

ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE REGULATORY PROPOSALS

ARCTIC-YUKON-KUSKOKWIM MANAGEMENT AREAS FINFISH

ALASKA BOARD OF FISHERIES MEETING ANCHORAGE, ALASKA

January 14–18, 2023



Regional Information Report No. 5J22-05

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 14–18, 2023. 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.

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REGIONAL INFORMATION REPORT NO. 5J22-05

ALASKA DEPARTMENT OF FISH AND GAME
STAFF COMMENTS ON
COMMERICAL, PERSONAL USE, SPORT, AND SUBSISTENCE
REGULATORY PROPOSALS

FOR

ARCTIC-YUKON-KUSKOKWIM FINFISH
ALASKA BOARD OF FISHERIES MEETING
ANCHORAGE, ALASKA

JANUARY 14–18, 2023

by
Alaska Department of Fish and Game

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

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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 14–18 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.

Keywords: 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
ARCTIC-YUKON-KUSKOKWIM FINFISH – ANCHORAGE, JANUARY 14-18, 2023.**

Proposal Number	Department Position	Issue
63	O	Establish an annual limit of 20 northern pike and reduce the bag and possession limits of fish greater than 30 inches in the Chatanika Harvest Area subsistence fishery.
64	O	Modify the bag limit to require retention of the first 10 fish caught over 24 inches for northern pike in the Chatanika Harvest Area subsistence fishery.
65	O	Require retention of sport caught salmon, if removed from the water, in the Tanana River Area.
66	O	Allow a catch-and-release fishery for northern pike in Harding Lake.
67	NA	Prohibit retention of northern pike caught on set lines in the Tanana River drainage.
68	O	Repeal the set line prohibition and bag and possession limit for burbot in T Lake.
69	O	Close the catch-and-release fishery for Arctic grayling in the lower Chena River (beginning 300 ft downstream of the Moose Creek Dam to the Tanana River) and its tributaries, including Badger Slough from April 1 through May 15.
70	S	Establish a bag and possession limit of one Arctic grayling, with no size limit, in the lower Chena River and its tributaries, including Badger Slough, downstream of the Moose Creek Dam to the Tanana River between June 1 and March 31.
71	S	Remove the size limit for lake trout in Fielding Lake.
72	S	Allow for catch-and-release fishing in Bathing Beauty Pond, Bear Lake, Moose Lake, Polaris Lake, Piledriver Slough, and Moose Creek.
73	S	Update the list of stocked waters in regulation and add lake trout to stocked species with modified bag and possession limits.
74	S	Update the Tanana River Area Stocked Waters management plan to include lake trout.
75	S	Remove the minimum length limit and reduce the bag and possession limit for Arctic grayling in Northern Norton Sound drainages.
76	S	Allow permit holders to leave their set gillnets fishing and depart the area and only require them to return when taking catch from their gillnets.

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

**SUMMARY OF DEPARTMENT POSITIONS ON REGULATORY PROPOSALS FOR
ARCTIC-YUKON-KUSKOKWIM FINFISH – ANCHORAGE, JANUARY 14-18, 2023.**

Proposal Number	Department Position	Issue
77	N	Convert 5 AAC 04.362. Guideline harvest range for Port Clarence District. into a management plan with a suggested optimal escapement goal (OEG) of 7,000 to 12,000 sockeye salmon for the Salmon Lake drainage.
78	S	Allow herring to be harvested and sold as bait during the same period as the sac roe herring season in Norton Sound.
79	S	Allow hook and line attached to a rod or pole when subsistence fishing upstream of the Nulato River mouth, to and including the Koyukuk River drainage up to the closed waters of the Koyukuk River and the subsistence permit area.
80	O/N	Restrict subsistence king salmon harvest in the middle and upper Yukon River (Districts 4–6).
81	O/N	Implement a Yukon River drainage subsistence salmon permit to allow retention of king salmon less than 24 inches with an annual limit 10 fish during times of king salmon conservation.
82	S	Modify the dates sinking of gillnets is allowed in the Yukon Area from October 1 to April 30.
83	S	After August 15, a person may not take salmon with a gillnet that has a mesh size greater than 6 inches in the Yukon Area Personal Use Salmon Fishery.
84	N/S	Repeal and readopt Yukon Area subsistence fishery lawful gear and gear specifications.
85	S	Modify Yukon Area Personal Use Salmon Fishery specifications for selective gear types and gillnet mesh size during times of salmon conservation.
86	O	Require retention of sport caught salmon, if removed from the water, in the Yukon River Area.
87	S	Establish a definition of an eel stick.
88	S	Repeal and replace Yukon Area commercial salmon fishing gear specifications.
89	S	Modify Yukon Area commercial dip net gear operations in the commercial fishery to include a single rigid handle with a single line attached.
90	N	Establish a household Kuskokwim River Tier II subsistence king salmon fishery for fish >20 in between June 12 and June 24 during times of king salmon conservation.

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

**SUMMARY OF DEPARTMENT POSITIONS ON REGULATORY PROPOSALS FOR
ARCTIC-YUKON-KUSKOKWIM FINFISH – ANCHORAGE, JANUARY 14-18, 2023.**

Proposal Number	Department Position	Issue
91	N/S	Establish alternative fishing methods that could be used during times of chum, sockeye, or coho salmon conservation.
92	S	Eliminate exact subsistence closure times during and surrounding a commercial fishing period in Districts 4 and 5 of Kuskokwim Bay, and in the Goodnews, Kanektok and Arolik Rivers.
93	O	Close the Buckstock River to all fishing upstream of a point approximately 1.5 miles from its confluence with the Aniak River between June 14 and September 1.
94	O	Close sport fishing for chum salmon in the Kanektok River to nonresidents from June 1–July 15.
95	O	When the projected escapement of Kuskokwim River king salmon is within the drainagewide escapement goal range, the department would not provide set gillnet fishing periods prior to June 12 in the Kuskokwim River when a federal special action or emergency special action is in effect
96	O	When the projected escapement of Kuskokwim River king salmon is within the drainagewide escapement goal range, the department would not provide directed subsistence king salmon fishing periods in the Kuskokwim River after June 11 when a federal special action or emergency special action is in effect
97	S	During times when the commissioner determines that it is necessary for the conservation of king salmon, the department may, by emergency order authority, close the commercial gillnet fishing season and immediately reopen a fishing season during which: (1) dip net and beach seine gear may be used; and (2) all salmon specified by the commissioner caught in dip net and beach seine gear must be returned immediately to the water alive
170	N	Establish a 500-pot limit for vessels participating in the North Peninsula District commercial Dungeness crab fishery and cap the total number of pots allowed in the fishery at 10,000.
171	N/S	Allow groundfish pot gear to be longlined in Prince William Sound Area (PWS) groundfish fisheries where pot gear is a legal gear type.
172	S	Add provisions to mark groundfish pot gear that is longlined with a cluster of four or more marker buoys, a flag mounted on a pole, and a radar reflector.

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

COMMITTEE OF THE WHOLE - GROUP 1: NORTH PENINSULA DUNGENESS CRAB AND PRINCE WILLIAM SOUND GROUNDFISH (3 PROPOSALS)

PROPOSAL 170 – 5 AAC 32.425. Lawful gear for Registration Area J.

PROPOSED BY: Diego Castillo.

WHAT WOULD THE PROPOSAL DO? Establish a 500-pot limit for vessels participating in the North Peninsula District commercial Dungeness crab fishery and cap the total number of pots allowed in the fishery at 10,000. While not directly specified in the proposal, the department interprets that if more than 20 vessels register 500 pots each, the 10,000-pot cap would be divided by the total number of vessels registered, which would result in a pot limit fewer than 500 pots per vessel.

