIONS?** Subsistence ice fishing is closed for northern pike on the Chatanika River in the area 1 river mile upstream of the confluence with Goldstream Creek. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the Chatanika Harvest Area (CHA; includes 15 river miles upstream of Goldstream Creek). The subsistence bag limit is 10 northern pike per day, with 20 fish in possession per household in the CHA. In the remainder of Minto Flats and the Tolovana River drainage, there is no harvest limit. Based on the management plan, if inseason subsistence harvest reports indicate 1,500 northern pike have been harvested in the CHA from January 1 until the waters are free of ice, the subsistence fishery will close for the remainder of the spring in the CHA. If the harvest reports exceed 750 northern pike, then the sport fishing bag limit is reduced from 5 to 2 fish for the remainder of the calendar year in Minto Flats. There is no size limit on fish retained in the subsistence fishery. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single hooks may be used.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** By increasing the closed area from 1 to 3 miles, the primary winter subsistence fishing area would be smaller and the subsistence harvest of northern pike will decrease, as occurred in 2017 when the 3-mile closure was in effect.

**BACKGROUND:** The CHA includes 15 river miles of the Chatanika River between confluence of Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area (Figure 65-1). The CHA is popular for northern pike subsistence fishing through the ice due to the concentration of an overwintering population and good winter trail access. Most fishing occurs a few miles upstream of the current 1-mile closed area between January and April. Regulations for the subsistence fishery in the CHA started in 1987 and it was closed for 1 spring season in 2007 due to harvest reaching the management threshold of 1,500 fish. Participation in the subsistence fishery has shifted from predominantly rural Minto community residents to predominantly Fairbanks North Star Borough residents since 2003. In 2010, the board established a household subsistence bag limit of 10 northern pike per day, with 20 fish in possession in the CHA. A 3-mile closed area for the winter subsistence northern pike fishery in the CHA upstream of Goldstream Creek was created in the 2017 season then modified and reduced to 1 mile in the 2018 season.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests are required to be reported weekly in the CHA, and when reported harvest exceeds 750 northern pike the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or more in length, for the remainder of the calendar year. The winter subsistence fishery within the CHA is closed by emergency order if the harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average subsistence harvest is 526 fish and the recent average sport fishing harvest is 424 fish, with a total average harvest of 950 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though a creel survey to accurately document age, sex, and length of subsistence harvest has not been conducted. In 2018, the department opportunistically collected 101 samples from subsistence fishermen; these indicated an average fork length of 28.5 inches (Figure 65-3). Previous studies have shown that virtually all northern pike >30 inches total length are females in Minto Flats.

During the spring of 2018, an abundance study was conducted for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Similarly, 14,565 northern pike were estimated in the Minto Lakes study area and this increase is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy for abundance in the entire Minto Flats wetland complex. Based on radio telemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The 2018 preliminary harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA. Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA compared to 2018 where 744 fish were harvested and 525 were released.

The CHA is the most significant of the 3 known overwintering areas for northern pike within Minto Flats. Telemetry studies have shown that 100% of tagged fish utilizing Minto Lakes overwinter within the CHA and are concentrated in the 4 miles upstream of Goldstream Creek. In 2016, the board amended a proposal to close a popular 3-mile area upstream of Goldstream Creek to subsistence ice fishing which would reduce the harvest of overwintering northern pike and large, pre-spawning females. The 3-mile closure was in place for 1 season in 2017, during which a record low of 21 fish were harvested with half as many permits issued (93 permits) as the previous year (Table 65-1, Figure 65-2). The Fairbanks Fish and Game Advisory Committee then submitted an out-of-cycle proposal in 2017 to change the 3-mile closed area to 1 mile stating that the closure in the primary harvest area resulted in the unintended consequence of not providing a reasonable opportunity for subsistence. The board adopted the proposal and reduced the 3-mile closure to a

1-mile closure in the CHA. With the 1-mile closure in the 2018 season, preliminary subsistence reports indicated the 2018 northern pike harvest was the second highest observed since 2011 in the CHA (Table 65-1). Based on sampling, nearly all (>95%) overwintering fish were likely outside of the 1-mile closed area during March of 2018.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. Prior research indicates that between 4 and 68% of northern pike may overwinter within the first 3-miles upstream of Goldstream Creek on the Chatanika River. Preliminary results from an abundance study in 2018 indicate a larger abundance and fish are larger in size compared to 2008. The board should consider whether adoption of this proposal still provides a meaningful priority for the subsistence fishery, and a reasonable opportunity for success in taking northern pike for subsistence uses.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of northern pike for subsistence uses.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes; these northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 68 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** Dan Moody.

**WHAT WOULD THE PROPOSAL DO**? This seeks to eliminate the current 1-mile subsistence closed area in the Chatanika River above the Goldstream Creek confluence during the winter subsistence fishery for northern pike.

**WHAT ARE THE CURRENT REGULATIONS?** Subsistence ice fishing is closed for northern pike on the Chatanika River for 1 mile upstream of the confluence with Goldstream Creek. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the Chatanika Harvest Area (CHA; includes 15 river miles upstream of Goldstream Creek). The subsistence bag limit is 10 northern pike per day, with 20 fish in possession per household in the CHA. In the remainder of Minto Flats and the Tolovana River drainage, there is no harvest limit. Based on the management plan, if inseason subsistence harvest reports indicate 1,500 northern pike have been harvested in the CHA from January 1 until the waters are free of ice, the subsistence fishery will close for the remainder of the spring in the CHA. If the harvest reports exceed 750 northern pike, then the sport fishing bag limit is reduced from 5 to 2 fish for the remainder of the calendar year in Minto Flats. There is no size limit on fish retained in the subsistence fishery. Subsistence fishing with hook and line gear is limited to ice fishing only, and in the CHA only single hooks may be used.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** By eliminating the 1-mile closed area, the primary winter subsistence fishing area would return to pre-2017 fishable areas in the CHA. The harvest of northern pike in the CHA may be similar to harvest levels prior to 2017 when the closed area was first instated.

**BACKGROUND:** The CHA includes 15 river miles of the Chatanika River between the confluence of Goldstream Creek and the boundary of the Fairbanks Nonsubsistence Area (Figure 65-1). The CHA is popular for northern pike subsistence fishing through the ice due to the concentration of an overwintering population and good winter trail access. Most fishing occurs a few miles upstream of the current 1-mile closed area between January and April. Regulations for the subsistence fishery in the CHA started in 1987 and it was closed for 1 spring season in 2007 due to harvest reaching the management threshold of 1,500 fish. Participation in the subsistence fishery has shifted from predominantly rural Minto community residents to predominantly Fairbanks North Star Borough residents since 2003. In 2010, the board established a household subsistence bag limit of 10 northern pike per day, with 20 fish in possession in the CHA. A 3-mile closed area for the winter subsistence northern pike fishery in the CHA upstream of Goldstream Creek was created in the 2017 season then modified and reduced to 1 mile in the 2018 season.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests are required to be reported weekly in the CHA, and when reported harvest exceeds 750 northern pike the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or more in length, for the remainder of the calendar year. The winter subsistence fishery within the CHA is closed by emergency order until ice out if the harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average subsistence harvest is 526 fish and the recent average sport fishing harvest is 424 fish, with a total average harvest of 950 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though a creel survey to accurately document age, sex, and length of subsistence harvest has not been conducted. In 2018, the department opportunistically collected 101 samples from subsistence fishermen; these indicated an average fork length of 28.5 inches. Previous abundance studies have shown that virtually all northern pike >30 inches total length are females in Minto Flats.

During the spring of 2018, an abundance study was conducted for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Similarly, 14,565 northern pike were estimated in the Minto Lakes study area and this increase is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy of abundance for the entire Minto Flats wetland complex. Based on radio telemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The preliminary 2018 harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA (Table 65-2). Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA compared to 2018 where 744 fish were harvested and 525 were released.

The CHA is the most significant of the 3 known overwintering areas for northern pike within Minto Flats. Telemetry studies have shown that 100% of fish utilizing Minto Lakes overwinter within the CHA and are concentrated in the four miles upstream of Goldstream Creek. In 2016, the board amended a proposal to close a popular 3-mile area upstream of Goldstream Creek to subsistence ice fishing with the intent of reducing the harvest of overwintering northern pike and large, pre-spawning females.

The 3-mile closure was in place for 1 season in 2017, during which a record low of 21 fish were harvested with half as many permits issued (93 permits) as the previous year (Table 65-1, Figure 65-2). The Fairbanks Fish and Game Advisory Committee submitted an out-of-cycle proposal in 2017 to change the 3-mile closed area to 1-mile stating that closing the primary harvest area

resulted in the unintended consequence of not providing a reasonable opportunity for subsistence. The board adopted the proposal and reduced the 3-mile closure to a 1-mile closure in the CHA. With the 1-mile closure in the 2018 season, preliminary subsistence reports indicated the 2018 northern pike harvest was the second highest observed since 2011 in the CHA (Table 65-1, Figure 65-2). Based on sampling, nearly all (>95%) overwintering fish were likely outside of the 1-mile closed area during March of 2018.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. Prior research indicates that between 4 and 68% of northern pike may overwinter within the first 3-miles upstream of Goldstream Creek on the Chatanika River. Preliminary results from an abundance study in 2018 indicate a larger abundance and fish are larger in size compared to 2008.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of northern pike for subsistence uses.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes; these northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).
3 Can a portion of the stock be harvested consistent with sustained yield? Yes
4 What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 69 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

**PROPOSED BY:** Denis and Andree Porchet.

**WHAT WOULD THE PROPOSAL DO?** Reduce the 1,500 northern pike ice fishing subsistence harvest threshold within the Chatanika Harvest Area (CHA), that closes the ice fishing subsistence fishery in the CHA, to a number that will maintain an exploitation rate for fish larger than 30 inches below 10%.

**WHAT ARE THE CURRENT REGULATIONS?** In the CHA, when subsistence harvest reports indicate that 1,500 or more northern pike have been harvested during the period from January 1 until those waters are free of ice, subsistence fishing through the ice in the CHA shall be closed by emergency order. The management plan (5 AAC 01.244) established the annual harvest thresholds to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by subsistence and sport fishermen. There are no size limits in the subsistence fishery and fishermen do not report fish lengths on subsistence permits.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** If the current harvest threshold was reduced from 1,500 fish, the winter subsistence fishery in the CHA could close, by emergency order, more frequently from January through April. Subsistence fishermen would be required to report fish lengths. Abundance estimates would need to be performed more frequently and estimates would need to meet sampling design objectives. If adopted, this proposal may result in unnecessary restrictions in the subsistence fishery.

**BACKGROUND:** The CHA is in the Chatanika River drainage (Figure 65-1) from an ADF&G regulatory marker approximately 1 mile upstream of the confluence of the Chatanika River and Goldstream Creek to an ADF&G regulatory marker at the boundary of the Fairbanks Nonsubsistence Area (1 mile below Murphy Dome Road). Most fishing occurs in the CHA a few miles upstream of the current 1-mile closed area between January and April. A household permit is required to participate in the subsistence fishery, with an additional weekly call-in required when fishing in the CHA. Regulations for the subsistence fishery in the CHA started in 1987. The primary subsistence gear is jigging with rod and reel, which is only permitted while ice fishing.

In 1998, the Minto Flats Northern Pike Management Plan was adopted into Yukon Area subsistence (5 AAC 01.244) and sport fish (5 AAC 74.044) regulations to manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plan (5 AAC 01.244) established annual harvest thresholds with attendant regulatory actions to ensure that the overall exploitation rate of northern pike within the lakes and flowing waters of Minto Flats does not exceed 20% by all users. Relative to 5 AAC 74.044, the maximum exploitation rate of 20% was applied to the CHA and Minto Lakes. In 2010, the board aligned both plans so that the exploitation rates refer to all lakes and flowing waters of Minto Flats.

Subsistence harvests are required to be reported weekly in the CHA, and when reported harvest exceeds 750 northern pike the sport fishing bag limit is reduced from 5 to 2 fish, only 1 of which may be 30 inches or more in length, for the remainder of the calendar year. The winter subsistence fishery within the CHA is closed by emergency order until ice out if the harvests exceed 1,500 northern pike, with all other areas in Minto Flats remaining open to subsistence fishing. Since the plan was established, the 1,500-fish threshold in the subsistence fishery of the CHA was exceeded

in 2007, resulting in a subsistence fishery closure, and the 750-fish threshold was exceeded in 2007, 2008, and 2016, resulting in sport fishery restrictions (Table 65-1, Figure 65-2). The recent 5-year average subsistence harvest is 526 fish and the recent average sport fishing harvest is 424 fish, with a total average harvest of 950 by all users (Table 65-1).

The management plan does not specify what size of fish the exploitation rate applies to. Northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies. Fish greater than 24 inches are generally harvested in subsistence and sport fisheries, though a creel survey to accurately document age, sex, and length of subsistence harvest has not been conducted. In 2018, the department opportunistically collected 101 samples from subsistence fishermen; these indicated an average fork length of 28.5 inches. Previous abundance studies have shown that virtually all northern pike >30 inches total length are females in Minto Flats.

During the spring of 2018, an abundance study was conducted for the first time in the CHA during the subsistence fishery and estimated 19,943 northern pike over 24 inches long were present (Table 65-2; Albert and Tyers *In prep*). Similarly, 14,565 northern pike were estimated in the Minto Lakes study area and this increase is attributed to persistent high water levels since 2012 that has more than doubled the amount of lake and slough habitat in Minto Lakes. In previous studies, abundance estimates (Table 65-2) have been conducted in Minto Flats Area-A (all of Minto Lakes complex) and Area-B (comprises about 64% of Area-A), which are used as a proxy of abundance for the entire Minto Flats wetland complex. Based on radio telemetry studies, about 70% of northern pike tagged in the CHA during the spring migrated to the Minto Lakes study area in the summer. Northern pike that spawn in the spring and reside in the Minto Lakes study area during summer are a discrete stock that overwinters exclusively in the CHA.

The 2018 preliminary harvest by subsistence fishermen (Table 65-1) in the CHA was 744 northern pike, equating to an exploitation rate of 3.7% of the estimated abundance of 19,943 fish over 24 inches in the CHA. Since 2017, the department has required fishermen to record the number of northern pike released. In 2017, 21 fish were harvested and 11 were released in the CHA compared to 2018 where 744 fish were harvested and 525 were released.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. The department **OPPOSES** modifying the harvest threshold since current regulations appear to be maintaining the harvests at a sustainable level based on the 2018 abundance study in the CHA. Modifying the threshold would result in unnecessary restrictions to the subsistence fishery. The board should consider whether adoption of this proposal still provides a meaningful priority for subsistence fishing, and a reasonable opportunity for success in taking northern pike for subsistence uses.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? Yes, less than 5% of the northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot,

sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## TANANA DRAINAGE SPORT FISHERIES (16 PROPOSALS)

### PROPOSAL 70 –5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Ethan Birkholz.

**WHAT WOULD THE PROPOSAL DO?** This would modify the size limit for lake trout in Fielding Lake to a maximum of 28 inches or less.

**WHAT ARE THE CURRENT REGULATIONS?** A bag and possession limit of one fish, which must be 26 inches or greater in length.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The total number of lake trout harvested may increase, and anglers would be not be able to harvest larger-sized fish (i.e. > 28 inches).

**BACKGROUND:** Fielding Lake is an alpine lake located off the Richardson Highway near the community of Paxson. The lake supports populations of burbot, lake trout, Arctic grayling, and whitefish. In 2001, the board adopted regulations to reduce harvest of lake trout in Fielding Lake that included increasing the minimum size limit from 22 to 26 inches and established a spawning closure in September. In 2007, to further reduce harvest mortality a regulation was adopted to limit terminal gear to unbaited, single-hook, artificial lures.

In 2007, the board also adopted the *Tanana River Area Wild Lake Trout Management Plan* (5 AAC 74.040). This plan provides guideline management actions to maintain lake trout fishing mortality at sustainable levels, which are estimated from the lake area model (LAM). The plan also allows the board to designate special management waters where objectives include higher stock abundance, or a higher percentage of trophy-sized fish. The department's definition of a trophy-sized lake trout is 20 lb or 36 inches (catch-and-release). The LAM identifies an annual level of harvest (i.e., biomass) that is sustainable based on the surface area of the lake. This biomass is converted into numbers of fish based on known length-weight relationships, which was updated based on sampling conducted during 2010 and 2011. Under current regulations, the allowable annual fishing mortality for Fielding Lake is 81 fish ≥ 26 inches per year. Under a 28-inch maximum size limit and an assumption that anglers would keep fish 16-28 inches, the allowable annual harvest would be 194 fish; more fish because the average size of the fish harvested would be smaller.

Since 2007, the total fishing mortality (harvest plus an estimated 10% hooking mortality applied to catch after harvest is subtracted) has averaged 59 lake trout (Table 70-1). From 1999 to 2006, annual fishing mortality averaged 82 lake trout.

To evaluate sustainability, population assessments are preferred in cases when harvests approach or exceed LAM guidelines. The most recent estimate of mature lake trout was attained in 2011 (540 fish ≥ 21 inches, and 250 fish ≥ 26 inches). Approximately 47% of all fish sampled from 2010 and 2011 were above the 26-inch minimum size limit, three of which were > 36 inches (Figure 70-1). The yield potential of 81 lake trout represented 32% of the estimated population > 26 inches in 2011. However, the high proportion of fish sampled greater than 26 inches (47%) indicated that recruitment fishing is not occurring, and that the current regulatory regime at Fielding Lake since 2007 is maintaining the lake trout fishery at a sustainable level.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The 2011 study indicated that current regulations are maintaining fishing mortality at sustainable levels. The relatively small spawning population remains a concern and any increase in the harvest of smaller lake trout may affect the future recruitment of spawning fish. This proposal would increase regulatory complexity because there are no maximum size limits in regulation for all waters and species within the AYK region.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

Table 70-1.–Estimated sport fishing effort, lake trout harvest and catch, total lake trout fishing mortality, and lake trout regulations in Fielding lake, 1996–2017.

| Year | Effort[a] | Harvest | Catch | Total fishing mortality[b] | Regulations |
|---|---|---|---|---|---|
| 1996 | 960 | 42 | 260 | 64 | -1 fish bag and possession, 22-inch minimum size<br>-no setlines<br>-bait allowed |
| 1997 | 1,259 | 55 | 270 | 77 | |
| 1998 | 1,601 | 19 | 300 | 47 | |
| 1999 | 1,154 | 43 | 279 | 67 | |
| 2000 | 827 | 18 | 221 | 38 | |
| 2001 | 525 | 12 | 106 | 21 | -Open season, October 1-August 31<br>-1 fish bag and possession, 26-inch minimum size<br>-no setlines<br>-bait allowed on a single-hook only |
| 2002 | 826 | 0 | 137 | 14 | |
| 2003 | 840 | 83 | 423 | 117 | |
| 2004 | 1,010 | 101 | 520 | 143 | |
| 2005 | 1,190 | 80 | 814 | 153 | |
| 2006 | 1,034 | 108 | 634 | 161 | |
| 2007 | 1,085 | 40 | 227 | 59 | -Open season, October 1-August 31<br>-1 fish bag and possession, 26-inch minimum size<br>-no setlines<br>-only unbaited, single-hook, artificial lures may be used |
| 2008 | 1,203 | 7 | 103 | 17 | |
| 2009 | 569 | 18 | 552 | 71 | |
| 2010 | 1,483 | 48 | 309 | 74 | |
| 2011 | 422 | 0 | 12 | 1 | |
| 2012 | 1,163 | 64 | 299 | 88 | |
| 2013 | 1,545 | 161 | 335 | 178 | |
| 2014 | 714 | 0 | 145 | 15 | |
| 2015 | 1,732 | 32 | 291 | 58 | |
| 2016 | 992 | 21 | 117 | 31 | |
| 2017 | 1,108 | 29 | 286 | 55 | |
| 5-yr Average (2012-2016) | 1229 | 56 | 237 | 74 | |
| 10-yr Average (2007-2016) | 1,091 | 39 | 239 | 59 | |

[a] Sport fishing effort is measured in number of days fished and is not apportioned by species.

[b] Total fishing mortality accounts for hooking mortality and equals Harvest + 10% of (Catch-Harvest).

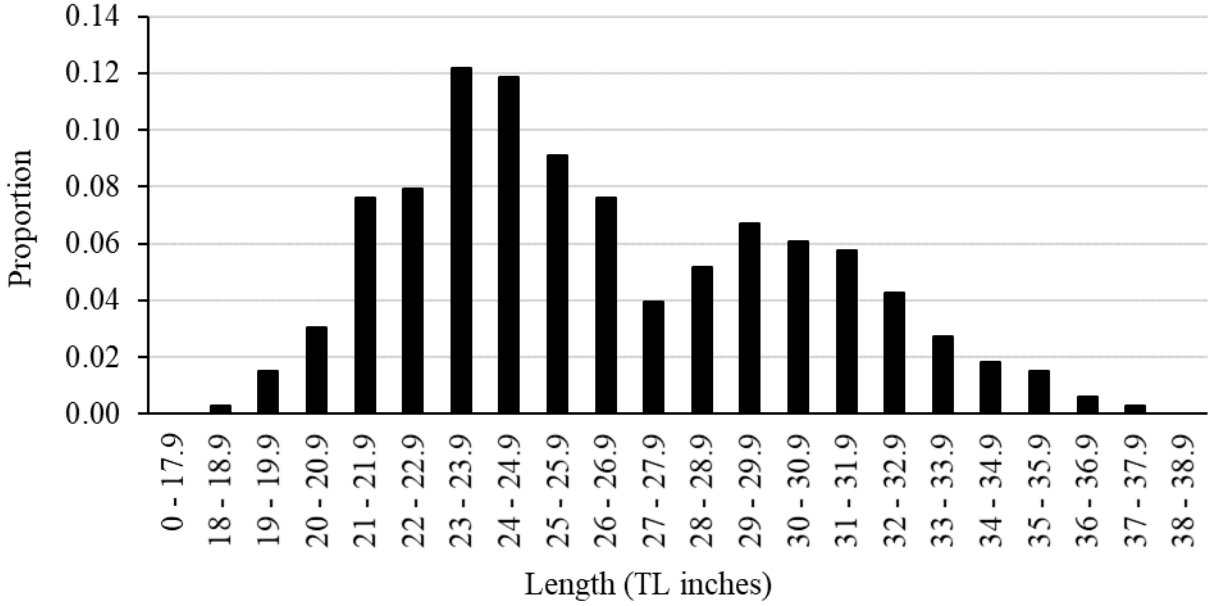



Figure 70-1.–Length composition of all lake trout sampled from Fielding Lake during 2010 and 2011 combined (n = 329).

## PROPOSAL 71 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Ethan Birkholz.

**WHAT WOULD THE PROPOSAL DO?** This would repeal the size limit for lake trout in Fielding Lake.

**WHAT ARE THE CURRENT REGULATIONS?** A bag and possession limit of one fish, which must be 26 inches or greater in length.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED**? The total number of lake trout harvested annually may increase.

**BACKGROUND**: Fielding Lake is an alpine lake located off the Richardson Highway near the community of Paxson. The lake supports populations of burbot, lake trout, Arctic grayling, and whitefish. In 2001, the board adopted regulations to reduce harvest of lake trout in Fielding Lake that included increasing the minimum size limit for harvest from 22 to 26 inches and establishing a spawning closure in September. In 2007, to further reduce harvest mortality a regulation was adopted to limit terminal gear to unbaited, single-hook, artificial lures.

In 2007, the board also adopted the *Tanana River Area Wild Lake Trout Management Plan* (5 AAC 74.040). This plan provides guideline management actions to maintain lake trout fishing mortality at sustainable levels, which are estimated from the lake area model (LAM). The LAM identifies an annual level of harvest (i.e., biomass) that is sustainable based on the surface area of the lake. This biomass is converted into numbers of fish based on known length-weight relationships. The plan also allows the board to designate special management waters where objectives include higher stock abundance, or a higher percentage of trophy-sized fish. The department's definition of a trophy-sized lake trout is 20 lb or 36 inches (catch-and-release). Based on the LAM (updated with 2010 and 2011 data) and under the current regulations, the allowable annual fishing mortality for Fielding Lake is 81 fish ≥ 26 inches per year. Under a no size limit regulation and an assumption that anglers would not keep fish < 16 inches, the allowable annual harvest would be 136 fish; more fish would be harvested because the average size of the fish harvested would be smaller.

Since 2007, the total fishing mortality (harvest plus an estimated 10% hooking mortality applied to catch after harvest is subtracted) has averaged 59 lake trout (Table 70-1). From 1999 to 2006, annual fishing mortality averaged 82 lake trout.

To evaluate sustainability, population assessments are preferred in cases when harvests approach or exceed LAM guidelines. The most recent estimate of mature lake trout was attained in 2011 (540 fish ≥ 21 inches, and 250 fish ≥ 26 inches). Approximately 47% of all fish sampled from 2010 and 2011 were above the 26-inch minimum size limit, three of which were > 36 inches (Figure 70-1). The yield potential of 81 lake trout represents 32% of the estimated population > 26 inches in 2011. However, the high proportion of fish sampled greater than 26 inches (47%) indicated that recruitment fishing is not occurring, and that the current regulatory regime at Fielding Lake since 2007 is maintaining the lake trout fishery at a sustainable level.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The 2011 study indicated that current regulations are maintaining fishing mortality at sustainable levels. Eliminating the length limit will likely increase harvest, potentially to levels exceeding the

allowable annual harvest of 136, since catch has already exceeded that number under more restrictive regulations. The relatively small spawning population remains a concern and any increase in the harvest of smaller lake trout may affect the future recruitment of spawning fish.

**COST ANALYSIS**: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

## PROPOSAL 72 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Robert Marks.

**WHAT WOULD THE PROPOSAL DO?** This would allow catch-and-release fishing only for Arctic grayling in the Upper Chatanika River drainage from the Elliot Highway campground upstream.

**WHAT ARE THE CURRENT REGULATIONS?** In the Chatanika River, the general regulations for Arctic grayling apply: the bag and possession limit is five fish, with no size limit, and the season is open year-round.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Anglers would not have the opportunity to harvest Arctic grayling in the upper Chatanika River drainage. Overall mortality of Arctic grayling in the Upper Chatanika River drainage would be reduced.

**BACKGROUND:** In 2004, the board adopted *the Tanana River Wild Arctic grayling Management Plan*. In 2010, the board aligned the Chatanika River with this plan to its current regulations under the regional management approach. Prior to 2010, the bag and possession limit was five Arctic grayling 12 inches or greater, and fishing was catch-and-release only from April 1 to May 30.

The Elliot Highway Bridge is the boundary between the Upper and Lower Chatanika River reporting areas (Figure 72-1). The Statewide Harvest Survey does not apportion effort by species, but nearly all angling effort upstream of the Elliot Highway is directed at Arctic grayling. The recent 5-year average harvest of Arctic grayling in the Upper Chatanika was 808 fish, and catch was 4,414 fish (Table 72-1).

Abundance estimates of Arctic grayling have been attained in select reaches of the Chatanika River. Prior to 2007, an 18-mile index area immediately downstream of the Elliot Highway Bridge was used to monitor abundance, but these did not reflect population changes farther upstream (Table 72-2). In 2002, Arctic grayling abundance was estimated in a 12-mile reach in the headwaters upstream of Perhaps Creek, which is ~1.5 miles downstream of U.S. Creek. The only comprehensive assessment of Arctic grayling was conducted in a 77-mile reach during 2007, which extended from Faith Creek to Any Creek. The estimated abundance of Arctic grayling ≥ 12 inches in this reach was 11,934 fish (i.e. ~155 fish per river mile). The 2007 study identified a trend of lower fish densities in the upper reaches upstream of the Steese Highway Bridge, and localized depletions near road access points that can affect angler catch rates.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Exploitation rates based on recent harvest levels are believed to be sustainable. The Chatanika River is the only major river system near Fairbanks where anglers have good access and the opportunity to harvest Arctic grayling because other local rivers, the Chena River and Piledriver Slough, are catch-and-release only. This proposal would also further complicate existing regulations.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

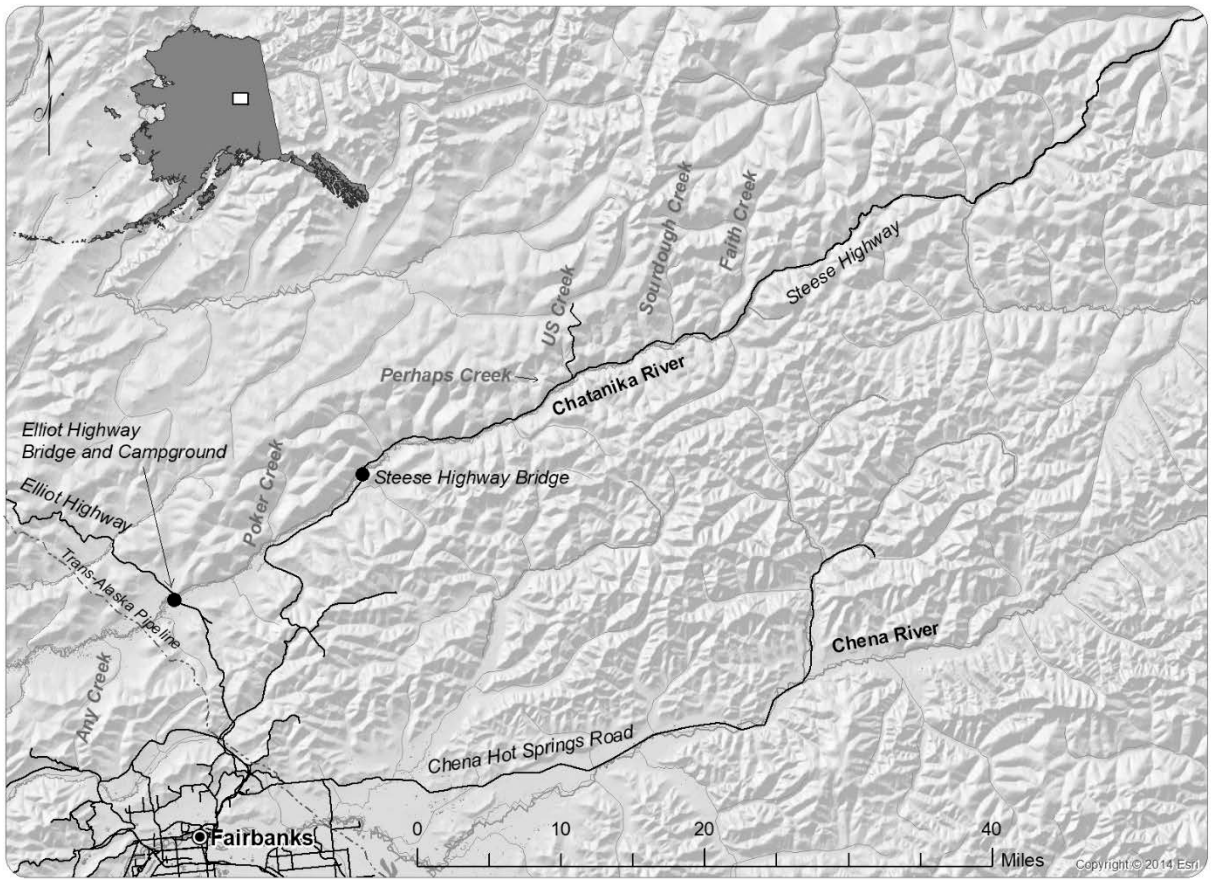



Figure 72-1.–Map of Chatanika River.

Table 72-1.–Estimates of effort (angler-days), harvest, and catch of Arctic grayling in the Chatanika River. The Elliot Highway bridge is the boundary between Upper and Lower areas of the drainage.

| | Effort | | | Harvest | | | Catch | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Lower | Upper | Total | Lower | Upper | Total | Lower | Upper | Total |
| 2007 | 2,960 | 2,352 | 5,312 | 230 | 230 | 460 | 3,753 | 6,643 | 10,396 |
| 2008 | 1,592 | 1,966 | 3,558 | 471 | 518 | 989 | 1,986 | 9,243 | 11,229 |
| 2009 | 1,629 | 1,897 | 3,526 | 103 | 105 | 208 | 2,254 | 4,738 | 6,992 |
| 2010 | 1,699 | 2,438 | 4,137 | 283 | 491 | 774 | 1,232 | 3,427 | 4,659 |
| 2011 | 1,605 | 1,796 | 3,401 | 120 | 496 | 616 | 2,940 | 4,210 | 7,150 |
| 2012 | 3,001 | 3,199 | 6,200 | 202 | 89 | 291 | 1,897 | 2,958 | 4,855 |
| 2013 | 1,898 | 4,767 | 6,665 | 273 | 417 | 690 | 5,024 | 5,338 | 10,362 |
| 2014 | 2,241 | 2,903 | 5,144 | 2,726 | 765 | 3,491 | 6,491 | 11,611 | 18,102 |
| 2015 | 2,528 | 2,528 | 5,056 | 38 | 193 | 193 | 1,784 | 4,302 | 6,086 |
| 2016 | 2,528 | 1,344 | 10,370 | 802 | 400 | 1,202 | 6,875 | 1,916 | 6,875 |
| 2017 | 2,879 | 3,559 | 6,438 | 358 | 938 | 460 | 2,065 | 7,160 | 9,225 |
| 2012-2016 5-yr average | 2,948 | 2,439 | 6,687 | 373 | 808 | 1,173 | 5,225 | 4,414 | 9,256 |
| 2007-2016 10-yr average | 2,519 | 2,168 | 5,337 | 370 | 525 | 891 | 5,439 | 3,424 | 8,671 |

Table 72-2.–Approximate densities of Arctic grayling ≥ 270 mm FL (12 inches TL) in assessed areas of the Chatanika River.

| Assessment area | Year | Density (fish/mi) |
|---|---|---|
| Chatanika River (Faith to Any Creek; 78.3 mi) | 2007 | 155 |
| Chatanika River (Faith to Poker Creek; 50.1 mi) | 2007 | 157 |
| Lower Chatanika River (Above Elliot Highway Bridge to to Any Creek; 18.5 mi) | 1991 | 80 |
| | 1992 | 69 |
| | 1993 | 169 |
| | 1994 | 137 |
| | 1995 | 140 |
| | 2007 | 116 |
| Upper Chatanika River (Sourdough to Perhaps Creek, 11.4 mi) | 2002 | 18 |
| | 2007 | 66 |

## PROPOSAL 73 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Fairbanks Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Allow harvest of Arctic grayling less than 12 inches from June 1 – July 15 in the Chena River, from 500 yards downstream of the Nordale Road Bridge to the Chena River confluence with the Tanana River, and in Piledriver Slough (Figure 73-1). From June 1 to July 15 the remainder of the Chena River would remain closed to Arctic grayling retention. During July 16 – May 31, the entire Chena River would be closed to all Arctic grayling retention. This regulation would sunset after three years.

**WHAT ARE THE CURRENT REGULATIONS?** In the Chena River and Piledriver Slough Arctic grayling is catch-and-release only. Retention is not allowed.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The proposal as submitted does not specify a bag and possession limit, but this would increase harvests of Arctic grayling in the Chena River and Piledriver Slough. It would provide harvest opportunity but increase regulatory complexity.

**BACKGROUND:** The Chena River and Piledriver Slough have been catch-and-release for Arctic grayling since 1992. The 2017 sport catch of Arctic grayling on the Chena River was 27,325 fish. This was near the recent 5-year (2012-16) average annual catch of 27,731 fish. The 2017 sport fish catch of Arctic grayling on the lower Chena River was 15,503 (Table 73-1).

The management objectives of the DRAFT *Fishery Management Plan for the Chena River Arctic Grayling Sport Fishery* are:

In the upper river (river-miles 45-90) maintain a minimum abundance of 8,500 Arctic grayling over 12 inches in total length.

In the lower river (downriver from river-mile 45 (the Moose Creek dam)) maintain a minimum abundance of 2,200 Arctic grayling over 12 inches in total length.

The most recent abundance estimate (2005) for Chena River Arctic grayling was approximately 27,700 total fish, with 5,203 fish ($\geq$ 12 inches) above the Moose Creek dam, and 2,963 fish ($\geq$ 12 inches) below the Moose Creek dam (Table 73-2). For Arctic grayling 6 – 12 inches, the estimated abundance was 5,541.

Piledriver Slough was last assessed for Arctic grayling abundance in 1997 and the population was estimated at 8,660 total fish during spring, of which were only 2,636 were of mature age (age-5) and size (~12 inches), the length at which 50% of the fish are mature. The abundance of fish is smaller in summer because an unknown fraction of these age-5 fish are known to leave for other summer feeding areas. Due to beaver dams, the Arctic grayling population is concentrated into the lower third of Piledriver Slough and in areas of highest access. The 2017 catch of 2,939 Arctic grayling in Piledriver Slough was below the recent 5-year average (Table 73-1).

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal because the most recent abundance estimate does not indicate that we are meeting our minimum objectives necessary to consider opening the Chena River to Arctic grayling retention. Although it has been 13 years since the last abundance estimate, catch has remained relatively stable over time possibly indicating that the population has not increased since that last assessment. In Piledriver Slough, there are concerns of sustainability because the population of mature-sized fish is small, the

population is concentrated into the lower reaches where access is greatest, and effort is relatively high. These proposed changes would also further complicate existing regulations.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

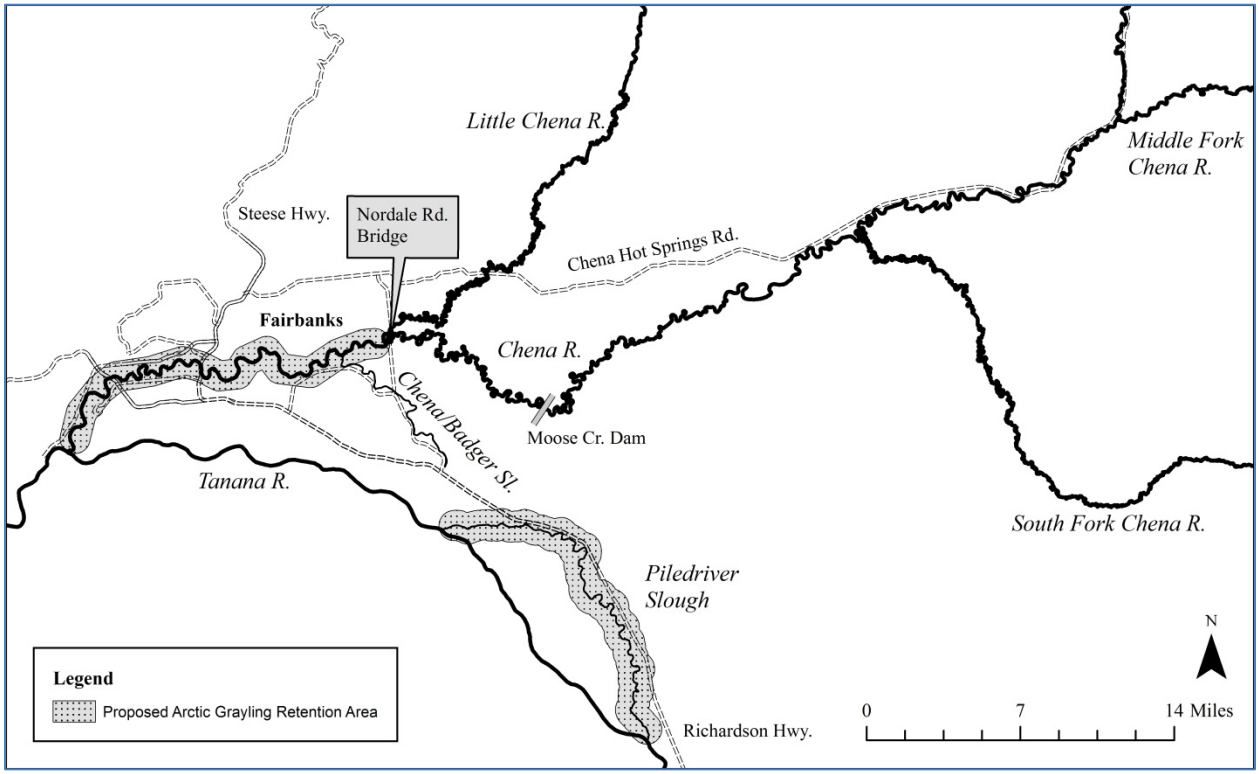



Figure 73-1.–Map of Chena River drainage and proposed Arctic grayling retention areas.