WHAT ARE THE CURRENT REGULATIONS? The North Peninsula District of Registration Area J (Figure 170-1) is a nonexclusive, open access fishery for Dungeness crab. Crab can be harvested with either pot gear or ring nets. There are no vessel length restrictions or pot limits. Due to the lack of assessment and stock specific data for Area J Dungeness crab, there are no guideline harvest levels or other control measures established to limit harvest. The fishery is managed by regulating sex, size, and season (“3-S” management). Only male crab with a 6.5-in carapace width or greater may be retained from May 1 through October 18.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? A pot limit would not likely impact day to day operations for vessels that historically operate fewer than 500 pots. A pot limit for existing higher capacity vessels (> 500 pots) would likely reduce their overall fishing capacity and limit their ability to maintain fishing intensity and spatial distribution of gear. If high-capacity harvesters pull fewer pots more often in an effort to achieve historical catch rates, soak time will decrease, which allows less time for crab to enter pots. Conversely, less gear and competition overall may improve catch rates for smaller, low-capacity vessels.

A pot limit may additionally disincentivize future entry into the fishery by new high-capacity vessels, which may benefit existing users. Alternatively, some vessels may opt out of North Alaska Peninsula District and transition to an adjacent (Aleutian Islands - nonexclusive) or Chignik - superexclusive) Dungeness crab fishery without gear limits, increasing competition and fishing pressure in those fisheries.

Annual catch from 2012–2019 averaged approximately 24,000 pounds (Table 170-1). Average annual catch from 2020–2022 was nearly 2 million pounds. It is unknown if the current harvest rate is sustainable or presents a conservation concern. Prolonged overharvest could result in stock collapse or lower future fishery yield.

BACKGROUND: The first reported commercial harvest of Dungeness crab in the North Peninsula District occurred in 1992. Since 1992, harvest has occurred sporadically, and fishery participation has generally been limited to one to two vessels. Since 1992, no participation or harvest occurred in eight seasons. Due to limited vessel participation, most of the historical harvest is confidential. North Peninsula Dungeness crab abundance is cyclical. Periods of increased

abundance are generally followed by increases in commercial effort (Table 170-1). The fishery is generally characterized by low effort, high volumes of gear, and long soak times.

From 2012 to 2019, on average, one vessel annually participated in the North Peninsula District Dungeness crab fishery; there was no participation in 2013, 2018, and 2019. The amount of registered gear averaged 1,468 pots per vessel and ranged between 1,200 and 1,800 pots per vessel (Table 170-1). All participating vessels during these years operated more than 500 pots (Tables 170-1 and 170-2). Beginning in 2020, vessel participation and landings increased significantly with 2022 participation and harvest the highest on record (Table 170-1). From 2020 to 2022, on average, nine vessels annually participated in the fishery. The amount of registered gear averaged 574 pots per vessel and ranged between 100 and 1,062 per vessel (Table 170-1). On average, 31% of participating vessels operated more than 500 pots (Tables 170-1 and 170-2). Under the proposed 500-pot limit, the amount of gear vessels could legally operate would have been reduced by an average of 65% annually from 2012–2019 and 42% annually from 2020–2022 (Table 170-2).

Historically, the maximum number of pots registered for the North Alaska Peninsula Dungeness crab fishery was well below the proposed fishery cap of 10,000 pots; the 2022 season had the highest participation and harvest on record, with 16 vessels registering 8,212 pots and harvesting 2.8 million pounds (Table 170-1). The proposed fishery cap of 10,000 pots would not have reduced the amount of gear in the water for any previous season. The department generally issues buoy tags to aid enforcement of fisheries with established pot limits; however, a 500-pot limit would likely be difficult to enforce. Should the board adopt a buoy tag requirement, the 10,000-pot fishery cap would require a preseason registration deadline at least 30 days before the fishery opening to allow staff adequate time to calculate and issue the appropriate number of buoy tags prior to the season start. If more than 20 vessels register for the fishery, the 10,000-pot cap would be divided by the total number of vessels registered by the registration deadline which would result in a pot limit less than 500 pots per vessel. Vessels may not be eligible to register or participate in the fishery after the preseason registration deadline if 10,000 pots have already been registered for the fishery.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. If the board adopts this proposal the department recommends adopting buoy marking requirements to aid enforcement of the pot limit.

COST ANALYSIS: Approval of a pot limit would increase the cost for a private person to participate in this fishery should the board adopt a companion buoy tag requirement with the pot limit. The department estimates selling buoy tags at cost of \$0.50 each. Approval of this proposal is not expected to result in an additional direct cost for the department.

Table 170-1.—North Peninsula District commercial Dungeness crab effort, harvest in pounds, CPUE, and exvessel value, by year, 2012–2022.

Year	Number					Avg. CPUE ^b	Exvessel value
	Vessels	Pots/vessel	Pots ^a	Pot lifts	Pounds		
2012	1	1,200	1,200		Confidential		
2013			No Commercial Fishing Effort				
2014	2	1,500	3,000		Confidential		
2015	1	1,800	1,800		Confidential		
2016	1	1,600	1,600		Confidential		
2017	1	1,240	1,240		Confidential		
2018-2019			No Commercial Fishing Effort				
Average 2012-2019	1	1,468	1,768	6,759	23,725	3	\$64,222
2020	2	650	1,300		Confidential		
2021	8	560	4,482	28,405	1,147,881	18	\$4,407,798
2022	16	513	8,212	78,087	2,808,802	15	\$7,049,419 ^c
Average 2020-2022 ^d	9	574	4,665	53,246	1,978,342	17	\$5,728,609

Note: Data are confidential when fewer than 3 vessels participated.

^a Number of pots registered by vessels that made landings.

^b Catch per unit effort (number of legal crab retained per pot lift).

^c Estimated from fish ticket information.

^d 2020–2022 average, except pot lifts, harvest, effort, and ex-vessel value averages exclude 2020 confidential data.

Table 170-2.—Estimated reduction in pot gear for vessels that have historically registered more than 500 pots in the North Peninsula District Dungeness crab fishery, 2012–2022.

Year	Vessels	Number of pots/vessel			Total pots ^a	Proposed pot limit ^b	% Gear reduction ^c
		Min	Max	Avg			
2012	1	1,200	1,200	1,200	1,200	500	58%
2013		No Commercial Fishing Effort					N/A
2014	2	1,500	1,500	1,500	3,000	1,000	67%
2015	1	1,800	1,800	1,800	1,800	500	72%
2016	1	1,600	1,600	1,600	1,600	500	69%
2017	1	1,240	1,240	1,240	1,240	500	60%
2018-2019		No Commercial Fishing Effort					N/A
Average 2012-2019	1	1,468	1,468	1,468	1,768	600	65%
2020	1	800	800	800	800	500	38%
2021	2	992	1,000	996	1,992	1,000	50%
2022	5	550	1,062	832	4,162	2,500	40%
Average 2020-2022	3	781	954	876	2,318	1,333	42%

^a Total number of pots registered for the fishery by vessels that register more than 500 pots.

^b Estimated number of pots that would have been registered by these vessels if a 500-pot limit was in effect.

^c Percent reduction between the actual number of pots registered by these vessels and the estimated number of pots under the proposed pot limit.