Table 73-1.–Estimates of effort (angler-days) and catch of Arctic grayling in the Chena River. The "lower river" is the Chena River from the Moose Creek Dam downriver to its confluence with the Tanana River, 2007–2017.

| | Chena River | | | | | | Piledriver | |
|---|---|---|---|---|---|---|---|---|
| Year | Lower Effort | Lower Catch | Upper Effort | Upper Catch | Total Effort | Total Catch | Total Effort | Total Catch |
| 2007 | 14,519 | 14,307 | 9,507 | 31,366 | 24,026 | 45,637 | 1,519 | 3,316 |
| 2008 | 9,114 | 8,594 | 5,688 | 20,315 | 14,802 | 28,909 | 1,900 | 5,030 |
| 2009 | 10,787 | 11,960 | 6,017 | 14,356 | 16,804 | 26,316 | 4,695 | 5,295 |
| 2010 | 7,401 | 8,793 | 8,007 | 18,274 | 15,408 | 27,067 | 2,338 | 6,717 |
| 2011 | 6,480 | 5,759 | 3,921 | 9,820 | 10,401 | 15,579 | 1,768 | 3,475 |
| 2012 | 4,249 | 5,054 | 4,047 | 13,722 | 8,296 | 18,776 | 1,585 | 2,291 |
| 2013 | 13,013 | 30,772 | 6,206 | 22,262 | 19,219 | 53,034 | 2,119 | 3,202 |
| 2014 | 14,627 | 7,931 | 5,666 | 16,303 | 20,293 | 24,234 | 1,167 | 2,939 |
| 2015 | 6,916 | 13,830 | 4,294 | 11,006 | 11,210 | 24,836 | 644 | 1,395 |
| 2016 | 4,997 | 5,015 | 3,024 | 7,905 | 8,021 | 12,920 | 250 | 451 |
| 2017 | 4,653 | 15,503 | 3,807 | 11,822 | 8,460 | 27,325 | 1,004 | 411 |
| 2012–2016 average | 8,760 | 12,520 | 4,647 | 14,240 | 13,408 | 26,760 | 1,153 | 2,056 |
| 2007–2016 average | 9,210 | 11,202 | 5,638 | 16,533 | 14,848 | 27,731 | 1,799 | 3,411 |

Table 73-2.–Estimated abundance of Arctic grayling by size and by river section of the Chena River, 1991–1998, 2005.

| | Lower River (below dam) | | Upper River (above dam to river mile 90) | | |
|---|---|---|---|---|---|
| Year | <12 inches | ≥12 inches | <12 inches | ≥12 inches | Total [a] |
| 1991 | 5,100 | 1,426 | 14,513 | 5,717 | 26,756 |
| 1992 | 9,394 | 1,921 | 13,495 | 4,538 | 29,348 |
| 1993 | 10,514 | 1,533 | 20,694 | 6,877 | 39,618 |
| 1994 | 14,200 | 2,335 | 21,239 | 6,601 | 44,375 |
| 1995 | 14,150 | 2,059 | 21,660 | 7,276 | 45,145 |
| 1996 | 11,863 | 2,780 | 15,611 | 11,209 | 41,463 |
| 1997[b] | 10,205 | 2,044 | ND | 9,458 | ≥21,707[b] |
| 1998[b] | 7,212 | 1,804 | 6,028 | 12,519 | 27,563 |
| 2005 | 5,541 | 2,190 | 14,764 | 5,203 | 27,698 |
| Management Objectives | | 2,200 | | 8,500 | |

[a] Total abundance is for fish ≥ 150 mm (~6 in) FL unless otherwise indicated.
[b] Abundance estimate does not include fish ~6-10 in FL for the upper section.

## PROPOSAL 74 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Extend the period during which Arctic grayling 12 inches or less in size may be retained in the Delta Clearwater drainage.

**WHAT ARE THE CURRENT REGULATIONS?** In the Delta Clearwater River drainage including the Clearwater Lake drainage, Arctic grayling may be taken by catch-and-release fishing only, except that from June 1 through December 31, a person may retain Arctic grayling with a bag and possession limit of one fish, 12 inches or less in length; all Arctic grayling caught that are greater than 12 inches in length must be released immediately.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The harvest of Arctic grayling smaller than 12 inches would increase by a minimal amount because anglers would be able to retain an Arctic grayling year-round. Most of the additional harvest would occur during the months of favorable weather in April and May when fishing effort is generally low until the Memorial Day weekend.

**BACKGROUND:** The Delta Clearwater River (DCR) and Clearwater Lake are managed under the special management approach of the *Tanana River Wild Arctic Grayling Management Plan* (5 AAC 70.055). The management objective of this fishery is to maintain large-sized Arctic grayling in the population and still allow a limited harvest of small sized fish (12 inches or less).

The DCR is the largest of several spring-fed tributaries entering the Tanana River. Arctic grayling do not spawn in the DCR and recruitment is a result of immigration from other systems. The DCR population is comprised of at least eight documented spawning populations from nearby drainages and is also comprised mainly of older fish (i.e. > age-7). Arctic grayling inhabit the DCR from early April through November, and on rare occasions, fish have been reportedly caught or observed during mid-winter.

In 1996, the estimated abundance of Arctic grayling greater than 10 inches had declined to only 3,000 fish. Due to concerns of overexploitation, emergency orders were issued to reduce the harvest through bag limit reductions, and eventually catch-and-release: in 1997 the board adopted catch-and-release regulations. In 2001, the board adopted regulations allowing the harvest of one Arctic grayling 12 inches or smaller from July 10 to August 9, and limited terminal gear to unbaited, single-hook artificial lures from January 1 through August 31. In 2007, the board adopted a proposal to expand the dates to June 1 – December 31 during which the harvest of Arctic grayling 12 inches or smaller could occur.

In 2000, the estimated abundance of Arctic grayling ≥ 12 inches was 7,591. The most recent estimate in 2006 was 14,799 Arctic grayling ≥ 12 inches. Fish smaller than 12 inches cannot be estimated, but a harvest of 900 fish < 12 inches was determined to be sustainable based on population modeling. The recent 10-year average annual harvest of Arctic grayling < 12 inches was 110 (Table 74-1). The recent 10-year average annual catch of Arctic grayling of all sizes was 13,310.

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal. This simplifies the regulation and provides additional opportunity for anglers to harvest an Arctic

grayling in spring, particularly over the Memorial Day weekend. The additional harvest would be sustainable, and total annual harvests would remain well below prescribed levels (i.e. < 900 fish).

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

Table 74-1.–Estimates of fishing effort (angler-days), harvest (fish < 12 inches) and catch (all sizes) of Arctic grayling in the Delta Clearwater River (1999-2017).

| Year | Effort | Harvest | Catch | Regulations |
|---|---|---|---|---|
| 1999 | 5,705 | 0 | 11,772 | -No harvest allowed |
| 2000 | 2,626 | 0 | 8,690 | |
| 2001 | 4,671 | 91 | 12,574 | -1 fish, 12 inches or less<br>-July 10–August 10 |
| 2002 | 4,580 | 51 | 12,913 | |
| 2003 | 6,006 | 0 | 17,576 | |
| 2004 | 3,357 | 111 | 14,212 | |
| 2005 | 4,507 | 140 | 19,922 | |
| 2006 | 4,850 | 85 | 12,542 | |
| 2007 | 5,149 | 172 | 22,112 | -1 fish, 12 inches or less<br>-June 1–December 31 |
| 2008 | 2,248 | 214 | 8,912 | |
| 2009 | 5,018 | 0 | 20,714 | |
| 2010 | 4,193 | 14 | 12,081 | |
| 2011 | 5,048 | 0 | 9,758 | |
| 2012 | 3,870 | 86 | 11,063 | |
| 2013 | 3,158 | 0 | 11,551 | |
| 2014 | 5,366 | 266 | 10,778 | |
| 2015 | 4,330 | 244 | 14,066 | |
| 2016 | 6,191 | 99 | 12,065 | |
| 2017 | 5,662 | 0 | 15,843 | |
| 5-year average (2012-2016) | 4,583 | 139 | 11,905 | |
| 10-year average (2007-2016) | 4,457 | 110 | 13,310 | |

## PROPOSAL 75 – 5 AAC 74.010.Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Upper Tanana/Fortymile Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Increase the bag and possession limit for northern pike in all lakes and flowing waters of the Chisana River drainage to five per day, one over 30 inches.

**WHAT ARE THE CURRENT REGULATIONS?** In the Chisana River drainage upstream of the Northway Bridge the bag and possession limit for northern pike is two fish, of which only one fish may be greater than 30 inches.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Increase the opportunity to harvest northern pike in waters of the Chisana River drainage and align northern pike regulations with adjacent waters. Harvest of northern pike in the Chisana River drainage may increase, but additional harvest will likely be sustainable.

**BACKGROUND:** From 1988 to 2000, the general bag and possession limit in the Chisana River drainage for northern pike was five fish, with only one fish over 30 inches. This was changed in 2001 to the current bag and possession limit of two fish, with only one over 30 inches, to protect road accessible stocks along the Alaska Highway from overharvest. The regulation to allow only one fish over 30 inches has been in effect for all waters of the Tanana River drainage since 1987. Nearly all (i.e., > 99%) northern pike > 30 inches are females, and these larger fish are the most fecund and play a significant role in reproduction and controlling population growth through cannibalism (thus preventing stunting).

The Chisana River is a glacial system with clearwater tributaries and numerous interconnected wetlands and unnamed lakes in its lower reaches, particularly near the community of Northway (Figure 75-1). A portion of the drainage lies within the Tetlin National Wildlife Refuge. Most of the Chisana River drainage is inaccessible except by snowmachine, boat, or float plane. The road assessible waters include Scottie, Gardiner, and Desper creeks, Island Lake, and Deadman Lake where there is a small federal campground. Due to the absence of concerns regarding sustainability, the department has not conducted assessment projects on northern pike in the Chisana River drainage. The scale of northern pike habitat in the drainage is extensive, indicating a large population that moves seasonally between interconnected waters in the lower reaches of the drainage for spawning, overwintering, and summer feeding.

Minimal sport fishing for northern pike occurs in the Chisana River drainage and estimates of fishing effort and harvest from the SWHS for most waters are not available due to very low response rates. Because of the campground, Deadman Lake receives most of the angling pressure, and harvests have averaged only 11 northern pike annually from 2007 to 2016. Residents of Northway harvest northern pike locally under subsistence regulations in the lowermost reaches of the Chisana River drainage. The most recent estimate of subsistence northern pike harvests from Northway (2014) was a mean annual household harvest of ~19 juvenile (“pickle”) northern pike and 1 mature northern pike. Northern pike densities increase with the availability of suitable habitat and percent littoral area. Based on the magnitude of northern pike habitat (i.e., interconnected wetlands and lake) in the Chisana River drainage, the combined sport and subsistence harvests are believed to be sustainable.

**DEPARTMENT COMMENTS**: The department **SUPPORTS** this proposal. It would reduce regulatory complexity because all adjacent waters within the Tanana River drainage have the same bag and possession limit of five northern pike, of which only one fish may be greater than 30 inches. There are no sustainability concerns because the anticipated increases in angler harvest would be small.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

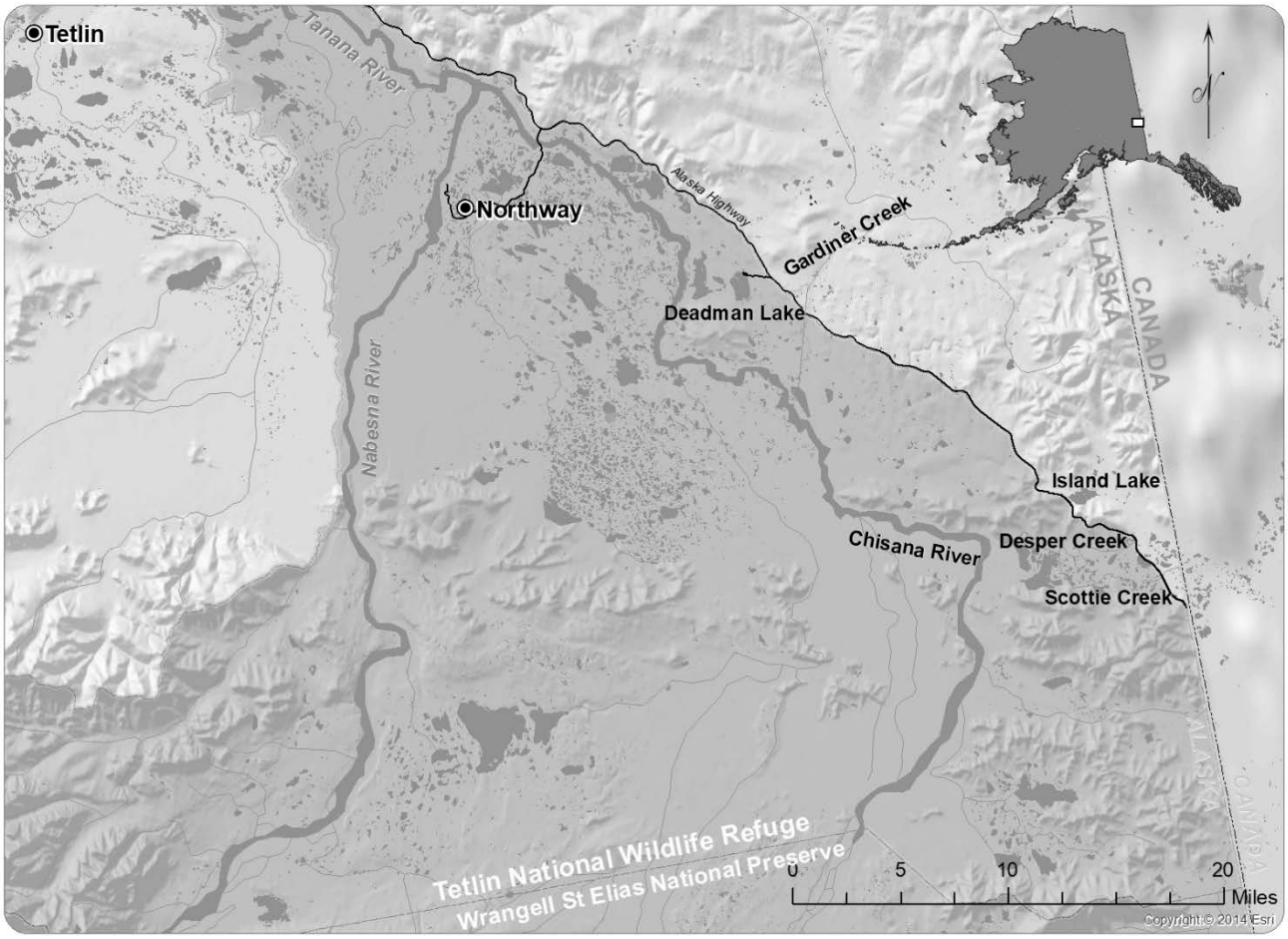



Figure 75-1.–Chisana River drainage.

## PROPOSAL 76 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Fairbanks Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Increase the sport fishing season for northern pike to year-round in Volkmar lake.

**WHAT ARE THE CURRENT REGULATIONS?** In Volkmar Lake, northern pike may be taken only from June 1 – April 20, with a bag and possession limit of two fish, of which only one fish, may be 30 inches in length or greater.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Allow an additional 41 days of fishing in late spring for northern pike in Volkmar Lake.

**BACKGROUND:** In 1993, a northern pike spawning closure (April 1 – May 31) was implemented for all Tanana Area lakes as a precautionary measure to protect mature northern pike in the pre- and post- spawning periods. In 1998, the spawning closure was relaxed in most lakes to April 21 – May 31. In 2013, the spawning closure was removed for most lakes within the Tanana Area because: 1) the lakes were not road assessible and harvests were minimal, 2) a decreasing trend by anglers of retaining fish, 3) research demonstrating that northern pike populations can sustain an exploitation rate of at least 10%, and 4) large female northern pike were already protected by the general regulation that allow only one fish over 30 inches to be harvested. Northern pike over 30 inches are females, and these larger-sized fish play a significant role in reproductive potential and population controls, such as preventing a stunted population. During the 2013 board meeting, the department supported maintaining the spawning closure on Harding, Minto, George, and Volkmar lakes since these lakes were popular fisheries and had the highest effort of northern pike lakes in the Tanana Area.

Effectively, the 41-day closed period on Volkmar Lake only restricts fishing for northern pike during one or two weeks in late May, which includes Memorial Day weekend. Volkmar Lake is remote and only accessible in winter by ski plane and snowmachine trails across the Tanana River, and by using float planes during open water. After mid-April, ice conditions on the Tanana River and Volkmar Lake are too hazardous, and float planes cannot land on the lake until the third or fourth week of May when the lake generally becomes ice free.

Several population estimates have been conducted on Volkmar Lake from 1986 to 2009, and the most recent estimate during 2009 was 4,017 northern pike > 18 inches. Estimates of annual harvest are relatively inaccurate due to an insufficient number of respondents to the Statewide Harvest Survey; however, they do indicate that only a very small fraction of the population is harvested annually (Table 76-1). The additional harvest that might occur during the last week of May would represent a very small percentage of the annual harvest.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. In Volkmar Lake, the additional harvest that might occur during the last week of May would likely be minimal. The department would **SUPPORT** this proposal with an amendment to also repeal the closed period in George Lake (5 ACC 74.101(c)(32)). Like Volkmar Lake, George Lake is remote and during spring break-up can only be accessed during the last week of May after ice-out. Recent harvest levels in George Lake have been sustainable (less than 5% of the population is harvested annually), and the additional harvest during the last week of May would be inconsequential (Table 76-2). The most recent (2006) estimated abundance of northern pike >18 inches in George Lake

was 16,209. Inclusion of George Lake would further simplify regulations in the upper Tanana River drainage and allow anglers to fish for northern pike on Memorial Day weekend.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

Table 76-1.–Estimated angler effort, harvest and catch, and regulations for northern pike in Volkmar Lake, 1999-2017.

| Year | Effort | Harvest | Catch | Regulations |
|---|---|---|---|---|
| 1999 | 311 | 19 | 85 | -1 per day, no size limit |
| 2000 | 22 | 10 | 10 | -Closed April 1 – May 31 |
| 2001 | 188 | 40 | 390 | |
| 2002 | 372 | 127 | 304 | |
| 2003 | 313 | 24 | 339 | |
| 2004 | 193 | 30 | 604 | |
| 2005 | 44 | 12 | 283 | |
| 2006 | 139 | 55 | 186 | |
| 2007 | 57 | 0 | 174 | |
| 2008 | 145 | 51 | 51 | |
| 2009 | 134 | 26 | 244 | |
| 2010 | 184 | 59 | 381 | -2 per day, only 1 over 30 in |
| 2011 | 50 | 16 | 244 | -Closed April 21 – May 31 |
| 2012 | 143 | 31 | 188 | |
| 2013 | 53 | 58 | 0 | |
| 2014 | 360 | 37 | 145 | |
| 2015 | 148 | 11 | 817 | |
| 2016 | 0 | 0 | 0 | |
| 2017 | 20 | 10 | 10 | |
| 5-year average (2012-2016) | 141 | 27 | 230 | |
| 10-year average (2007-2016) | 127 | 29 | 224 | |

Table 76-2.–Estimated angler effort, harvest and catch, and regulations for northern pike in George Lake, 1999-2017.

| Year | Effort | Harvest | Catch | Regulation |
|---|---|---|---|---|
| 1999 | 1,417 | 344 | 3,380 | -5 per day, only 1 over 30 in |
| 2000 | 734 | 258 | 4,956 | -Closed April 1 – May 31 |
| 2001 | 1,128 | 609 | 5,146 | |
| 2002 | 700 | 222 | 2,150 | |
| 2003 | 716 | 738 | 4,096 | |
| 2004 | 377 | 149 | 2,723 | |
| 2005 | 1,939 | 862 | 4,529 | |
| 2006[a] | 601 | 216 | 2,957 | |
| 2007 | 705 | 776 | 6,888 | |
| 2008 | 526 | 264 | 1,442 | |
| 2009 | 1,645 | 567 | 3,152 | |
| 2010 | 1,256 | 681 | 4,009 | -Closed April 21 – May 31 |
| 2011 | 249 | 82 | 1,574 | |
| 2012 | 1,553 | 653 | 8,463 | |
| 2013 | 474 | 67 | 1,255 | |
| 2014 | 641 | 431 | 4,830 | |
| 2015 | 289 | 433 | 470 | |
| 2016 | 256 | 102 | 2,606 | |
| 2017 | 148 | 0 | 491 | |
| 5-year average (2012-2016) | 643 | 337 | 3,525 | |
| 10-year average (2007-2016) | 759 | 406 | 3,469 | |

[a] The most recent (2006) estimated abundance of northern pike > 18 inches in George Lake was 16,209.

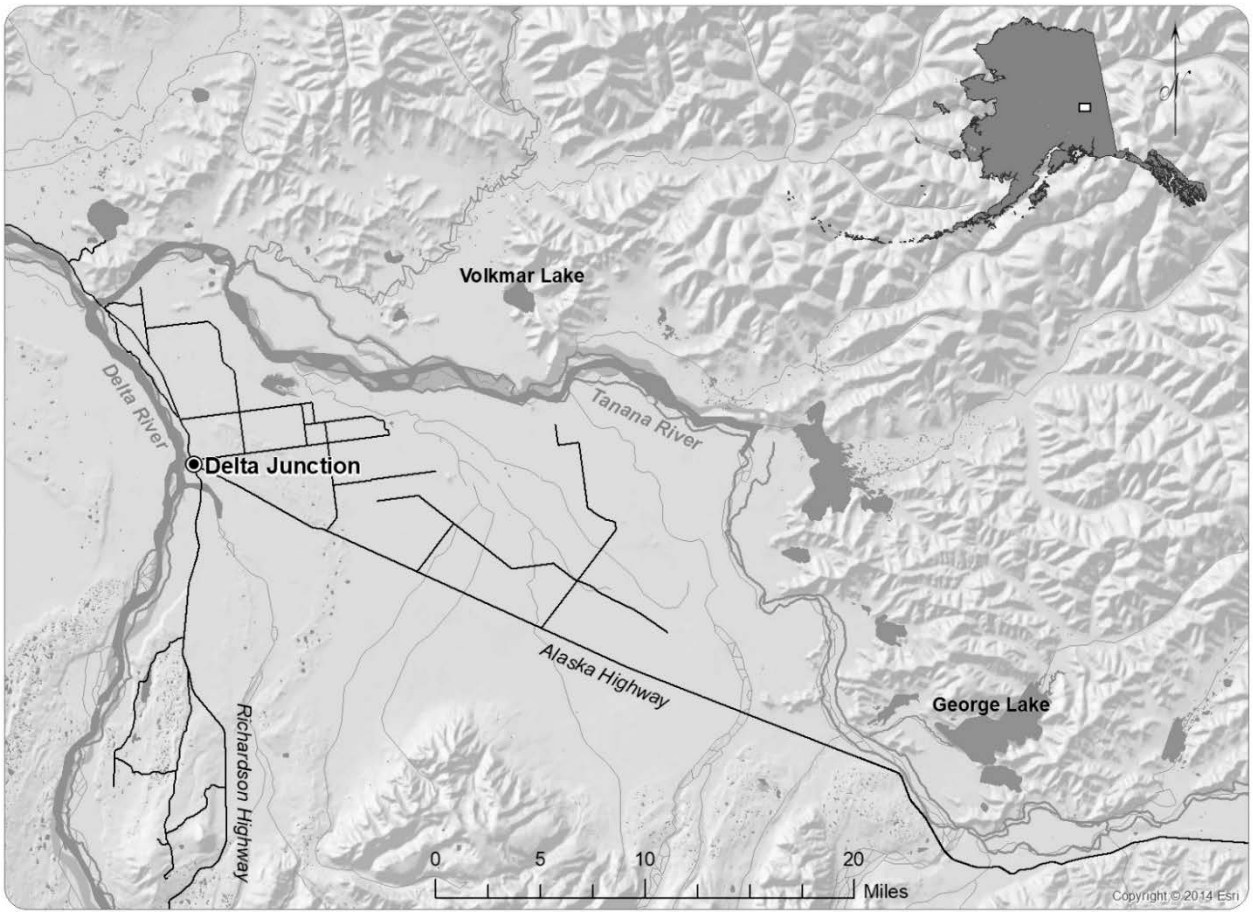


Figure 76-1–Location of Volkmar and George lakes.

## PROPOSAL 77 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Open sport fishing for northern pike in Little Harding Lake.

**WHAT ARE THE CURRENT REGULATIONS?** In Little Harding Lake, sport fishing for northern pike is closed.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Allow sport fishing for northern pike in Little Harding Lake under the general bag, possession, and size limit of five fish, of which only one fish may be greater than 30 inches. This would increase harvest by some unknown amount.

**BACKGROUND:** In 1960s, native northern pike in Little Harding Lake were eradicated to create a stocked fishery for rainbow trout and coho salmon. Until the late 1980s, Little Harding Lake was intermittently treated to eradicate northern pike reintroduced from either a small intermittent outlet stream connected to Harding Lake, or illegally transplanted. Adjacent Harding Lake has been closed to fishing for northern pike since 2000 due to low abundance.

From 2001 to 2013, Little Harding Lake was managed under the *Tanana River Area Stocked Waters Management Plan* special management approach as a trophy fishery. In 2013, stocking of rainbow trout was terminated in Little Harding Lake and fishing for northern pike was closed. The intent of these actions was to protect the newly established northern pike population, which was first documented in 2010. Additionally, at that time the department believed that a satisfactory rainbow trout fishery could not coexist with a northern pike population. Sampling in 2016 and 2018 demonstrated that a population of very large-sized rainbow trout was present with an average size exceeding 24 inches and identified an established population of northern pike with indications of good recruitment of age-1 and age-2 northern pike (Figure 77-1). Stocking of rainbow trout resumed in 2017 and 2018 because other stocked lakes in the Tanana Area (e.g., Cushman Lake and Bathing Beauty Pond) have demonstrated that northern pike and rainbow trout coexist and support high-use fisheries for both species. In these fisheries, larger-sized (i.e., 10-inch) rainbows are stocked, which can better avoid predation, and the harvest of northern pike is encouraged.

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal. Allowing sport fishing for northern pike in Little Harding Lake would provide a new opportunity for roadside anglers looking to catch or retain northern pike, and the harvest of northern pike would help to alleviate predation on stocked rainbow trout.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

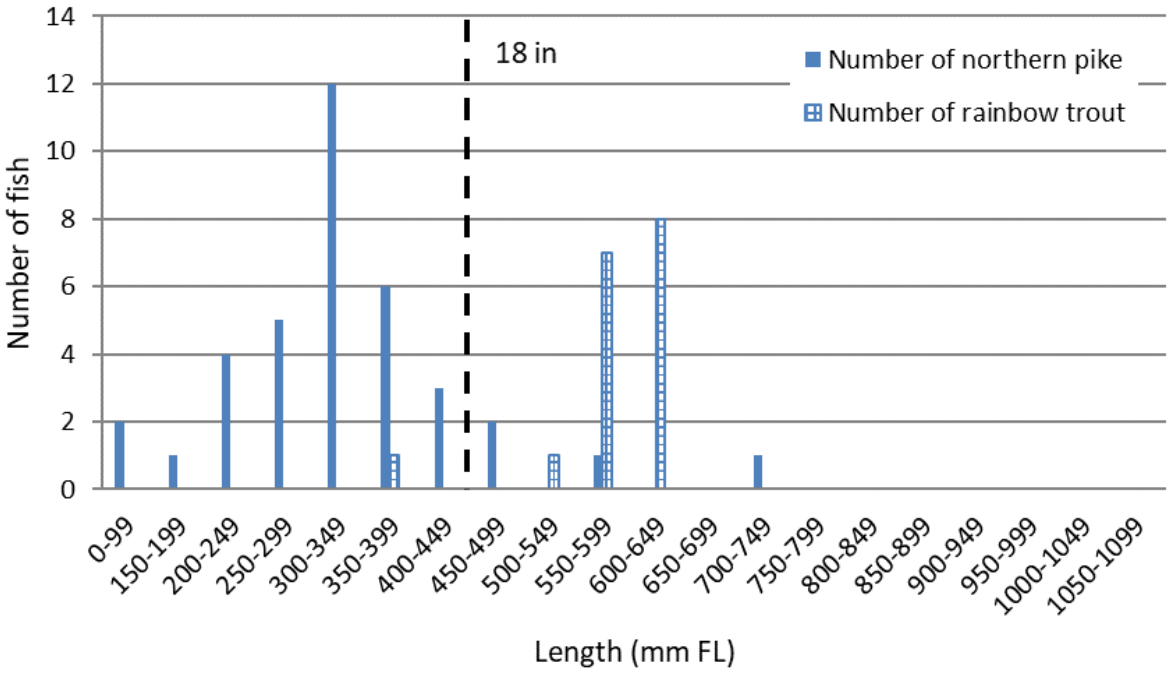



Figure 77-1.–Number of rainbow trout and northern pike sampled by length category in Little Harding Lake during 2016 and 2018 combined.

## PROPOSAL 78 – 5 AAC 74.044. Minto Flats Management Plan.

**PROPOSED BY:** Candace Tucker.

**WHAT WOULD THE PROPOSAL DO?** Allow only single hooks when sport fishing for northern pike in Minto Flats.

**WHAT ARE THE CURRENT REGULATIONS?** During the open season (June 1 to October 14), a multiple hook (i.e., a hook with two or more points) with a gap between point and shank greater than ½ inch may be used when sport fishing for northern pike in all waters of Minto Flats, except only single hooks may be used in the Chatanika River from a regulatory marker one mile upstream of Goldstream Creek to the boundary of the Fairbanks Nonsubsistence Area.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would require anglers to buy single hook lures or refit multiple hook lures with single hooks when fishing for northern pike in Minto Flats. For some popular lures (e.g., topwater frog imitations), hooks are fixed and cannot be exchanged, and points would have to be permanently cut off. This may reduce angler efficiency in catching northern pike. Based on hooking mortality studies comparing treble hooks to single hooks there was no significant difference in either hook placement or the likelihood of bleeding so it is unlikely that the total mortality of northern pike in Minto Flats will be reduced.

**BACKGROUND:** The boundary of Minto Flats includes all waters of the Tolovana River drainage, which includes Minto Lakes, the Tatalina River and the lowermost portion of the Chatanika River; all are outside of the Fairbanks Nonsubsistence Area (Figure 78-1). Within the Tolovana River drainage, most northern pike are caught in Minto Lakes (Table 78-1). Abundance estimates have varied, and the most recent estimate of northern pike in Minto Lakes > 24 inches was 14,569 (Table 78-2).

Release-related mortality is most significantly correlated with hook placement. Fish are more likely to be injured and more difficult to release if they are hooked deeply in the throat or in the gills. Overall, studies on catch-and-release mortality do not indicate mortality is reduced by using single hooks. Some studies reported lower mortality with multiple hook lures because the fish were not as likely to take the lure as deeply and avoided injury to the throat and gills. Angler experience and fishing technique affect hook placement and good handling practices can minimize stress to the fish. The department promotes best practices for handling and releasing fish.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. If adopted, this would increase regulation complexity, and would not reduce hooking mortality rates for northern pike. It would also require anglers to replace hooks, or permanently remove points from some lures.

**COST ANALYSIS:** Approval of this proposal is expected to result in an additional direct cost for a private person to participate in this fishery. Single hooks, split rings, and pliers are needed to replace treble hooks on lures.

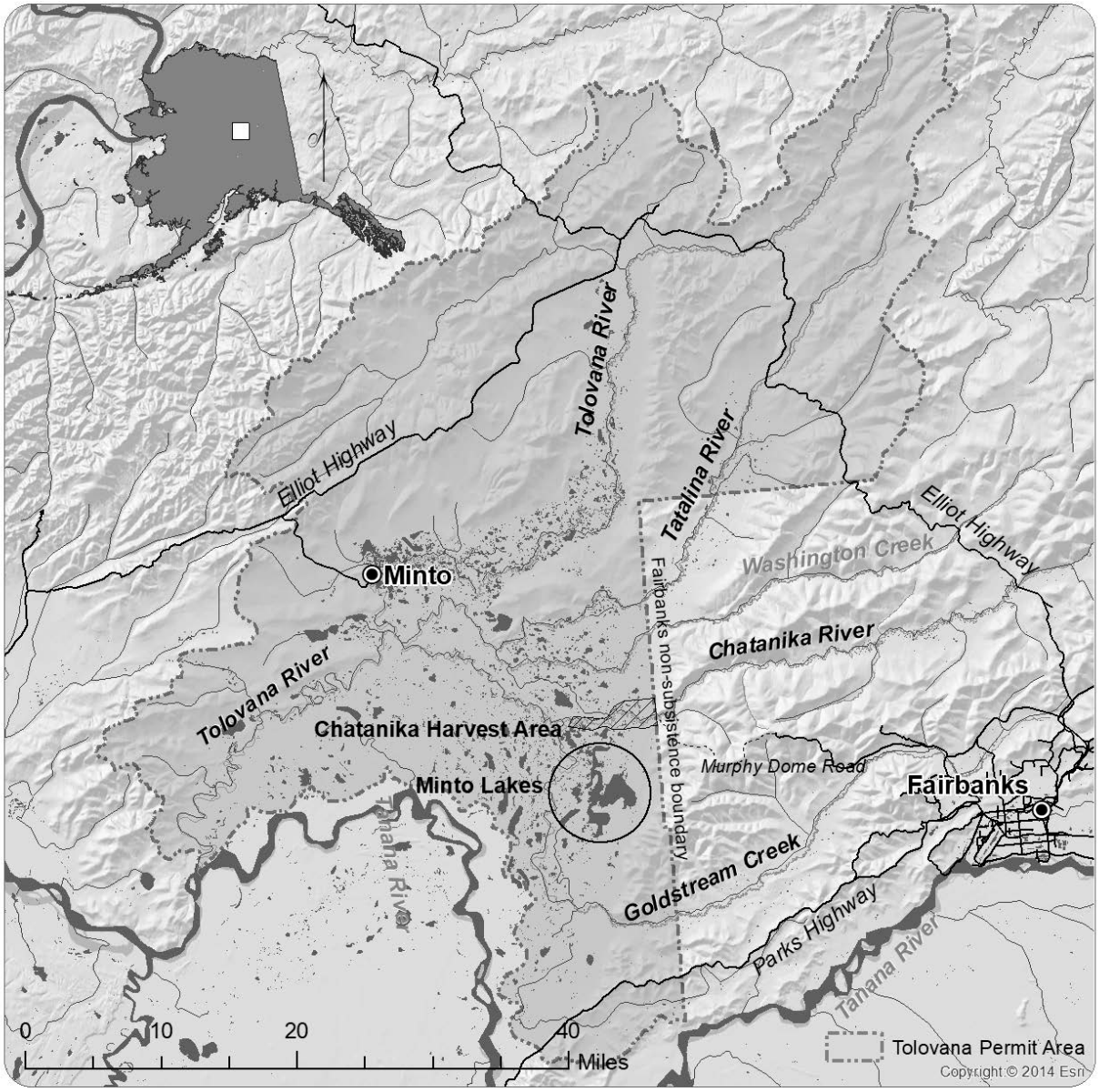



Table 78-1.–Minto Flats and demarcation of the Tolovana Subsistence Permit Area (shaded area), the Chatanika River Harvest Area, and Minto Lakes.

Table 78-1.–Estimated effort (angler-days), harvest, and catch for northern pike in the Minto Flats area, and the Minto Flats Complex[b].

| | Minto Flats Area | | | Minto Flats Complex[b] | | |
|---|---|---|---|---|---|---|
| Year | Effort | Harvest | Catch | Effort | Harvest | Catch |
| 1996 | 3,051 | 2,539 | 12,714 | 7,990 | 3,082 | 16,366 |
| 1997 | 3,334 | 1,074 | 9,930 | 7,655 | 1,246 | 11,251 |
| 1998 | 1,413 | 732 | 4,136 | 3,768 | 773 | 4,735 |
| 1999 | 2,431 | 908 | 3,260 | 7,064 | 1,098 | 3,642 |
| 2000 | 1,230 | 266 | 1,402 | 4,212 | 380 | 1,774 |
| 2001 | 1,118 | 641 | 2,850 | 2,454 | 654 | 2,917 |
| 2002 | 2,349 | 482 | 8,806 | 4,815 | 746 | 11,181 |
| 2003 | 2,023 | 1,260 | 8,707 | 4,555 | 1,405 | 13,725 |
| 2004 | 1,892 | 1,198 | 19,205 | 4,650 | 1,389 | 21,461 |
| 2005 | 3,124 | 1,880 | 14,841 | 5,047 | 2,040 | 16,899 |
| 2006 | 2,416 | 937 | 7,286 | 4,050 | 1,206 | 8,449 |
| 2007 | 2,695 | 1,742 | 11,526 | 5,656 | 1,839 | 14,258 |
| 2008 | 887 | 259 | 2,925 | 2,840 | 387 | 3,951 |
| 2009 | 2,984 | 765 | 6,622 | 4,892 | 873 | 7,913 |
| 2010 | 1,424 | 568 | 6,477 | 3,327 | 608 | 8,073 |
| 2011 | 1,460 | 396 | 3,362 | 3,090 | 422 | 3,911 |
| 2012 | 964 | 303 | 4,113 | 4,036 | 412 | 4,481 |
| 2013 | 1,197 | 350 | 3,101 | 3,406 | 382 | 3,273 |
| 2014 | 1,996 | 485 | 1,947 | 4,261 | 583 | 2,204 |
| 2015 | 1,074 | 360 | 4,395 | 2,229 | 372 | 4,417 |
| 2016 | 400 | 75 | 1,986 | 2,911 | 196 | 2,584 |
| 2017 | 2,450 | 520 | 7,853 | 5,426 | 586 | 8,509 |
| 5-year average (2012-2016) | 1,126 | 315 | 3,108 | 3,369 | 389 | 5,507 |
| 10-year average (2007-2016) | 1,508 | 530 | 4,645 | 3,665 | 607 | 3,392 |

[a] Includes Minto Flats, the Tatalina and Tolovana drainages, and the lower portion of the Chatanika River downstream of the Elliot Highway Bridge.

Table 78-2.–Estimated northern pike abundance in the Minto Lakes Study Area (MLSA) during 1996–2018, and with the Chatanika River Overwintering Area (CROA) in 2018.

| | | ≥ 400mm (~16 in)[a] | | ≥ 600mm (~24 in) | | ≥ 720 mm (~30 in) | |
|---|---|---|---|---|---|---|---|
| Year | Area | Abundance | SE | Abundance | SE | Abundance | SE |
| 1996 | MLSA-B | 23,850 | 7,799 | 7,616 | 883 | - | - |
| 1997 | | 16,547 | 1,754 | 3,251 | 174 | 672 | 48 |
| 2000 | MLSA-B | - | – | 5,331 | 1,152 | - | - |
| 2003 | MLSA-B | 25,227 | 4,529 | 7,683 | 2,347 | 1,405 | 288 |
| 2008[a] | MLSA-A[b] | 16,045 | 3,132 | 2,219 | 397 | 958 | 362 |
| | MLSA-B | 9,854 | 1,701 | 2,092 | 448 | 635 | 635 |
| 2018 | CROA | | | 19,943 | 2,537 | 3,098 | 510 |
| | MLSA-A | | | 14,569 | 2,034 | 2,380 | 432 |

Note: SE= standard error.