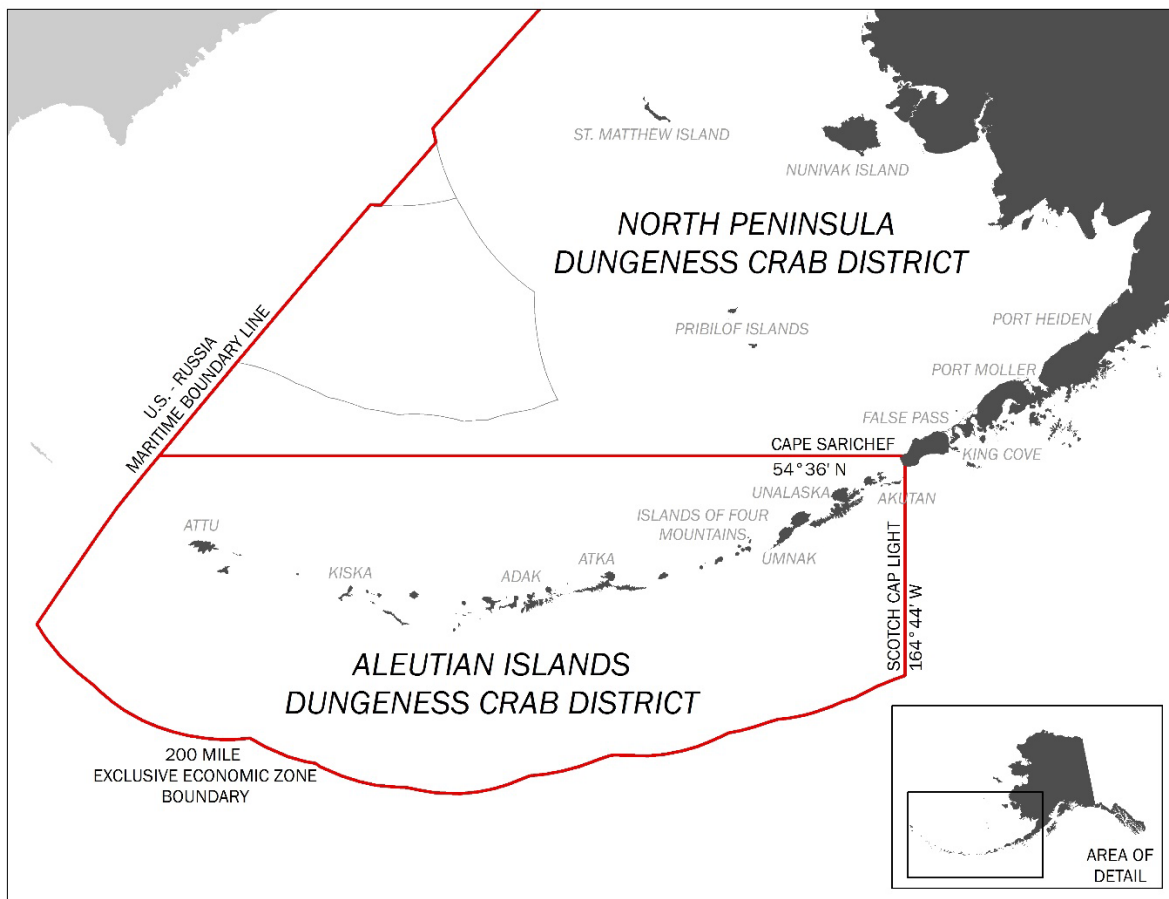


Figure 170-1.—Map of Registration Area J, North Peninsula District Dungeness crab fishery management area.

PROPOSAL 171 – 5AAC 28.230. Lawful gear for Prince William Sound Area.

PROPOSED BY: Kenneth Jones.

WHAT WOULD THE PROPOSAL DO? This would allow groundfish pot gear to be longlined in Prince William Sound Area (PWS) groundfish fisheries where pot gear is a legal gear type.

WHAT ARE THE CURRENT REGULATIONS? Currently, groundfish pot gear may not be longlined in the PWS Pacific cod fishery although pot gear may be longlined in the PWS sablefish fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This may result in increased use of pots to harvest groundfish in PWS, including some vessels that currently harvest groundfish with longline gear switching to pot gear. If collapsible, cylindrical, ‘slinky’ pots are used this may result in reduced bycatch of some species relative to longline gear. Use of ‘slinky’ pots allows smaller vessels to fish relatively large numbers of groundfish pots when compared to traditional pot gear.

BACKGROUND: Several regulations were adopted by the board related to the Pacific cod fisheries in December 2014 and implemented in 2015. PWS became a nonexclusive registration area for jig gear during the state-waters Pacific cod season, which allows jig vessels to participate in a state-waters season in both PWS and in another exclusive (or nonexclusive) registration area during the same calendar year. Also, a regulation was adopted that provided for a combined jig and pot gear guideline harvest level (GHL) allocation initially set at 15% and the longline gear allocation set at 85%; the regulation included step-up and step-down provisions of 5% implemented the following year for the pot and jig gear GHL allocation if the allocation was or was not achieved, with a minimum of 15% and a maximum of 30% of the GHL allocated to pot and jig gear. This provision has never been implemented because of low fishery participation from the pot and jig sectors.

Parallel Pacific cod seasons are prosecuted in state waters in addition to state waters Pacific cod seasons; parallel Pacific cod seasons for pot, jig and longline open January 1 and in coordination with the federal Central Gulf of Alaska seasons. Since 2012, there has been ample year-round opportunity for the pot and jig sectors to fish for Pacific cod in PWS, however, participation has been low enough that harvest information is confidential for the vessels fishing with pot gear. Most fishermen have chosen to use longline gear. As provided in the management plan, any state-waters season GHL remaining on September 1 may become available to all legal gear types.

Traditional pot gear used to target Pacific cod are heavy, converted crab pots that are fished single-pot fashion with a buoy attached to each individual pot. Collapsible or slinky pots, which have become increasingly popular in groundfish fisheries, are too light to fish single-pot fashion and must be longlined to avoid gear loss. The use of collapsible pots was unforeseen when the prohibition on longlining Pacific cod pots in Prince William Sounds was adopted. Generally, pot gear has been shown to have less bycatch, whereas longline and jigging have higher levels.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but generally **SUPPORTS** longlining of groundfish pots in PWS. Longlining pots is lawful in the PWS sablefish fishery and there are no conservation concerns extending this gear configuration to the Pacific cod fishery. If this proposal is adopted, it is likely the board will receive future proposals to allow longlined pot gear for Pacific cod in other state waters Pacific cod 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. Approval of this proposal would not result in increased direct costs for the department.

PROPOSAL 172 – 5AAC 28.230 Lawful gear for Prince William Sound Area.

PROPOSED BY: Kenneth Jones.

WHAT WOULD THE PROPOSAL DO? This would add provisions to mark groundfish pot gear that is longlined with a cluster of four or more marker buoys, a flag mounted on a pole, and a radar reflector. In addition, one hard buoy in the cluster must be marked with the capital letters “LP” and the ADF&G vessel registration number.

WHAT ARE THE CURRENT REGULATIONS? In the PWS sablefish fishery, a groundfish pot may be attached to a line connected to another groundfish pot if each end of the buoy is legibly marked with the permanent ADF&G vessel license plate (ADF&G number) of the vessel operating the gear (5 AAC 28.230 (c)(d)). The number must be placed on the top one-third of the buoy in numerals at least four inches high, one-half inch wide, and in a color that contrasts with the color of the buoy; these markings must be visible on the buoy above the water surface.

The board adopted a proposal in October 2022 that will allow pots to be longlined in the Aleutian Islands Subdistrict Pacific cod and Aleutian Islands-Western District sablefish fisheries. In addition, the board adopted regulations requiring groundfish pots that are being longlined to have buoys at each end of the longline. Each buoy must have the ADF&G vessel number and the letters “PL” to designate the gear as longlined pot gear. The numbers and letters are required to be on the top one-half of the buoys in numbers with letters that are at least four inches high, one-half inch wide, and in a color that contrasts with the color of the buoy; these markings must be visible above the water’s surface.

In the Kodiak Management Area, groundfish pots cannot be attached to one another. Each groundfish pot must be marked with at least one buoy (5 AAC 28.430 (b)) and marked with the ADF&G vessel number with that number placed on the top one-third of the buoy with numerals four inches high and one-half inch wide, in a color that contrasts with the color of the buoy; they also must be visible from the water’s surface.

In the Eastern Gulf of Alaska Area, pots may be longlined in the Southern Southeast Inside District sablefish fishery and at least one buoy must mark the longline with buoy marking requirements identical to the Kodiak Management Area (above).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow fishermen and enforcement personnel to identify longlined pot gear on the fishing grounds. This is important to avoid gear conflicts and to inform enforcement personnel when they are inspecting fishing gear.