[a] Estimated abundance of northern pike 400–600 mm FL are likely biased, and the magnitude of this is unknown. However, it is believed the estimate does accurately reflect order of magnitude.

[b] In 2008, the geographical size of the study area was expanded and is referred to as "Area-A." "Area-B" is the same study area that was used during 1996–2003.

## PROPOSAL 79 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Fairbanks Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Removes Dune Lake from the conservative management approach under the *Tanana River Area Stocked Waters Management Plan* (5 AAC 74.065). Increases the bag and possession limit to 15 fish, only 10 of which can be landlocked salmon, and only five of which can be other stocked species. The size limit for all stocked species combined is only one fish over 18 inches.

**WHAT ARE THE CURRENT REGULATIONS?** In Dune Lake, the bag and possession limit for rainbow trout, landlocked salmon, Arctic char/Dolly Varden, and Arctic grayling, combined, is five fish, of which only one fish may be 18 inches or greater.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would increase the harvest of coho salmon, allow anglers to utilize these stocked fish before they would otherwise die in late spring, and allow anglers to continue harvesting other stocked species. An angler could potentially harvest 10 coho salmon plus five other stocked species, for a total of 15 fish. This would be different than other Tanana Area stocked waters under the regional management approach: they have a total limit of 10 stocked species in combination, of which only one fish may be 18 inches or greater.

**BACKGROUND:** Prior to 2001, the general bag and possession limits were applied: 10 salmon in combination, 10 rainbow trout, 10 Arctic Char/Dolly Varden, five Arctic grayling, and no size limits for any species. In 2004, the board adopted the *Tanana River Area Stocked Waters Management Plan* at which time Dune Lake was categorized under the conservative approach. The intent of the conservative approach is to provide a reasonable expectation to catch a bag limit with a reasonable chance of catching fish 18 inches or greater. Since 2001, the bag, possession, and size limits for all stocked species, combined, have been five fish, of which only one may be 18 inches or greater.

Dune Lake is 85 acres in size, is classified as a "remote" stocked lake and is one of the most productive stocked lakes within the Tanana River drainage (Figure 80-1). Anglers access Dune Lake by float plane during the open-water months and by snow machine or ski plane after freeze-up. Coho salmon and rainbow trout are currently the only species stocked. Arctic grayling were last stocked in 2013 and are still present in the lake. Rainbow trout are the most desired species by anglers. Once stocked, coho salmon live ~3 years and begin to die off in late March. During their final winter, coho salmon in Dune Lake are desired by anglers because the quality of their flesh is unusually high compared to other stocked lakes, and they are at their maximum size (i.e., 16-18 inches).

Based on angler reports and sampling, rainbow trout consistently grow greater than 18 inches, with some rainbow trout approaching 24 inches (Figure 79-1). Coho salmon sampled did not exceed 19 inches. Since 2011, effort in Dune Lake has been too low to be accurately estimated in the Statewide Harvest Survey. This low participation indicates that a restricted bag limit is no longer needed to prevent overharvest of rainbow trout less than 18 inches to maintain adequate recruitment of larger-sized fish.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. This proposal falls outside of the management approaches identified in the *Tanana River Area Stocked Waters*

*Management Plan.* The proposal adds complexity to the regulations because it would create a unique stocked waters regulation. The department would **SUPPORT** an amendment to repeal 5 AAC 74.010(c)(8) and manage Dune Lake under the regional management approach described at 5 AAC 74.010(c)(30), which has a combined bag and possession limit of 10 stocked species, of which only one can be 18 inches or greater. This amendment would allow anglers to retain up to 10 coho salmon, and the 18-inch restriction would still protect the large rainbow trout that are sought by anglers.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

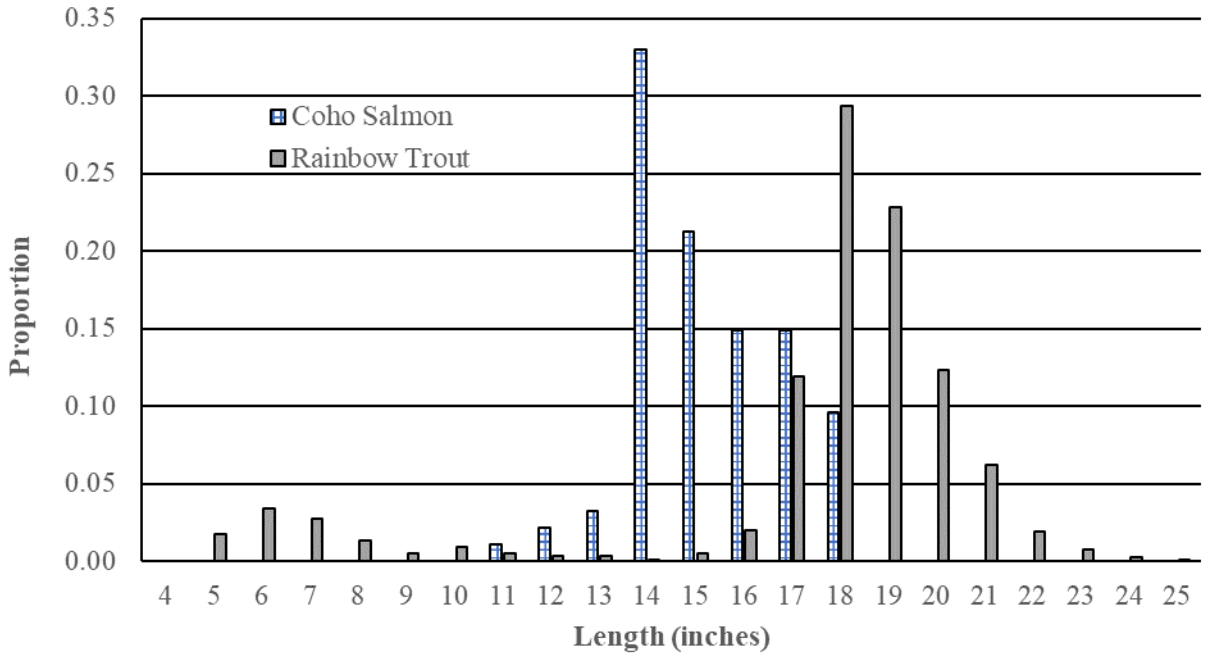



Figure 79-1.–Length composition of coho salmon and rainbow trout in Dune Lake sampled during 2000, 2006, and 2016 combined.

**PROPOSAL 80 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.**

**PROPOSED BY:** Fairbanks Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Increase the bag and possession limit in Koole Lake for all stocked species combined from five to 10.

**WHAT ARE THE CURRENT REGULATIONS?** In Koole Lake, the bag possession, and size limit for all stocked species combined is five fish, of which only one may be 18 inches or greater.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Reclassify Koole Lake from the conservative management approach to the regional management approach in the *Tanana River Area Stocked Waters Management Plan*. This would allow an angler to keep 10 fish, of which only one may be 18 inches or greater.

**BACKGROUND:** In 2004, the board adopted the *Tanana River Area Stocked Waters Management Plan*. In 2007, the management approach for Koole Lake was changed from regional to conservative. The intent of the conservative approach is to provide a reasonable expectation to catch a bag limit with a reasonable chance of catching fish 18 inches or greater. If a lake is sufficiently productive, lowering the bag limit from 10 to five fish is expected to reduce exploitation, and allow stocked fish to survive and grow to 18 inches or greater.

Koole Lake is 320 acres in size and is classified as a "remote" stocked lake in the upper Tanana Valley. Anglers access Koole Lake by float plane during the open-water months and by snow machine after freeze-up (Figure 80-1). The 5-year stocking plan currently has Koole Lake stocked every other year with ~15,000 – 24,000 fingerling-sized (i.e. 3-4 inches), Arctic grayling, rainbow trout, and coho salmon combined. Based on modeling, this should result in an expected population of 1,000 – 2,000 age-2 rainbow trout to support the fishery. Rainbow trout are the species most desired by anglers and the most likely to grow beyond 18 inches.

Based on sampling in 2013 and angler reports, rainbow trout were not growing to 18 inches (Figure 80-2), and not meeting expectations of the conservative management approach. Estimated effort and harvests in Koole Lake have declined since 1999, and it is suspected that there is insufficient harvest to decrease competition and promote growth. Since 2000, the number of respondents has been too low in the Statewide Harvest Survey to estimate effort and harvest in Koole Lake. Water levels in Koole Lake have also been steadily falling, which negatively affects lake productivity.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal. Based on the lack of 18-inch fish during sampling, a decreasing trend in harvest, and falling water levels, Koole Lake cannot support the conservative management approach. It is recommended that 5 AAC 74.010(c)(30) be repealed and listed under the regional management approach 5 AAC 74.010(c)(29).

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

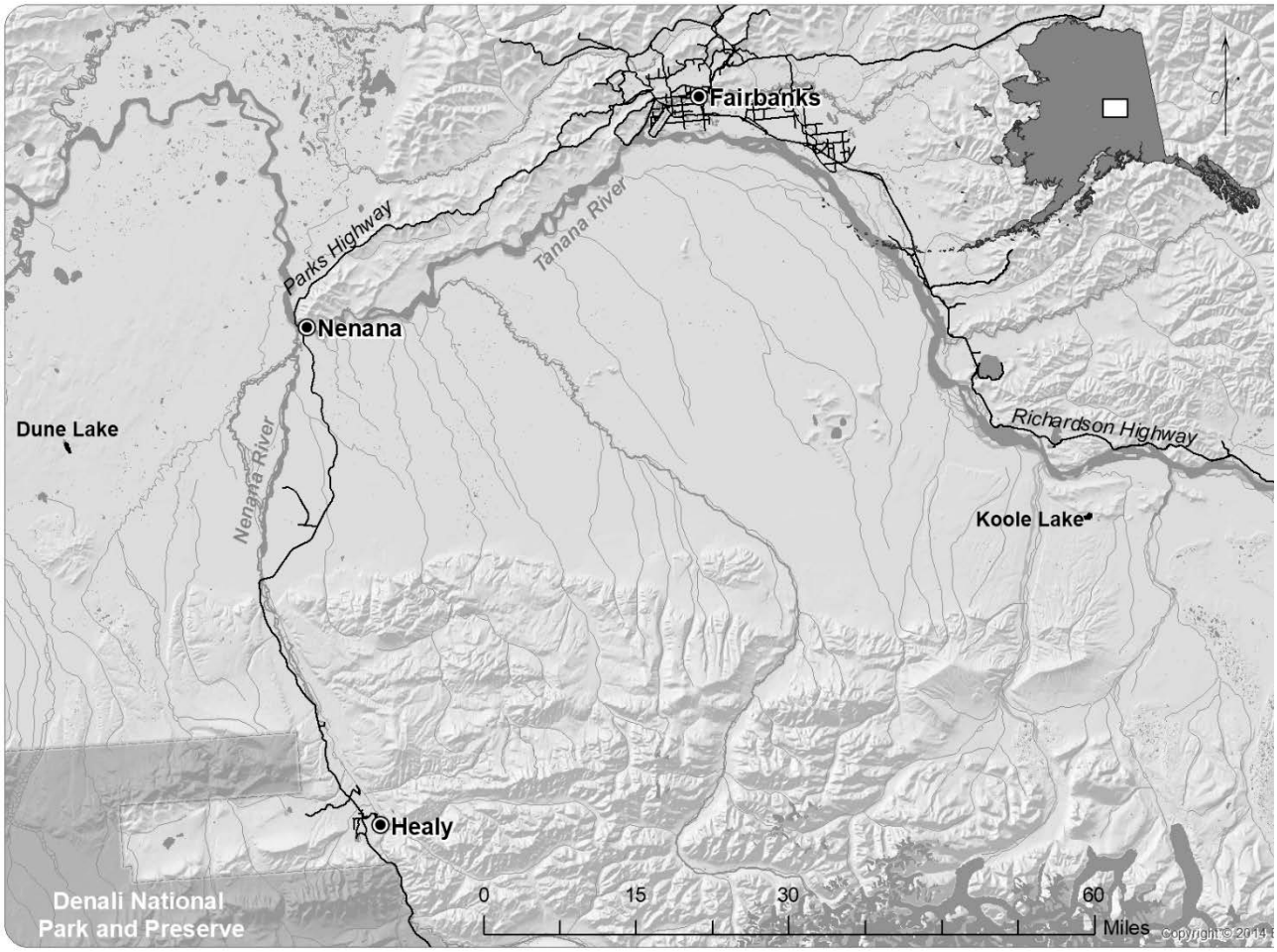



Figure 80-1.–Location of Koole and Dune lakes.

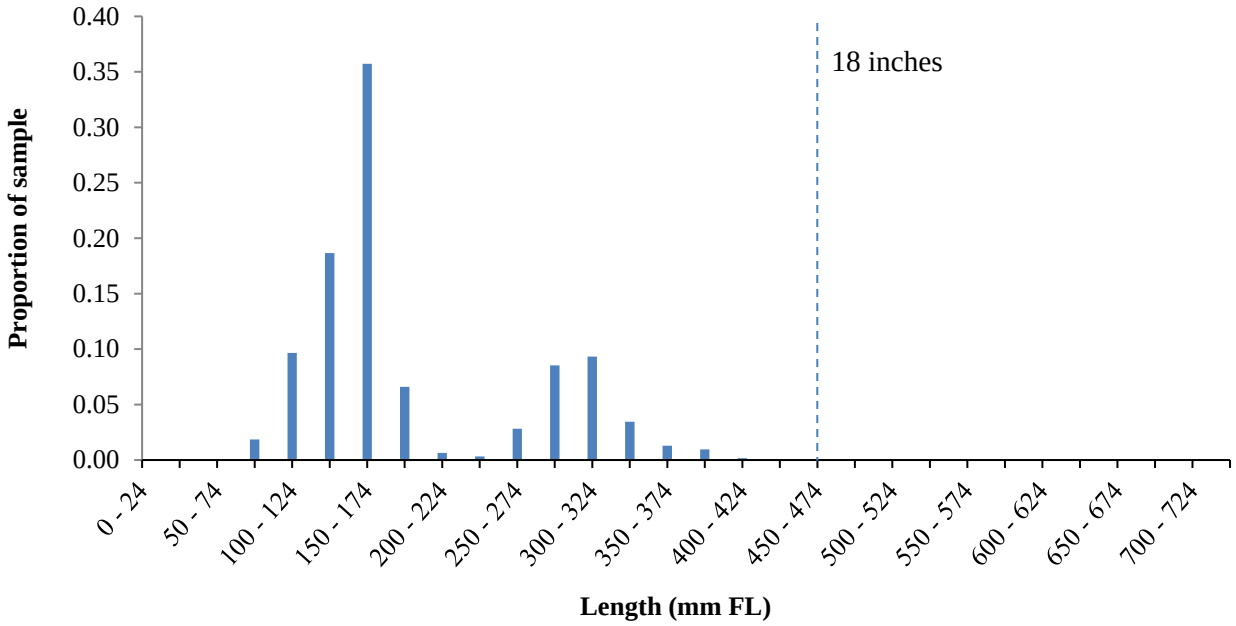



Figure 80-2.–Length composition of rainbow trout in Koole Lake sampled during 2013.

## PROPOSAL 81 – 5 AAC 74.010. Season, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Fairbanks Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Increase the bag and possession limit for coho and chum salmon.

**WHAT ARE THE CURRENT REGULATIONS?** The general bag and possession limit for salmon, other than king salmon, is three fish, with no size limit.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would establish specific bag and possession limits for coho and chum salmon (three each). Anglers could harvest up to three coho and three chum salmon in one day.

**BACKGROUND:** For salmon other than king salmon, a combined bag and possession limit has been in regulation within the AYK region since 1984. In the Tanana River drainage, the current bag and possession limit for 'other salmon' has been three fish since 1987.

The Tanana River drainage supports three species of salmon: king, coho and chum salmon (summer and fall). Summer chum salmon are available to anglers in July and early August. The run timings of coho and fall chum salmon are similar, with most fish entering tributary streams in late September. Few chum and coho salmon are harvested in sport fisheries. The largest coho salmon sport fishery occurs in the Delta Clearwater River where coho and fall chum salmon are both present. Most chum salmon (summer chum) harvest occurs on the Chena and Salcha rivers. Annual harvests of coho salmon in the entire Tanana River drainage have averaged 254 fish from 2007-2016, and chum salmon have averaged 371 fish.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. This would increase regulation complexity and would be inconsistent with all other management areas in the AYK. Combined bag and possession limits for "other salmon" are applied across all flowing waters in the AYK, and this proposal would alter a long-standing management option used for pink, chum, coho, and sockeye salmon.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

Table 81-1.–Estimated sport harvest and catch for chum and coho salmon in the Tanana Drainage and the Delta Clearwater River (DCR).

| | Coho | | | | Chum | | | |
|---|---|---|---|---|---|---|---|---|
| | DCR harvest | DCR catch | Tanana harvest | Tanana catch | DCR harvest | DCR catch | Tanana harvest | Tanana catch |
| 1999 | 76 | 1,634 | 451 | 2,239 | 0 | 203 | 474 | 2,230 |
| 2000 | 252 | 1,890 | 310 | 2,537 | 12 | 12 | 97 | 290 |
| 2001 | 816 | 5,394 | 1,122 | 6,791 | 0 | 65 | 29 | 1,240 |
| 2002 | 517 | 5,311 | 541 | 5,694 | 0 | 23 | 307 | 1,109 |
| 2003 | 1,272 | 14,665 | 1,317 | 15,377 | 0 | 50 | 63 | 1,791 |
| 2004 | 511 | 4,061 | 716 | 5,796 | 0 | 42 | 98 | 1,196 |
| 2005 | 267 | 2,640 | 267 | 2,844 | 0 | 0 | 144 | 1,372 |
| 2006 | 580 | 4,864 | 629 | 5,230 | 52 | 533 | 315 | 1,445 |
| 2007 | 311 | 3,210 | 339 | 3,343 | 0 | 105 | 41 | 305 |
| 2008 | 65 | 475 | 170 | 1,739 | 0 | 0 | 61 | 636 |
| 2009 | 105 | 4,311 | 115 | 4,330 | 0 | 0 | 71 | 526 |
| 2010 | 209 | 3,214 | 369 | 3,679 | 0 | 11 | 62 | 158 |
| 2011 | 284 | 3,761 | 284 | 3,761 | 0 | 14 | 77 | 620 |
| 2012 | 57 | 2,316 | 84 | 2,623 | 0 | 0 | 63 | 411 |
| 2013 | 81 | 1,747 | 139 | 1,952 | 0 | 130 | 8 | 580 |
| 2014 | 216 | 6,278 | 216 | 6,655 | 0 | 24 | 54 | 171 |
| 2015 | 180 | 4,378 | 180 | 4,393 | 52 | 52 | 189 | 189 |
| 2016 | 641 | 4,853 | 641 | 4,853 | 0 | 21 | 0 | 117 |
| 2017 | 215 | 2,844 | 236 | 3,218 | 25 | 195 | 25 | 642 |
| 5-yr Average (2012–2016) | 235 | 3,914 | 252 | 4,095 | 10 | 45 | 63 | 294 |
| 10-yr Average (2007–2016) | 215 | 3,454 | 254 | 3,733 | 5 | 36 | 63 | 371 |

## PROPOSAL 82 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Allow sport fishing for salmon and nonsalmon species within the Toklat River drainage year-round.

**WHAT ARE THE CURRENT REGULATIONS?** The Toklat River drainage is closed to sport fishing from August 15 through May 15.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would increase sport fishing opportunity for salmon and nonsalmon species in the Toklat River drainage, particularly during hunting season when the area is most heavily utilized. Within the area of highest recreational use, it would continue to maintain protection of critical chum salmon spawning habitat in a ~3-mile corridor of the mainstem.

**BACKGROUND:** The Toklat River drainage is a significant spawning area for fall chum salmon in the Tanana River drainage. An unknown number of coho salmon also spawn within the Toklat River. Chum salmon start to arrive in early September and spawning in the mainstem peaks during mid- to late-October. Based on a radiotelemetry study in 1997, the largest concentration (~71%) of chum salmon was located between river kilometer 41 and 45 (i.e., Toklat Springs area), which is bisected by the Kobi-McGrath trail. Estimated escapements in the Toklat River have ranged from 3,624 to 158,336 chum salmon, and their relative contribution to Yukon River escapements has ranged from 5 to 14%.

Subsistence fishing for salmon in the Toklat River drainage was closed from 1990 until 1993. In 1993, the *Toklat River Fall Chum Salmon Rebuilding Plan* (5 AAC 01.249) was implemented to help rebuild the stock, and sport fishing for salmon and nonsalmon species in the drainage was closed from August 15 through May 15. In 2004, Toklat River fall chum salmon were removed as a management concern, and a BEG of 15,000 – 33,000 was established. By 2007, the board determined that Yukon River chum salmon (which incorporated Toklat River fall chum salmon) no longer met the criteria of a yield concern, and in 2010 the Toklat River chum salmon BEG was removed from the *Yukon River Drainage Fall Chum Salmon Management Plan*. Since 2003, Yukon River fall chum salmon runs have exceeded the lower bound of the escapement goal (300,000 fish) every year and exceeded the upper bound (600,000) 11 out of 15 years. Toklat River fall chum are still assessed opportunistically by aerial survey, but surveys are often (e.g., every other year) disrupted by turbid glacial water that can persistent into late fall. Coho salmon are present in clearwater tributaries but have not been assessed.

Minimal sport fishing occurs in the Toklat River drainage and estimates of fishing effort and harvest from the SWHS are not available due to low response rates. The Toklat River is remote and access is limited to aircraft, jet-powered boats, or ORV traffic along the Kobi-McGrath Trail. The river is most heavily utilized during moose hunting season, and the intent of the sport fishing closure was to protect mainstem spawning habitat from motorized and foot traffic where the RS2477 Kobi-McGrath trail crosses the Toklat Springs area.

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal because it provides sport fishing opportunity for nonsalmon species such as northern pike and Arctic grayling. Most sport fishing would occur in association with moose hunting season during fall and would primarily occur within the tributaries of the Toklat River drainage. The level of sport fishing effort is expected to be minimal and would present no sustainability concerns for salmon or

nonsalmon species. The Toklat Springs Area where the Kobi-McGrath trail crosses would remain protected by closing a 3-mile corridor of the mainstem Toklat River.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

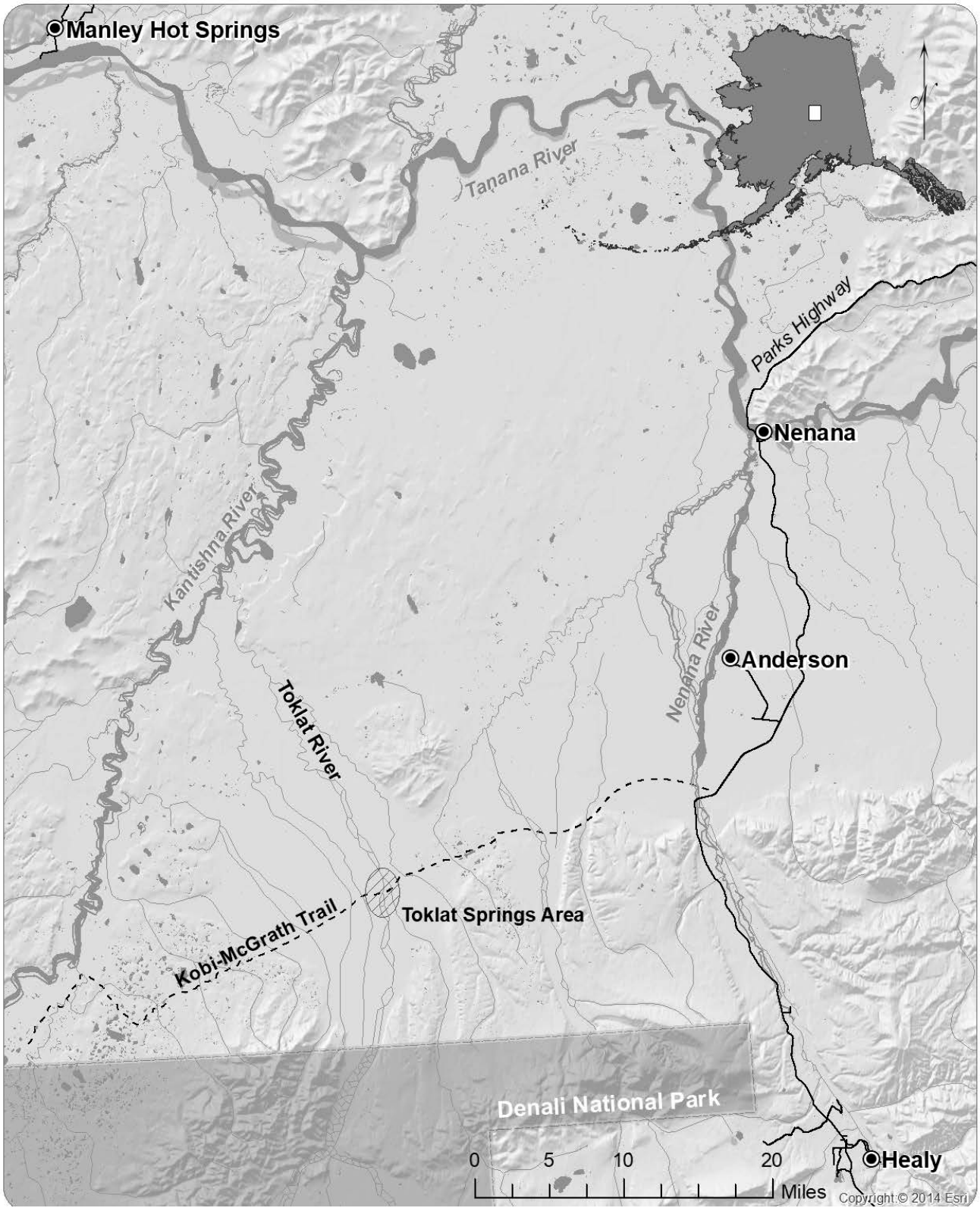



Figure 82-1.–Toklat River drainage and demarcation of Toklat Springs protected area.

## PROPOSAL 83 – 5 AAC 01.249. Yukon River Drainage Fall Chum Salmon Management Plan.

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Allow subsistence and sport fishing for salmon and nonsalmon species within in the Toklat River drainage year-round.

**WHAT ARE THE CURRENT REGULATIONS?** The Toklat River drainage is closed to sport and subsistence fishing from August 15 through May 15.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would increase subsistence and sport fishing opportunity for salmon and nonsalmon species in the Toklat River drainage, particularly during hunting season when the area is most heavily utilized. Within the area of highest recreational use, it would continue to maintain protection of critical chum salmon spawning habitat in an ~3-mile corridor of the mainstem.

**BACKGROUND:** The Toklat River drainage is a significant spawning area for fall chum salmon in the Tanana River drainage (Figure 82-1). An unknown number of coho salmon also spawn within the Toklat River. Chum salmon start to arrive in early September and spawning in the mainstem peaks during mid- to late-October. Based on a radiotelemetry study in 1997, the largest concentration (~71%) of chum salmon was located between river kilometer 41 and 45 (i.e., Toklat Springs area), which is bisected by the Kobi-McGrath trail. Estimated escapements in the Toklat River have ranged from 3,624 to 158,336 chum salmon, and their relative contribution to Yukon River escapements has ranged from 5 to 14%.

Subsistence fishing for salmon in the Toklat River drainage was closed from 1990 until 1993. In 1993, the *Toklat River Fall Chum Salmon Rebuilding Plan* (5 AAC 01.249) was implemented to help rebuild the stock, and sport fishing for salmon and nonsalmon species in the drainage was closed from August 15 through May 15. In 2004, Toklat River fall chum salmon were removed as a management concern, and a BEG of 15,000 – 33,000 was established. By 2007, the board determined that Yukon River chum salmon (which incorporated Toklat River fall chum salmon) no longer met the criteria of a yield concern, and in 2010 the Toklat River chum salmon BEG was removed from the *Yukon River Drainage Fall Chum Salmon Management Plan*. Since 2003, returns of Yukon River fall chum salmon have exceeded the lower bound of the escapement goal (300,000 fish) every year, and exceeded the upper bound (600,000) 11 out of 15 years. Toklat River fall chum salmon are still assessed opportunistically by aerial survey, but surveys are often (e.g., every other year) disrupted by turbid glacial water that can persistent into late fall. Coho salmon are present in clearwater tributaries but have not been assessed.

Minimal sport fishing occurs in the Toklat River drainage and estimates of fishing effort and harvest from the SWHS are not available due to low response rates. The Toklat River is remote and access is limited to aircraft, jet-powered boats, or ORV traffic along the Kobi-McGrath Trail. The river is most heavily utilized during moose hunting season, and the intent of the sport fishing closure was to protect mainstem spawning habitat from motorized and foot traffic where the RS2477 Kobi-McGrath trail crosses the Toklat Springs area.

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal because it provides sport and subsistence fishing opportunity for salmon and nonsalmon species such as northern pike and Arctic grayling. Most fishing would occur in association with moose hunting season during fall and would primarily occur within the tributaries of the Toklat River drainage

where Arctic grayling or northern pike would be targeted by anglers. The level of sport fishing effort and subsistence use is minimal and would present no sustainability concerns for salmon or nonsalmon species. The Toklat Springs Area where the Kobi-McGrath trail crosses would remain protected by closing a 3-mile corridor of the mainstem Toklat River.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)) and for freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars in the Yukon Area (5 AAC 01.236(a)(2)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? The board found that 89,500–167,900 fall chum salmon and 20,500–51,980 coho salmon are reasonably necessary for subsistence in the Yukon Area (5 AAC 01.236(b)). While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 84 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Repeal the Tanana River Area rainbow trout regulations.

**WHAT ARE THE CURRENT REGULATIONS?** The general bag and possession limit is 10 rainbow trout with no size limit.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would eliminate unnecessary sport fishing regulations for the Tanana River Area because rainbow trout are not native to the Tanana River drainage. It also reduces confusion for anglers, particularly those new to Alaska, who inadvertently believe rainbow trout are native in stocked lakes, which have a different regulation.

**BACKGROUND:** Current sport fishing regulations for the Tanana River drainage include a bag and possession limit for wild rainbow trout of 10 fish, and no size limit. In stocked waters, the bag, possession, and size limit for rainbow trout, Arctic grayling/Dolly Varden, landlocked salmon, and Arctic grayling is 10 of all species combined, of which no more than one fish may be 18 inches or greater in length. Native populations of rainbow trout are not present in the Tanana River drainage and wild rainbow trout have not been captured or observed during department assessment projects.

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal. It would reduce regulation complexity.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**PROPOSAL 85 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.**

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Update the list of stocked waters in regulation. The following water bodies would be added to the stocked waters in regulation: Cather's Lake, CHSR 56.0 Mile Pit, Kenna Lake, and Little Harding Lake.

**WHAT ARE THE CURRENT REGULATIONS?** There are over 90 stocked waters in the Tanana River Area managed under the regional management approach with an aggregate bag, possession, and size limit for rainbow trout, Arctic char/ Dolly Varden, landlocked salmon, and Arctic grayling of 10 fish (all stocked species combined), of which no more than one fish may be 18 inches or greater in length.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would make regulations consistent with stocked waters.

**BACKGROUND:** In conjunction with each AYK board cycle, the department reviews stocked waters to ensure consistency between the *Statewide Stocking Plan for Recreational Fisheries*, the *Tanana River Area Stocked Waters Management Plan* (5 AAC 74.065), and Tanana River Area stocked waters regulations. Stocked waters are removed from the stocking plan due to loss of public access, poor fish growth or survival, inadequate supply of hatchery fish, or insufficient fishing effort. As new waters are identified and included in the stocking plan, they are added to the regulations.

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal. It will eliminate confusion and apply the correct regulations to newly stocked waters and waters no longer stocked. Substitute language will be provided depending on board action on Proposals 79 and 80.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

# COMMITTEE OF THE WHOLE – GROUP 2: YUKON SALMON (20 PROPOSALS)

## YUKON SUBSISTENCE FISHERIES (12 PROPOSALS)

### PROPOSAL 86 – 5 AAC 01.220. Lawful gear and gear specifications.

**PROPOSED BY:** Middle Yukon Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** This would allow hook and line attached to a rod or pole to be used under subsistence regulations, in addition to sport regulations to catch nonsalmon species in the Kaltag, Nulato, and Old Village (or Rodo) rivers year-round.

**WHAT ARE THE CURRENT REGULATIONS?** Fish, other than salmon and halibut, may be harvested under subsistence regulations by set gillnet, drift gillnet, beach seine, fish wheel, longline, fyke net, dip net, jigging gear, spear, and a hook and line attached to a rod or pole (rod and reel), handline, or lead. Rod and reel may be used to take nonsalmon under subsistence regulations in the described area, only through the ice. Rod and reel is legal subsistence gear for all fish species downstream of Paimiut Slough, which is below the community of Holy Cross (see map below).

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** People fishing with rod and reel for nonsalmon species upstream of Paimiut Slough would no longer be required to purchase a fishing license. People fishing for salmon with rod and reel in this same area would be required to purchase a fishing license. This may not increase subsistence harvest if subsistence users have been using rod and reel under sport fishing regulations to selectively target and harvest nonsalmon species. Effects to subsistence fishing opportunity and conservation resulting from this proposal would likely be negligible because opportunity to harvest fish for personal use is currently provided under sport fishing regulations. This would not align regulations with those in the lower districts downstream of Paimiut Slough since it only requests the use of rod and reel under subsistence regulations for nonsalmon species. This would add complexity to the subsistence regulations since it would allow the use of rod and reel for nonsalmon species in only three tributaries upstream of Paimiut Slough.

**BACKGROUND:** In 2000, the board adopted regulations providing rod and reel as a legal subsistence gear for all finfish species year-round in a subsection of the Yukon River. The boundaries were based on the Association of Village Council Presidents (AVCP) Region. Paimiut Slough is the uppermost boundary of the AVCP Region in the Yukon River. In the Yukon River drainage below Paimiut Slough, rod and reel is legal gear to harvest salmon and nonsalmon year-round. The vast majority of harvests of nonsalmon and salmon species throughout the drainage come from other legal subsistence gear such as gillnets. Much of the Yukon River mainstem is deep, fast moving and turbid. Therefore, the use of rod and reel may be preferred in tributaries and sloughs, or their mouths, for fish such as nonsalmon that are actively feeding. The use of rod and reel may also be preferred for selective harvest when just a few fish are needed, and is often the preferred gear for children and young fishermen while in fish camp. Allowing rod and reel would provide Alaska residents with opportunity to harvest nonsalmon for subsistence uses without being required to purchase a sport fishing license, and opportunity to selectively harvest certain species for subsistence purposes.

Fishing with rod and reel is one of few fundamental inherent characteristics of sport fishing and is a defining characteristic identified by the legislature in the statutory definition of "sport fishing". In many areas of the state, rod and reel is the only legal sport fishing gear allowed for finfish. However, the board has authorized rod and reel as a legal subsistence gear in many areas of the state, including this area when fishing through the ice.

Many nonsalmon populations migrate through, spawn, and rear in tributaries of the Yukon River; however, very little is known about their population sizes. As a result, any increase in harvest on these species would have unknown effects. Based on the Anadromous Waters Catalog for the Interior region, the Nulato River is listed for presence of whitefish. The Rodo River is listed for sheefish and whitefish presence.

Nonsalmon harvest data are collected from subsistence harvest survey projects. Annual average (2012-2016) sheefish harvests for the entire Yukon Area is approximately 14,600 fish. Other whitefish harvests average approximately 77,500 fish. Northern pike harvests average 18,600 fish per year; burbot, Arctic grayling, and sucker harvests average fewer than 3,000 fish per year. These harvests are achieved through many gear types in various seasons depending on community and current regulation.

Household surveys conducted by the department in 2010 found that nonsalmon harvests accounted for approximately 20% of the total annual fish harvest by Nulato residents. Approximately 60% of the nonsalmon harvest occurs using rod and reel gear. Whitefishes (humpback whitefish, broad whitefish, sheefish, and least cisco) are commonly harvested using rod and reel gear, as is northern pike. As the river begins to freeze in the fall months, many residents use rod and reel fish for Arctic grayling and Dolly Varden (locally called trout). According to ethnographic research, Koyukon Athabascans in the middle river area catch fish "with hook and line, especially pike, burbot, sheefish, grayling, and some whitefish. People still use the oldstyle handlines with lures, especially for ice fishing in the spring and fall; but when they fish in open water, they prefer the modern rod and reel. Compared with nets, hook and line fishing is not very productive; but in certain situations it is the best and most convenient way to catch fish…"

Currently state and federal regulations are inconsistent: rod and reel is legal gear throughout the Yukon River drainage for subsistence harvest of salmon and nonsalmon species by federally-qualified users in federal public waters.

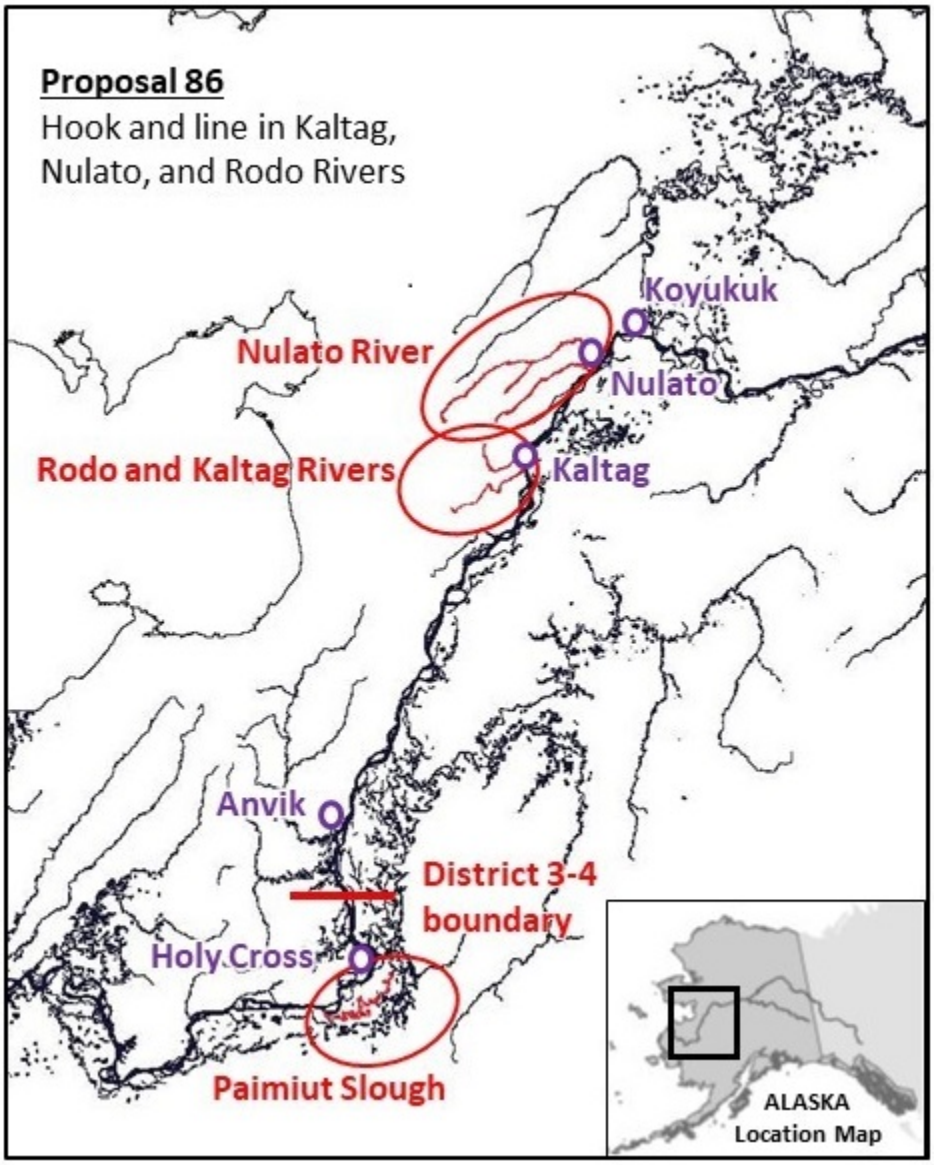
**DEPARTMENT COMMENTS:** The department recommends the board **TAKE NO ACTION** on this proposal. The board will be addressing two proposals during this cycle requesting the use of rod and reel for subsistence fishing gear. Since 1997, the board has addressed five proposals requesting the use of rod and reel as legal subsistence gear: three of these proposals have carried, two have failed. There have been inconsistencies in the department's positions on these proposals in addition to the board's deliberation over this time. The board created a committee at the Bristol Bay meeting to discuss the use of rod and reel as sport and subsistence gear and the department recommends tabling this proposal until the committee reports its findings to the board.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; The Alaska Board of Fisheries made a positive customary and traditional use finding for nonsalmon fish in the Yukon River (5AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Not much is known about regional non-salmon stock productivity in District 4, but it is suspected that hook and line harvest would have little impact.
4. What amount is reasonably necessary for subsistence use? While not in regulation, in 1997, the board found that 133,000 – 2,850,000 pounds of freshwater fishes was the amount reasonably necessary for subsistence uses in the Yukon Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.



## PROPOSAL 87 – 5 AAC 01.220. Lawful gear and gear specifications.

**PROPOSED BY:** Tanana Rampart Manley & Fairbanks Fish and Game Advisory Committees.

**WHAT WOULD THE PROPOSAL DO?** Allow the use of drift gillnets for subsistence fishing throughout the Yukon River.

**WHAT ARE THE CURRENT REGULATIONS?** Drift gillnets are only a legal gear type for harvest of salmon in Districts 1, 2, 3 and for limited dates in subdistricts 4-A, 4-B, and 4-C. Drift gillnets are not currently legal in Districts 5 and 6.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** More subsistence fishermen would have the opportunity to utilize drift gillnets. This would provide fishermen flexibility in gear types to address the issue of competition for the limited number of suitable set gillnet sites. Conversely, finding suitable drift zones can involve the loss or damage of nets due to underwater snags, and this may limit the use of drift gillnet gear in some areas. The effect on harvest is unknown if more fishermen begin drifting gillnets, though it is more likely fishermen would reach their subsistence needs more efficiently rather than increasing their overall harvest. Because drift gillnet 'soak times' tend to be much shorter compared to set gillnets, fishermen would be able to more closely monitor their harvest compared to a set gillnet. The regulations regarding drift and set gillnets would be more consistent across all districts.

**BACKGROUND:** Drift gillnets are the dominant gear type used to harvest salmon for subsistence and commercial purposes in Districts 1–3 (except for the coastal area of District 1 where set gillnets predominate) and for subsistence in Subdistrict 4-A. Drift gillnet gear is an efficient method of harvesting salmon when used in these locations. Though drift gillnets have not been legal gear in the upper Yukon Area since 1976, they have historically been an important gear type for subsistence salmon fishing.

Since the 2013 AYK meeting, the board has made incremental regulatory changes to allow the use of drift gillnets to harvest chum or king salmon in several upper river subdistricts. The most recent of these regulatory changes occurred in 2018, allowing the use of drift gillnets for all of Subdistricts 4B and 4C for king and summer chum salmon. This came as the result of an ACR adopted by the board and deliberated at the March 2018 statewide meeting. It had relatively unified support from stakeholder and user groups and many advisory committees. During the July 2018 meeting, the board adopted an emergency petition to allow the use of drift gillnets for harvest of fall chum and coho salmon in Subdistricts 4B and 4C.

In many areas where only set gillnets are allowed, fishermen report that the productive fishing spots are traditionally used by long-established families or residents, who may put their gear in that spot for an entire period, thus making it unavailable to any other fishermen. While competition could occur for drift sites, it is less likely because drifts through an area are relatively short and fishermen report 'lining up' near good drift sites and taking turns drifting through the site. If the fishing window or schedule is long enough, multiple fishermen can access the same area and have an opportunity to meet their needs. With river conditions reportedly changing each year and reducing viable setnet sites in many regions of the Yukon River, drift gillnets could provide more opportunity and reduce competition.

The regulatory subsistence salmon fishing schedules for Districts 4–6 allow for more fishing time than what is allowed in Districts 1–3. This is based, in part, on less efficient set gillnets and fish wheel gear that is used in upper river areas. Drifting gillnets would be a new practice requiring the use of

certain areas ideal for drifting nets close to shore. It may take some time for users to take up the practice and effects on harvest would be monitored through the subsistence harvest monitoring program. Furthermore, because of below-average king salmon run sizes in recent years, subsistence and commercial opportunity has been largely restricted by time, area, and gear throughout most of the summer season, including significantly reduced fishing schedules in most districts. Depending on harvest levels it may be warranted to reduce fishing time in upriver districts if drift gillnets become a predominant gear type for harvesting salmon.

In the past, the department and stakeholders have shared concerns that drift gillnets fished further from shore could harvest a higher proportion of Canadian-bound king salmon. While this could be the case, it has not been verified through genetic analysis. Limiting harvest on a single stock throughout the river is challenging, particularly on a stock that comprises approximately 40% of the total run and a run timing that overlaps with U.S. stocks throughout the season. While fishermen in the upper part of District 5 predominantly harvest Canadian-origin stock, they do so regardless of the gear used because that is the main stock in the area. Conversely, in District 6, Canadian-origin salmon are not typically present, so the use of drift gillnets may not have a significant biological effect on any particular stock in that district.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. The department **SUPPORTS** expanding subsistence opportunity to harvest salmon with gear that may alleviate competition and allow fishermen better access to the resource when warranted. The department currently has the management tools under emergency order authority to effectively limit harvest when necessary based on inseason abundance to achieve escapement goals.

If adopted, multiple existing regulations restricting drift gillnet use to specific timeframes, species, fisheries, or areas would need to be amended or removed. It may also be necessary to reduce the maximum length of drift gillnets for upriver districts based on the narrower channels and sloughs present.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes. The Alaska Board of Fisheries made a positive customary and traditional use finding for salmon in the Yukon River (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 88 – 5 AAC 01.220. Lawful gear and gear specifications.

**PROPOSED BY:** Tanana Rampart Manley Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** This would eliminate any use of the livebox as an intermediate step of releasing king salmon from a fish wheel. During times of conservation when king salmon are required to be released, fish wheel users would need to bypass the livebox and be present at all times while the fish wheel was running so they could release a king salmon from the chute directly to the river (using a net, for example). Only species allowed for retention would be allowed in the livebox.

**WHAT ARE THE CURRENT REGULATIONS?** In subsistence regulation, during times of king and chum salmon conservation, by emergency order, fish wheels must be closely attended and king or chum salmon must be released alive immediately. A fish wheel may be operated without a live box if it is equipped with a chute that returns fish to the water alive, the operator closely attends the fish wheel while in operation, and the operator returns all king or chum salmon caught to the water alive.

In commercial regulation, a fish wheel may be used in Districts 4-A and 6 but must be constructed in a manner that includes fish-friendly baskets and sides and an adjustable slide or chute that allows the immediate return of king salmon to the water, and the permit holder must be present on the wheel at all times. There is no mention of the use of a live box in commercial regulations, which means they are allowed; however, it is stipulated that king salmon be released immediately.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Currently fishermen must release fish alive from the livebox immediately. Once a live king salmon goes into a livebox, the fishermen must quickly remove them from the box with a net, which is difficult because the fish is darting around in a large underwater box.

Without a live box, all fishermen would be required to use a fish-friendly chute with a net or plastic tote poised at the end of the chute as the only means of releasing each fish. This could reduce handling effects and delayed mortality of salmon. The effects of handling stress on salmon for chute-released versus live-box-released fish, has not been studied. However, it has been observed at research projects that the longer a king salmon has been held in liveboxes, the more stress the fish may be experiencing.

The proposal as written states "Fishwheels must be manned at all times when any catch and release of King salmon or other species is required in an executed fishery." This language, if adopted, could reduce management flexibility to allow fish retention in one fishery while requiring live release in another. For example, the harvest of king salmon in the subsistence fishery may be unrestricted based on abundance and as a priority use, while the commercial chum salmon fishery may require the release of all king salmon because a surplus is not available for commercial use. Discussion between the department and the proponent has clarified that the intent of this proposal was limited to ensuring that when salmon are required to be released *within* a particular fishery or area, that they be immediately released from the chute and not released from a livebox.

**BACKGROUND:** Fish wheels are a legal gear type for subsistence salmon fishing in the Yukon Area. After declines in chum and king salmon runs occurred in 1998–2000, regulations were adopted to require, during times of chum or king salmon conservation, that fish wheels be equipped with a livebox when chum or king salmon must be released alive. Liveboxes may also be preferred by some fishermen to preserve flesh quality.

Research suggests that crowding and holding times greater than four hours can cause delayed mortality and reduced travel rates in chum salmon. At the 2016 board meeting, regulations requiring the live release of salmon from fish wheels were amended such that no holding time in the livebox was allowed, fish wheels must be attended when operational, and fish are released immediately alive from either the livebox or a fish friendly chute. Because it can be challenging to dipnet salmon out of a livebox, and because they can swim very aggressively in the presence of other species of salmon, there is chance for fish to become injured and stressed even in a short time. It can be less efficient to capture the fish to be released from the livebox and get them back into the river, therefore it may not be as 'immediate' as other methods. If the intent of regulatory changes was the immediate release of king salmon to reduce holding stress, the current process allowing them to go into the livebox may provide a few extra minutes of stress or harm prior to their release. The proponent originally intended for there to be no holding time of salmon in the livebox when requiring live release for conservation purposes.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal. At times when salmon need to be released alive, any reduction in stress or potential mortality is preferred. Having to remove fish from the livebox may increase handling stress. The department would support language that requires fish be released via the chute, bypassing the livebox.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 89 – 5 AAC 01.220. Lawful gear and gear specifications.

**PROPOSED BY:** John A. Lamont.

**WHAT WOULD THE PROPOSAL DO?** Allow retention of king salmon by emergency order in dip nets and beach seines during times of king salmon conservation in the subsistence and commercial fisheries..

**WHAT ARE THE CURRENT REGULATIONS?** Dip nets, beach seines and fish wheels have been collectively referred to as 'selective gear' because they allow the targeting of one species and live release of another. While gillnets, based on mesh size, will select certain age classes or sizes of fish, they typically do not allow the fishermen to target one species and consistently release another alive, thus incidental harvest occurs. Current commercial fishing regulations do not allow the use of dip nets and beach seines, except in times of salmon conservation to facilitate live release. Under the *Yukon River King Salmon Management Plan* (5 AAC 05.360), if a need to conserve king salmon exists, the commercial season closes to gillnets and reopens with selective gear to target summer chum salmon and requires the release of king salmon. Similar regulations exist within the *Yukon River Summer Chum Salmon Management Plan* (5 AAC 05.362), if summer chum salmon conservation is warranted. Fish wheels are a legal commercial gear only in Districts 4-6 and retention of salmon is determined through emergency order.

Currently, dip nets are not a legal gear for subsistence harvest of salmon, except during times of conservation, to target one species (e.g., target chum salmon and release king salmon). Fish wheels are a legal gear for subsistence fishing in all areas of the river, and retention of salmon or the requirement to release king salmon (based on the need to conserve) is allowed by emergency order. Beach seines are also a legal subsistence gear for salmon, but during times of conservation, the season is closed and reopened and the live release of king salmon is required from this gear type.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The department would be given emergency order authority to allow retention (and/or to require the release of a species) of salmon in dip nets, beach seines, and fish wheels for both commercial and subsistence fishing. Dip nets would become a legal gear type for the harvest of salmon in the subsistence fishery, except when conservation of a particular species required their release as determined by emergency order. It would give fishermen additional gear types to target salmon and could potentially align the regulatory language for these three types of selective fishing gear in the subsistence fishery. This would give the department more flexibility to allow a limited harvest when run sizes are small and inadequate for unrestricted or full subsistence opportunity.

**BACKGROUND:** Given the decline in run size of king salmon and subsequent closures of king salmon-directed commercial and subsistence fisheries, the summer chum salmon run has become an important resource for both subsistence and commercial use on the Yukon River. In 2013, the board adopted a proposal that gave the department the flexibility to restrict gear in the summer chum salmon commercial fishery to types that allow for the live release of king salmon in Districts 1–3 by emergency order (e.g., dip nets and beach seines). These selective gear types were implemented from 2013–2018 for the majority of the summer chum salmon run in the lower river. However the use of these gear in the commercial fishery were limited to times of conservation, and there was no provision made for including it as a legal gear type for commercial permit holders outside of the times for king or summer chum conservation.

The department attempts to balance protecting a weak king salmon run with providing both subsistence and commercial opportunity on abundant summer chum salmon. Once the majority of the king salmon run has migrated through a district, or if inseason indicators show that escapement goals are likely to be met, the commercial chum fishery switches to 6-inch or smaller mesh size gillnets to more efficiently harvest summer chum salmon and allow retention of incidentally harvested king salmon for the fisherman's own use.

Beach seines are currently a legal subsistence salmon fishing gear; however, because they can require a well-maintained beach site and motor-powered equipment such as a boat and/or four-wheeler and multiple people, they are not commonly used. Only 2% of commercial fishermen and very few subsistence fishermen report using the gear type. Dip nets can be used for subsistence salmon fishing in times of king salmon conservation by emergency order only. All king salmon caught in dip net gear must be returned to the water alive. Typically, dip nets have only been used for subsistence salmon fishing in districts that see high concentrations of summer chum salmon and where fish wheels are not used. However, fishermen have been requesting the use of dip nets even when subsistence fishing is allowed with gillnets and king retention is allowed in fish wheels. Fishermen say they may be a good method for just getting a few fish, when the quantities from a gillnet might not be desired, and that it allows them to retain only good quality chums for eating.

The selectivity of beach seine and dipnet gear on king salmon size and age classes is unknown. Using dip nets could allow for fishermen to 'high-grade' based on size or quality of fish, choosing to keep only the largest fish and releasing smaller fish. When run sizes are severely depressed this could have unknown effects on escapement quality. While dip nets and beach seines are reportedly less efficient for harvest of salmon, requiring much drifting time with low individual catches, they have been very effective for the harvest of hundreds of thousands of chum salmon in the commercial fishery. During the commercial season in the lower river, when dip nets and beach seines are used (typically through the first three weeks of June) about 9,000 king salmon annually have been caught and released alive.

The number of fish that could be taken in the subsistence fishery from dip nets and beach seines is unknown, but could be measured by the annual postseason survey and is likely not to exceed the far more efficient harvest methods of gillnets or fish wheels, both of which are currently legal.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** adding dip nets as a subsistence gear type for salmon, which would provide additional subsistence salmon opportunity. Allowing retention of king salmon in all selective gear types, i.e. dip nets, beach seines and fish wheels, by emergency order may make regulatory language within the subsistence fishery more consistent.

The department is **NEUTRAL** on the allocative aspects of adding dip nets and beach seines as a legal gear in the commercial fishery. However, current CFEC limited entry permits for Districts 1-3 only allow the use of gillnets.

Commercial fishermen may retain king salmon from lawfully-taken commercial catches for their own personal use; however, when the harvestable portion of the king salmon stock is not sufficient for all consumptive uses, this personal use would be given a secondary priority to subsistence uses. The commercial fishery is predominantly in the lower river, and fishing with selective gear occurs before many subsistence harvests occur in Districts 3-6. Therefore, if the proposal passes, while the department would have the discretion to allow some retention of king salmon based on run abundance in the commercial dipnet fishery, retention of king salmon in the commercial fishery would likely be delayed and may not occur until subsistence fishing in the lower river has been

given reasonable harvest opportunity. Closures between commercial and subsistence openings may be necessary to avoid confusion when the retention of king salmon in one fishery is allowed, but not in the other (i.e., there is a harvestable surplus only available for subsistence, but not for other consumptive uses.) This can happen early in the season when run strength uncertainty is highest.

While addressing this proposal, the board should evaluate and consider whether these changes would provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 90 – 5 AAC 01.210. Fishing seasons and periods.

**PROPOSED BY:** Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** Reduce the subsistence closure time prior to the opening of the commercial fishing season in Yukon Districts 1-3 and Subdistrict 4-A from 24 hours to six hours.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations require that subsistence fishing be closed for 24-hours prior to the first commercial period of the season in Districts 1-4 and the department does not have the emergency order authority to reduce this closure.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would reduce the subsistence fishery closure time from 24-hours to 6-hours prior to the first commercial fishing period of the season in Yukon Districts 1-3 and Subdistrict 4-A. This may limit the department's ability to conduct an orderly fishery and could make it easier for illegal sale of subsistence-caught fish in the commercial fishery. Because gillnet opportunities for summer chum salmon are often not limited, fishermen selling totes of these fish illegally into the commercial fishery could drive down the quality of the product for markets and could have unknown biological effects from unreported harvests.

**BACKGROUND:** In 1992, the board enacted separation of commercial and subsistence fishing through closures around commercial periods and instituted the marking of subsistence-caught fish. These changes were in response to illegal sales of subsistence-caught king salmon in the commercial fishery—which were successfully prosecuted. While the highly lucrative directed commercial king salmon fishery has been almost nonexistent since 2008, there continues to be a successful commercial fishery for chum salmon. The concern for potential unlawful sale of subsistence-caught chum salmon in the commercial fishery persists and presents both biological and enforcement challenges. Allowing the department continued discretion to use the full-length closures when warranted may be crucial if the king salmon run improves and a harvestable commercial surplus becomes available. If the commercial king salmon fishery reopens these fish will be very valuable, thereby exacerbating concern for illegal sale of subsistence caught fish. In recent years, law enforcement is unable to patrol all fishing areas in Districts 1 and 2 during all commercial periods: thus, creating orderly separation between the subsistence and commercial fisheries makes it easier to encourage compliance.

However, most subsistence fishermen are compliant with regulations and take only what salmon they need. Many are both commercial and subsistence fishermen. In recent years of reduced king salmon productivity, subsistence fishing has been reduced and restricted. Allowing the department some discretion to reduce the subsistence closure prior to the start of commercial season would allow flexibility to provide more subsistence harvest opportunity. For example, if the first commercial opening is only 8 hours long, but the planned openings are daily, it may be warranted to have just 8 or 10 hours of subsistence closure prior to the first commercial opening, and this is a common practice during the summer season between the openings, since the department has the discretion to reduce closures around commercial openings after the season has begun.

District 3 currently has no commercial fishery, therefore fishermen in this district are not affected by the initial season closure unless they choose to subsistence fish in District 2.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal as written. Retaining the ability to enforce a full length 24-hour closure prior to the first commercial period does serve the

purpose of conducting an orderly fishery and could prevent the illegal sale of subsistence-caught salmon into the commercial fishery. However, in recent years of commercial fishing with selective gear for summer chum salmon, commercial openings tend to be long because of the relatively inefficient gear, these openings can affect subsistence opportunity. Therefore the department would support having emergency order authority to reduce the initial season closure to provide the subsistence fishery more fishing time, or to work around regulatory subsistence schedules.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 91 – 5 AAC 01.210. Fishing seasons and periods.

**PROPOSED BY:** Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** Reduce the period of subsistence closure prior to and after commercial openings to six hours in Yukon Districts 1-3

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations close subsistence fishing before, during, and after commercial periods in Districts 1-3. The closure times before and after commercial periods vary by date range as defined in 5 AAC 01.210(e). However, the department does have emergency order authority to reduce these subsistence closures and allow subsistence fishing before, during, or after commercial fishing in order to provide more subsistence opportunity.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would reduce the subsistence closure times before and after commercial periods by approximately 50%. This may limit the department's ability to conduct an orderly fishery or increase the risk of illegal sale of subsistence-caught fish in the commercial fishery.

**BACKGROUND:** In 1992, the board enacted separation of commercial and subsistence fishing through closures around commercial periods and instituted the marking of subsistence-caught fish. These changes were in response to illegal sales of subsistence-caught king salmon in the commercial fishery—which were successfully prosecuted. While the highly lucrative directed commercial king salmon fishery has been almost nonexistent since 2008, there continues to be a successful commercial fishery for chum salmon. The concern for potential unlawful sale of subsistence-caught chum salmon in the commercial fishery persists and presents both biological and enforcement challenges. Allowing the department continued discretion to use the full-length closures when warranted may be crucial if the king salmon run improves and a harvestable commercial surplus becomes available. If the commercial king salmon fishery reopens these fish will be very valuable, thereby exacerbating concern for illegal sale of subsistence caught fish. In recent years, law enforcement is unable to patrol all fishing areas in Districts 1 and 2 during all commercial periods: thus, creating orderly separation between the subsistence and commercial fisheries makes it easier to encourage compliance.

The closures also allow groups of fish to pass through districts or subdistricts without excessive harvest pressure, and they may be used to spread the harvest across incoming groups of fish.

Most subsistence fishermen are compliant with regulations and only take what salmon they need. Many are both commercial and subsistence fishermen. In recent years of lower king salmon productivity, subsistence fishing has been reduced and restricted. Because of this, in 2014 and 2015 in Districts 1, 2, and 4, the subsistence and commercial periods were concurrent to provide more subsistence opportunity. However, fishermen in the lower river requested that commercial and subsistence periods be separated to reduce competition for fishing sites. In 2016, 2017, and 2018, commercial and subsistence periods were separated, but nearly all subsistence closures before and after commercial periods were reduced in the summer season, sometimes to as short as 2 hours.

District 3 currently has no commercial fishery, and therefore fishermen in this district are not affected by the closures around commercial openings unless they choose to subsistence fish in District 2.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Existing regulations already provide the department with management discretion by emergency order authority to reduce subsistence fishery closure time prior to commercial periods during the season and to allow concurrent subsistence and commercial fishing when feasible. Retaining the ability to enforce closures around commercial periods may serve to deter the illegal sale of subsistence-caught salmon into the commercial fishery. Allowing management flexibility to keep full-length closures in place allows groups of fish to pass though the districts without excessive harvest.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 92 – 5 AAC 01.220. Lawful gear and gear specifications; and 5 AAC 05.331. Gillnet specifications and operations.

**PROPOSED BY:** Tanana Rampart Manley Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** This would restrict gillnet mesh to a maximum of 6 inches in Districts 4, 5, and 6 for subsistence and commercial fisheries.

**WHAT ARE THE CURRENT REGULATIONS?** Currently the maximum gillnet mesh size allowed for subsistence fishing is 7.5-inch or smaller mesh, and the department, by emergency order may restrict mesh size in the subsistence fishery in order to conserve king salmon.

In the commercial fishery, fishermen are restricted to 7.5-inch or smaller mesh gillnets for king salmon-directed fishing and 6-inch or smaller mesh gillnets for summer chum, fall chum and coho salmon-directed fishing. If a conservation concern arose for chum salmon, and the run strength for king salmon was sufficient to warrant a king-directed commercial fishery, then by emergency order, the department could require fishermen to use gillnets of 8 inches or larger.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** It would restrict the maximum mesh size a fisherman could use in Districts 4, 5, and 6 to 6-inch or smaller mesh ("chum gear") at all times. It would create a disparity between legal maximum mesh size between the lower river (Districts 1-3) and the middle and upper river (Districts 4-6). This could make it hard for subsistence fishermen wishing to target king salmon to meet their harvest needs, particularly in areas where high passage of summer chum could fill a 6-inch net and make it hard to catch king salmon. In some areas where there are only king salmon in the summer season, such as the upper parts of District 5, fishing with 6-inch or smaller mesh gillnets could reduce harvest of larger, older king salmon, resulting in increased passage of larger, older, and predominantly female fish to the spawning grounds.

**BACKGROUND:** Quality of the king salmon run and of escapement is important, and is assessed by taking age, sex, and length (ASL) samples from the population. Concerns over the decreasing number of age-6 and age-7 king salmon prompted the mesh size study that found that mesh sizes *larger* than 7.5-inch may be over-selecting the oldest, largest king salmon. Whereas 7.5-inch gear is selective proportionately across all age and size classes present in the king salmon run and works as an effective tool to target king salmon. In 2010 the board reduced the maximum mesh size allowed in the Yukon River to 7.5-inch or smaller mesh.

Gillnet mesh that is 6-inch or smaller is ideal for harvesting chum and coho salmon proportionately to the age and sizes present in those runs. Therefore, using 6-inch or smaller mesh gillnets to harvest king salmon (which are larger than chum salmon) may reduce the overall catch of king salmon, and does tend to be selective for smaller fish such as age-4 and age-5 fish. However, the assumption that continuing to decrease the allowable mesh size so that the smaller, younger king salmon are size-selected for harvest would be beneficial to the run and would increase returns of larger fish and older age classes is not supported by the data. Furthermore, because the decrease in size at age and proportion of older fish has occurred across many species and drainages (including rivers where gillnets are not primarily used), it is unlikely to be entirely linked to size-selective harvest and mesh size.

In areas where summer chum salmon are present, it is more likely they will fill the net and cause a reduction in harvest of king salmon because the turbulence in the water created by entangled chum salmon likely leads to king salmon avoiding the net. Local knowledge shared by fishermen

indicates that large king salmon may get tangled in chum salmon gear, but not properly gilled, and thus may drop or roll out of the net rather than being harvested by the fisherman. The magnitude of this drop-out is unmeasured but has been corroborated during test fishing. Fish that drop out may recover and spawn successfully, or may experience mortality.

The department has had emergency order authority to restrict gillnets to 6-inch mesh in times of king salmon conservation since 2001. These gillnet restrictions have been used extensively since 2013 primarily to provide summer chum salmon harvest opportunity and to reduce the total harvest of king salmon. When there is sufficient king salmon run strength to provide for the harvest of king salmon, it is preferred to allow fishermen the ability to use king salmon gear to efficiently target king salmon so that there is no waste of unwanted chum salmon and so that the age structure of the harvest is more proportional to the age structure of what is present in the river. Often, if a reduction in king salmon harvest is warranted, a reduction in fishing time is preferred because it has an equitable restrictive effect across regions of the river. During all subsistence openings, fishermen may choose to use a net that is smaller than what is allowed, and some fishermen choose to use 6-inch gear as a conservation tool.

In areas such as the upper part of District 5, where there is more support from local fishermen to use 6-inch or smaller gear because of the lack of summer chum salmon, use of the gear has been a restriction that has allowed reduction of king salmon harvests without the need for severe time restrictions. In that area of river, fewer restrictions on fishing time are important because there are many channels and sloughs and fish are more dispersed. Therefore, longer soak times, and the need to move nets to better locations, both require longer fishing times than areas of the lower river where fish densities are much higher. Harvest ASL data from 6-inch gillnets show fewer older and larger fish being caught than in 7.5-inch mesh nets. In areas where only set gillnets and fish wheels (shore-based gear) are allowed, catches may include smaller fish because larger fish tend to swim further offshore. The department endeavors to attain parity among areas or groups of fishermen during times of conservative management rather than restricting one area of fishermen and not others.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The department already has the emergency order authority to restrict gillnets to 6-inch or smaller mesh when necessary to reduce harvest of king salmon and has been requiring it in many districts for periods of the fishing season. Requiring it at all times in Districts 4, 6, and the lower part of 5, where high densities of chum salmon pass alongside king salmon, could have the effect of removing harvest opportunity for king salmon, even during times when there is not a conservation concern for king salmon. Furthermore, the potential for drop-out mortality of large king salmon when using chum salmon gear is widely reported by fishermen, and the biological effects of this are unknown. The department is **NEUTRAL** on the allocative aspects of this proposal.

This proposal restricts subsistence opportunity. While addressing this proposal, the board should evaluate whether these changes would continue to provide reasonable opportunity in the subsistence fishery.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 93 – 5 AAC 01.240. Marking and use of subsistence-taken salmon.

**PROPOSED BY:** Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** Repeal the requirement to remove the tips of the tail fin of subsistence-taken salmon on the Yukon River.

**WHAT ARE THE CURRENT REGULATIONS?** Currently in Districts 1-3, from June 1 through July 15, a person may not possess king salmon taken for subsistence uses unless both tips (lobes) of the tail fin have been removed before the person conceals the salmon from plain view or transfers the salmon from the fishing site.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Fishermen would no longer need to remove both tips (lobes) of the tail fin of their subsistence-caught king salmon. This would relieve subsistence fisherman of a time burden by reducing the amount of handling time that subsistence fishermen spend before leaving the fishing area, thus increasing efficiency. However, it may decrease the enforceability of ensuring that subsistence-caught fish are not sold in the commercial fishery when king salmon sales are allowed.

**BACKGROUND:** In 1992, the board incorporated separation of commercial and subsistence fishing through closures around commercial openings and instituted the marking of subsistence-caught fish. These changes were a likely response to large-scale illegal sales of subsistence-caught king salmon in the commercial fishery—which were successfully prosecuted.

During the 2007 board cycle, the marking of king salmon changed from a removal of the dorsal fin to the current regulation of cutting the tail lobes. The dorsal fin method exposed the inner flesh to the air, and it was presumed the tips of the tail was easier and would not interfere with meat quality.

It is hard to assess the time burden of clipping the fins from king salmon. This is because, while fishermen in districts 1 and 2 harvest on average, about 6 king salmon per household, usually a few fishermen with boats and gear do most of the harvesting for extended family groups. In 2012-2017 the average number of kings harvested in district 1 was 504 and in district 2 was 564. These would have been harvested over a number of days or weeks, and by multiple fishermen.

Most subsistence fishermen are compliant with existing regulations and take only what salmon they need. Many are both commercial and subsistence fishermen. Requiring that all fish be marked before the fishermen leaves a fishing area helps prevent those fish from ending up in the commercial market. While the highly lucrative directed commercial king salmon fishery has been almost nonexistent since 2008, the concern for potential unlawful sale of subsistence-caught king salmon would arise if run sizes were large enough to warrant commercial sale of king salmon. The opportunity to sell incidentally-caught king salmon in the chum fishery occurred during the fall season in 2017 and could occur in future seasons. Allowing the department discretion to require marking of king salmon, particularly within seasons in which sale of king salmon will be allowed, may be essential for prosecution of an orderly fishery.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal as written. The department's preferred approach to addressing this proposal is to provide management discretionary authority to require the marking of king salmon when commercial sale of king salmon is allowed. Although burdensome to subsistence fishermen, wholesale repeal of the requirement to remove both lobes of the tail fin in the subsistence fishery would create additional

enforcement challenges, particularly in times when king salmon are allowed for sale. The concern for potential unlawful sale of subsistence-caught salmon in the commercial fishery persists and presents both biological and enforcement challenges.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 94 – 5 AAC 01.2XX.

**PROPOSED BY:** Stanley Pete

**WHAT WOULD THE PROPOSAL DO?** Allow the taking of the first king salmon entering the Yukon River for religious and ceremonial use for all Yukon River Yup'ik people

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations allow subsistence fishing for salmon at all times with 7.5-inch and smaller mesh gillnets until the department restricts fishing or puts fishermen on their regulatory schedule. Subsistence harvests on the Yukon River in most districts from the coastal area to parts of Districts 5 and 6 are open to all Alaska residents; fishermen are not limited by the number of salmon they can take except in permit areas and in nonsubsistence areas of District 6.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The taking of the first king salmon entering the Yukon River for religious or ceremonial use would be allowed. The proposal characterizes this new regulation as an "exemption" for "all Yukon Yup'ik people" even during times when fishing is closed in order to conserve king salmon. This could present enforcement challenges, for example, how would enforcement verify a fisherman was acting under this proposed exemption? This could complicate regulations which currently do not address cultural or religious practices, or ancestry. It is unclear how many fish would be allowed to each household, but if many households were allowed king salmon during closures necessary for conservation, the harvest impacts are unknown. If the proposal intends to limit each household to a single king salmon, it is unlikely that most gears used for king salmon would be effective at just harvesting a single fish, and current subsistence regulations in non-permit areas do not provide for a means of limiting households to a particular harvest amount.

**BACKGROUND:** While many restrictions have been in place in the recent years because of below average king salmon runs, most fishermen have access to liberal fishing very early in the season when the first fish are passing through. Low numbers of king salmon present early in the season and challenging river conditions often reduce subsistence harvest efficiency. Fishermen often target sheefish just before king salmon arrive and current regulations usually provide for that opportunity to fish, with occasional restrictions to 6-inch or smaller mesh gear. These regulations also allow for the harvest of king and summer chum if they are present. Therefore access to the first migrating king salmon is often available for all districts and subdistricts (since management actions are timed in districts to coincide with fish migration), but the number of fish present and the ability to catch the early or first fish varies among seasons based on run timing, ice out conditions, fishing conditions, and personal factors such as net and boat readiness.

In 2014 and 2015, a complete closure on the first pulse of king salmon greatly reduced subsistence opportunity to harvest fish at the front of the run. However, 4-inch and smaller mesh gear has been allowed during closures on the Yukon River. Although this gear is intended to target nonsalmon fish such as whitefish, any king or chum salmon caught can legally be kept. Many fishermen do report preference to harvest early in the run, on the first pulse, due to good drying weather and because chum salmon are typically not overly abundant at that time. Because of this preference for early fishing, the department has been working to allow some opportunity on the early part of the run on the first and second pulses rather than only on the later pulses. Spreading the harvest across the entire run in this way may help to reduce the disproportionate harvest of some stocks that come later in the run. In 2018 the department supported a proposal that removed the required first pulse protection, for some of the reasons stated here. In the 2018 fishing season, king salmon gear (7.5-

inch mesh) was allowed at the beginning of the season. Although restrictions occurred throughout the season, there were opportunities in nearly every district to harvest on the early part of the run.

The department currently has a means for providing permits to fish for king and chum salmon needed for funerary and potlatch purposes during salmon closures. These permits can be requested by family members or Tribal entities, and have been issued as needed in recent years where closures and restrictions have been prevalent during much of the summer season.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The proposal appears to seek a harvest opportunity for the first king salmon entering the Yukon River for all persons following Yup'ik religious and ceremonial practices. Currently some level of early season harvest opportunity is provided for all users in the subsistence fishery and opportunity is increased based on abundance. The department has taken measures in recent years to allow fishing on the earliest part of the run in most districts, because this is also when sheefish and other nonsalmon fish are migrating. As a result, fishermen who fish early have had access to the first king salmon entering the river in 2016, 2017 and 2018.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 95 – 5 AAC 01.220. Lawful gear and gear specifications.

**PROPOSED BY:** Randy Mayo.

**WHAT WOULD THE PROPOSAL DO?** In that portion of Yukon River District 5 between the ADF&G marker near Waldron Creek and Hess Creek (Figure 95-1), subsistence gillnet gear would require a minimum distance of 300 feet between units of gear; this would also limit the aggregate length of gillnet gear that may be deployed in an eddy to 350 feet (58.3 fathoms).

**WHAT ARE THE CURRENT REGULATIONS?** In District 5, subsistence fishing gear may not be set within 200 feet of other operating subsistence or commercial gear. The aggregate length of a set gillnet used for subsistence salmon fishing may not exceed 900 feet (150 fathoms). A household permit is required to subsistence fish in the area between Hess Creek upstream to the mouth of the Dall River.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** It may exclude some fishermen from participating in this area because of the limited number of fishing sites in the area. It may also result in subsistence fishermen having to travel longer distances to find fishing spots. A definition of eddy would be necessary if adopted as written.

**BACKGROUND:** Since 2008 the number of permits issued annually to fishermen for this area has averaged 51 and the number of permit holders that have reported fishing annually has averaged 25 (Table 95-1). The number of permit holders that reported fishing decreased substantially from 2012 through 2015, likely because of severe subsistence king salmon fishing restrictions in those years. However, in the last two years the number of permit holders has increased as king salmon restrictions have eased because of improving runs.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. Minimum distance between fishing gear regulations, intended to reduce crowding and competition for fishing areas, exist for the subsistence and commercial fisheries in District 5 and other districts in the Yukon Area. While addressing this proposal, the board should evaluate and consider whether changes to this regulation still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish.

**COST ANALYSIS:** Approval of this proposal may result in additional direct costs for a private person to participate in the subsistence fishery if fishing spots are limited. Individuals would need to travel longer distances by boat to find fishing spots.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes
4. What amount is reasonably necessary for subsistence use? The board found the following amounts to be reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

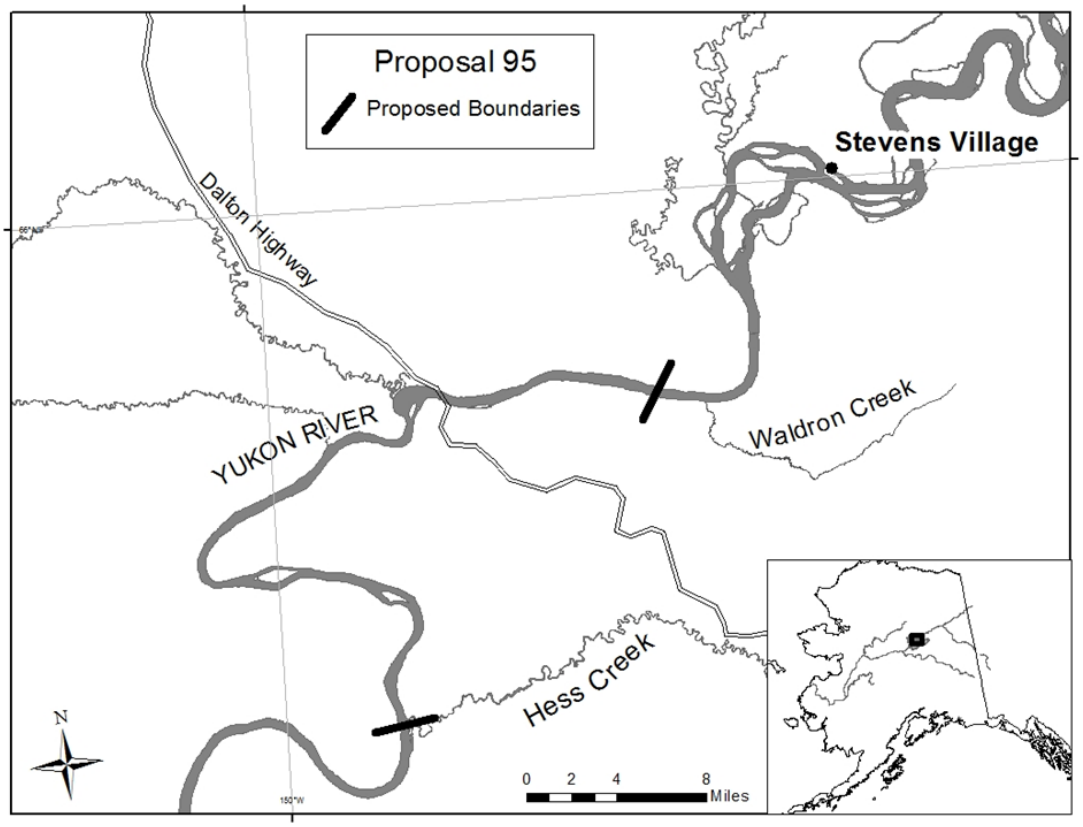



Figure 95-1.–Map showing portion of the Yukon River between Hess Creek and an ADF&G regulatory marker located near Waldron Creek.

Table 95-1.–Yukon River household subsistence fishing permits and salmon harvest, Hess Creek to Dall River.

| Year | Subsistence Permits Issued | Number of Permits Fished | King Salmon | Summer Chum Salmon | Fall Chum Salmon | Coho Salmon |
|---|---|---|---|---|---|---|
| 2008[a] | 73 | 44 | 1,434 | 130 | 705 | 7 |
| 2009 | 68 | 38 | 1,248 | 28 | 996 | 106 |
| 2010 | 85 | 43 | 1,300 | 448 | 422 | 2 |
| 2011[a] | 74 | 43 | 1,552 | 1,139 | 1,828 | 1 |
| 2012[a] | 63 | 26 | 629 | 147 | 259 | 0 |
| 2013[a] | 49 | 22 | 379 | 1,020 | 1,055 | 0 |
| 2014[a] | 42 | 20 | 3 | 221 | 798 | 0 |
| 2015[a] | 39 | 16 | 158 | 479 | 2,199 | 0 |
| 2016[a,b] | 62 | 40 | 996 | 518 | 1,449 | 101 |
| 2017[b] | 63 | 46 | 2,392 | 1,605 | 1,803 | 113 |
| 2012-2016 Average | 51 | 25 | 433 | 477 | 1,152 | 20 |

[a] Shortened subsistence fishing periods or closures for Chinook Salmon.