BACKGROUND: Refer to background information in Proposal 171.

DEPARTMENT COMMENTS: The department **SUPPORTS** specifying gear marking requirements. If longlined pot gear is allowed in the PWS Pacific cod fishery, it is likely this gear type will be used extensively, warranting specific marking requirements to reduce gear conflicts and aid enforcement. The department recommends the board consider adopting statewide standard marking requirements for longlined pot gear.

COST ANALYSIS: Approval of this proposal may require fishery participants to buy additional gear marking equipment which would be added direct cost for a private person to participate in this fishery. Approval of this proposal would not result in increased direct costs for the department.

COMMITTEE OF THE WHOLE – GROUP 2: TANANA SUBSISTENCE AND SPORT FISHERIES (12 PROPOSALS)

CHATANIKA NORTHERN PIKE SUBSISTENCE (2 PROPOSALS)

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

PROPOSED BY: Will Samuel.

WHAT WOULD THE PROPOSAL DO? Establish an annual limit of 20 northern pike and reduce the bag and possession limits of fish greater than 30 inches in the Chatanika Harvest Area (CHA) subsistence fishery.

WHAT ARE THE CURRENT REGULATIONS? For the winter subsistence fishery in the CHA provisions include: a household harvest permit and weekly reporting requirement; a bag limit of 10 northern pike, two of which may be over 30 inches in length; a possession limit of 20 northern pike, four of which may be over 30 inches in length; and a 1-mile closed area upstream of Goldstream Creek on the Chatanika River. Gear restrictions include hook and line attached to a rod or pole and single hooks allowed only when ice fishing, and gillnets not allowed from October 15 to April 14.

If the subsistence harvest in the CHA reaches 750 fish before ice-out, there is a bag limit reduction to summer sport fishing for northern pike from 5 to 2 fish. If CHA harvest reaches 1,500 fish, the subsistence fishery closes until ice-out.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence fishers would be allowed to keep fewer northern pike over 30 inches and 20 fish annually.

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 63-1). Most subsistence fishing occurs with jigging gear between January and April. Based on radiotelemetry studies, approximately 50% of all northern pike inhabiting the Minto Flats area overwinter in the Chatanika River, and it is the only known overwinter location of northern pike that spawn and summer in Minto Lakes.

The *Minto Flats Northern Pike Management Plans* (5 AAC 01.244, Subsistence and 5 AAC 74.044, Sport Fish) manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plans contain 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 (Table 63-1). Between 2008 and 2018, the abundance and size of northern pike in the Minto Lakes increased significantly (Table 63-2). Based on the most recent abundance estimate (2018) of 14,817 (SE = 1,836) northern pike ≥ 24 inches in the CHA, the exploitation by all users has ranged 9–23% since 2018 (Tables 63-1 and 63-2). Prior to 2018, the department used Minto Lakes population estimates of northern pike over 16 inches to evaluate the exploitation rates, and exploitation remained under 20% (Tables 63-1 and 63-2). It was determined in 2018 that northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies.

The most recent regulatory change for the CHA fishery was adopted in the 2019 board cycle (enacted in 2020), to establish a size limit to reduce the number of northern pike caught over 30 inches. Prior to this size limit, fish larger than 30 inches made up 41% of the subsistence CHA harvest in 2019 and were 90% female (Gutierrez and Tyers 2020). Northern pike greater than 24 inches within the Minto Lakes population were more abundant in 2018 than found in previous surveys dating back to 1997 (Albert and Tyers 2020; Tables 63-2).

For permit holders who fish multiple times each season, annual harvest per permit has decreased. In 2020 and 2021, on average, only 26% of permits were fished on multiple days, and the average annual harvest for these permits was 8 fish. In comparison, in 2007, prior to bag and possession limits, 25% of permits were fished on multiple days and the average annual harvest for these permits was 96 fish. The CHA subsistence fishery reached the 750 fish threshold 5 times and the 1,500 fish threshold 2 times since implementation of bag and possession limits in 2010 (Figure 63-2).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Under the current management plan, harvests have been sustainable. An annual limit is unnecessary because most permit holders only fish once per season and this fishery is closed when the 1,500 harvest cap is reached in the CHA subsistence fishery during the period from January 1 until spring ice-out. Implementing an annual limit and reducing the bag and possession limits for fish 30 inches or greater in length would result in unnecessary restrictions to the subsistence fishery at current northern pike abundance. The board adopted changes to the CHA fishery in 2016, 2017, and 2019 relative to closed areas and size limits, and time is required to evaluate the impacts. 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? Only partially. Fewer than 5% of the northern pike stocks in the Minto Flats 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 63-1.—Subsistence and sport harvest summary for northern pike in Minto Flats Complex ^a, 1993–2022.

Year	Subsistence Permits Issued	CHA Subsistence Harvest ^b	CHA Released	Minto Flats Subsistence Harvest	Total Subsistence Harvest ^c	Sport Angler Days	Total Sport Harvest	Total Harvest by All Users
1993	31	—	—	—	767	—	3,420	4,187
1994	48	—	—	—	1,193	—	9,489	10,682
1995	57	—	—	—	1,088	—	4,480	5,568
1996	74	—	—	—	1,916	7,990	2,716	4,632
1997	88	—	—	—	1,344	7,655	1,246	2,590
1998	70	—	—	—	431	3,768	772	1,203
1999	54	—	—	—	400	7,064	1,098	1,498
2000	34	—	—	—	352	4,212	390	742
2001	50	—	—	—	277	2,454	654	931
2002	32	—	—	—	521	4,815	650	1,171
2003	119	—	—	—	966	4,555	1,248	2,214
2004	99	—	—	—	393	4,650	1,390	1,783
2005	80	—	—	—	386	5,047	2,052	2,438
2006	101	—	—	—	865	4,050	1,204	2,069
2007	118	—	—	—	1,837 ^d	5,656	1,809 ^e	3,646
2008	147	—	—	—	1,363	2,840	386 ^e	1,749
2009	113	—	—	—	563	4,892	873	1,436
2010	96	—	—	—	125	3,327	609	734
2011	70	27	—	83	110	3,090	422	532
2012	73	243	—	282	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 ^e	1,216
2017	93	21	—	116	137	5,450	589	726
2018	175	832	696	208	1,040	2,324	390	1,430
2019	245	937	1,404	696	1,633	2,480	770 ^e	2,403
2020	329	965	1,265	1,040	2,005	1,538	286 ^e	2,291
2021	425	1,538	1,908	1,554	3,092 ^d	2,262	257 ^e	3,349
2022 ^f	332	1,259	1,037	—	1,259 ^d	—	— ^e	1,259
2017–2021 Average	253	859	1,318	723	1,581	2,811	458	2,040
1993–2021 Average	115	—	—	—	890	4,114	1,350	2,241

Note: En dash = 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.

^c Includes harvest in CHA and Minto Flats Complex before 2011.

^d Subsistence fishery closed because 1,500 fish harvest threshold was met or projected to be met in the winter CHA subsistence fishery.

^e Sport fishing restricted because 750 fish harvest threshold was met in the winter CHA subsistence fishery.

^f Data are preliminary (inseason reporting and returned permits). Permits expire December 31, 2022. Sport Fish information is not available at this time.

Table 63-2.—Estimated northern pike abundance in the Minto Lakes Study Area during 1996–2018 and within the Chatanika River Overwintering Area in 2018.

Year	Area	$\geq 400\text{mm}$ (~16 in) ^a		$\geq 600\text{mm}$ (~24 in)		$\geq 720\text{ mm}$ (~30 in)	
		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	—	—	14,675	1,631	—	—
	MLSA-A	—	—	11,443	1,651	—	—

Sources: Roach 1997, 1998; Scanlon 2001, 2006; Joy 2009; Albert and Tyers 2020.