[b] Data are preliminary

## PROPOSAL 96 – 5 AAC 01.210. Fishing seasons and periods.

**PROPOSED BY:** Tanana Rampart Manley and Fairbanks Fish and Game Advisory Committees.

**WHAT WOULD THE PROPOSAL DO?** Allow subsistence fall chum salmon fishing seven days per week in all of District 5 of the Yukon Area once a fall chum salmon commercial fishery is opened unless a biological concern arises, at which time subsistence fishing would be restricted or closed.

**WHAT ARE THE CURRENT REGULATIONS?** During the fall season, subsistence fishing in Subdistricts 5-A, 5-B, and 5-C is open for two 48-hour periods per week. When the department announces a commercial fishing closure that will last longer than five days, subsistence fishing is open five days per week. Subsistence fishing in Subdistrict 5-D is open seven days per week.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Subsistence salmon fishing in District 5 would be open to seven days per week once the management flexibility to adjust subsistence fishing schedules (when inseason run assessment warrants it) would be eliminated.

**BACKGROUND:** Since 2012, preseason projections have indicated a commercial surplus of fall chum salmon, and all Yukon Area districts and subdistricts were placed on their full regulatory subsistence fishing schedules upon transitioning to fall season management. Since 2012, the department has liberalized the subsistence fishing schedules in Subdistricts 5-A, 5-B, and 5-C to seven days per week to increase the opportunity to harvest fall chum salmon for subsistence uses, and to help alleviate the impacts of king salmon subsistence fishing restrictions. Subdistrict 5-D returns to a full regulatory schedule (seven days per week) as soon as the king salmon run has completed migrating through that area.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. Adopting the proposal would reduce management flexibility. Current management practices have liberalized the subsistence fishing schedules to increase subsistence opportunity for fall chum salmon and to help alleviate the effects of the severe king salmon restrictions. However, in lower abundance years when a limited commercial surplus of fall chum salmon is identified, it may be warranted to remain on a full regulatory subsistence schedule to spread the harvest throughout the run to reduce harvest impacts on any component of the run and provide subsistence fishing opportunity along the entire river.

While addressing this proposal, the board should evaluate and consider whether changes to the management plan still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a non-subsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found that 89,500–167,900 fall chum salmon is the amount reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236(b)(3)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence use? This is a board determination.

## PROPOSAL 178 – 5 AAC 01.220. Lawful gear and gear specification.

**PROPOSED BY:** Alaska Board of Fisheries.

**WHAT WOULD THE PROPOSAL DO?** Allow chum salmon to be taken by drift gillnets after August 2 in Yukon River Subdistrict 4-A downstream from the mouth of Stink Creek.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations prohibit subsistence fishermen in Subdistrict 4-A downstream of Stink Creek from using drift gillnet gear to take chum salmon after August 2.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Subsistence salmon fishermen in that portion of Subdistrict 4-A below Stink Creek would be allowed to use drift gillnet gear after August 2. Subsistence drift gillnet regulations within the entire Yukon River District 4 would be consistent. At a meeting held in Anchorage on July 17, 2018 the board adopted an emergency petition to allow subsistence harvest of chum salmon with drift gillnets after August 2 in Subdistrict 4-A below Stink Creek on the Yukon River. This would make the emergency regulation permanent.

**BACKGROUND:** Though drift gillnets have not been legal gear in the upper Yukon River Area since 1976, they have historically been an important gear type for subsistence salmon fishing. Fishermen report having to travel downriver to District 3 to subsistence fish for salmon with drift gillnet gear. Though they can harvest salmon with drift gillnet gear much more efficiently than with set gillnet gear, traveling long distances to do so can be cost prohibitive for some. Subsistence fishermen from many communities have informed the department about the loss of suitable set gillnet fishing sites due to bank erosion causing changes to the efficacy or loss of the eddies where fish congregate. This has led to increased competition in Subdistrict 4-A for viable set gillnet sites.

King salmon returns on the Yukon River have been low the past decade and fishermen have been supplementing reduced subsistence king salmon harvests with other species of salmon that are more abundant and have a greater harvestable surplus. This regulation change would allow subsistence fishermen to harvest a biologically allowable surplus of fall chum salmon moving through Subdistrict 4-A below Stink Creek after August 2 and would align subsistence drift gillnet regulations within District 4.

Regulatory changes at the statewide board meeting in March 2018 allowed the department to open subsistence salmon fishing with drift gillnets, by emergency order, in Subdistricts 4-B and 4-C so that subsistence fishermen could more effectively harvest abundant summer and fall chum salmon in order to supplement low king salmon harvests. The board's decision was based on the limited number of stationary gear fishing locations in this area of the river and the conclusion that drift gillnets would allow fishermen to capitalize on the surplus of summer and fall chum salmon better than set gillnets.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal. It would provide additional subsistence salmon harvest opportunity when runs are adequate. This would align subsistence drift gillnet regulations within Yukon River District 4.

**COST ANALYSIS:** Adoption of this proposal may result in an additional direct cost for a private person to participate in this fishery because some fishermen may incur costs of purchasing new gillnets.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for salmon in the Yukon Area.
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board found the following amounts to be reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon, 83,500–142,192 summer chum salmon, 89,500–167,900 fall chum salmon, 20,500–51, 980 coho salmon, and 2,100–9,700 pink salmon.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## YUKON COMMERCIAL FISHERIES (8 PROPOSALS)

### PROPOSAL 97 – 5 AAC 05.200. Fishing districts and subdistricts.

**PROPOSED BY:** Yukon Delta Fisheries Development Association.

**WHAT WOULD THE PROPOSAL DO?** Divide District 2 into two subdistricts at the upstream boundary of Statistical Area 334-22, which lies between the communities of Pitka's Point and Saint Mary's.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations define District 2 as that portion of the Yukon River drainage from the northern edge of the mouth of the Anuk River upstream to an ADF&G regulatory marker located at Toklik, and includes the Anuk River drainage.

This area includes the communities of Mountain Village, Pitka's Point, St. Mary's, Pilot Station, and Marshall.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** District 2 would be divided into two subdistricts between Pitka's Point and St. Mary's. The commercial and subsistence fishing schedules could be managed as a district or by Subdistricts 2-A and 2-B. If fishing were to be concentrated in the lower part of the district, (proposed Subdistrict 2-A) there could be biological impacts as a result of over-harvest of stocks bound for the Andreafsky river. It could also affect the commercial market and competition among existing processors, some of which purchase fish in the upper part of the district. Fishermen that prefer to fish in the upper part of the district could be overly burdened by travel if they were forced to fish in a lower part of the district. There could also be an increase in competition among viable fishing sites if the total number of permit holders that usually fish in the whole district were confined to a smaller part of the district. This change could result in unnecessary management complexity.

**BACKGROUND:** The department typically provides commercial fishing openings based on the identified harvestable surplus above escapement and subsistence needs and on the presence of a buyer or processor in the area. In recent years chum and coho salmon run sizes have supported a commercial fishery in Districts 1, 2, 4, 5 and 6. The number of buyers and processors fluctuates over time, but beginning in 2017 there have been up to three buyers in District 2. The department works with the buyers to provide commercial openings that maximize the harvest of the available surplus and limit the harvest of incidentally-caught species; the department does not create openings based on product quality. Quality can affect the price and type of products available and is the responsibility of the fisherman and the buyer. For example, for the lower river, which recently has focused on a chum salmon flesh market, the quality of the flesh for sale can be affected by storage (i.e., icing and transport time of the product before sale). How far the fish have migrated upriver affects quality of the flesh, and for chum salmon, the quality within District 2 may change the further up the district the fish are caught. In the upper river, where commercial markets may exist for chum salmon, the products may be limited by flesh quality, such that the main products may be roe or dog food.

The department can limit the area where commercial fishing is allowed or subdivide any district in order to conduct subsistence fishing in a way that provides opportunity or protects groups of fish. Dividing District 2 may not have the effect the proponent desires, because if sufficient chum salmon abundance is present, the entire district would likely still be allowed access to commercially fish for those salmon. If the department were to offer only commercial periods

within the lower section of the district (i.e., proposed Section 2-A) all permit holders would be able to fish but those that might have fished in the upper area will be required to travel to the lower area, which could increase competition for good fishing sites. On average, harvests from the upper statistical areas (proposed Subdistrict 2-B) have contributed approximately 40% of the total District 2 harvest. If all fishermen were required to fish in the lower subdistrict, it may require openings twice as long to reach similar harvest levels, if competition exists. Lengthening commercial openings may not be feasible when also providing sufficient fishing time for the subsistence fishery, or when the need to conserve king salmon exists.

A large portion of the harvest occurs above the Andreafsky River and therefore includes stocks bound for other tributaries. There could be a biological concern for overharvest of the Andreafsky River chum salmon stock if all harvest is concentrated in the proposed Subdistrict 2A below the Andreafsky River.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The department already has time and area emergency order authority to restrict fishing, depending on buyer availability, when prosecuting a commercial fishery in District 2. Commercial buyers/processors can direct their fleet and decide which districts, subdistricts, or individual stat areas within those districts they will buy fish from to control quality and maximize economic benefits to the commercial fisherman. There is no biological justification for dividing District 2 into two subdistricts; this would not alleviate the concern raised in this proposal and would increase management complexity of the inriver commercial and subsistence fisheries. There could be increased competition and potential overharvest of Andreafsky-bound chum salmon. The department is **NEUTRAL** on the allocative aspects.

**COST ANALYSIS:** Adoption of this proposal could result in an additional direct cost for commercial fishermen if they were required to drive long distances to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No, although Yukon River salmon stocks do migrate through subdistrict 6-C which is partly in a nonsubsistence area.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board has found that king, summer chum, fall chum, coho, and pink salmon in the Yukon Area are customarily and traditional taken or used for subsistence (5 AAC 01.236).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board has found that 45,500 to 66,704 king salmon; 83,500 to 142,192 summer chum salmon; 89,500 to 167,900 fall chum salmon; 20,500 to 51,980 coho salmon; and 2,100 to 9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236.(b)(1-5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

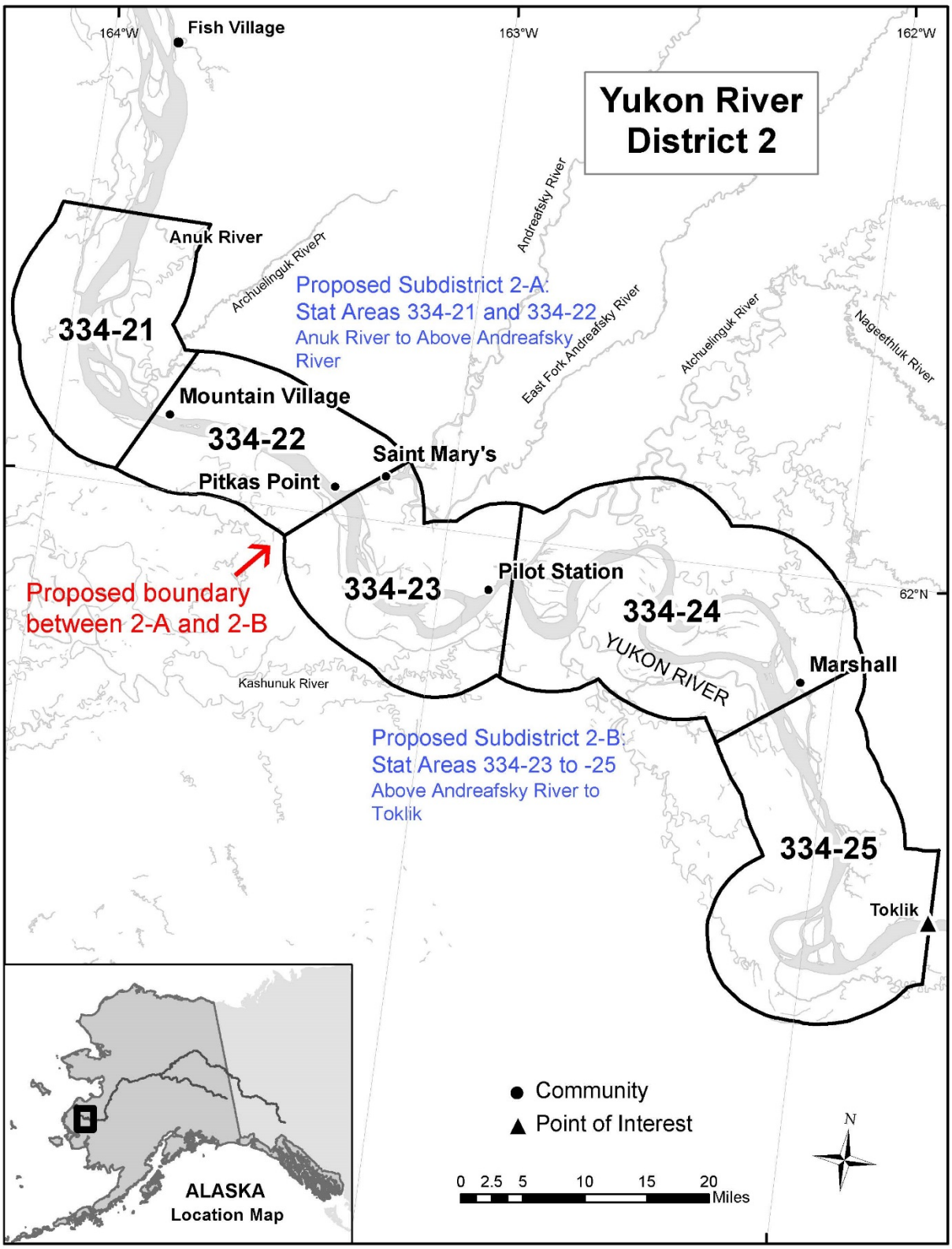



Figure 97-1.—Map of proposed District 2 subdistricts.

## PROPOSAL 98 – 5 AAC 05.331. Gillnet specifications and operations.

**PROPOSED BY:** John. H. Lamont.

**WHAT WOULD THE PROPOSAL DO?** This would require that commercial gillnets of 6-inch or smaller mesh be limited to a maximum of 50 meshes deep, and gillnets greater than 6-inch mesh be restricted to 45 meshes deep in Districts 4-6.

**WHAT ARE THE CURRENT REGULATIONS?** The current commercial regulations limit the mesh depth for 6-inch or smaller mesh gear in in Districts 4-6 to 70 meshes deep. Gillnets in Districts 4-6 must be operated as set gillnet gear. Mesh depth for 6-inch or smaller mesh gear in Districts 1-3 is limited to a maximum of 50 meshes deep for drift gillnets. For commercial set gillnets in Districts 1-3, 6-inch or smaller mesh gillnets are restricted to a maximum of 50 meshes deep.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** In the commercial fishery in Districts 4-6 (which are only set gillnet), it would reduce the maximum mesh depth of a 6-inch or smaller mesh gillnet to 50 meshes instead of 70 meshes deep, which would be similar to the depth requirement in the commercial set gillnet fishery in Districts 1-3.This could impact the efficiency and catch rates for commercial fishermen in the upper river, and could incur costs to fishermen for rehanging or adjusting net depth. Lower quality of fish in the upper river reduces prices and markets often rely on volume of harvests. Reducing catch efficiency for commercial fishermen in the upper river could reduce harvests significantly enough that markets and buyers could be lost in this area.

**BACKGROUND:** The department has emergency order authority to restrict the depth of gillnet gear when the need to reduce harvest of a particular species warrants it. The department has restricted mesh depth in the commercial summer chum salmon fishery, when trying to reduce incidental harvest of king salmon. King salmon swim deeper and more offshore than chum salmon, and therefore may avoid capture in chum salmon gear that is less deep.

Fishermen must contend with a multitude of factors that affect harvest efficiency, from river morphology and depth, to fish abundance and distribution, to gear costs. Recent below-average king salmon run abundance has led to necessary management actions that reduce king harvests to achieve escapement goals. However, the abundances of summer and fall chum in the river have been large enough to warrant commercial harvest, and the ability of the fleet, riverwide, to harvest the full available surplus of these species in most years is already insufficient due to effort, market, and conservation measures taken to protect king salmon. Commercial openings in Districts 4–6 are often long and frequent in order to harvest enough volume to maintain a market interest in these districts. The markets in district 4, 5 and 6 have been intermittent in the recent decade, with less than three buyers in most years. This has reduced commercial effort and there are now fewer than 20 permit holders actively fishing per year. Therefore, any reduction to catch efficiency for gear used to target commercial chum is unwarranted.

**DEPARTMENT COMMENTS:** The department **OPPOSES** unnecessary restrictions on the commercial chum fishery as fishermen are already unable to harvest the full available surplus of chum salmon in most years for a variety of reasons. Lower quality of fish in the upper river reduces prices and markets often rely on volume of harvests. Reducing catch efficiency for commercial fishermen in the upper river could reduce harvests significantly enough that markets and buyers could be lost in this area. The department is **NEUTRAL** on allocative aspects of this proposal.

**COST ANALYSIS:** Adoption of this proposal is expected to result in an additional direct cost for fishermen who would need to replace, mend, or rehang their gillnets to new specifications.

## PROPOSAL 99 – 5 AAC 05.330. Gear.

**PROPOSED BY:** Jaylene Fitka.

**WHAT WOULD THE PROPOSAL DO?** Would allow the use of beach seine gear during all commercial openings in Districts 1-3 in summer and fall seasons.

**WHAT ARE THE CURRENT REGULATIONS?** The current regulations allow the use of selective gear types such as beach seines and dip nets under both the king salmon management plan and the summer chum salmon management plan during times of low abundance in order to conserve one species while targeting another. For instance, in the summer season, when there is a need to conserve king salmon, the commercial fleet is limited to selective gear, and beach seines are legal, but all king salmon must be released alive (determined by emergency order.) Once the run strength warrants retention of king salmon in the commercial fishery, the department issues an emergency order that closes the selective commercial fishery and reopens the commercial season, and that requires the fleet to use gillnet gear (set and drift). Once the commercial fleet switches to gillnet gear, dip nets and beach seines are no longer legal for commercial fishing.

Beach seine gear is not legal during the commercial fisheries that target fall chum and coho salmon under the management plans for those species. The CFEC limited entry permits for all commercial fishing in Districts 1-3 currently define gillnets as the only legal commercial gear.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** A commercial fisherman could choose to use beach seines during times when only selective gear is allowed, and all king salmon would have to be released alive. Once the fishery warrants retention of king salmon, and gillnets are allowed, commercial fishermen could choose to use a beach seine instead of a gillnet and would then be allowed to retain any king salmon for their own use, like the gillnet fishermen. There could be some confusion as to when king salmon may and may not be kept in beach seines, since it would change throughout the course of the season.

It could provide those beach seine fishermen who prefer this method to use it in the summer and fall commercial fishing seasons. It does give the commercial fishermen the opportunity to release unwanted species alive safely, which is not always possible with gillnets.

**BACKGROUND:** Given the decline in run size of king salmon and subsequent closures of king salmon-directed commercial and subsistence fisheries, the summer chum salmon run has become an important resource for both subsistence and commercial use on the Yukon River. In 2013, the board adopted a proposal that gave the department the flexibility to restrict gear in the summer chum salmon commercial fishery to types that allow for the live release of king salmon in Districts 1–3 by emergency order (e.g., dip nets and beach seines). These selective gear types were implemented from 2013–2018 for the majority of the summer chum salmon run in the lower river. However the use of these gear in the commercial fishery were limited to times of conservation, and there was no provision made for including it as a legal gear type for commercial permit holders outside of the times for king or summer chum conservation.

Beach seines are currently only used by about 2% of commercial permit holders. This is likely because, as used today, the method requires a well-maintained beach site, and motor-powered equipment such as a boat and/or a four-wheeler and multiple people. Because of this, there does not seem to be any negative effect to allowing this gear type in the fall season, or at a time when gillnets are allowed in the commercial fishery.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. If passed, the department requests that emergency order authority be given to the department to allow or restrict the retention of any species as needed in these selective gear types.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

## PROPOSAL 100 – 5 AAC 05.333. Fish wheel specifications and operations.

**PROPOSED BY:** John H. Lamont.

**WHAT WOULD THE PROPOSAL DO?** This would require all commercial fish wheels to have a maximum basket dimension of 5 feet by 8 feet (40 square feet), and have a dipping depth of no more than 6 feet.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations do not limit the size or volume of the baskets, nor the dipping depth of the baskets in the commercial and subsistence fisheries. However, during times of king salmon conservation, by emergency order, fish wheels must be attended, and all king salmon caught must be released alive. Further, fish wheels in the commercial fishery must be constructed in a manner that includes padded baskets and sides with fish-friendly chutes that allow the immediate release of king salmon.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Some commercial fishermen would need to reconstruct their fish wheels according to the specifications outlined in the proposal, which could be costly. Limiting the depth of the wheel to just six feet could eliminate the ability for the wheel to effectively harvest any species of fish, depending on the location and river geomorphology. This could impact the efficiency and catch rates for commercial fishermen. Lower quality of fish in the upper river reduces prices and markets often rely on volume of harvests. Reducing catch efficiency for commercial fishermen in the upper river could reduce harvests significantly enough that markets and buyers could be lost in this area.

**BACKGROUND:** Fish wheels vary greatly in size and dimension based on many factors which include: the region of the river being fished; the geomorphology of the river; the fisherman's ability to transport the wheel to viable fishing spots; the materials available; the size and depth of the shore-based channel they fish in; and the species they typically target. For example, some fishermen in the upper river, where fish move inconsistently between braided sections of the mainstem, may prefer smaller wheels that are easier to relocate and are designed to fit the channel being fished. In other areas, where ideal fishing spots are harder to find, and near rocky substrate, locations can have very deep water, requiring stronger, larger wheels.

Fishermen must contend with a multitude of factors that affect harvest efficiency, from river morphology and depth, to fish abundance and distribution, to gear costs. Recent below-average king salmon run abundance has led to necessary management actions that reduce king harvests to achieve escapement goals. However, the abundances of summer and fall chum in the river have been large enough to warrant commercial harvest, and the ability of the fleet, riverwide, to harvest the full available surplus of these species in most years is already insufficient due to effort, market, and conservation measures taken to protect king salmon. The commercial fishery in Districts 4–6 allows the use of fish wheels. Commercial openings are often 24 hours per day, every day in order to harvest enough volume to maintain a market interest in these districts. The market in district 4, 5 and 6 has been intermittent in the recent decade, with less than three buyers in most years. This has reduced commercial effort and there are now fewer than 20 permit holders actively fishing per year. Any reduction to catch efficiency for fish wheels used to target commercial chum could adversely affect the market and may cause loss of buyer interest if harvest volumes are greatly reduced.

**DEPARTMENT COMMENTS:** The department **OPPOSES** unnecessary restrictions to commercial chum fisheries in the absence of a conservation or management benefit. Shore-based gear such as fish wheels tend to harvest smaller king salmon and typically more male fish. As a result, there is no biological concern that would require the proposed restrictions to basket size and depth. Similarly, if concerns for species abundance for any species occurs, the department can reduce fishing time, limit fishing areas, and require fish wheels be closely attended and fish released alive, by emergency order. Lower quality of fish in the upper river reduces prices and markets often rely on volume of harvests. Reducing catch efficiency for commercial fishermen in the upper river could reduce harvests significantly enough that markets and buyers could be lost in this area. The department is **NEUTRAL** on the allocative aspects of this proposal.

**COST ANALYSIS:** Adoption of this proposal would result in an additional direct cost for a private person to participate in this fishery if they had re-build the wheel to accommodate changes in basket dimensions and dipping depth.

**PROPOSAL 101 – 5 AAC 05.310. Fishing seasons. and 5 AAC 05.369. Yukon River Coho Salmon Management Plan.**

**PROPOSED BY:** Yukon Delta Fisheries Development Association.

**WHAT WOULD THE PROPOSAL DO?** This replaces the set closure dates for all fall season commercial fisheries within the Yukon Area with a closure specified by emergency order.

**WHAT ARE THE CURRENT REGULATIONS?** Commercial salmon fishing seasons in Yukon Area Districts 1-5 are opened by emergency order. Commercial seasons are closed by specified dates in regulation: Districts 1-3 on or before September 1; District 4 on or before October 1 unless modified by 5 AAC 05.369; and District 5 on or before October 1. In District 6, the commercial season is closed by emergency order.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The commercial fishing seasons in Districts 1-5 would no longer be closed by set dates in regulation. Instead, commercial fishing seasons would be closed by emergency order. This would provide management flexibility to extend commercial fishing opportunity in years when fall chum and/or coho salmon run timing is late, or when run sizes warrant additional fishing opportunity.

**BACKGROUND:** In recent years, large fall chum salmon runs, later run-timing, and delayed river ice formation have provided potential opportunities to fish later in the fall fishing season in some sections of the Yukon Area. However, the fall season fisheries (for fall chum and coho salmon) throughout the Yukon Area close by a set date in regulation, unless closed earlier by emergency order. Since 2011, fall chum salmon runs have been large enough to meet Pacific Salmon Treaty objectives with Canada and escapement goals, provide for unrestricted subsistence harvest opportunity, and provide a surplus for commercial harvest. In some years, a surplus remained after the season closed by regulation and additional harvest was warranted either because of large run size or late run timing. At the March 2018 statewide meeting the board adopted regulations based on an emergency petition that removed the October 1 closure date for the District 6 fall season fishery (5 AAC 05.310 (4)).

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on the allocative aspects of this proposal. The department **SUPPORTS** having the ability to provide additional opportunity to harvest salmon when a surplus exists. Additionally, this would allow the department more flexibility on the termination date of the fall season commercial fisheries. This would benefit commercial fishermen by allowing them to fish longer and possibly harvest more fish during the fall season fisheries.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

## PROPOSALS 102 – 5 AAC 05.200. Fishing districts and subdistricts.

**PROPOSED BY:** John H. Lamont.

**WHAT WOULD THE PROPOSAL DO?** Include the waters of the Pastolik and Pastoliak rivers in District 1 of the Yukon Area. The proponent is seeking to allow commercial salmon fishing in both rivers.

**WHAT ARE THE CURRENT REGULATIONS?** The Pastolik and Pastoliak rivers are currently located within the boundaries of Yukon Area District 1 (Figures 102-1 and 102-2). Subsistence salmon fishing is allowed in both rivers and follows District 1 subsistence fishing management actions. However, the waters of both rivers are closed to commercial fishing under statewide regulations, and the waters within 500 yards around their mouths are closed to commercial fishing under both statewide regulations and Yukon Area regulations.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Commercial salmon fishing would be allowed in the Pastolik and Pastoliak rivers and managed by District 1 commercial management actions. During the fall commercial salmon fishery, both rivers would be included in the set gillnet only area of District 1.

**BACKGROUND:** Prior to 2016, the Pastolik and Pastoliak rivers were located within the Yukon Area Coastal District. At the 2016 AYK board meeting, the District 1 boundary was expanded and encompassed the two rivers. The provision to close the waters within 500 yards of the mouths of each river was adopted at the same meeting to ensure there would be no commercial fishing of the salmon populations in the Pastolik and Pastoliak rivers. A review of the regulatory history of the Yukon Area shows that neither the Pastolik nor the Pastoliak river have been open to commercial salmon fishing since statehood.

The Black River was included in District 1 when the district was created because of a long history of commercial fishing activity in that area. The USGS Hydrological Survey's National Hydrology Dataset does show the Black River is connected to the Yukon River (Figure 102-1). The USGS Dataset shows both the Pastolik and Pastoliak rivers are within the Yukon River drainage, but neither river is directly connected to or drains into the Yukon River (Figure 102-1). The Pastolik River is listed in the state's Anadromous Waters Catalog as having king, chum, pink, and coho salmon present in all phases of their life history. The Pastoliak River is listed as having chum and pink salmon present in all phases of their life history. However there has been no assessment of the spawning salmon stocks in either river. Both rivers are considered terminal harvest areas and it is unknown what the impacts of commercial harvest would be on those stocks or if commercial harvest would be sustainable. Both rivers are open to salmon and nonsalmon subsistence fishing except when closed in conjunction with commercial fishing periods.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Without information on the salmon populations in either river, or what the impact of commercial exploitation would have on those populations, the department does not support opening these rivers to commercial fishing. Proposals 103 and 104 are similar.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

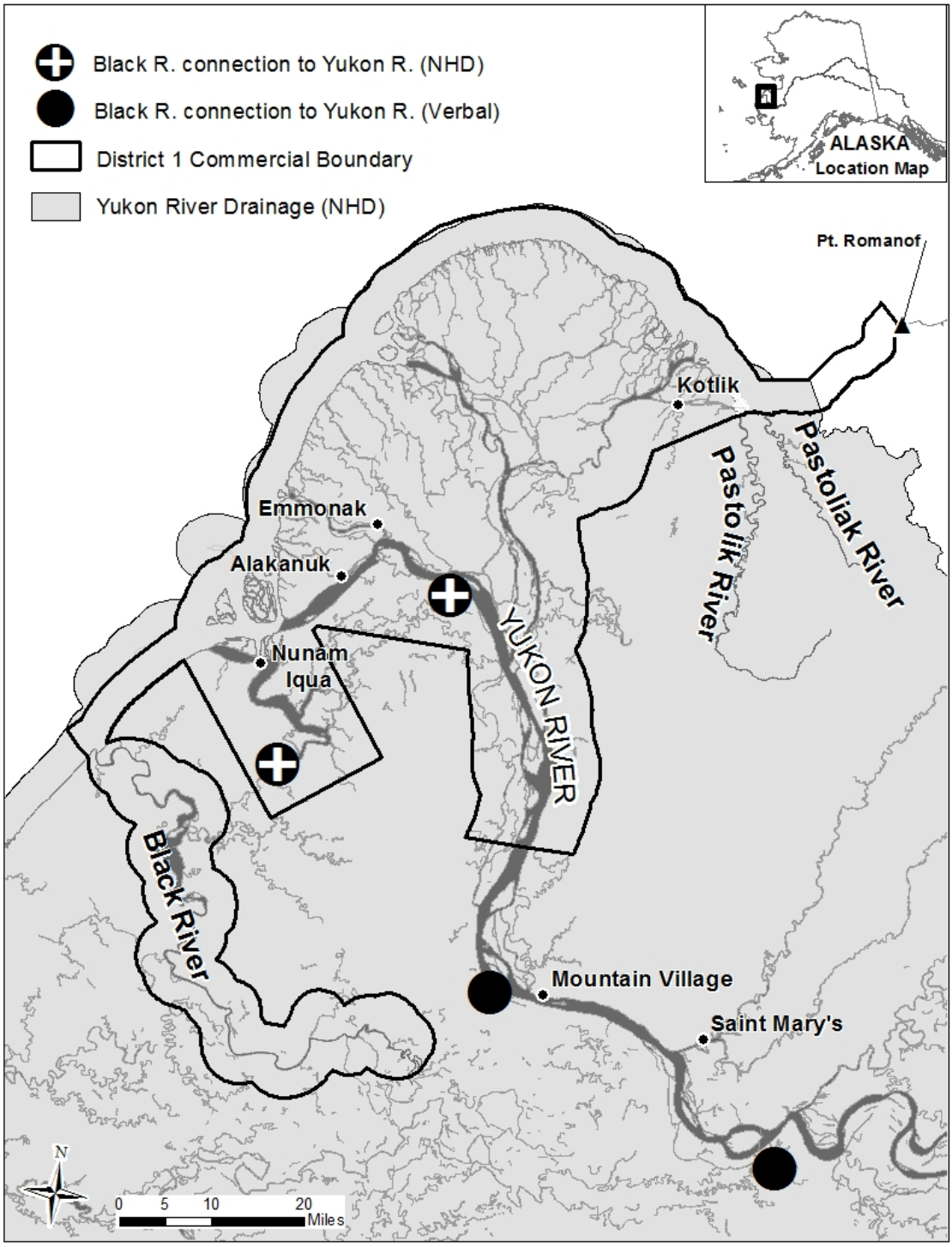



Figure 102-1. –Map showing Yukon Area District 1 including the Black River and Pastolik and Pastoliak rivers.

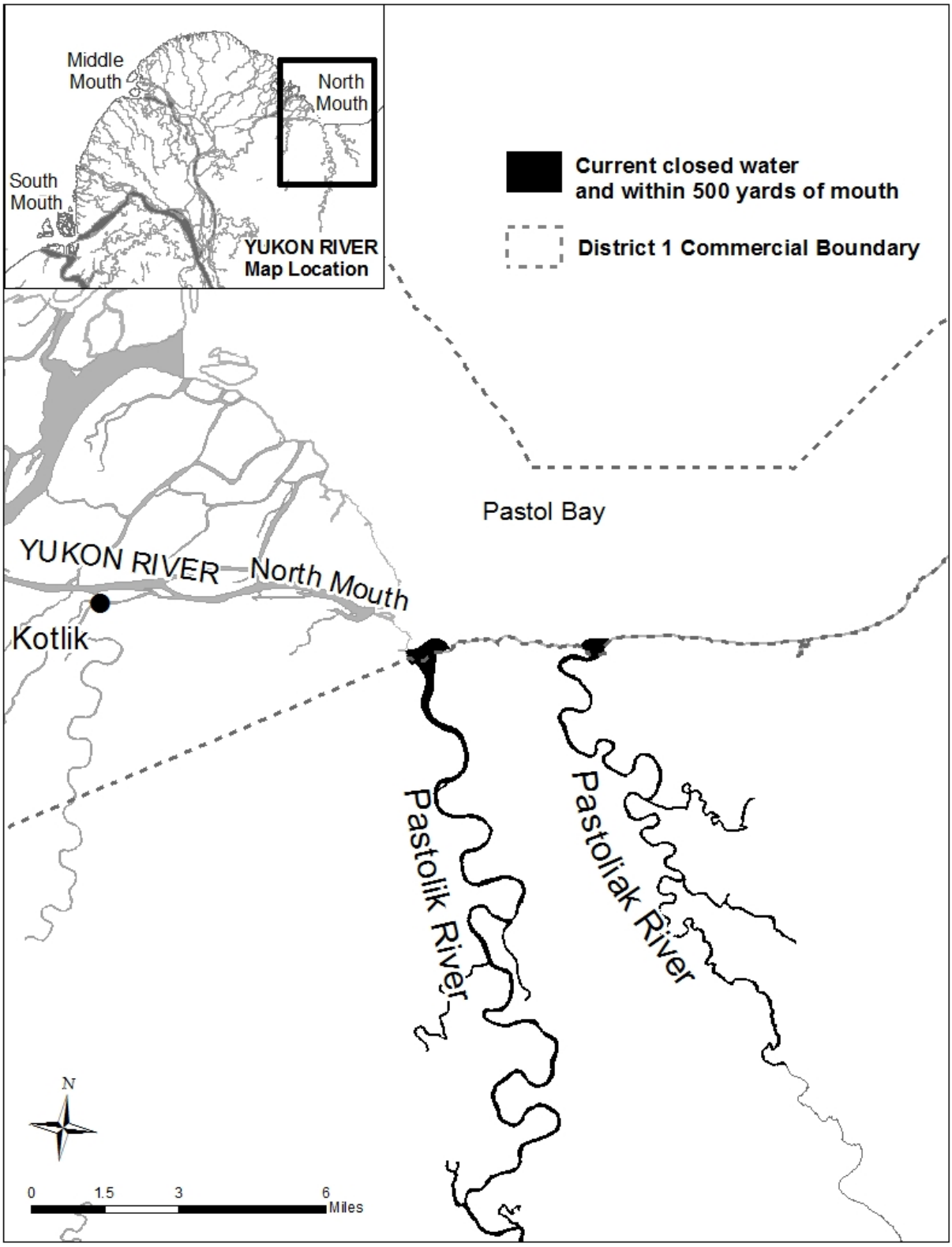



Figure 102-2. –Map of the Pastolik and Pastoliak rivers.

## PROPOSAL 103 – 5 AAC 05.350. Closed waters.

**PROPOSED BY:** John H. Lamont.

**WHAT WOULD THE PROPOSAL DO?** Allow commercial fishing within 500 yards of the mouths of the of Pastolik and Pastoliak rivers (Figure 102-2) as part of District 1 of the Yukon Area.

**WHAT ARE THE CURRENT REGULATIONS?** The waters within 500 yards around the mouths of the Pastolik River and the Pastoliak River are closed to commercial salmon fishing under both statewide regulations and Yukon Area regulations.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Commercial salmon fishing would be allowed in the waters within 500 yards of the mouth of the Pastolik River and the Pastoliak River. The resulting commercial harvest would have unknown impacts to salmon populations within each river. During the fall commercial salmon fisheries, the waters within 500 yards of the mouths would be included in the set net only area of District 1.

**BACKGROUND:** Prior to 2016, the Pastolik and Pastoliak rivers were located within the Yukon Area Coastal District. At the 2016 AYK board meeting, the District 1 boundary was expanded and encompassed the two rivers. The provision to close the waters within 500 yards of the mouths of each river was adopted at the same meeting to ensure there would be no commercial fishing of the salmon populations in the Pastolik and Pastoliak rivers. A review of the regulatory history of the Yukon Area shows that neither the Pastolik nor the Pastoliak river have been open to commercial salmon fishing since statehood.

The Black River was included in District 1 when the district was created because of a long history of commercial fishing activity in that area. The USGS Hydrological Survey's National Hydrology Dataset does show the Black River is connected to the Yukon River (Figure 102-1). The USGS Dataset shows both the Pastolik and Pastoliak rivers are within the Yukon River drainage, but neither river is directly connected to or drains into the Yukon River (Figure 102-1). The Pastolik River is listed in the state's Anadromous Waters Catalog as having king, chum, pink, and coho salmon present in all phases of their life history. The Pastoliak River is listed as having chum and pink salmon present in all phases of their life history. However there has been no assessment of the spawning salmon stocks in either river. Both rivers are considered terminal harvest areas and it is unknown what the impacts of commercial harvest would be on those stocks or if commercial harvest would be sustainable. Both rivers are open to salmon and nonsalmon subsistence fishing except when closed in conjunction with commercial fishing periods.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Commercial fishing within or around the mouths would likely harvest salmon bound for each river. Without information on the salmon populations in either river, or what the impact of commercial exploitation would have on those populations, the department does not support opening these waters to commercial fishing. The waters within 500 yards of each river are open to subsistence salmon and nonsalmon fishing.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

## PROPOSAL 104 – 5 AAC 05.200. Fishing districts and subdistricts.

**PROPOSED BY:** Cyril Okitkun.

**WHAT WOULD THE PROPOSAL DO?** Allow commercial salmon fishing in the lower three river miles of the Pastolik and Pastoliak rivers, as part of the Yukon Area District 1.

**WHAT ARE THE CURRENT REGULATIONS?** The waters of the Pastolik and Pastoliak rivers are closed to commercial fishing under statewide regulations, and the waters within 500 yards around their mouths are closed to commercial fishing under both statewide regulations and Yukon Area regulations.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would open the lower three miles of each river to commercial salmon fishing as part of Yukon Area District 1 (Figure 104-1). The resulting commercial harvest would have unknown impacts to salmon populations within each river. During the fall commercial salmon fisheries, the waters within 500 yards of the mouths would be included in the set net only area of District 1.

**BACKGROUND:** Prior to 2016, the Pastolik and Pastoliak rivers were located within the Yukon Area Coastal District. At the 2016 AYK board meeting, the District 1 boundary was expanded and encompassed the two rivers. The provision to close the waters within 500 yards of the mouths of each river was adopted at the same meeting to ensure there would be no commercial fishing of the salmon populations in the Pastolik and Pastoliak rivers. A review of the regulatory history of the Yukon Area shows that neither the Pastolik nor the Pastoliak rivers have been open to commercial salmon fishing since statehood.

The Black River was included in District 1 when it was created because of a long history of commercial fishing activity in that area. The USGS Hydrological Survey's National Hydrology Dataset does show the Black River is connected to the Yukon River (Figure 102-1). The USGS Dataset shows both the Pastolik and Pastoliak rivers are within the Yukon River drainage, but neither river is directly connected to or drains into the Yukon River (Figure 102-1). The Pastolik River is listed in the state's Anadromous Waters Catalog as having king, chum, pink, and coho salmon present in all phases of their life history. The Pastoliak River is listed as having chum and pink salmon present in all phases of their life history. However there has been no assessment of the spawning salmon stocks in either river. Both rivers are considered terminal harvest areas and it is unknown what the impacts of commercial harvest would be on those stocks or if commercial harvest would be sustainable. Both rivers are open to salmon and nonsalmon subsistence fishing except when closed in conjunction with commercial fishing periods.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Commercial salmon fishing is closed by statewide regulations that prohibit commercial fishing within freshwater streams and rivers, and within 500 yards of those streams. These rivers are already open to subsistence salmon and nonsalmon fishing. Since statehood, commercial fishing for salmon has not been opened in either of these rivers. Without information on the salmon populations in either river, or what the impact of commercial exploitation would have on those populations, the department does not support opening the rivers to commercial fishing.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

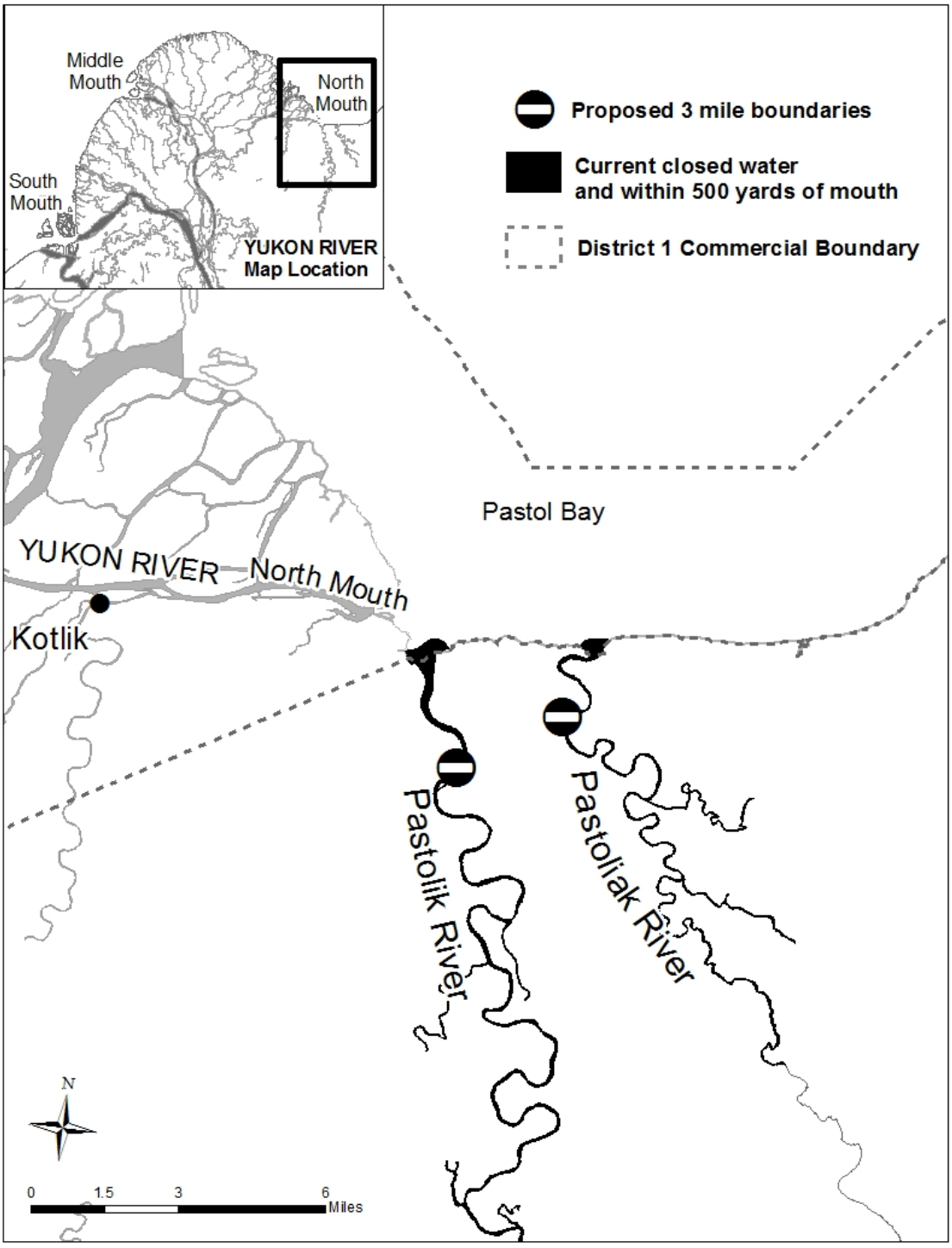



Figure 104-1. Map showing the proposed 3-mile boundaries in the Pastolik and Pastoliak rivers.

# COMMITTEE OF THE WHOLE – GROUP 3: KUSKOKWIM SUBSISTENCE, COMMERCIAL, AND SPORT (18 PROPOSALS)

## KUSKOKWIM SUBSISTENCE FISHERIES (6 PROPOSALS)

### PROPOSAL 105 – 5 AAC 01.270. Lawful gear and gear specifications and operations.

**PROPOSED BY:** Organized Village of Kwethluk.

**WHAT WOULD THE PROPOSAL DO?** This would modify subsistence gillnet specifications and operation during times of king salmon conservation. Specifically, gillnet mesh size may not exceed 7.5 inches, net length may not exceed 60 feet, and may only be operated as a set net, with no placement limitations in relation to the high-water mark. In addition, this proposal would add language to address what the gillnet may be anchored with, such as commercial anchors or make-shift anchors constructed out of wood.

**WHAT ARE THE CURRENT REGULATIONS?** Currently during times of king salmon conservation, the department may restrict gillnet operations to 4 inch or smaller mesh size, 60 feet in length, and they may only be operated as set gillnets, with no part being more than 100 feet from the ordinary high-water mark (5 AAC 01.270; 5 AAC 07.365).

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** During times of king salmon conservation and the early season closure, subsistence fishermen would be allowed to use a set gillnet with 7.5 inch or less mesh and not exceeding 60 feet in length. This may lead to an increase of king salmon harvest due to the larger mesh size, which could decrease the amount of subsistence fishing time provided in relation to the size of the king salmon return.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012, 2013, and 2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide sustainable escapement goal established in 2013 was not achieved that year. Beginning in 2014, a very conservative management approach has occurred on the Kuskokwim River, which has led to the majority of tributary escapement goals being achieved. In addition, drainagewide escapement levels have been near the upper end of the established escapement goal of 65,000–120,000 king salmon since 2015.

Up to 4-inch mesh gillnets not exceeding 60-feet in length have been allowed during times of king salmon conservation by emergency order as an opportunity for subsistence fishermen to harvest species of fish other than salmon (e.g. sheefish, whitefish, burbot, and pike). It was observed that subsistence fishermen were setting 4-inch mesh gillnets and targeting king salmon with this gear. This was a direct conflict with the intent of this fishing opportunity. In response, the Alaska Board of Fisheries (board) addressed this issue at their March 2015 meeting and adopted regulations to provide the department with the ability to specify that during times of conservation, 4-inch mesh gillnets could only be operated as set gillnets and no part of the gillnet may be more than 100-feet from the ordinary high-water mark.

The Kuskokwim Subsistence Salmon Panel was established at the board Work Session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. Subsequently, in January 2016, the board met in Fairbanks to consider proposals concerning the Arctic-Yukon-Kuskokwim areas. An early season king salmon subsistence fishing closure, similar to the approach taken in 2014 and 2015, was suggested and agreed to by a group of Kuskokwim River residents who were in attendance. The board passed language that would annually suspend directed subsistence fishing for king salmon in the Kuskokwim River until after June 11. The intent of this closure was to distribute fish throughout the drainage for equitable harvest opportunity. Consequently, the closure also conserves fish for escapement purposes. In 2017, the board provided the department with additional guidance by directing the department to provide at least one subsistence fishing opportunity per week with 4-inch or less mesh set gillnets during the closure. This allows subsistence fishermen the opportunity to harvest species other than salmon during the regulated early season closure.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The current regulations, to allow fishing periods with 4-inch or less mesh set gillnets not exceeding 60 feet in length, with no part being more than 100 feet from the ordinary high-water mark, during times of king salmon conservation, were a culmination of a public process through the board. This was to allow subsistence users an opportunity to harvest nonsalmon species while the king salmon run is building and migrating upriver. Increasing the mesh size of set gillnets from 4 inches to 7.5 inches would raise the likelihood of harvesting larger numbers of king salmon, which is counter to the intent of the current regulations. A recent mesh size study that was conducted on the Yukon River indicated that 7.5 inch mesh gillnets caught more king salmon than chum salmon as opposed to a smaller mesh size.

**COST ANALYSIS:** Adoption of this proposal may result in additional direct cost for a private person to participate in this fishery. Gillnets of 7.5-inch mesh are non-typical for most Kuskokwim River subsistence users so some may purchase a new gillnet to participate.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made positive customary and traditional use findings for halibut, Pacific cod, and all other finfish in the Kuskokwim Area, and specific findings for king, chum, sockeye, coho, and pink salmon in the Kuskokwim River drainage; (5 AAC 01.286).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the salmon amount reasonably necessary (ANS) findings in the Kuskokwim River drainage as follows: 67,200–109,800 king salmon; 41,200–116,400 chum salmon; 32,200–58,700 sockeye salmon; 27,400–57,600 coho salmon; and 500–2,000 pink salmon (5 AAC 01.286(b)). The board has not made a finding for nonsalmon species in the Kuskokwim Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 106 – 5 AAC 01.270. Lawful gear and gear specifications and operations.

**PROPOSED BY:** Organized Village of Kwethluk.

**WHAT WOULD THE PROPOSAL DO?** This would reduce the distance that must separate subsistence set gillnets, from 150 feet to 50 feet, within tributaries of that portion of the Kuskokwim River drainage from the north end of Eek Island upstream to the mouth of the Kolmakoff River.

**WHAT ARE THE CURRENT REGULATIONS?** Currently in that portion of the Kuskokwim River drainage from the north end of Eek Island upstream to the mouth of the Kolmakoff River, no part of a set gillnet located within a tributary to the Kuskokwim River may be set or operated within 150 feet of any part of another set gillnet.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Subsistence fishermen would have the ability to anchor and operate set gillnets no less than 50 feet away from another set gillnet. This may lead to an increase in the amount of gear placed in the water. Additionally, this may lead to increased user conflicts due to the lack of suitable fishing sites, as stated by the proponent.

**BACKGROUND:** This regulation was adopted prior to 1988 and is applicable year-round for subsistence fishing. During the summer salmon and whitefish fisheries this regulation reduces congestion around tributary mouths and within tributary systems where space is limited for fishing activity and navigation by boat. During the winter fishery this regulation limits the number of nets that can be placed in specific locations through the ice to harvest resident species of fish. In recent years, due to king salmon restrictions, king salmon spawning tributaries have been closed to the use of gillnets through mid-July.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. The department will continue to use time and area emergency order authority to manage the Kuskokwim River subsistence fishery to ensure that escapement goals will be achieved and to provide harvest opportunity.

While addressing this proposal, the board should evaluate and consider whether changes proposed would still provide for the provision of reasonable opportunity in the subsistence fishery.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made positive customary and traditional use findings for halibut, Pacific cod, and all other finfish in the Kuskokwim Area, and specific findings for king, chum, sockeye, coho, and pink salmon in the Kuskokwim River drainage; (5 AAC 01.286).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the salmon amount reasonably necessary (ANS) findings in the Kuskokwim River drainage as follows: 67,200–109,800 king salmon; 41,200–116,400 chum salmon; 32,200–58,700 sockeye salmon; 27,400–57,600 coho salmon; and 500–2,000 pink salmon (5 AAC

01.286(b)). The board has not made a finding for nonsalmon species in the Kuskokwim Area.

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 107 – 5 AAC 01.270. Lawful gear and gear specifications and operation.

**PROPOSED BY:** Stony/Holitna Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** This would add dip nets as a legal gear type for subsistence salmon fishing within the Kuskokwim Area.

**WHAT ARE THE CURRENT REGULATIONS?** Currently in the Kuskokwim Area, salmon may be taken for subsistence only by gillnet, beach seine, a hook and line attached to a rod or pole, handline, or fish wheels. Salmon may also be taken with a spear in the Holitna River drainage, Kanektok River drainage, Arolik River drainage, and the drainage of Goodnews Bay. However, during times necessary for the conservation of king salmon, a person may fish for salmon with a dip net and all king salmon caught must be released and returned alive to the water.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would allow subsistence fishermen the opportunity to target salmon while using a dip net at any time, not just during times of king salmon conservation. This may allow fishermen to more precisely harvest what they need during periods of high abundance of chum, sockeye, and coho salmon.

**BACKGROUND:** In regulation, dip nets have never been listed as a legal subsistence gear type for the taking of salmon in the Kuskokwim Area. Historically the only gear types allowed have been gillnets, beach seines, hook and line, hand line, and a fish wheel. Also, spears can be used in the Kanektok, Arolik, Goodnews and Holitna river drainages. In 2014, the board adopted regulations pertaining to dip nets as a gear type for salmon as implemented by emergency order. During times of king salmon conservation, subsistence fishermen may use dip nets, but all king salmon caught must immediately be returned alive to the water.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal. The addition of dip nets as a legal gear type for the taking of salmon would allow subsistence users an additional gear type to harvest salmon throughout the fishing season. The department would maintain management discretion to require the release of king salmon, if total run sizes warrant restrictions. Dip nets could be a more cost-effective way to participate in the Kuskokwim River subsistence salmon fishery for those who do not have the ability to use a gillnet. The intent of this proposal is similar to that of proposals 108 and 112.

**COST ANALYSIS:** Adoption of this proposal may result in an additional direct cost for a private person to participate in this fishery, if they chose to target salmon with a dip net.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species in the Kuskokwim Management Area (5 AAC 01.286(a)(3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon. The ANS for salmon in the remainder of the Kuskokwim Area is 6,900–17,000

salmon in districts 4 and 5, combined, and12,500–14,400 salmon in the remainder of the area (all species combined; 5 AAC 01.286(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 108 – 5 AAC 01.270. Lawful gear and gear specifications and operation.

**PROPOSED BY:** Iqurmiut Tribal Council.

**WHAT WOULD THE PROPOSAL DO?** This would add dip nets as a legal gear type for the taking of salmon within the Kuskokwim Area.

**WHAT ARE THE CURRENT REGULATIONS?** Currently in the Kuskokwim Area, salmon may be taken for subsistence only by gillnet, beach seine, a hook and line attached to a rod or pole, handline, or fish wheels. Salmon may also be taken with a spear in the Holitna River drainage, Kanektok River drainage, Arolik River drainage, and the drainage of Goodnews Bay. However, during times necessary for the conservation of king salmon, a person may fish for salmon with a dip net and all king salmon caught must be released and returned alive to the water. In addition, dip nets are allowed for subsistence fishing for nonsalmon fish in the Kuskokwim Area.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would allow subsistence fishermen the opportunity to target salmon while using a dip net at any time, not just during times of king salmon conservation. This may allow fishermen to more precisely harvest what they need when chum, sockeye, and coho salmon abundance is high. The department would maintain the flexibility to require the release of king salmon if necessary.

**BACKGROUND:** In regulation, dip nets have never been listed as a legal subsistence gear type for the taking of salmon in the Kuskokwim Area. Historically the only gear types allowed have been gillnets, beach seines, hook and line, hand line, and fish wheels. Also, spears can be used in the Kanektok, Arolik, Goodnews and Holitna river drainages. In 2014, the board adopted regulations pertaining to dip nets as a gear type for salmon as implemented by emergency order. During times of king salmon conservation, subsistence fishermen may use dip nets, but all king salmon caught must immediately be returned alive to the water.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal. The addition of dip nets as a legal gear type for the taking of salmon would allow subsistence users greater flexibility to harvest salmon throughout the fishing season. The department would maintain the flexibility to require the release of king salmon, if total run sizes warrant that restriction. Dip nets could be a more cost-effective way to participate in the Kuskokwim River subsistence salmon fishery for those who do not have the ability to utilize a gillnet. The intent of this proposal is similar to that of proposals 107 and 112.

**COST ANALYSIS:** Adoption of this proposal may result in an additional direct cost for a private person to participate in this fishery, if they chose to target salmon with a dip net.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for all salmon species in the Kuskokwim Area (5 AAC 01.286(a)(3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River drainage to be 67,200—109,800 king salmon; 41,200—116,400 chum

salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon. The ANS for salmon in the remainder of the Kuskokwim Area is 6,900–17,000 salmon in districts 4 and 5, combined, and 12,500–14,400 salmon in the remainder of the area (all species combined; 5 AAC 01.286(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 109 – 5 AAC 01.275. Waters closed to subsistence fishing.

**PROPOSED BY:** Bethel Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** This would close the marine waters immediately adjacent to the mouth of the Kuskokwim River to subsistence fishing during times of king salmon conservation.

**WHAT ARE THE CURRENT REGULATIONS?** The department has time and area authority through the emergency order process to close any or all state waters within the Kuskokwim Area if warranted. In addition, during times of king salmon conservation, the Kuskokwim River may be divided into five sections for the purposes of managing the subsistence fishery. Section 1 is defined as those waters from a line at the Yukon Delta National Wildlife Refuge boundary at the mouth of the Kuskokwim River (Figure 109-1) to the confluence of the Johnson River.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The marine waters adjacent to the mouth of the Kuskokwim River would close to subsistence fishing during times of king salmon conservation.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. In 2014 and 2015, the subsistence king salmon fishery was closed at the beginning of the run by emergency order in anticipation of low run abundance. Conservative management actions were taken in all fisheries with the intent of reducing king salmon harvest to achieve escapement goals. Due to these restrictive actions, the drainagewide king salmon escapement goal has been achieved since 2014 and the majority of tributary escapement goals were achieved in these recent years. Additionally, USFWS enacted special actions to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the board in 2013 found that 67,200–109,800 king salmon is the amount reasonably necessary for subsistence uses (ANS). The subsistence harvest of king salmon has fallen below the lower end of this ANS range since 2011.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The only season that restrictions were implemented in this area was 2014. The harvest levels of salmon in these adjacent marine waters have not had a detrimental impact on drainagewide escapement, since the drainagewide sustainable escapement goal of 65,000–120,000 king salmon has been achieved every year since 2014. Currently, the department has the ability to restrict fishing in this area if warranted but has not done so in recent years to avoid unnecessarily restricting subsistence fishing. Maintaining management discretion benefits subsistence users and state managers at various fish abundance levels.

While addressing this proposal, the board should evaluate and consider whether changes outlined in this proposal would still provide for a reasonable opportunity for subsistence fishing.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for all salmon species in the Kuskokwim Management Area (5 AAC 01.286(a)(3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200–109,800 king salmon; 41,200–116,400 chum salmon; 32,200–58,700 sockeye salmon; 27,400–57,600 coho salmon; and 500–2,000 pink salmon (5 AAC 01.286(b)(1–5)). Also in 2013 the Board revised the amount reasonably necessary findings for all salmon to be 6,900–17,000 salmon in Districts 4 and 5 combined; and 12,500–14,400 salmon in the remainder of the Kuskokwim Area (5 AAC 01.286(b)(6) and (7)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

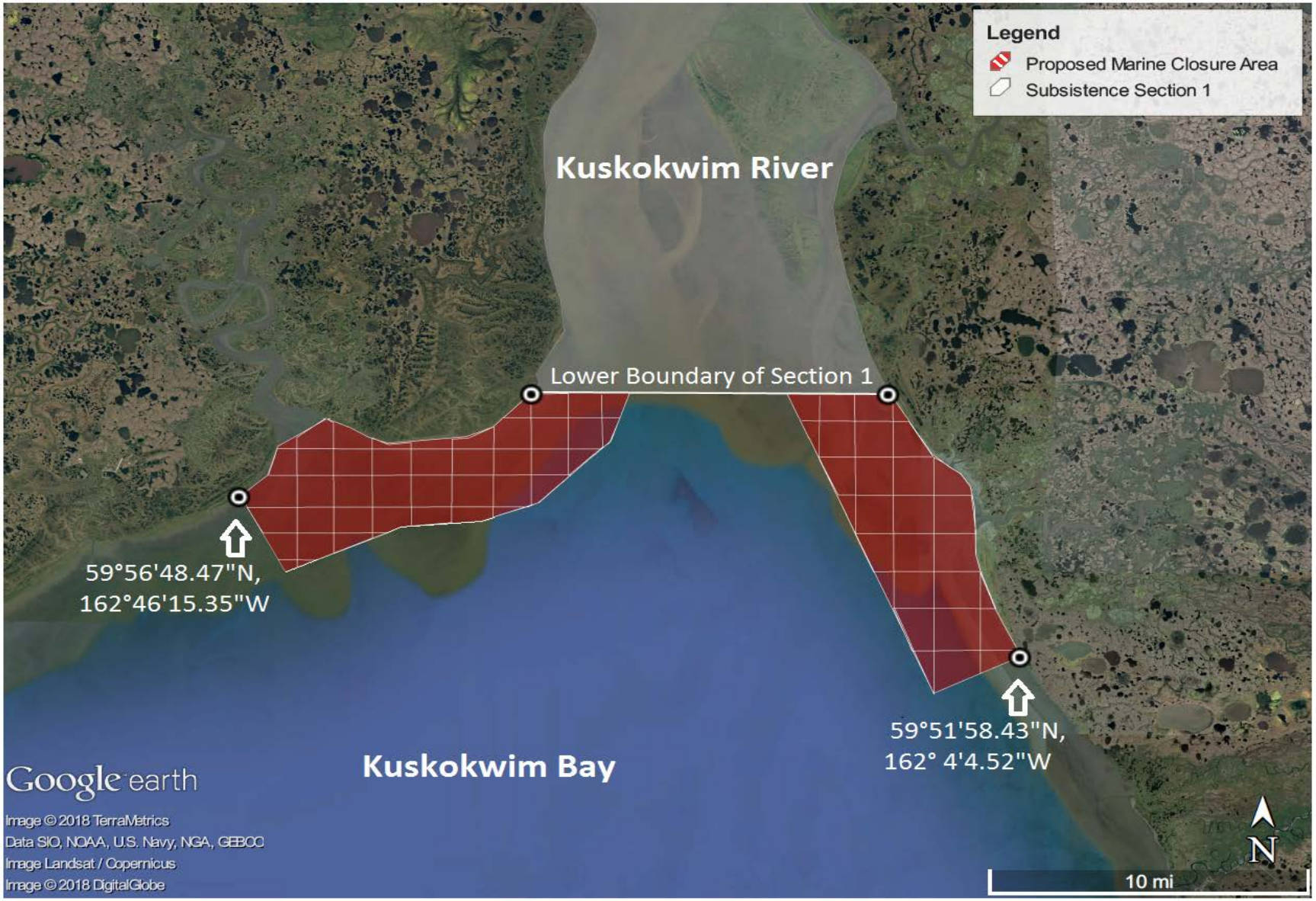



Figure 109-1.–Map of Section 1 lower boundary line and proposed closed waters, Kuskokwim River.

**PROPOSAL 110 – 5 AAC 01.275. Waters closed to subsistence fishing; 5 AAC 07.365. Kuskokwim River Salmon Management Plan; and 5 AAC 71.010. Seasons and bag, possession, annual, and size limits for the Kuskokwim — Goodnews Area.**

**PROPOSED BY:** Organized Village of Kwethluk.

**WHAT WOULD THE PROPOSAL DO?** This would close all fishing in non-salmon spawning rivers of the Kuskokwim River within five miles of the confluence during times of king salmon conservation.

**WHAT ARE THE CURRENT REGULATIONS?** Unless otherwise modified by emergency order, finfish, except salmon and rainbow trout, may be taken for subsistence in the Kuskokwim Area at any time. Rainbow trout taken incidentally in other subsistence finfish net fisheries and through the ice are legally taken and may be retained for subsistence purposes. Additionally, current regulation allows the department time and area discretion through emergency order authority to close any or all state waters within the Kuskokwim Management Area, if warranted. Also, during times of king salmon conservation, the Kuskokwim River may be divided into five sections for management of the subsistence fishery (5 AAC 01.255(b)). There currently are no non-salmon spawning waters (Figure 110-1) closed to sport fishing in the Kuskokwim Area.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** All fishing would be closed in non-salmon spawning rivers (e.g. Tagayanaq, Ishkowik, Tuntutuliak, Kialiq, Johnson, Gweek rivers) of the Kuskokwim River within five miles of the confluence during times of king salmon conservation.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. In 2014 and 2015, the subsistence king salmon fishery was closed at the beginning of the run by emergency order in anticipation of low run abundance. Conservative management actions were taken in all fisheries with the intent of reducing king salmon harvest to achieve escapement goals. Due to these restrictive actions, the drainagewide king salmon escapement goal has been achieved since 2014 and the majority of tributary escapement goals were achieved in these recent years. Additionally, USFWS enacted special actions to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the board in 2013 found that 67,200–109,800 king salmon is the amount reasonably necessary for subsistence uses (ANS). The subsistence harvest of king salmon has fallen below the lower end of this ANS range since 2011 in an effort to achieve escapement goals.

The non-salmon tributaries of the Kuskokwim River have remained open to subsistence and sport fishing for species other than salmon during salmon closures because they are traditional fishing areas for whitefish, sheefish, and northern pike: species with no conservation concerns. Keeping the non-salmon spawning tributaries open provides opportunity for area subsistence fishermen to harvest fish other than salmon, while subsistence fishing in the mainstem of the Kuskokwim River has been closed or restricted for the conservation of king salmon.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. Since 2014, the nonsalmon tributaries in question have remained open to unrestricted subsistence fishing for

non-salmon fish 100 yards upriver from their confluences with the Kuskokwim River. This is to provide reasonable opportunity for subsistence fishermen to harvest species other than salmon. The incidental harvest of salmon that has occurred in these tributaries has not had a meaningful impact on drainagewide escapement, since the drainagewide escapement goal of 65,000–120,000 king salmon has been achieved since 2014. Currently, the department can restrict fishing in these tributaries if warranted but has not done so in recent years to avoid unnecessarily restricting customary and traditional subsistence uses of non-salmon species. Maintaining department management discretion will benefit subsistence users and state and federal managers at various fish abundance levels. This proposal is similar to proposals 115, 116, and 117.

While addressing this proposal, the board should evaluate and consider whether changes to the management plan still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species and all other finfish in the Kuskokwim Area (5 AAC 01.286(a)(1) and (3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1—5)). The Board has not determined an amount reasonably necessary for subsistence uses for any other species in the Kuskokwim Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

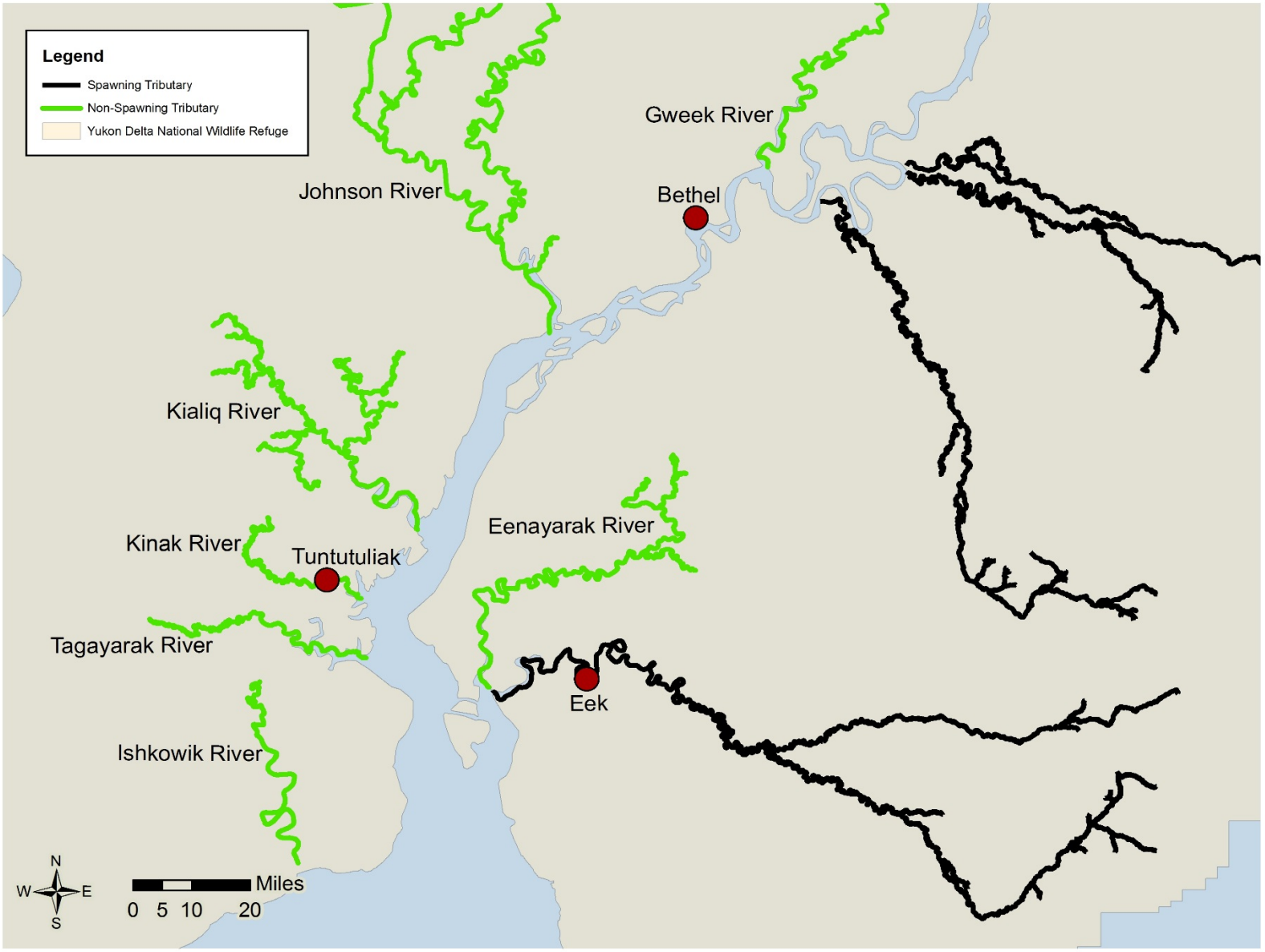



Figure 110-1.–Non-salmon tributaries of the lower Kuskokwim River.

## KUSKOKWIM COMMERCIAL FISHERIES (7 PROPOSALS)

### PROPOSAL 111 – 5 AAC 07.331. Gillnet specifications and operations.

**PROPOSED BY:** Kasigluk Traditional Council.

**WHAT WOULD THE PROPOSAL DO?** This proposal seeks to increase maximum gillnet mesh size to 8 inches for or commercial salmon fishing and would set maximum gillnet mesh size at 8 inches in the subsistence salmon fishery.

**WHAT ARE THE CURRENT REGULATIONS?** Currently in the commercial salmon fishery, maximum gillnet mesh size is set at 6 inches (5 AAC 07.331(a)). Additionally, there are no regulations that set a maximum mesh size in the subsistence salmon fishery within the Kuskokwim Area. However, when the department determines there is a conservation need for either king or chum salmon, there are regulations that allow changes to gillnet mesh size depending on the conservation need (5 AAC 01.270(n)(1)(A) and (B)).

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would allow the use of gillnets with a mesh size of up to 8 inches in the commercial fishery, which could direct harvest to large king salmon depending on when commercial opportunity is provided. Within the subsistence salmon fishery, this would limit gillnet mesh size to a maximum of 8 inches.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. In 2014 and 2015, the subsistence king salmon fishery was closed at the beginning of the run by emergency order in anticipation of low run abundance. Specific management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. One of these management actions was a restriction to six inch or less mesh gillnets, which shifted harvest away from the older and larger king salmon. With these restrictive actions, the drainagewide king salmon escapement goal has been met since 2014 and the majority of tributary escapement goals were achieved in these recent years.

Within the commercial fishery, there has not been a directed king salmon fishery since 1986. The removal of this fishery occurred prior to the 1987 fishing season, due to the concerns about declining numbers of king salmon and to address the priority use of king salmon in the subsistence fishery. The use of unrestricted mesh gillnets in the commercial fishery was also discontinued at that time. Since then, all commercial fishing has been prosecuted with the use of 6-inch or less mesh gillnets and has been directed at salmon stocks with no conservation concerns (chum, sockeye, and coho salmon).

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Current subsistence fishing regulations allow the use of unrestricted mesh gillnets, including 8-inch mesh, when there is not a conservation concern for king salmon. Recent management actions reducing gillnet mesh size to 6 inches or less were taken to address poor king salmon runs, while allowing subsistence users an opportunity to harvest other species of fish. Directed king salmon commercial fishing has not occurred since 1987 and commercial gillnet mesh size has been restricted to 6 inch or less to allow for harvest of more abundant chum and sockeye salmon along with king salmon. Eight-inch mesh gillnets would target king salmon, effectively re-opening a directed king salmon commercial fishery during a time

of poor king salmon run abundance and restrictions in the king salmon subsistence fishery. Additionally, there has not been a large-scale commercial processor/buyer in the Kuskokwim Area since 2015.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species and all other finfish in the Kuskokwim Area (5 AAC 01.286(a)(1) and (3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1—5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 112 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

**PROPOSED BY:** Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** This would allow subsistence fishing with dip net gear during times of king or coho salmon conservation.

**WHAT ARE THE CURRENT REGULATIONS?** Currently in the Kuskokwim Area, salmon may be taken for subsistence only by gillnet, beach seine, a hook and line attached to a rod or pole, handline, or fish wheels. Salmon may also be taken with a spear in the Holitna River drainage, Kanektok River drainage, Arolik River drainage, and the drainages of Goodnews Bay (5 AAC 01.270(a). However, during times necessary for the conservation of king salmon, a person may fish for salmon with a dip net and all king salmon caught must be released and returned alive to the water (5 AAC 01.270(n)(4)).

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would allow subsistence fishermen the opportunity to target salmon while using a dip net at any time, not just during times of king salmon conservation. This may allow fishermen to more precisely harvest what they need when chum, sockeye, and coho salmon abundance is high.

**BACKGROUND:** In regulation, dip nets have never been listed as a legal subsistence gear type for the taking of salmon in the Kuskokwim Area. Historically the only gear types allowed have been gillnets, beach seines, hook and line, hand line, and fish wheels. Also, spears can be used in the Kanektok, Arolik, Goodnews and Holitna river drainages. In 2014, the board adopted regulations pertaining to dip nets as a gear type for salmon as implemented by emergency order. During times of king salmon conservation, subsistence fishermen may use dip nets, but all king salmon caught must immediately be returned alive to the water.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal. The addition of dip nets as a legal gear type for the taking of salmon would allow subsistence users an additional gear type to harvest salmon throughout the fishing season. The department would still maintain management discretion to require the live release of king salmon, if run abundance warrants. Dip nets could be a more cost-effective way to participate in the Kuskokwim River subsistence salmon fishery. The intent of this proposal is similar to that of proposals 107 and 108.

**COST ANALYSIS:** Adoption of this proposal may result in additional direct cost for a private person to participate in this fishery if they need to purchase a dip net.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made a positive customary and traditional use finding for all salmon species in the Kuskokwim River drainage (5 AAC 01.286(a)(3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1–5)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 113 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

**PROPOSED BY:** Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** This would close subsistence salmon fishing on June 1.

**WHAT ARE THE CURRENT REGULATIONS?** Currently the subsistence salmon fishery is open until closed by emergency order. There is a regulatory closure that must take place prior to June 11. After that date, to the extent practicable, the department shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide opportunity on harvestable surpluses of king salmon. If there is not an identified surplus, the fishery is to remain closed.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This proposal would allow subsistence fishing with gillnets to occur until June 1, at which time the regulatory closure would go into effect through at least June 11.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. In 2014 and 2015, the subsistence fishery was closed at the beginning of the king salmon run in anticipation of low run abundance. Specific management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Due to these management actions, the drainagewide escapement goal has been achieved since 2014 and the majority of tributary escapement goals have been achieved in recent years. Additionally, USFWS enacted special actions to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the board in 2013 found that 67,200–109,800 king salmon is the amount reasonably necessary for subsistence uses (ANS) The subsistence harvest of king salmon has fallen below the lower end of this ANS range since 2011 in an effort to achieve escapement goals.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel was composed of board members as well as a broad cross-section of Kuskokwim River residents with longstanding traditional ecological knowledge. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. Subsequently, in January 2016, the board met in Fairbanks to consider proposals concerning the Arctic-Yukon-Kuskokwim areas. An early season king salmon subsistence fishing closure, similar to the approach taken in 2014 and 2015, was suggested and agreed to by a group of Kuskokwim River residents who were in attendance. The board adopted a regulation that would annually suspend directed subsistence fishing for king salmon in the Kuskokwim River until after June 11. The intent of this closure was to distribute fish throughout the drainage for equitable harvest opportunity. This front-end closure also conserves fish for escapement purposes. In 2017, the board provided the department additional guidance about fishing for non-salmon fish during the closure by providing for at least one subsistence fishing opportunity per week with 4-inch or less mesh set gillnets during the front-end closure. The board's intent was to allow subsistence

fishermen the opportunity to harvest species other than salmon (e.g., sheefish, whitefish, burbot, and northern pike) during the front-end closure.

Since the introduction of the front-end closure in 2016, the king salmon subsistence fishery has been closed beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species when there were little to no salmon present early in the season. After the June 11 end date of the front-end closure, the fishery was managed by emergency order authority in state waters upstream of Aniak and federal Special Actions in federal waters downstream of Aniak, with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) based on inseason run indicators.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. The board adopted the front-end closure after hearing directly from users of the Kuskokwim Area at various meetings about providing more equitable harvest opportunity throughout the drainage. The department has management authority within the current regulatory structure to determine the beginning date of the front-end closure; furthermore, the department applies the guidance heard during pre-season stakeholder meetings to settle on the beginning date. Maintaining flexibility with the start date of the front-end closure would be beneficial if run abundance of Kuskokwim River king salmon increases or drops below current levels. However, in most circumstances the number of king salmon present prior to June 1 is small and any harvest that occurs would not greatly impact overall escapement. As specified in the management plan, prior to June 12, the department provides at least one fishing period per week so non-salmon fish can be harvested for subsistence uses.

While addressing this proposal, the board should evaluate and consider whether changes to the management plan still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species and all other finfish in the Kuskokwim Area (5 AAC 01.286(a)(1) and (3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1—5)). The Board has not determined an amount reasonably necessary for subsistence uses for any other species in the Kuskokwim Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 114 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

**PROPOSED BY:** Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** This would restrict gillnets in the Kuskokwim River subsistence fishery to 6-inch or less mesh from June 1–25 only if necessary, during rolling closures consistent with king salmon run-timing.