Note: SE = standard error, MLSA = Minto Lakes Study Area, en dash = no data.

^a Estimated abundance of northern pike 400–600 mm fork length 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.

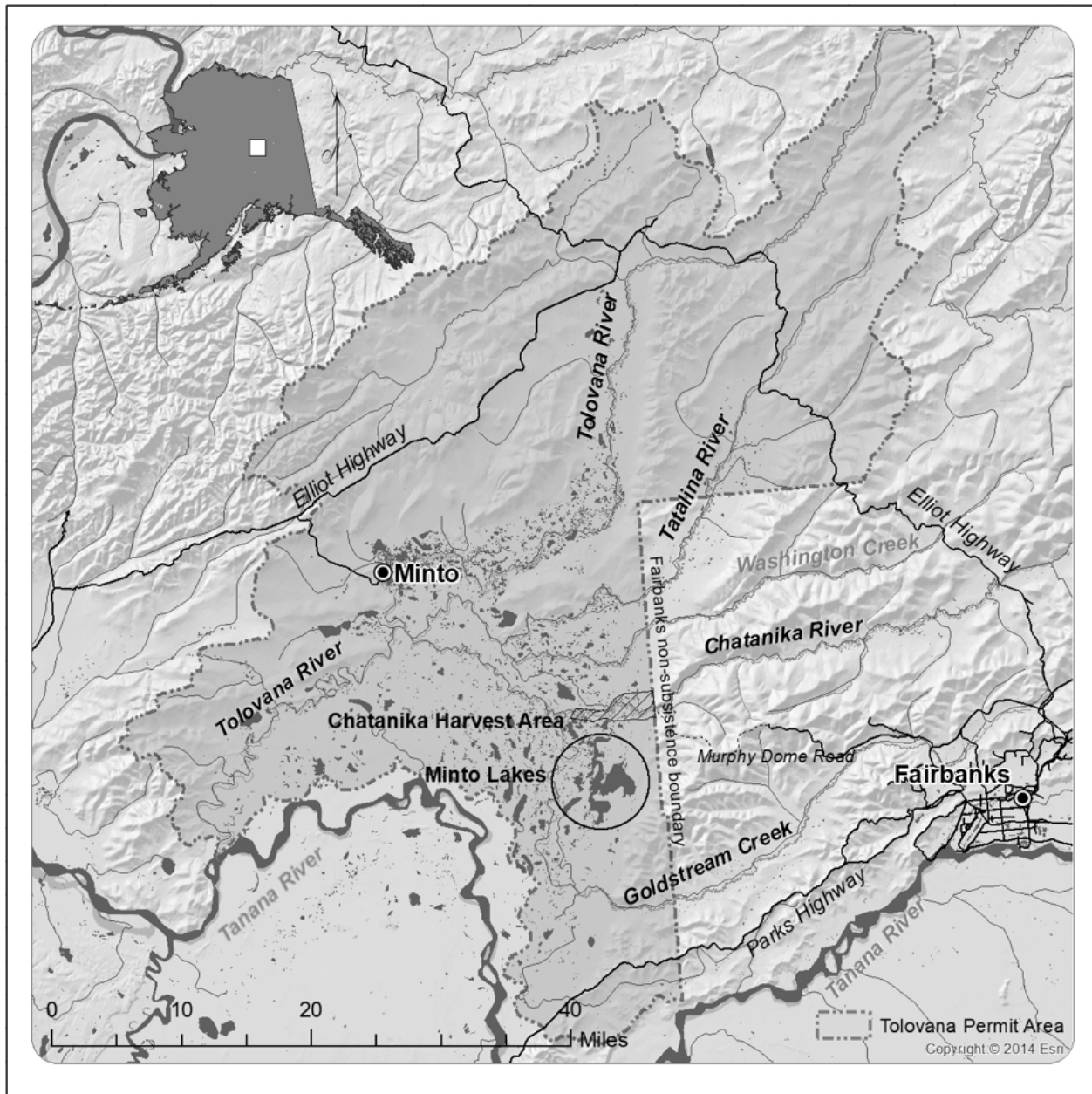


Figure 63-1.—Map of subsistence fishery permit area in Minto Flats Complex. Minto Flats Complex includes Minto Flats lakes and flowing waters, Tolovana River drainage, and the Lower Chatanika River.

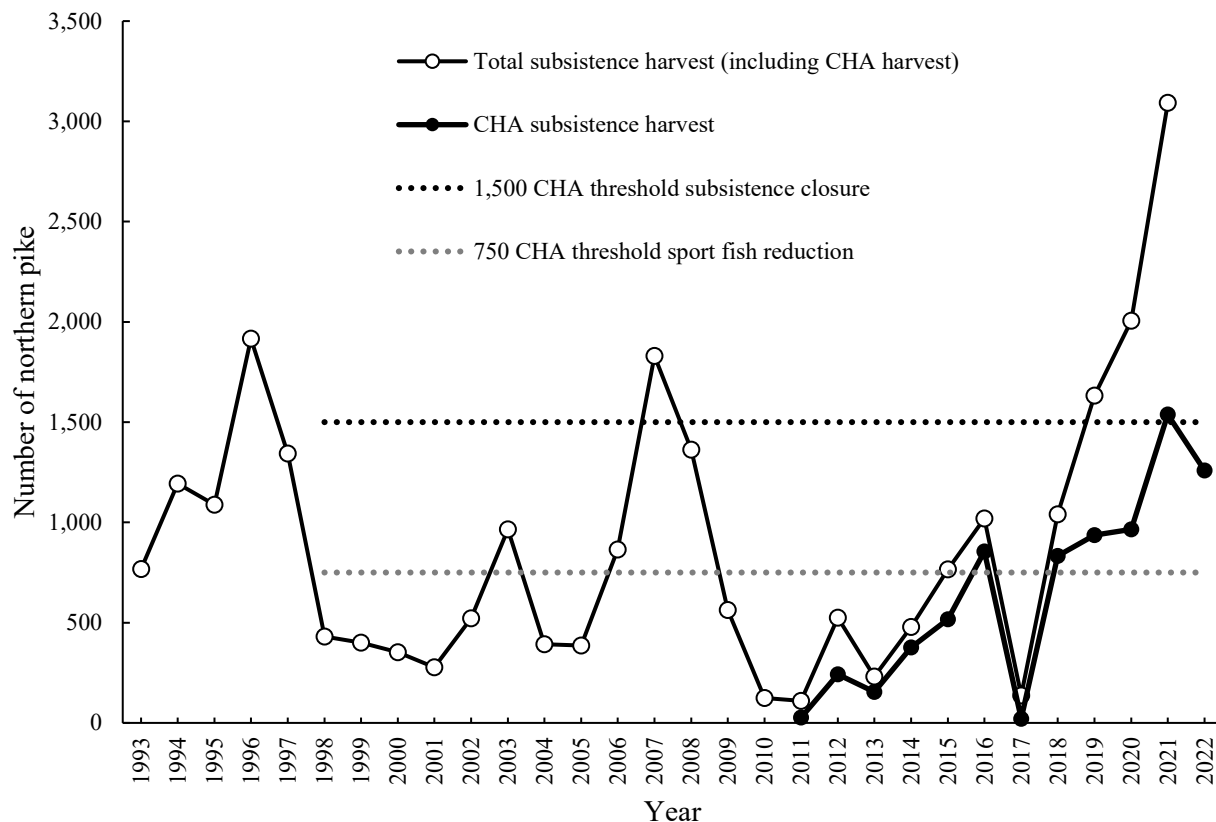


Figure 63-2.—Subsistence harvest of northern pike in Minto Flats Wetland Complex, 1993–2022.