**WHAT ARE THE CURRENT REGULATIONS?** Currently the subsistence fishery is open until closed by emergency order. There is a regulatory closure that must take place prior to June 11. After that date, to the extent practicable, the department shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide opportunity on harvestable surpluses of king salmon. If there is not an identified surplus the fishery is to remain closed. In addition, gillnet mesh size may be restricted to 6-inch mesh or less in times that it is necessary to conserve king salmon.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would allow subsistence fishing to occur June 1–June 25 with 6-inch or less mesh gillnets and place rolling closures along the drainage consistent with king salmon run timing.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. In 2014 and 2015, the subsistence fishery was closed at the beginning of the king salmon run by emergency order in anticipation of low runs. Specific management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Due to these management actions, the drainagewide escapement goal has been achieved since 2014 and the majority of tributary escapement goals were achieved in recent years. Additionally, USFWS enacted special actions to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In the Kuskokwim River drainage, the Alaska Board of Fisheries in 2013 found that 67,200–109,800 king salmon is the amount reasonably necessary for subsistence uses (ANS) The subsistence harvest of king salmon has fallen below the lower end of this ANS range since 2011 in an effort to achieve escapement goals.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel was composed of board members as well as a broad cross-section of Kuskokwim River residents with longstanding traditional ecological knowledge. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. Subsequently, in January 2016, the board met in Fairbanks to consider proposals concerning the Arctic-Yukon-Kuskokwim areas. An early season king salmon subsistence fishing closure, similar to the approach taken in 2014 and 2015, was suggested and agreed to by a group of Kuskokwim River residents who were in attendance. The board passed language that would annually suspend directed subsistence fishing for king salmon in the Kuskokwim River until after June 11. The intent of this closure was to distribute fish throughout the drainage for equitable harvest opportunity. This front-end closure also conserves fish for escapement purposes. In 2017, the board provided the department additional guidance about fishing for non-salmon fish during

the closure by providing for at least one subsistence fishing opportunity per week with 4-inch or less mesh set gillnets during the front-end closure. The board's intent was to allow subsistence fishermen the opportunity to harvest species other than salmon (e.g., sheefish, whitefish, burbot, and northern pike) during the front-end closure.

Since the introduction of the front-end closure in 2016, the king salmon subsistence fishery has been closed beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species when there were little to no salmon present early in the season. After the June 11 end date of the front-end closure, the fishery was managed by state emergency order authority in waters upstream of Aniak and federal special actions in waters downstream of Aniak with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) based on inseason run indicators.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The department already has the tools necessary to effectively manage the fishery inseason based on salmon abundance. Clear and concise guidance would be needed regarding when the restrictions would be necessary, to ensure the department implements closures consistent with board intent. The board adopted regulations to institute the front-end closure in response to concerns from Kuskokwim River subsistence resource users about inequitable king salmon harvest opportunity throughout the drainage. Therefore, the department currently does not have the authority to open a directed king salmon subsistence fishery during the front-end closure. During times of king salmon conservation, early season fishing closures are necessary to distribute fish throughout the drainage and allow managers time to assess the king salmon run prior to providing directed harvest opportunity. With the implementation of the front-end closure (end date of June 11) the department believes that it already has the necessary tools to manage the subsistence king salmon fishery to achieve escapement goals and maximize subsistence fishing opportunity.

While addressing this proposal, the board should evaluate and consider whether changes to the management plan still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made a positive customary and traditional use finding for king salmon in the Kuskokwim River drainage (5 AAC 01.286(a)(3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the board revised the amount reasonably necessary finding for king salmon in the Kuskokwim River to be 67,200—109,800 king salmon (5 AAC 01.286(b)(1)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## PROPOSAL 115 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

**PROPOSED BY:** Native Village of Tuntutuliak.

**WHAT WOULD THE PROPOSAL DO?** This would allow subsistence fishing for non-salmon fish with gillnets of 8-inch or smaller mesh in the Tuntutuliak, Tagayarak, Kialik, and Johnson rivers 100 yards upstream from their confluences with the Kuskokwim River, when salmon fishing is closed.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations provide the department time and area authority through the emergency order process to close any or all state waters within the Kuskokwim Area if warranted. Unless otherwise modified by emergency order, finfish, except salmon and rainbow trout, may be taken for subsistence uses in the Kuskokwim Area at any time. Rainbow trout taken incidentally in other subsistence finfish net fisheries and through the ice are legally taken and may be retained for subsistence purposes. There are other regulations specific to salmon fishing throughout the Kuskokwim Area.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?**

If a subsistence fishing closure was put into effect on the mainstem of the Kuskokwim River, this proposal would allow for continued subsistence fishing opportunity on the selected tributaries (Figure 115-1) upstream from a boundary located 100 yards from their confluences with the Kuskokwim River. This would allow incidental harvest of salmon migrating up the Kuskokwim River mainstem by nets placed near the 100-yard boundary of the selected tributaries.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012, 2013, and 2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. Beginning in 2014, the most restricted subsistence fishing seasons have occurred in the Kuskokwim River, but have led to the majority of tributary escapement goals being achieved. In addition, drainagewide escapement levels have been near the upper end of the established escapement goal of 65,000–120,000 king salmon, since 2015. From 2014 to 2018, the king salmon fishery has been managed by the United States Fish and Wildlife Service (USFWS) under Special Action authority.

As part of the restrictions taken during king salmon conservation management, major king salmon spawning tributaries have been closed to subsistence king salmon harvest while non-salmon tributaries have been left unrestricted to their confluences with the mainstem Kuskokwim River while under State of Alaska management. The department has left these tributaries open to allow for subsistence users to continue traditional practices and harvest fish other than salmon. Incidental harvest of salmon does occur in the lower portions of these tributaries, but the department has deemed this amount minimal and the incidental harvest has not caused a detrimental effect on meeting established salmon escapement goals. The USFWS has also largely left the non-salmon tributaries unrestricted under special action management with the exception of prohibiting subsistence fishing within 100 yards of a tributary's confluence with the mainstem Kuskokwim River.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. Since 2014, the non-salmon tributaries in question have remained open to unrestricted subsistence fishing for non-salmon fish 100 yards upriver from their confluences with the Kuskokwim River. This is to

provide reasonable opportunity for subsistence fishermen to harvest species other than salmon. The incidental harvest of king salmon that has occurred in these tributaries has not had a meaningful impact on drainagewide escapement, since the drainagewide sustainable escapement goal of 65,000–120,000 king salmon has been achieved since 2014. The department already has the ability to restrict fishing in these tributaries if it is warranted but has not done so in recent years to avoid unnecessarily restricting customary and traditional subsistence uses of non-salmon species. Maintaining this management authority benefits subsistence users and state managers at various fish abundance levels.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species and all other finfish in the Kuskokwim River drainage (5 AAC 01.286(a)(1) and (3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1—5)). The Board has not determined an amount reasonably necessary for subsistence uses for any other species in the Kuskokwim Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

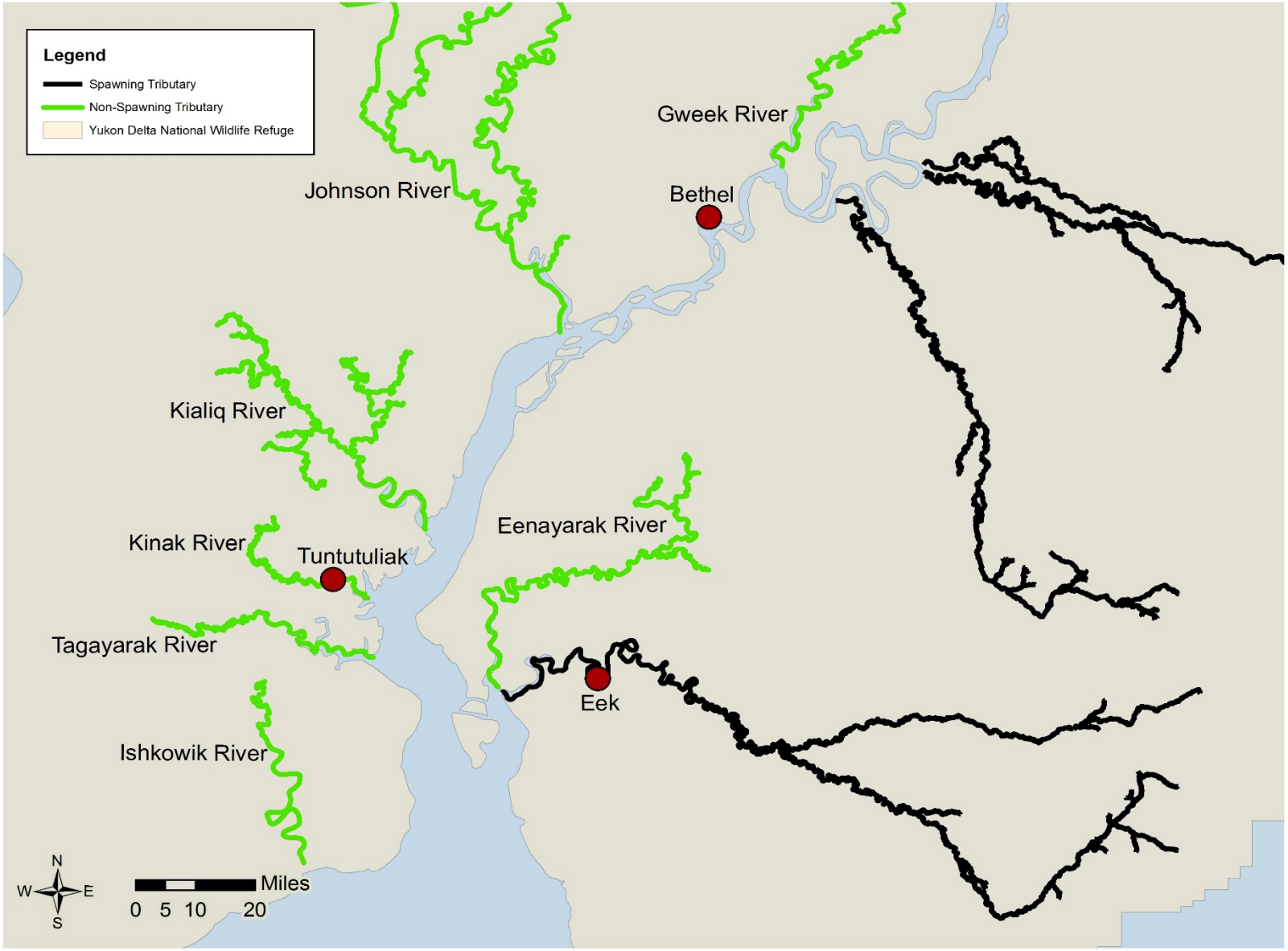



Figure 115-1.–Non-salmon tributaries of the lower Kuskokwim River.

## PROPOSAL 116 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

**PROPOSED BY:** Tuntutuliak Traditional Council.

**WHAT WOULD THE PROPOSAL DO?** This would keep the confluences of the Johnson, Kialiq, Kinak, Tagyaraq, and Pailleq rivers open to subsistence fishing with gillnets during times of closure in the subsistence salmon fishery.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulation allows the department time and area authority through the emergency order process to close any or all waters within the Kuskokwim Area to subsistence harvest if warranted. Unless otherwise modified by emergency order or special action, finfish, except rainbow trout, may be taken in the Kuskokwim Area at any time. Rainbow trout taken incidentally in other subsistence finfish net fisheries and through the ice are legally taken and may be retained for subsistence purposes. There are other regulations specific to salmon fishing throughout the Kuskokwim Area.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** If a closure was put into effect on the Kuskokwim River this would allow for continued subsistence fishing opportunity on the selected tributaries in their confluence areas with the Kuskokwim River. This would increase incidental harvest of salmon migrating up the Kuskokwim River mainstem by nets placed near the confluence of the selected tributaries (Figure 116-1) with the mainstem of the Kuskokwim River.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012, 2013, and 2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. Beginning in 2014, the most restricted subsistence fishing seasons have occurred on the Kuskokwim River, but have led to the majority of tributary escapement goals being achieved. In addition, drainage wide escapement levels have been near the upper end of the established escapement goal of 65,000–120,000 king salmon, since 2015. From 2014 to 2018, the king salmon fishery downstream of Aniak has been managed directly by the United States Fish and Wildlife Service (USFWS) under special action authority.

Since the introduction of the early season closure in 2016, the king salmon subsistence fishery has been closed by regulation, beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species, while there were little to no salmon present that early in the season. After the June 11 end date of the early season closure, the king salmon fishery is managed by state emergency order authority in waters upstream of Aniak and federal Special Actions in waters downstream of Aniak with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) and based on inseason run indicators.

As part of the restrictions taken during king salmon conservation management, king salmon spawning tributaries have been closed to subsistence fishing with gillnets while non-salmon tributaries have been left unrestricted to their confluences with the mainstem Kuskokwim River while under department management. The department has not restricted these tributaries in order to allow for subsistence users to continue traditional practices and harvest fish other than salmon. Incidental contact with king salmon does occur in the lower portions of these tributaries but the department has not observed a meaningful effect on meeting established king salmon escapement

goals. The USFWS has also largely left the non-salmon tributaries unrestricted under special action authority, with the exception of prohibiting subsistence fishing within 100 yards of a tributary's confluence with the mainstem Kuskokwim River.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. Since 2014, the non-salmon tributaries in question have remained open to unrestricted subsistence fishing for non-salmon fish 100 yards upriver from their confluences with the Kuskokwim River. This is to provide reasonable opportunity for subsistence fishermen to harvest species other than salmon. The incidental harvest of salmon that has occurred in these tributaries has not had a meaningful impact on drainagewide escapement, since the drainagewide sustainable escapement goal of 65,000–120,000 king salmon has been achieved since 2014. The department already has the ability to restrict fishing in these tributaries if it is warranted but has not done so in recent years to avoid unnecessarily restricting customary and traditional subsistence uses of non-salmon species. Maintaining this management authority benefits subsistence users and state managers at various fish abundance levels.

While addressing this proposal, the board should evaluate and consider whether changes to the management plan still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish while providing adequate protection during times of king conservation.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made positive customary and traditional use findings for all salmon species and all other finfish in the Kuskokwim River drainage (5 AAC 01.286(a)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1—5)). The Board has not determined an amount reasonably necessary for subsistence uses for any other species in the Kuskokwim Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

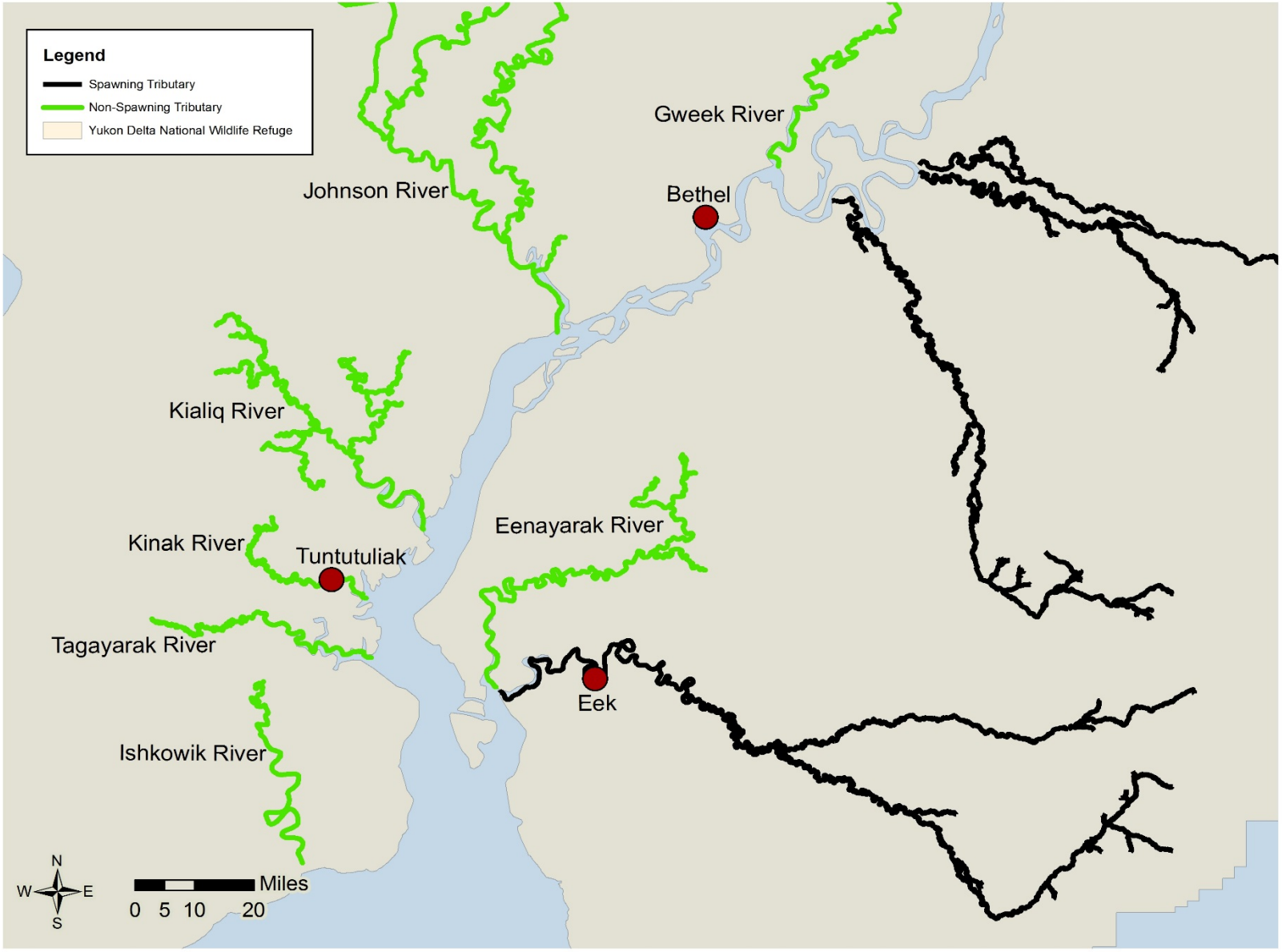



Figure 116-1.–Non-salmon tributaries of the lower Kuskokwim River.

## PROPOSAL 117 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

**PROPOSED BY:** William Charlie Brown.

**WHAT WOULD THE PROPOSAL DO?** This would keep the waters of Pailleq Slough of the lower Kuskokwim River open to subsistence fishing for non-salmon species with gillnets 100 yards upstream of its confluence with the Kuskokwim River during times of subsistence fishing closures on the mainstem of the Kuskokwim River.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulation allows the department time and area authority through the emergency order process to close any or all waters within the Kuskokwim Area to subsistence harvest if warranted. Unless otherwise modified by emergency order or special action, finfish, except salmon and rainbow trout, may be taken in the Kuskokwim Area at any time. Rainbow trout taken incidentally in other subsistence finfish net fisheries and through the ice are legally taken and may be retained for subsistence purposes. There are other regulations specific to salmon fishing throughout the Kuskokwim Area.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** If a closure was put into effect on the Kuskokwim River this would allow for continued subsistence fishing for non-salmon species with gillnets in Pailleq Slough from a boundary located 100 yards upstream of its confluence with the Kuskokwim River.

**BACKGROUND:** Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012, 2013, and 2014 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. Beginning in 2014, the most restricted subsistence fishing seasons have occurred on the Kuskokwim River, but have led to the majority of tributary escapement goals being achieved. In addition, drainage wide escapement levels have been near the upper end of the established escapement goal of 65,000–120,000 king salmon since 2015. From 2014 to 2018, the king salmon fishery downstream of Aniak has been managed by the United States Fish and Wildlife Service (USFWS) under special action authority.

Since the introduction of the front-end closure in 2016, the king salmon subsistence fishery has been closed by regulation, beginning May 20 in 2016 and 2017, and May 25 in 2018. The start of the closure was delayed in the upper sections of the Kuskokwim River to allow users more opportunity to harvest non-salmon species while there were little to no king salmon present that early in the season. After the June 11 end date of the front-end closure, the king salmon fishery has been managed by state emergency order authority in waters upstream of Aniak and federal Special Actions in waters downstream of Aniak, with actions guided by the *Kuskokwim River Salmon Management Plan* (5 AAC 07.365) based on inseason run indicators.

As part of the restrictions taken during king salmon conservation management, king salmon spawning tributaries have been closed to subsistence fishing with gillnets while non-salmon tributaries have been left unrestricted to their confluences with the mainstem Kuskokwim River while under department management. The department has not restricted these tributaries in order to allow for subsistence users to continue traditional practices and harvest fish other than salmon. Incidental harvest of king salmon does occur in the lower portions of these tributaries, but this harvest has not had a meaningful effect on meeting established king salmon escapement goals. The USFWS has also largely left the non-salmon tributaries unrestricted under Special Action

authority, with the exception of prohibiting subsistence fishing within 100 yards of a tributary's confluence with the mainstem Kuskokwim River.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. Since 2014, the non-salmon tributaries in question have remained open to unrestricted subsistence fishing for non-salmon species 100 yards upriver from their confluences with the Kuskokwim River. This is to provide reasonable opportunity for subsistence fishermen to harvest species other than salmon. The incidental harvest of king salmon that has occurred in these tributaries has not had a meaningful impact on drainagewide escapement, since the drainagewide sustainable escapement goal of 65,000–120,000 king salmon has been achieved since 2014. The department has the ability to restrict fishing in these tributaries if it is warranted but has not done so in recent years to avoid unnecessarily restricting customary and traditional subsistence uses of non-salmon species. Maintaining this management authority benefits subsistence users and state managers at various fish abundance levels.

While addressing this proposal, the board should evaluate and consider whether changes to the management plan still provide an opportunity that allows a subsistence user to participate in the subsistence fishery that provides a normally diligent participant with a reasonable expectation of success of taking fish while providing adequate protection during times of king conservation.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species and all other finfish in the Kuskokwim River drainage (5 AAC 01.286(a)(1) and (3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the Board revised the amount reasonably necessary findings for five species of salmon in the Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon (5 AAC 01.286(b)(1–5)). The Board has not determined an amount reasonably necessary for subsistence uses for any other species in the Kuskokwim Management Area.
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## KUSKOKWIM SPORT FISHERIES (5 PROPOSALS)

### PROPOSAL 118 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan; and 5 AAC 71.010. Seasons and bag, possession, annual, and size limits for the Kuskokwim-Goodnews Area.

**PROPOSED BY:** Organized Village of Kwethluk.

**WHAT WOULD THE PROPOSAL DO?** Close sport fishing for king salmon for the entire Kuskokwim River drainage when other king salmon fisheries are closed to the taking of king salmon.

**WHAT ARE THE CURRENT REGULATIONS?** The general sport bag and possession limit for king salmon is three fish 20 inches or greater, only two of which may be 28 inches or longer. The open season for king salmon is from May 1–July 25.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would automatically close all sport fisheries in the Kuskokwim River drainage when any other fisheries (subsistence and commercial) are closed. It is unclear whether the sport fishery would close if only the commercial fishery is closed. This would reduce sport fishing opportunity. There has not been a directed commercial king salmon fishery since the late 1980s.

**BACKGROUND:** Due to poor returns of king salmon, annual restrictions to the subsistence fishery by emergency order have occurred since 2012. Similarly, sport fishing for king salmon in the Kuskokwim River has been closed by emergency orders, either preseason or simultaneously when inseason subsistence restrictions were issued. It is anticipated that restrictions to subsistence, commercial, and sport fisheries will occur in 2019. Prior to 2012, estimated annual sport fish harvests of king salmon in the Kuskokwim River drainage averaged 685 fish over a 10-year period (2002–2011) based on the Statewide Harvest Survey (Table 118-1). The reported harvest of king salmon by guides during 2006-2012 was 83 fish annually. The estimated harvest of king salmon in the sport fishery in the Kuskokwim River drainage has been zero since 2012 (Table 118-1).

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The department already has the ability under existing regulation to close all king salmon sport fisheries, and this proposal would unnecessarily restrict the department's ability to manage fisheries by drainage(s) based on run strength indicators. During the period of low returns of king salmon since 2012, the Kuskokwim River drainage, including tributaries, has been closed to sport fishing for king salmon by emergency order. If future restrictions to the subsistence fisheries are required to achieve inriver and escapement goals, commensurate measures will be taken for sport fisheries as stipulated by the *Policy for the Management of Mixed Stock Salmon Fisheries* (5ACC 39.220).

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

Table 118-1.–Sport fishing estimated harvest and catch of king salmon in the Aniak, Kisaralik, Kwethluk, and other Kuskokwim rivers, 1996–2017.

| | Aniak River | | Kisaralik River | | Kwethluk River | | Holitna River | | Kuskokwim River Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Harvest | Catch | Harvest | Catch | Harvest | Catch | Harvest | Catch | Harvest | Catch |
| 2002 | 135 | 1,759 | 46 | 531 | 30 | 195 | 53 | 210 | 319 | 3,225 |
| 2003 | 12 | 874 | 75 | 552 | 103 | 861 | 48 | 272 | 391 | 5,020 |
| 2004 | 335 | 1,103 | 58 | 1,774 | 150 | 778 | 136 | 619 | 857 | 5,427 |
| 2005 | 189 | 594 | 40 | 907 | 65 | 385 | 180 | 470 | 572 | 2,652 |
| 2006 | 29 | 1,201 | 86 | 359 | 183 | 493 | 16 | 173 | 444 | 3,480 |
| 2007 | 162 | 5,380 | 446 | 1,096 | 93 | 733 | 86 | 171 | 1,683 | 11,224 |
| 2008 | 26 | 3,614 | 148 | 1,583 | 149 | 845 | 122 | 992 | 739 | 7,382 |
| 2009 | 10 | 796 | 51 | 287 | 42 | 499 | 0 | 676 | 917 | 3,586 |
| 2010 | 0 | 1,902 | 0 | 717 | 136 | 584 | 39 | 130 | 354 | 3,564 |
| 2011 | 51 | 1,069 | 17 | 864 | 0 | 0 | 318 | 1,641 | 579 | 4,249 |
| 2012 | 0 | 135 | 0 | 97 | 0 | 86 | 0 | 0 | 0 | 415 |
| 2013 | 0 | 328 | 0 | 0 | 0 | 211 | 0 | 0 | 0 | 662 |
| 2014 | 0 | 241 | 0 | 111 | 0 | 18 | 0 | 0 | 0 | 370 |
| 2015 | 0 | 66 | 0 | 20 | 0 | 0 | 0 | 129 | 0 | 300 |
| 2016 | 0 | 35 | 0 | 141 | 0 | 477 | 0 | 0 | 0 | 1,174 |
| 2017 | 0 | 0 | 0 | 18 | 0 | 147 | 0 | 0 | 0 | 165 |
| Average 2007–2016 | 25 | 1,357 | 66 | 492 | 42 | 345 | 57 | 368 | 445 | 3,293 |
| Average 2012–2016 | 0 | 161 | 0 | 74 | 0 | 158 | 0 | 26 | 0 | 584 |

**PROPOSAL 119 – 5 AAC 01.295. Aniak River bag and possession limits; 5 AAC 07.365. Kuskokwim River Salmon Management Plan; and 5 AAC 71.010. Seasons and bag, possession, annual, and size limits for the Kuskokwim-Goodnews Area.**

**PROPOSED BY:** Organized Village of Kwethluk.

**WHAT WOULD THE PROPOSAL DO?** Close sport fishing for king salmon on the Aniak River above Doestock Creek by regulation when other fisheries in the Kuskokwim River drainage are closed to the taking of king salmon.

**WHAT ARE THE CURRENT REGULATIONS?** The Aniak River sport bag and possession limit for king salmon is two fish 20 inches or longer, with an annual limit of two fish. Anglers are required to immediately fill out a harvest record upon harvesting a king salmon.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Close sport fishing for king salmon in the Aniak River above Doestock Creek when any other fisheries (subsistence and commercial) in the Kuskokwim River drainage are closed to king salmon. It is unclear whether the sport fishery would close if only the commercial fishery is closed. This would reduce sport fishing opportunity. There has not been a commercial king salmon fishery since the late 1980s.

**BACKGROUND:** Due to poor returns of king salmon, annual restrictions to the subsistence fishery by emergency order have occurred since 2012. Similarly, sport fishing in the Kuskokwim River has been closed by emergency order, either preseason or simultaneously when inseason subsistence restrictions were issued. It is anticipated that restrictions to subsistence, commercial, and sport fisheries will occur in 2019. Prior to 2012, estimated annual sport harvests of king salmon in the Aniak River drainage averaged 95 fish over a 10-year period (2002-2011) based on the Statewide Harvest Survey (Table 119-1). The estimated harvest of king salmon in the Aniak River has been zero since 2012 (Table 119-1). During 2006-2012, guided king salmon harvests have averaged 15 fish annually.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. The department already has the ability under existing regulation to close all king salmon sport fisheries, and this proposal would unnecessarily restrict the department's ability to manage fisheries by drainage(s) based on run strength indicators. During the period of low returns of king salmon since 2012, the Kuskokwim River drainage, including tributaries, has been closed to sport fishing for king salmon by emergency order. If future restrictions to the subsistence fisheries are required to achieve inriver and escapement goals, commensurate measures will be taken for sport fisheries.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the Board made positive customary and traditional use findings for all salmon species in the Kuskokwim Management Area (5 AAC 01.286(a)(3)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? In January 2013 the board revised the amount reasonably necessary findings for five species of salmon in the

Kuskokwim River to be 67,200—109,800 king salmon; 41,200—116,400 chum salmon; 32,200—58,700 sockeye salmon; 27,400—57,600 coho salmon; and 500—2,000 pink salmon. The ANS for salmon in the remainder of the Kuskokwim Area is 6,900–17,000 salmon in districts 4 and 5, combined, and12,500–14,400 salmon in the remainder of the area (all species combined; 5 AAC 01.286(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

Table 119-1.–Sport fishing estimated harvest and catch of king salmon in the Aniak, Kisaralik, Kwethluk, and other Kuskokwim rivers, 1996–2017.

| | Aniak River | | Kisaralik River | | Kwethluk River | | Holitna River | | Kuskokwim River Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Harvest | Catch | Harvest | Catch | Harvest | Catch | Harvest | Catch | Harvest | Catch |
| 2002 | 135 | 1,759 | 46 | 531 | 30 | 195 | 53 | 210 | 319 | 3,225 |
| 2003 | 12 | 874 | 75 | 552 | 103 | 861 | 48 | 272 | 391 | 5,020 |
| 2004 | 335 | 1,103 | 58 | 1,774 | 150 | 778 | 136 | 619 | 857 | 5,427 |
| 2005 | 189 | 594 | 40 | 907 | 65 | 385 | 180 | 470 | 572 | 2,652 |
| 2006 | 29 | 1,201 | 86 | 359 | 183 | 493 | 16 | 173 | 444 | 3,480 |
| 2007 | 162 | 5,380 | 446 | 1,096 | 93 | 733 | 86 | 171 | 1,683 | 11,224 |
| 2008 | 26 | 3,614 | 148 | 1,583 | 149 | 845 | 122 | 992 | 739 | 7,382 |
| 2009 | 10 | 796 | 51 | 287 | 42 | 499 | 0 | 676 | 917 | 3,586 |
| 2010 | 0 | 1,902 | 0 | 717 | 136 | 584 | 39 | 130 | 354 | 3,564 |
| 2011 | 51 | 1,069 | 17 | 864 | 0 | 0 | 318 | 1,641 | 579 | 4,249 |
| 2012 | 0 | 135 | 0 | 97 | 0 | 86 | 0 | 0 | 0 | 415 |
| 2013 | 0 | 328 | 0 | 0 | 0 | 211 | 0 | 0 | 0 | 662 |
| 2014 | 0 | 241 | 0 | 111 | 0 | 18 | 0 | 0 | 0 | 370 |
| 2015 | 0 | 66 | 0 | 20 | 0 | 0 | 0 | 129 | 0 | 300 |
| 2016 | 0 | 35 | 0 | 141 | 0 | 477 | 0 | 0 | 0 | 1,174 |
| 2017 | 0 | 0 | 0 | 18 | 0 | 147 | 0 | 0 | 0 | 165 |
| Average 2007–2016 | 25 | 1,357 | 66 | 492 | 42 | 345 | 57 | 368 | 445 | 3,293 |
| Average 2012–2016 | 0 | 161 | 0 | 74 | 0 | 158 | 0 | 26 | 0 | 584 |

## PROPOSAL 120 – 5 AAC 71.010. Seasons and bag, possession, annual, and size limits for the Kuskokwim - Goodnews Area.

**PROPOSED BY:** Chariton Epchook.

**WHAT WOULD THE PROPOSAL DO?** In times of salmon conservation within the Kuskokwim River drainage, close sport fishing to all fish species and recreational rafting on the Kwethluk, Kasigluk, and Kisaralik rivers from May 1 to October 31.

**WHAT ARE THE CURRENT REGULATIONS?** In the Kuskokwim River drainage, the bag and possession limit for king salmon is three fish 20 inches or greater, of which only two may be 28 inches or greater in length. The king salmon season runs from May 1 through July 25. For other salmon, the bag and possession limit is five fish, with no size limit. The following regulations apply to the Kwethluk, Kasigluk, and Kisaralik rivers. Only unbaited, single-hook, artificial lures are allowed. There is a bag and possession limit of two rainbow trout, only two of which may be only 20 inches or greater in length, with an annual limit of two rainbow trout 20 inches or greater in length. In a portion of the Kisaralik River, rainbow trout cannot be harvested and must be released immediately. For Arctic char/Dolly Varden, the bag and possession limit is five fish, only two of which may be 20" or greater in length. The sheefish bag and possession limit is five fish, no size limit. The northern pike bag and possession limit is five fish, only one of which may be 30 inches or greater in length.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** If restrictions to any salmon fisheries (subsistence or commercial) are issued in the Kuskokwim River drainage, this would eliminate sport fishing opportunity for all species (salmon and nonsalmon) and all rafting would be prohibited in the Kwethluk, Kasigluk, and Kisaralik rivers from May 1 to October 31.

**BACKGROUND:** The Kwethluk, Kasigluk, and Kisaralik rivers are tributaries in the lower Kuskokwim River drainage (Figure 120-1). Due to poor returns of king salmon, annual restrictions to the subsistence fishery by emergency order have occurred since 2012. Similarly, sport fishing for king salmon in the Kuskokwim River drainage has been closed by emergency orders, either preseason or simultaneously when inseason subsistence restrictions were issued. Based on the Statewide Harvest Survey, sport harvests of salmon and other species on the Kwethluk and Kisaralik are relatively small and the sport fishery on the Kasigluk River has very few participants (Table 120-1). If fewer than four guide businesses operate on a river, department policy prevents releasing the information to the public. Fewer than four guide businesses have operated annually on the Kwethluk, Kasigluk, and Kisaralik rivers, except that in 2015 there were four business registered on the Kwethluk River. The small number of guides per river is consistent with low estimates of angler participation. No information on the number of rafters floating these rivers is available.

**DEPARTMENT COMMENTS**: The department **OPPOSES** this proposal. During the period of low returns of king salmon since 2012, the entire Kuskokwim River drainage, including tributaries, has been closed to sport fishing for king salmon by emergency order. If future restrictions to the subsistence fisheries are required, commensurate restrictions to the sport fishery will be taken through EO authority to achieve escapement goals. This proposal would unnecessarily prohibit sport fishing for salmon and nonsalmon species, and the board does not have the authority to limit solely recreational rafting that is not directly connected to fishing or guiding anglers.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

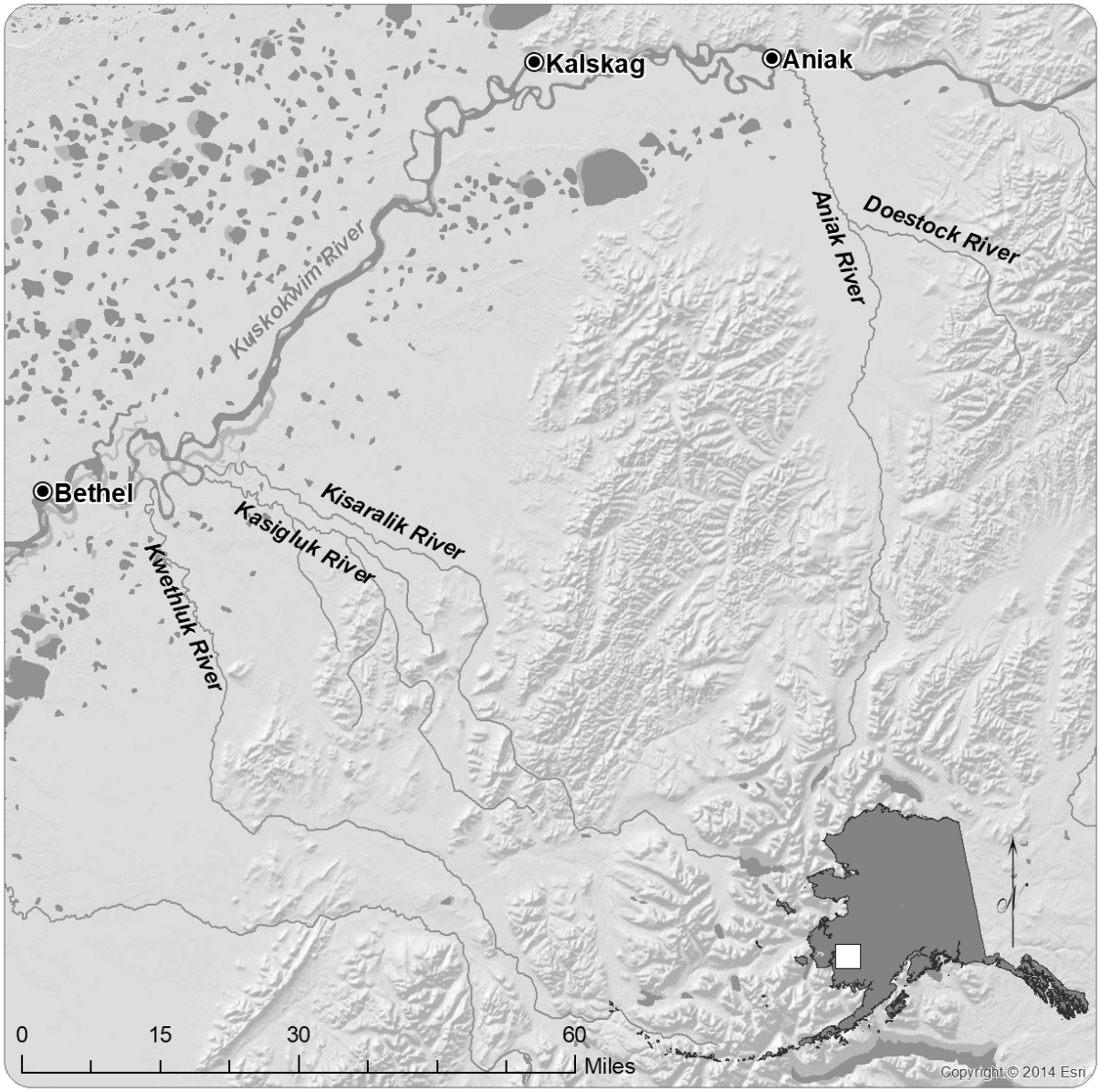



Figure 120-1.–Locations of Kwethluk, Kasigluk, Kisaralik, and Aniak rivers.