Note: Chatanika Harvest Area (CHA) fishing location has been documented since 2011. Prior to 2011, CHA harvest is included in the total subsistence harvest. 2022 data are preliminary. Thresholds are based on inseason harvest reported in the CHA from January 1 until ice out. Minto Flats Complex includes Minto Flats lakes and flowing waters, Tolovana River drainage, and the Lower Chatanika River.

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

PROPOSED BY: Ben Dobrovolsky.

WHAT WOULD THE PROPOSAL DO? Modify the bag limit to require retention of the first 10 fish caught over 24 inches for northern pike in the Chatanika Harvest Area (CHA) subsistence fishery.

WHAT ARE THE CURRENT REGULATIONS? For the winter subsistence fishery in the CHA provisions include: a household harvest permit and weekly reporting requirement; a bag limit of 10 northern pike, two of which may be over 30 inches in length; a possession limit of 20 northern pike, four of which may be over 30 inches in length; and a 1-mile closed area upstream of Goldstream Creek on the Chatanika River. Gear restrictions include hook and line attached to a rod or pole and single hooks allowed only when ice fishing and gillnets not allowed from October 15 to April 14.

If the subsistence harvest in the CHA reaches 750 fish before ice-out, the summer sport fishing bag limit is reduced from 5 to 2 northern pike. If CHA harvest reaches 1,500 fish, the subsistence fishery closes until ice-out.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED?

Participation would decrease from the fishers who only catch-and-release northern pike greater than 24 inches. Eliminating the size restriction of fish 30 inches or greater, which are mostly female, may increase the subsistence harvest of larger fish.

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 64-1). Most subsistence fishing occurs with jigging gear between January and April. Based on radiotelemetry studies, approximately 50% of all northern pike inhabiting the Minto Flats area overwinter in the Chatanika River, and it is the only known overwinter location of northern pike that spawn and summer in Minto Lakes.

The *Minto Flats Northern Pike Management Plans* (5 AAC 01.244, Subsistence and 5 AAC 74.044, Sport fish) manage stocks consistent with the sustained yield principle, provide reasonable opportunity for the subsistence fishery, and provide sport fishing opportunity. The plans contain 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 (Table 64-1). Between 2008 and 2018, the abundance and size of northern pike in the Minto Lakes increased significantly (Table 64-2). Based on the most recent abundance estimate (2018) of 14,817 (SE = 1,836) northern pike ≥ 24 inches in the CHA, the exploitation by all users has ranged from 9-23% since 2018 (Tables 64-1 and 64-2). Prior to 2018, the department used Minto Lakes population estimates of northern pike over 16 inches to evaluate the exploitation rates, and exploitation remained under 20% (Tables 64-1 and 64-2). It was determined in 2018 that northern pike less than 24 inches in length are difficult to reliably assess with accuracy and precision in Minto Flats abundance studies.

The most recent regulatory change for the CHA fishery was adopted in the 2019 board cycle (enacted in 2020), to establish a size limit to reduce the number of northern pike caught over 30 inches. Prior to this size limit, fish larger than 30 inches made up 41% of the subsistence CHA harvest in 2019 and were 90% female (Gutierrez and Tyers 2020). Northern pike in the greater than 24- to 30-inch size classes within the Minto Lakes population were more abundant in 2018

than found in previous surveys dating back to 1997 (Albert and Tyers 2020). Between 2018 and 2021, fishers released around half (54%) of the fish they caught ice fishing in the CHA. Mortality after release is assumed to be very low due to the healthier body condition of northern pike in winter compared to any other time of year (Guy and Willis 1991; Albert and Tyers 2020).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Under the current management plan, harvests have been sustainable. The board adopted changes to the CHA subsistence fishery in 2016, 2017, and 2019 relative to closed areas and size limits, and time is required to evaluate the impacts. Based on the information provided, there have not been any studies since the last regulation change in 2019. Lifting the size restriction of fish 30 inches or greater in length may result in higher harvest rates of female northern pike.

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? Only partially. Fewer than 5% of the northern pike stocks in the Minto Flats 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 64-1.—Subsistence and sport harvest summary for northern pike in Minto Flats Complex ^a, 1993–2022.

Year	Subsistence Permits Issued	CHA Subsistence Harvest ^b	CHA Released	Minto Flats Subsistence Harvest	Total Subsistence Harvest ^c	Sport Angler Days	Total Sport Harvest	Total Harvest by All Users
1993	31	—	—	—	767	—	3,420	4,187
1994	48	—	—	—	1,193	—	9,489	10,682
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1997	88	—	—	—	1,344	7,655	1,246	2,590
1998	70	—	—	—	431	3,768	772	1,203
1999	54	—	—	—	400	7,064	1,098	1,498
2000	34	—	—	—	352	4,212	390	742
2001	50	—	—	—	277	2,454	654	931
2002	32	—	—	—	521	4,815	650	1,171
2003	119	—	—	—	966	4,555	1,248	2,214
2004	99	—	—	—	393	4,650	1,390	1,783
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2006	101	—	—	—	865	4,050	1,204	2,069
2007	118	—	—	—	1,837 ^d	5,656	1,809 ^e	3,646
2008	147	—	—	—	1,363	2,840	386 ^e	1,749
2009	113	—	—	—	563	4,892	873	1,436
2010	96	—	—	—	125	3,327	609	734
2011	70	27	—	83	110	3,090	422	532
2012	73	243	—	282	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 ^e	1,216
2017	93	21	—	116	137	5,450	589	726
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2021	425	1,538	1,908	1,554	3,092 ^d	2,262	257 ^e	3,349
2022 ^f	332	1,259	1,037	—	1,259 ^d	—	— ^e	1,259
2017–2021 Average	253	859	1,318	723	1,581	2,811	458	2,040
1993–2021 Average	115	—	—	—	890	4,114	1,350	2,241

Note: En dash = 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.

^c Includes harvest in CHA and Minto Flats Complex before 2011.

^d Subsistence fishery closed because 1,500 fish harvest threshold was met or projected to be met in the winter CHA subsistence fishery.

^e Sport fishing restricted because 750 fish harvest threshold was met in the winter CHA subsistence fishery.

^f Data are preliminary (inseason reporting and returned permits). Permits expire December 31, 2022. Sport Fish information is not available at this time.

Table 64-2.—Estimated northern pike abundance in the Minto Lakes Study Area during 1996–2018 and within the Chatanika River Overwintering Area in 2018.

Year	Area	$\geq 400\text{mm}$ (~16 in) ^a		$\geq 600\text{mm}$ (~24 in)		$\geq 720\text{ mm}$ (~30 in)	
		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	—	—	14,675	1,631	—	—
	MLSA-A	—	—	11,443	1,651	—	—

Sources: Roach 1997, 1998; Scanlon 2001, 2006; Joy 2009; Albert and Tyers 2020.

Note: SE = standard error, MLSA = Minto Lakes Study Area.

^a. Estimated abundance of northern pike 400–600 mm fork length 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.