Table 120-1.–Estimated sport fishing effort (days fished), and sport harvest of salmon and non-salmon species for the Kisaralik, Kwethluk, Kasigluk rivers.

| | Kisaralik R. | | | | Kwethluk R. | | | | Kasigluk R. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Days Fished | King salmon | Other salmon | Non-salmon | Days Fished | King salmon | Other salmon | Non-salmon | Days Fished | King salmon | Other salmon | Non-salmon |
| 2007 | 757 | 446 | 84 | 273 | 1,067 | 93 | 0 | 41 | 38 | 0 | 0 | 36 |
| 2008 | 2,576 | 148 | 1,032 | 441 | 1,092 | 149 | 117 | 146 | 0 | 0 | 0 | 84 |
| 2009 | 2,235 | 51 | 591 | 344 | 1,387 | 42 | 457 | 385 | 0 | 0 | 15 | 0 |
| 2010 | 2,056 | 0 | 196 | 149 | 1,453 | 136 | 376 | 403 | 127 | 95 | 392 | 0 |
| 2011 | 2,417 | 17 | 271 | 160 | 369 | 0 | 171 | 129 | 0 | 0 | 150 | 0 |
| 2012 | 1,420 | 0 | 126 | 468 | 1,152 | 0 | 536 | 148 | 0 | 0 | 0 | 55 |
| 2013 | 1,871 | 0 | 383 | 560 | 1,117 | 0 | 223 | 534 | ND | ND | ND | ND |
| 2014 | 3,187 | 0 | 305 | 730 | 645 | 0 | 228 | 422 | ND | ND | ND | ND |
| 2015 | 662 | 0 | 128 | 39 | 609 | 0 | 100 | 0 | 0 | 0 | 82 | 0 |
| 2016 | 1,709 | 0 | 259 | 48 | 1,803 | 0 | 453 | 271 | ND | ND | ND | ND |
| 2017[a] | 978 | 0 | 127 | 171 | 1,468 | 0 | 483 | 68 | ND | ND | ND | ND |
| 5-yr average (2012-2016) | 1,770 | 0 | 240 | 369 | 1,065 | 0 | 308 | 275 | 0 | 0 | 16 | 11 |
| 10-yr average (2007-2016) | 1,889 | 66 | 338 | 321 | 1,069 | 42 | 266 | 248 | 24 | 14 | 64 | 18 |

[a] Preliminary estimates.

## PROPOSAL 121 – 5 AAC 71.030. Methods, means, and general provisions–Finfish.

**PROPOSED BY:** Lisa Feyereisen.

**WHAT WOULD THE PROPOSAL DO?** This would close guided fishing in the Aniak River on weekends and would limit the number of people in guided boats to four.

**WHAT ARE THE CURRENT REGULATIONS?** There are no regulations for state waters in the Kuskokwim River drainage that impose restrictions to guided sport fishing based on specified days within a calendar week, nor are there restrictions on how many people may be present in a guided boat.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would reduce the number of days a guide could operate in a week and would limit the number of people that could participate per vessel in guided trips. This would potentially reduce fishing opportunity and effort. Guides and guide-related businesses may experience an economic loss.

**BACKGROUND:** The majority of the sport fishing effort in the Kuskokwim-Goodnews Area occurs in three areas: Kuskokwim Bay tributaries (including the Kanektok, Goodnews, and Arolik rivers), the Aniak River, and the Lower Kuskokwim River tributaries near Bethel (i.e., Kwethluk and Kisaralik rivers). Among these tributaries, the Aniak and Kisaralik are similar in scale relative to the number of guided clients. An average of 19 guides operated annually during 2007-2016; this number has trended downward since 2013 (Table 121-1). Prior to 2012, estimated annual sport harvests of king salmon in the Aniak River drainage averaged 95 fish over a 10-year period (2002-2011) based on the Statewide Harvest Survey (Table 119-1). The estimated harvest of king salmon in the Aniak River has been zero since 2012 (Table 119-1). During 2006-2012, guided king salmon harvests have averaged 15 fish annually.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal because the department manages the Aniak River and its fish populations for sustainability by emergency order. There are no restrictions to sport fishing based on specified days in a calendar week in the AYK Region for state waters. This would increase regulatory complexity and reduce sport fishing opportunity in the absence of a measurable biological benefit. The department is **NEUTRAL** on the allocative aspects of this proposal.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

Table 121-1.–Angling effort (i.e. days fished), and number of guides and clients provided by the Sport Fish Business/Guide Licensing and Logbook Program for the Aniak River, 2006-2017.

| Year | Days fished | Number of Guides | Number of clients | | Total Clients |
|---|---|---|---|---|---|
| | | | Resident | Non-Resident | |
| 2006[a] | 3,096 | NA[a] | NA | NA | NA |
| 2007 | 3,363 | 17 | 7 | 645 | 663 |
| 2008 | 4,559 | 19 | 17 | 814 | 831 |
| 2009 | 2,611 | 23 | 7 | 757 | 765 |
| 2010 | 2,909 | 22 | 2 | 611 | 626 |
| 2011 | 1,715 | 21 | 6 | 580 | 587 |
| 2012 | 2,315 | 19 | 1 | 521 | 526 |
| 2013 | 2,189 | 23 | 6 | 424 | 438 |
| 2014 | 882 | 18 | 5 | 431 | 466 |
| 2015 | 1,528 | 15 | 7 | 420 | 496 |
| 2016 | 1,380 | 12 | 0 | 184 | 186 |
| 2017[a] | 652 | NA[a] | NA | NA | NA |

[a] ADF&G policy prevents the release of information where there are fewer than 4 guide businesses.

## PROPOSAL 122 – 5 AAC 71.030. Methods, means, and general provisions–Finfish.

**PROPOSED BY**: Alissa Nadine Rogers.

**WHAT WOULD THE PROPOSAL DO?** This would require non-utilized parts of a salmon carcass (e.g., tail and viscera) to be retained. These parts must first be offered to dog mushers and garden groups before requiring disposal by burying them away from communities or discarding the parts mid-river away from shore.

**WHAT ARE THE CURRENT REGULATIONS?** There are no fisheries regulations that specify disposal criteria regarding non-utilized portions of a salmon carcass.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would require those participating in the sport fishery to: 1) retain filleted salmon carcasses and viscera, 2) transport these parts to a musher or gardener for offering, and 3) if rejected, bury them away from communities or discard them mid-river.

**BACKGROUND:** Fish parts on beaches have been a complaint in the Kwethluk, Kasigluk and Kisaralik river drainages. The department encourages best practices when disposing non-utilized parts of fish.

**DEPARTMENT COMMENTS:** The department **OPPOSES** this proposal. Best practices and common courtesy are encouraged for disposal of non-utilized parts of a salmon. There are no fisheries regulations that specify disposal criteria regarding non-utilized portions of a salmon carcass in the state. This proposal is not enforceable and would increase regulation complexity.

**COST ANALYSIS:** Approval of this proposal is expected to result in an additional direct cost for a private person to participate in this fishery. Additional time and travel expenses, such as fuel, would be required to transport and dispose of filleted salmon carcasses in the manner described.

# COMMITTEE OF THE WHOLE – GROUP 4: NORTON SOUND SUBSISTENCE AND COMMERCIAL (5 PROPOSALS)

## NORTON SOUND SUBSISTENCE FISHERIES (2 PROPOSALS)

### PROPOSAL 123 – 5 AAC 01.182. Tier II subsistence chum salmon fishery.

**PROPOSED BY:** Northern Norton Sound Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Repeal Norton Sound Subdistrict 1 Tier II subsistence chum salmon fishery.

**WHAT ARE THE CURRENT REGULATIONS?** If a harvestable surplus of chum salmon is determined insufficient in Subdistrict 1 (Nome) prior to the fishing season a subsistence chum salmon fishery by Tier II permit would occur (5 AAC 01.182) using a scoring system (5 AAC 01.184).

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** There would be no Norton Sound Subdistrict 1 Tier II subsistence chum salmon fishery and all Alaska residents could participate in subsistence fishing when open. If a harvestable surplus of chum salmon was determined to be insufficient during the fishing season the department would close the subsistence chum salmon fishery. The subsistence chum salmon fishery may reopen if chum salmon escapements were projected to be achieved. Also, the subsistence chum salmon fishery may reopen if further restricting fishing time would have no impact on achieving chum salmon escapement goals but would impact subsistence participants' ability to harvest pink and coho salmon.

**BACKGROUND:** The Norton Sound Subdistrict 1 (Figure 123.1) Tier II subsistence chum salmon fishery was implemented in 1999, with 20 household permits issued. A poor chum salmon run resulted in the closure of the fishery and the following year only 10 permits were issued. After several years of the Tier II chum salmon fishery, managers observed a pattern that some successful Tier II applicants never picked up their permits or never fished and almost all did not reach their catch limit. Although the limit had been 100 chum salmon the average chum salmon harvest was approximately one-third of the amount allowed. Also, some permit holders were not targeting chum salmon, but instead targeting pink salmon during Tier II chum salmon subsistence fishing periods.

In 2004 and 2005, the department issued Tier II chum salmon permits to all applicants and in 2006 stopped issuing Tier II chum salmon permits because surpluses of chum salmon during the two previous years had been far enough above the low end of the amount reasonably necessary for subsistence uses of chum salmon (3,430 fish) to allow all subsistence permit holders to target chum salmon. Since then, the Subdistrict 1 escapement goal range of 23,000 to 35,000 has been reached or exceeded in all years except 2009. In 2009 the chum salmon subsistence fishery was closed for a short duration when escapement was predicted to fall short of 23,000 fish: the final escapement estimate was 21,368 chum salmon. Beginning in 2010, the escapement goal range has been greatly exceeded every year, with escapements ranging from 51,459 in 2012 to 123,781 in 2017. Since 2009, the average chum salmon escapement in Subdistrict 1 has been nearly 87,000 fish. This has created harvestable surpluses of over 50,000 chum salmon on average since 2010.

Although there have been near record to record runs of chum salmon in recent years the Subdistrict 1 subsistence chum salmon harvest has not exceeded 4,000 chum salmon. Only in 2014 (3,844) and 2015 (3,967) did the harvest reach the lower end of the ANS range of 3,430 to 5,716 chum salmon. A record number of subsistence permits have been issued in recent years but permit holders have targeted other salmon species. Record subsistence harvests of coho and sockeye salmon have occurred in Subdistrict 1, and record harvests of sockeye salmon have occurred in the nearby Pilgrim River. Also, record runs of pink salmon have resulted in record hook and line subsistence harvests in Subdistrict 1 in recent even-numbered years.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal but supports providing maximum subsistence fishing opportunity for a given annual run size. The department **SUPPORTS** eliminating the Norton Sound Subdistrict 1 Tier II subsistence chum salmon fishery. This Tier II fishery had severely restricted the department's ability to provide timely subsistence fishing opportunity for households that did not qualify for the Tier II fishery.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for chum salmon in Subdistrict 1 of the Norton Sound District (5 AAC 01.186).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board established the amount reasonably necessary for subsistence (ANS) for chum salmon in Subdistrict 1 of the Norton Sound District at 3,430 to 5,716 chum salmon (5 AAC 01.186(b)(2)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

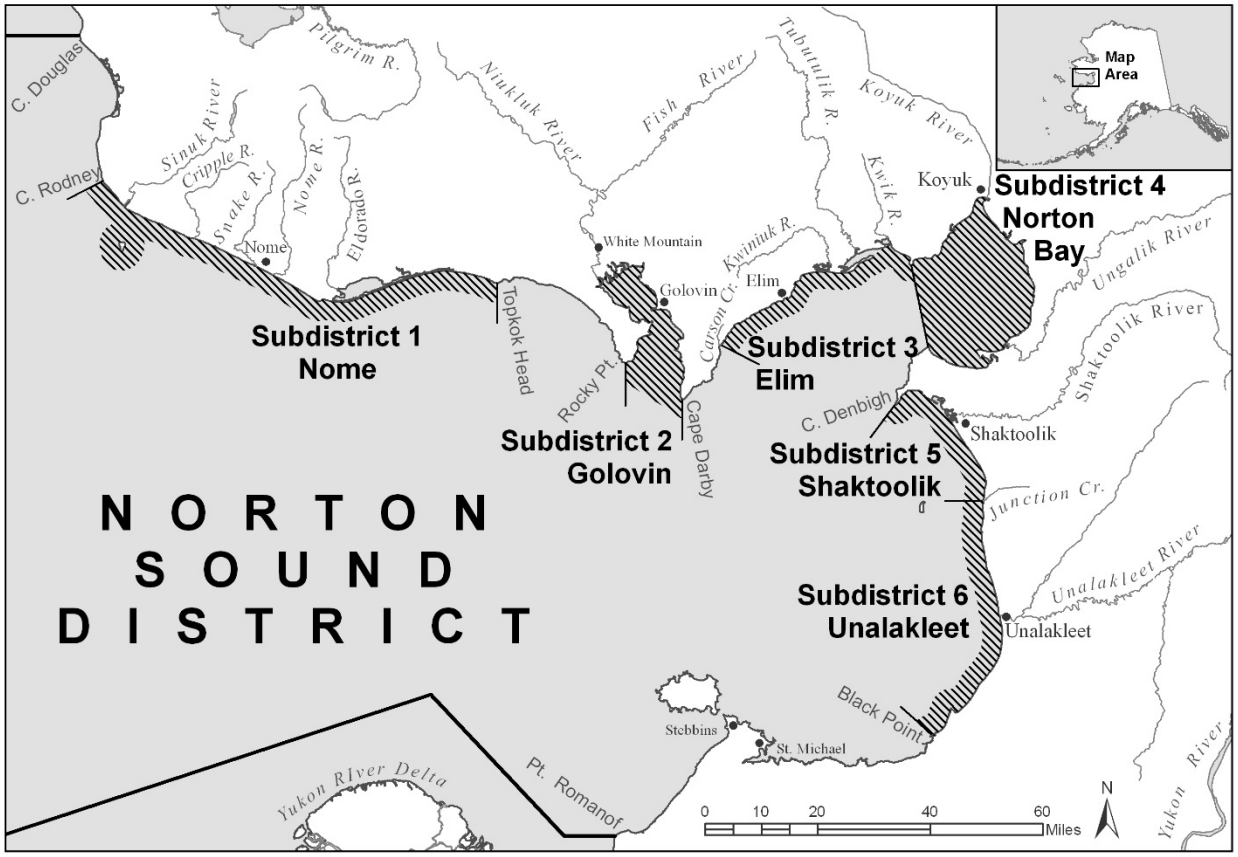



Figure 123.1.–Map showing major salmon producing river drainages and commercial fishing subdistricts in the Norton Sound District.

## PROPOSAL 124 – 5 AAC 01.190. Subdistrict 1 of the Norton Sound District Chum Salmon Management Plan.

**PROPOSED BY:** Northern Norton Sound Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Repeal the Subdistrict 1 (Nome) chum salmon management plan in the subsistence finfish section and readopt in the commercial salmon fishery section with increased opportunities for commercial fishing by having earlier start and end dates to the season and increased fishing time during weekly fishing periods for all species.

**WHAT ARE THE CURRENT REGULATIONS?** The department shall manage Subdistrict 1 to achieve optimal escapement goals for chum salmon so that a Tier II subsistence fishery will not be necessary. Commercial fishing for chum and pink salmon may be opened in the waters east or west of Cape Nome, or both, by emergency order, after escapement goals are projected to be met. Salmon may be taken in a commercial fishery in Subdistrict 1 after July 1 through August 31 during no more than two 24-hour fishing periods per week. In the subsistence fishery, chum salmon fishing shall be opened and closed by emergency order on a stream-by-stream basis, when chum salmon stocks are abundant enough to provide of optimal escapement goals and a harvestable surplus. A household subsistence fishing permit is required for chum salmon fishing, with the department's discretion to identify the body of water to be fished and the allowable gear. If chum salmon subsistence fishing is closed, the department has emergency order authority to close the commercial fishery and immediately re-open the fishery during which chum salmon may be retained but not sold. There are other regulations for subsistence salmon fishing for other species in Subdistrict 1.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?**

The proposal would move the subsistence chum salmon management plan from the Norton Sound subsistence fishery section to the commercial fishery section. There is no foreseen effect to management of the subsistence chum salmon fishery and the provision of reasonable opportunity. The commercial fishing season would be expanded from a start date of after July 1 to on or after June 20 and from an end date of August 31 to September 7. During times of high salmon abundance increased commercial fishing time during weekly fishing periods would be allowed to create more opportunity for harvest.

**BACKGROUND:** In the 2000s, commercial salmon fishing did not occur in Subdistrict 1 until 2013 because of restrictions to chum salmon fishing and limited buyer interest. In recent years Subdistrict 1 has had near record to record runs of chum, pink, sockeye and coho salmon. A near record run of chum salmon was expected in 2018 and the department opened commercial fishing on June 27 rather than waiting until after July 1. By the second week of July, commercial fishing time was increased to two 48-hour fishing periods a week when all chum salmon escapement goals were projected to be exceeded. A record coho salmon run to Subdistrict 1 in 2018 resulted in continuing two 48-hour fishing periods a week and extending the season until mid-September with 72-hour and 96-hour fishing periods.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** this proposal with modification. The department supports moving the management plan to the commercial fishery section if the plan is updated as described in the proposal and clarified to still require a permit, and that the new regulations apply only to subsistence chum salmon fishing because there are regulations in other sections of the subsistence chapter that apply to fishing for other salmon species. The department also

supports repealing the Subdistrict 1 restriction of no more than two 24-hour commercial fishing periods per week; however, instead of establishing commercial fishing periods of fixed duration, the department prefers establishing commercial fishing periods by emergency order as in other Norton Sound subdistricts. This proposal would not change the priority of the subsistence chum salmon fishery in Subdistrict 1. Subdistrict 1 escapement assessment projects become operational in late June and early July. Therefore, the department cannot project Subdistrict 1 chum salmon abundance and escapement in time to allow commercial fishing in late June and early July, but instead could open the commercial fishery by emergency order if warranted based on chum salmon run abundance and escapement in nearby Norton Sound subdistricts. The department is **NEUTRAL** on the allocative aspects of this proposal.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for salmon and all finfish other than salmon. Additionally, the board has made a specific positive customary and traditional use finding for chum salmon in Subdistrict 1 of the Norton Sound District (5 AAC 01.186).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board established the amount reasonably necessary for subsistence (ANS) for salmon in the Norton Sound-Part Clarence Area as 96,000–160,000 fish; and specifically for chum salmon in Subdistrict 1 of the Norton Sound District at 3,430 to 5,716 chum salmon (5 AAC 01.186(b)(2)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

## NORTON SOUND COMMERCIAL FISHERIES (3 PROPOSALS)

### PROPOSAL 125 – 5 AAC 04.310. Fishing Seasons.

**PROPOSED BY:** Northern Norton Sound Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Change the start of the commercial fishing season in Norton Sound Subdistrict 1 (Nome) from after July 1 to on or after June 20.

**WHAT ARE THE CURRENT REGULATIONS?** Salmon may be taken in a commercial fishery in Subdistrict 1 after July 1 through August 31, unless closed by emergency order.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The proposal requests a change in regulation to allow for an earlier start to the commercial fishing season. An earlier start to the commercial fishing season would create more opportunity for harvest.

**BACKGROUND:** In every year since 2013, when commercial salmon fishing resumed in Subdistrict 1, all chum salmon escapement goals have been exceeded, and there have been no restrictions to the subsistence fishing schedule. Because of the near record chum salmon run in 2018, the department opened the commercial fishery on June 27 rather than waiting until after July 1.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal. This proposal is like Proposal 124 that also requested a June 20 commercial fishery start date.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

## PROPOSAL 126 – 5 AAC 04.320. Fishing periods.

**PROPOSED BY:** Northern Norton Sound Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Repeal the restriction on the length of commercial salmon fishing periods in Norton Sound Subdistrict 1 (Nome).

**WHAT ARE THE CURRENT REGULATIONS?** In Subdistrict 1, commercial salmon may be taken during no more than two 24-hour fishing periods per week.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The length of Subdistrict 1 commercial salmon fishing periods would be established by emergency order. During times of high salmon abundance increased commercial fishing time during weekly fishing periods would be allowed to create more opportunity for harvest.

**BACKGROUND:** In recent years Subdistrict 1 has had near record to record runs of chum, pink, sockeye and coho salmon. Because of the near record chum salmon run in 2018, the department extended commercial fishing time to two 48-hour fishing periods per week during most of the chum salmon run. A record 2018 coho salmon run in Subdistrict 1 resulted in continuing the two 48-hour fishing periods per week through early September, and then allowing longer commercial fishing periods through the end of the season by extension to September 14.

**DEPARTMENT COMMENTS:** The department **SUPPORTS** eliminating the provision of only two 24-hour commercial fishing periods per week in Subdistrict 1 and allowing commercial periods to be established by emergency order. This proposal is like Proposal 124 that requested additional fishing time based on run strength. The department is **NEUTRAL** on the allocative aspects of this proposal.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

## PROPOSAL 127 – 5 AAC 04.362. Guideline harvest range for Port Clarence District.

**PROPOSED BY:** Northern Norton Sound Fish and Game Advisory Committee.

**WHAT WOULD THE PROPOSAL DO?** Repeal the guideline harvest range for the Port Clarence District commercial salmon fishery and replace with a salmon management plan that establishes criteria to open the fishery and set the commercial period duration. This management plan would also set the annual household subsistence sockeye salmon catch limit in Pilgrim River based on the average salmon escapement from the two previous years under three scenarios of increasing limits aligned with higher average escapements.

**WHAT ARE THE CURRENT REGULATIONS?** A commercial salmon fishery is allowed if the department projects an inriver run goal of at least 30,000 sockeye salmon in the Pilgrim River. Commercial fishing periods are established by emergency order with a guideline harvest range of 0 to 10,000 sockeye salmon. The annual household subsistence sockeye salmon catch limit is 25 fish in the Pilgrim River; a household permit is required.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Commercial salmon fishing periods would be established in regulation with the amount of fishing opportunity determined on average sockeye salmon escapement from the two previous years. The annual household subsistence sockeye salmon catch limit may be two to four times higher than the previous limit at the season start based on average sockeye salmon escapement from the two previous years.

**BACKGROUND:** There has been no commercial salmon fishing in Port Clarence District since 2008 because there is no fish buyer operating in the area.

In the mid-2000s there were record sockeye salmon runs in the Port Clarence District. Subsistence sockeye salmon catch limits were often waived and the limit at the start of the season was raised until 2008 when it reached 250 fish. When the Port Clarence sockeye salmon run crashed in 2009, concern was expressed by some subsistence participants that the catch limit was too high at the start of the run. People who lacked boats felt too many fish had been caught farther downstream in the Pilgrim River and in marine waters of the Port Clarence District. Those who lacked boats were limited in their access to that part of the Pilgrim River adjacent to the road from Nome and had little chance to harvest sockeye salmon in low run years. For example, in 2009, the sockeye salmon passage at Pilgrim River weir was 953 fish and 6 sockeye salmon were reported caught upstream of the weir. Although the Pilgrim River length downstream of the weir is only approximately one-third of the entire river length, there were 688 sockeye salmon reported caught in that river section and 949 sockeye salmon were reported caught in Port Clarence District marine waters.

In the fall of 2009, the Northern Norton Sound Fish and Game Advisory Committee recommended that the department set the annual subsistence limit at 25 sockeye salmon in Pilgrim River and allow the limit to be raised or waived if the run size allowed for more harvest. The annual subsistence limit of 25 sockeye salmon has been in place since 2010 and was placed in regulation by the board in 2016. During the last four years the sockeye salmon catch limit has been waived early in the run and the four highest subsistence sockeye salmon harvests on record have occurred in those years.

**DEPARTMENT COMMENTS:** The department is **OPPOSED** to aspects of this proposal that would base the amount of commercial fishing time and subsistence harvest limits on past year's escapements. A situation similar to 2009 may occur again when sockeye salmon were overharvested in the subsistence fishery downstream of the weir before the department closed the fishery. The Pilgrim River weir is upstream of where most sockeye salmon are harvested in the Pilgrim River and with a large subsistence catch limit the department may not be able to close the fishery in a timely manner to allow for adequate escapement. The department is **NEUTRAL** on the allocative aspects of this proposal.

**COST ANALYSIS:** Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery.

**SUBSISTENCE REGULATION REVIEW:**

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for salmon in the Norton Sound – Port Clarence Area (5 AAC 01.186).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? The board established the amount reasonably necessary for subsistence (ANS) in the Norton Sound – Port Clarence Area at 96,000 to 160,000 salmon (5 AAC 01.186(b)(1)).
5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence uses? This is a board determination.

# COMMITTEE OF THE WHOLE – GROUP 5
# MISCELLANEOUS SPORT AND COMMERCIAL FISHING
# (3 PROPOSALS)

## SPORT FISHING SERVICES AND GUIDE SERVICES (1 PROPOSAL)

**PROPOSAL 175 – 5 AAC 47.090. George Inlet superexclusive guided sport ecotourism Dungeness crab fishery; 5 AAC 47.091. Nakwasina Sound superexclusive guided sport ecotourism Dungeness crab fishery; 5 AAC 75.075. Sport fishing services and sport fishing guide services; salt water license and fresh water registration requirements; regulation of activities; 5 AAC 75.076. Sport fishing guide and operator reporting requirements; 5 AAC 75.085. Guided sport ecotourism requirements; and 5 AAC 75.995. Definitions.**

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Amend saltwater sport fishing guide and operator licensing requirements and references in other sections of the Fishing Services and Sport Fishing Guides regulations to align regulations for sport fishing services and sport fishing guide services in fresh and salt waters and update sport fishing guide and operator reporting requirements consistent with Alaska Statutes.

**WHAT ARE THE CURRENT REGULATIONS?** Current regulations require sport fishing businesses and guides operating in fresh water to be registered with the department, while sport fishing businesses and guides operating in salt water are required to obtain a salt water operator license or a salt water guide license. Before a vessel is used to provide sport fishing guide services in fresh or salt waters, a vessel must be registered with the department.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** Regulations for salt water sport fishing guides and operators would no longer be in conflict with statute. It would continue vessel registration and logbook programs for all sport fishing guides and operators with no gap in data collection. These data will continue to provide the department, board, and other entities with detailed information on harvest and effort of guided anglers in fresh- and saltwater fisheries.

**BACKGROUND:** In February 1998, the board established statewide *registration* requirements for sport fishing businesses and guides and required sport fishing business owners to complete logbooks for saltwater charter vessels. In May 2004, the Alaska Legislature adopted HB 452 that established statewide *licensing* requirements for sport fishing guide business owners and sport fishing guides. Licensing requirements include license fee and minimum insurance provisions – requirements authorized by the Alaska Legislature but not the board – where registration requirements do not. The bill also established reporting requirements for all guided fishing trips, in both salt and fresh waters, and required that all vessels used in these guided fishing trips be registered with the department. In November 2004, the board amended the state regulations for sport fishing guide businesses and guides to implement the new statutes created by the Alaska Legislature. The statutes (AS 16.05.260–16.05.299) established by adoption of HB 452 sunsetted effective January 1, 2015.

House Bill 41 (HB41) was submitted during the 29th Legislature to reimplement the provisions that sunsetted in January, 2015. During the 2016 legislative session, HB 41 was adopted as amended by the Alaska Legislature to require licensing of sport fishing guides and businesses operating in salt water and not freshwater. This most recent legislation will sunset January 1, 2019.

The department has operated a program to register [1998–2004, 2015–2016, 2017–2018 (for fresh water)] and/or license [2005–2014, 2017–2018 (for salt water)] both sport fishing guides and businesses, administer sport fishing salt (since 1998) and fresh (since 2005) water guide logbooks, and register sport fishing guide vessels (since 2005)(Figures 175-1,2).

**DEPARTMENT COMMENTS:** The department submitted and **SUPPORTS** this proposal.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

## SOUTHEAST ALASKA PROPOSALS (2 PROPOSALS)

### PROPOSAL 176 – 5 AAC 47.055. Southeast Alaska King Salmon Management Plan.

**PROPOSED BY:** Alaska Department of Fish and Game.

**WHAT WOULD THE PROPOSAL DO?** Existing management measures based on the 2009-2018 Pacific Salmon Treaty (PST) prescribed in the current *Southeast Alaska King Salmon Management Plan* (5 AAC 47.055; SEAKKSMP) would be aligned with the seven new harvest limit tiers established under the renewed 2019-2028 PST. Additionally, management measures would be based on the Southeast (SEAK) Alaska Winter Troll CPUE and its treaty equivalent instead of the SEAK king salmon preseason abundance index (AI), values generated by the Chinook Technical Committee of the Pacific Salmon Commission (PSC).

**WHAT ARE THE CURRENT REGULATIONS?** The king salmon harvest ceiling for SEAK fisheries under terms of the PST is allocated domestically by the Alaska Board of Fisheries (board). The SEAKKSMP and regulations under the *Allocation of king salmon in the Southeastern Alaska-Yakutat Area (5 AAC 29.060)* direct the department to manage the sport fishery for a harvest of 20 percent and the commercial troll fishery of 80 percent of the annual harvest ceiling (all-gear harvest limit) specified by the PSC, after subtracting the commercial net harvest as follows: purse seine fishery, 4.3 percent; drift gillnet 2.9 percent; and set gillnet fishery 1,000 king salmon.

The SEAKKSMP directs the department to establish specific regionwide bag limits for resident and nonresident anglers and annual limits for nonresident anglers at various levels of king salmon abundance (as measured by the king salmon preseason AI). Under the current plan, the nonresident bag limit is generally 1 fish; the exception being 2 fish limits in May and June when the AI is greater than 2.0 and a 2 fish limit in May when the AI is greater than 1.75. The resident bag limit is 3 fish when the AI is greater than 1.5, 2 fish when the AI is less than 1.5 and greater than 1.2 and 1 fish when the AI is less than 1.2. Additionally, the plan directs the department to establish periods of nonretention for nonresidents, as well as resident anglers, under very low AI levels. The nonresident annual limit is established using a sliding scale that becomes progressively more restrictive as the AI declines, from a maximum of 6 fish annually at high levels to a low of 1 fish.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** The sport fishery would continue to be managed to attain an average harvest of 20% of the all-gear harvest limit specified by the PSC, minimize regulatory restrictions on resident anglers; and provide stability to the sport fishery by eliminating inseason regulatory changes, except those necessary for conservation purposes.

**BACKGROUND:** The SEAKKSMP was adopted by the board in 1992, and subsequently modified by the board in 1994, 1997, 2000, 2003, 2006, 2009, 2012 and 2018.

Prior to 2003 the commercial troll fishery was managed to harvest the difference between the all-gear harvest limit less the net allocation and projected sport harvest. Cumulative sport harvests above the sport fishery allocation came out of the troll allocation and were to be paid back in future years by not implementing more liberal regulations in the sport fishery, and the cumulative number of fish not harvested (underage) was applied as an offset against excess harvests in prior or future years.

The SEAKKSMP has seen numerous changes since inception, and these changes have continually focused on keeping sport harvests on average within the 20% allocation to the sport fishery. In 2002, the board established and charged a task force to work toward developing a suite of management prescriptions within the context of the plan that would keep the sport fishery within their allocation given growing concerns of increasing nonresident angler participation in the SEAK sport fishery, and to address an apparent pattern of consistent overages of the allocation. The task force worked diligently for over a year to come to consensus on a set of management measures within the context of the SEAKKSMP for presentation to the board and the board adopted these measures in 2003. The primary changes to the plan in 2003 were to achieve the following: 1) require that the sport and troll fisheries be managed separately to achieve their own allocations (uncoupling of the fisheries); 2) cumulative overages or underages in the sport fishery would not be used to liberalize or restrict regulations; 3) at AIs above 1.2, reduce either bag limits, annual limits, or both for nonresidents; 4) remove additional restrictions to resident anglers fishing on guided vessels; and 5) implement a series of additional restrictions at lower AIs.

A new agreement on fishery arrangements under the PST was reached between the U.S. and Canada in May 2008. One of the key elements to reaching that agreement was a 15% reduction to the all-gear harvest limit of king salmon in the SEAK fisheries. This reduction had significant implications for management of the sport fishery, especially at lower levels of abundance. To address resulting reductions in the sport fishery allocations, the board modified harvest limits at the 2009 board meeting for nonresident anglers in years when the AI is 1.1 or lower. Additionally, the board modified management measures to allow resident anglers the use of two rods from October through the following March when the AI is less than or equal to 1.5.

The current SEAKKSMP establishes four key objectives. These objectives state that the sport fishery will be managed by the department to accomplish the following: 1) manage the sport fishery to attain an average harvest of 20% of the all-gear harvest limit specified by the PSC, after subtraction of the allocation specified in 5 AAC 29.060; 2) allow uninterrupted sport fishing in salt water for king salmon while not exceeding the sport allocation; 3) minimize regulatory restrictions on resident anglers; and 4) provide stability to the sport fishery by eliminating inseason regulatory changes, except those necessary for conservation purposes.

In order to meet these objectives, the SEAKKSMP lists specific management measures that may be applied to the sport fishery at specified ranges of abundance and directs the department to

establish specific regionwide regulations that will either liberalize or restrict harvest. The plan triggers management action based on the preseason AI, from which a specific harvest level for the SEAK commercial and sport fisheries is derived. Depending on the level of the preseason AI, regulations could include implementing measures such as: bag limits for resident and nonresident anglers; annual limits for nonresident anglers; minimum size limits; and periods of nonretention. A current objective of the SEAKKSMP is to ensure regulatory stability of the sport fishery once the season has commenced.

There are seven AI ranges in the current SEAKKSMP that have specific, corresponding management 'actions' for use in keeping the sport fishery within its allocation. Those seven AI ranges equate to harvest ranges in numbers of king salmon allowed to be taken by the sport fishery. Under the current plan the sport fishery generally harvests under its allocation during years of high abundance and over its allocation during years of low abundance. Since 2009 based on preseason estimates of abundance, the sport fishery harvested on average 21.2% of the all-gear harvest limit less the net harvest (range 15.3% to 29.8%).

In August 2018, the PSC reached agreement to renew various fishery arrangements under the PST for the next ten years (2019-2028). One significant change is the creation of seven harvest limit tiers that replace the existing harvest limit ranges and result in a 1 to 7 percent reduction on average in the existing harvest limit of king salmon in the SEAK fisheries. Since the renewed 2019-2028 PST agreement reduces the harvest limit at specified abundance indices, managing the sport fishery under the current SEAKKSMP would likely cause the sport fishery to exceed its allocation more often and by a greater amount. Another significant change under the new PST would be the requirement for Alaska to deduct any overages from the previous year from the next year's all-gear harvest limit.

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this proposal due to the allocative nature of the management prescriptions that effect the all-gear harvest limit allocations between fisheries and the harvest ratios between resident and nonresident anglers. Given the overage payback provisions in the new 2019-2028 PST annex the department seeks direction from the board on how overages are to be addressed in the sport fishery.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

**PROPOSAL 177 – 5AAC 33.380. District 13: Crawfish Inlet Terminal Harvest Area Salmon Management Plan.**

**PROPOSED BY:** Alaska Board of Fisheries.

**WHAT WOULD THE PROPOSAL DO?** This will add purse seine and drift gillnet as allowed gear types in the Crawfish Inlet Terminal Harvest Area (THA).

**WHAT ARE THE CURRENT REGULATIONS?** Troll gear is allowed in the Crawfish Inlet THA to harvest hatchery-produced king and chum salmon. Although purse seine gear is not specifically mentioned in the management plan, it is a legal gear type in District 13 and by extension, is allowed in the THA.

**WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?** This would allow NSRAA the flexibility to influence gear rotations in Crawfish Inlet THA between all three gear groups until a more permanent management plan can be submitted for board approval. The addition of drift gillnet and purse seine gear in the Crawfish Inlet THA would likely increase the chum salmon allocation percent for these two gear groups.

**BACKGROUND:** *5 AAC 33.364. Southeastern Alaska Area Enhanced Salmon Allocation Plan* defines fair and reasonable distribution of harvest of salmon from enhancement projects among the seine, troll and gillnet fleets. Additionally, if the value of the harvest of enhanced salmon stocks by a gear group listed in (a) of this section is outside of its allocation percentage for three consecutive years, the board will, in its discretion, adjust fisheries within special harvest areas to bring the gear group within its allocation percentage.

Through 2017, the seine and troll fleets have been below their allocation range for over three consecutive years and the drift gillnet fleet has been above its range for over three consecutive years. According to Board Findings (94-148-FB, #13), when adjustments are deemed necessary to the distribution of the harvest to meet allocation percentage goals, the following tools should be used: special harvest area management adjustments; new production; and modification of existing production. New production and modifications of existing production are considered long-term and will take five to ten years to have an impact. Changes in special harvest areas can be used in the short-term to help modify imbalances until long-term adjustments can take effect.

In 2015, NSRAA began releasing salmon at the Crawfish Inlet remote site. In 2017, chum salmon began returning and in 2018 king salmon began to return. In 2018 the Crawfish Inlet chum salmon return was 3.23 million fish, 4.7 times greater than the forecast of 681,000 fish. Due to the low forecast return, NSRAA entered into an exclusive cost recovery harvest contract with Silver Bay Seafoods. This exclusive contract did not allow for common property openings to gear types other than troll gear in the THA. When returns threatened to overwhelm cost recovery harvest, common property seine openings were allowed by the department and by mutual agreement of NSRAA and Silver Bay Seafoods. Although the run was harvested as efficiently as possible, the exclusive contract made it difficult to harvest more often on potentially better-quality fish.

This remote release site was established to provide additional opportunity to the troll fleet to bring the troll fleet closer to their enhanced allocation range. At the 2018 Southeast and Yakutat Finfish Meeting, NSRAA submitted Proposal 150 that modified the special harvest area (SHA) and established legal gear for the hatchery operator to harvest cost recovery salmon. Additionally, the Alaska Trollers Association submitted Proposal 176 that established a management plan for a

commercial chum salmon troll fishery in Crawfish Inlet. Both proposals were adopted into regulation (5 AAC 33.380).

**DEPARTMENT COMMENTS:** The department is **NEUTRAL** on this allocative proposal.

**COST ANALYSIS:** Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery.

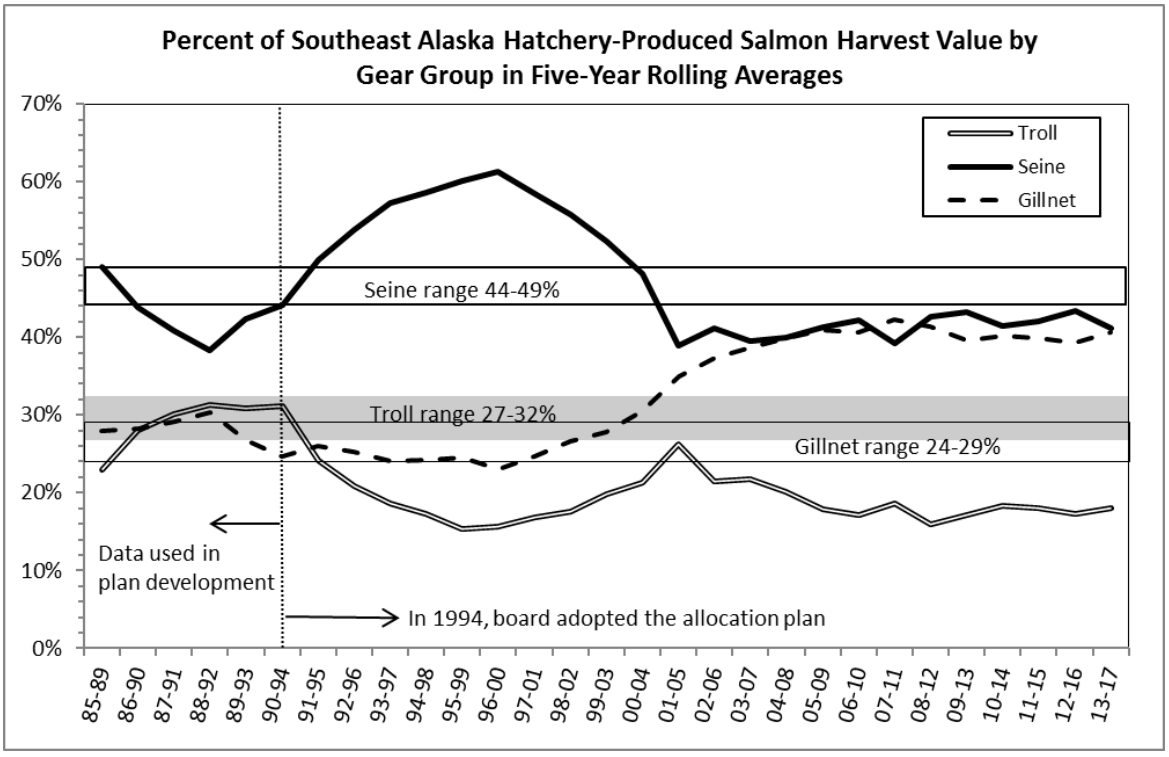



Figure 177-1.–Southeast Alaska enhanced allocation value chart.