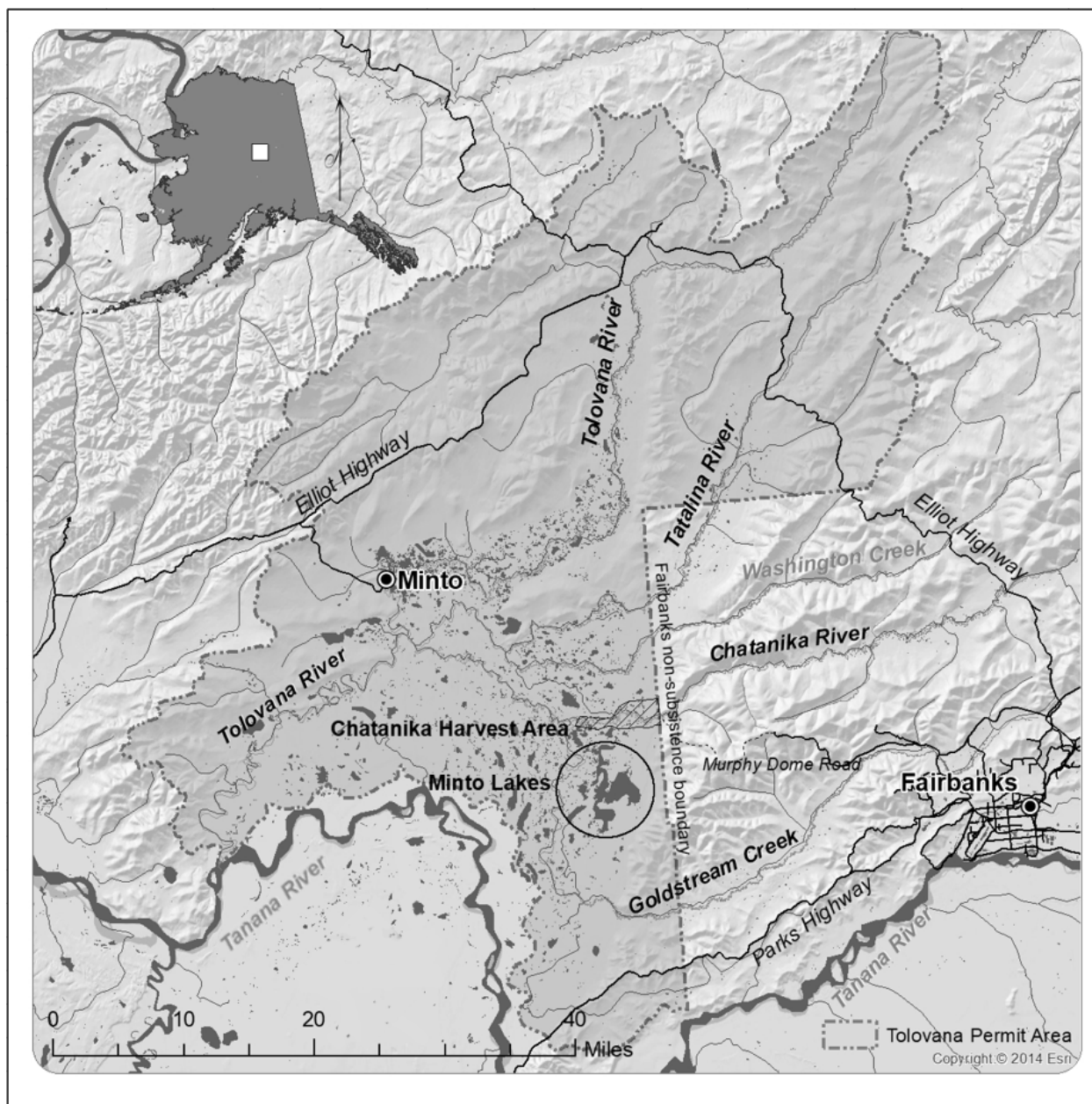


Figure 64-1.—Map of subsistence fishery permit area in Minto Flats Complex. Minto Flats Complex includes Minto Flats lakes and flowing waters, Tolovana River drainage, and the Lower Chatanika River.

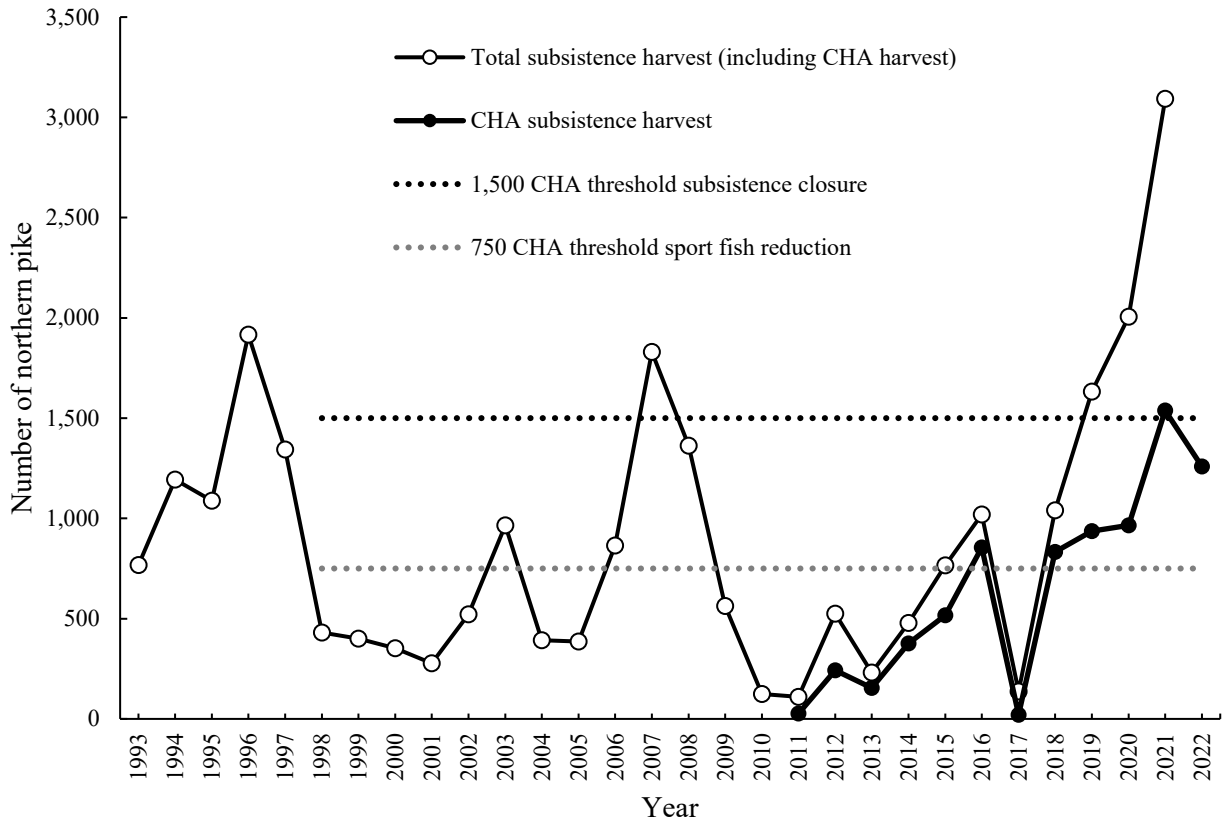


Figure 64-2.—Subsistence harvest of northern pike in Minto Flats Wetland Complex, 1993–2022.

Note: Chatanika Harvest Area (CHA) fishing location has been documented since 2011. Prior to 2011, CHA harvest is included in the total subsistence harvest. 2022 data are preliminary. Thresholds are based on inseason harvest reported in the CHA from January 1 until ice out. Minto Flats Complex includes Minto Flats lakes and flowing waters, Tolovana River drainage, and the Lower Chatanika River.

TANANA DRAINAGE SPORT FISHERIES (10 PROPOSALS)

PROPOSAL 65 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Midnight Sun Flycasters.

WHAT WOULD THE PROPOSAL DO? This would require retention of sport caught salmon, if removed from the water, in the Tanana River Area.

WHAT ARE THE CURRENT REGULATIONS? In the Tanana River Area there are no regulations that prohibit removing salmon from the water that are intended to be released. Regulations from other management areas that specify “a person may not remove a salmon from the water before releasing the fish” are in the Upper Copper River and Upper Susitna River Area (5 AAC 52.022), Knik Arm Drainages Area (5 AAC 60.120), Kenai Peninsula Area (5 AAC 56.120), and Kenai River Drainage Area (5 AAC 57.120).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would change angling habits in ways that are difficult to anticipate. Anglers may choose to harvest fish that would have otherwise been photographed and released for the sake of obtaining a photo. For many anglers, the trophy is the photo, and this may increase retention in situations that would have otherwise resulted in a catch-and-release event. This may also reduce catch-and-release mortality by an unknown, but likely minimal amount and may increase harvest by an unknown amount. This would increase regulatory complexity.

BACKGROUND: The Tanana River drainage supports runs of king, chum, and coho salmon. Salmon are conservatively managed within the Yukon and Tanana River Drainages, where recent runs of king, chum, and coho salmon have been poor. Salmon sport fisheries have been restricted or closed by emergency order when run sizes have been inadequate to meet escapement goals. Based on the Statewide Harvest Survey and the Freshwater Sport Fish Guide Logbook, catch and harvest of salmon within the Tanana River Area have been relatively low in recent years (Tables 65-1 and 65-2).

Past catch-and-release mortality studies conducted by the department on king salmon in the Kenai and Nushagak Rivers and coho salmon in the Unalakleet River have illustrated low mortality rates for salmon caught and released with typical sport fishing gear, with the additional stress of using radiotelemetry techniques to tag and track handled fish.

Several studies have demonstrated that air exposure below 60 seconds is not a significant factor in catch-and-release mortality. Roth et al. (2018, NAJFM) demonstrated that there was no increase in mortality in trout within the Snake River drainage that were exposed to air for up to 60 seconds. A catch-and-release study on sockeye salmon in Bear Lake, Alaska showed that these fish were largely resilient to the physiological stress associated with catch-and-release if handled carefully and air exposure was minimized (Smukall et al. 2019, CJFAS). A study on Canadian rainbow trout showed reduced survival for fish that were exposed to air for 60 seconds after exhaustive exercise, but survival greatly increased when exposure was reduced to 30 seconds (Ferguson and Tufts, 1992, CJFAS.)

Catch-and-release mortality is not only dependent upon air exposure, but other factors such as water temperature, gear type, hook placement, landing times, and fish size, many of which impact mortality more than air exposure. The department actively promotes proper catch-and-release

techniques using various media including brochures, web-based content, and social media. This outreach promotes the use of single barbless hooks, landing the fish as quickly as possible, and limiting handling time and air exposure.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This would increase regulatory complexity and unnecessarily impact sport fishing opportunity in the absence of a measurable biological benefit. The department encourages anglers to use best practices when handling and releasing all sport caught 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. Approval of this proposal is not expected to result in an additional cost to the department.

Table 65-1—Sport fishing effort (angler-days), harvest, and catch of wild king, chum, and coho salmon in the Tanana River Area, 2002–2021.

Year	Effort	Harvest			Catch		
		King	Chum	Coho	King	Chum	Coho
2002	108,462	478	307	541	3,227	1,109	5,694
2003	99,934	2,153	63	1,317	7,000	1,791	15,377
2004	116,486	1,319	98	716	6,339	1,196	5,796
2005	93,398	483	144	267	1,633	1,372	2,844
2006	79,677	638	315	629	2,619	1,445	5,230
2007	100,956	549	41	339	2,463	305	3,343
2008	72,335	254	61	170	915	636	1,739
2009	92,497	836	71	115	2,632	526	4,330
2010	96,859	313	62	369	1,859	158	3,679
2011	67,378	372	77	284	1,432	620	3,761
2012	69,691	114	63	84	1,142	411	2,623
2013	85,301	11	8	139	129	580	1,952
2014	96,140	0	54	216	10	171	6,655
2015	76,241	13	0	180	48	189	4,393
2016	71,055	20	0	641	1,532	117	4,853
2017	66,897	18	23	236	138	627	3,218
2018	69,865	200	15	482	538	57	2,830
2019	63,305	19	0	72	36	24	1,579
2020	59,981	49	0	80	33	88	694
2021	65,721	0	0	0	207	12	13
10-yr Average (2011–2020)	72,421	82	24	241	504	288	3,256
5-yr Average (2016–2020)	65,157	61	8	302	455	183	2,635

Table 65-2.—Sport fish angling effort (i.e. angler-days), and estimated harvest of salmon in flowing waters provided by the Freshwater Sport Fish Guide Logbook for the Tanana River Area, 2006–2016.

Year	Angler-days resident	Angler-days nonresident	King harvest	King released	Coho harvest	Coho released	Sockeye harvest	Sockeye released	Other species harvest	Other species released ^a
2006	44	103	9	13	58	144	0	0	0	53
2007	11	76	9	24	41	149	0	0	0	0
2008	37	113	6	2	36	28	0	0	0	0
2009	38	765	31	26	72	133	0	0	0	2
2010	53	836	6	31	95	54	0	0	0	2
2011	46	1,226	2	4	85	65	0	0	0	4
2012	9	1,183	0	0	29	67	0	0	0	0
2013	27	1,110	0	1	10	63	0	0	0	5
2014	42	1,229	0	0	2	28	0	0	0	1
2015	37	1,379	0	0	37	101	0	0	0	4
2016	33	1,217	3	14	81	124	0	0	0	0
Average 2006–2016	34	840	6	10	50	87	0	0	4	6

^a Other species includes all other species including pink and chum salmon.

PROPOSAL 66 – 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 Fisheries Sub-Committee.

WHAT WOULD THE PROPOSAL DO? Allow a catch-and-release fishery for northern pike in Harding Lake.

WHAT ARE THE CURRENT REGULATIONS? In Harding Lake, the sport fishery for northern pike is closed.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide catch-and-release sport fishing opportunity for northern pike in Harding Lake. A small level (<5%) of hooking mortality would be incurred on a rebuilding northern pike population. This may delay the recovery of the northern pike population to historical levels.

BACKGROUND: Harding Lake is the largest road-accessible lake in the Tanana River drainage (Figure 66-1) with a surface area of 2,500 acres, a maximum depth of 140 ft, and a shoreline length of 8.9 mi. The lake is oligotrophic and is a deep, bowl shaped lake with limited shallow, vegetated areas. Harding Lake is a popular recreational area, has a state campground and public boat launch, and is stocked with lake trout and Arctic char. Approximately 420 properties surround Harding Lake, approximately 75% of which are lake front homes or recreational cabins. Historically, Harding Lake provided the only major roadside sport fishery for northern pike within the AYK Region, and although variable, estimated northern pike catch was generally high from the early 1980s until 1998 (Table 66-1).

In 1990, the bag and possession limit was changed from five fish with only one over 30 in to five fish all greater than 26 in. In 2000, the northern pike fishery in Harding Lake was closed, due to a large decline in population size, which decreased from an estimated abundance of 2,479 (SE = 307) fish ≥ 18 in in 1993 to 531 (SE = 54) fish in 2000 (Figure 66-2). This decline was partly attributed to harvest, but mainly because of dropping water levels and drying of the littoral spawning and rearing habitat. In 2007, a water diversion structure was constructed with a goal to raise and maintain an average water elevation of 717 ft to help restore the spawning and rearing habitat. By 2012, the abundance of northern pike had still not increased despite the fishery being closed for 12 years because of persistent drought conditions.

Since 2014, increased annual precipitation has helped raise the water level and the northern pike population has started to recover. During 2020, the abundance had increased to 704 (SE = 59) northern pike ≥ 18 in and in 2022 there was 927 (SE = 110) fish. During both of these assessments, recruitment was observed because ~21% of all catches were composed of smaller (12–18 in) fish, which was a near 10-fold increase compared to 2012. As of 2022, the lake's surface area has increased approximately 250 acres, mostly of preferred spawning and rearing habitat, and has risen to a level that once supported a harvest of northern pike in the 1980s. Evidence suggests that good recruitment will continue, but the duration required for the Harding Lake northern pike population to fully recover is unknown.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department prefers to see the Harding Lake northern pike population recover prior to opening the fishery to catch-and-release or harvest. Although the lake water level in Harding Lake has risen and there is an apparent increase in recruitment of northern pike, the recovery of the northern pike population

is still ongoing. Any additional fishing mortality due to catch-and-release fishing may impair recovery of the population to a level that can support harvest or a catch-and-release 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. Approval of this proposal is not expected to result in an additional cost to the department.

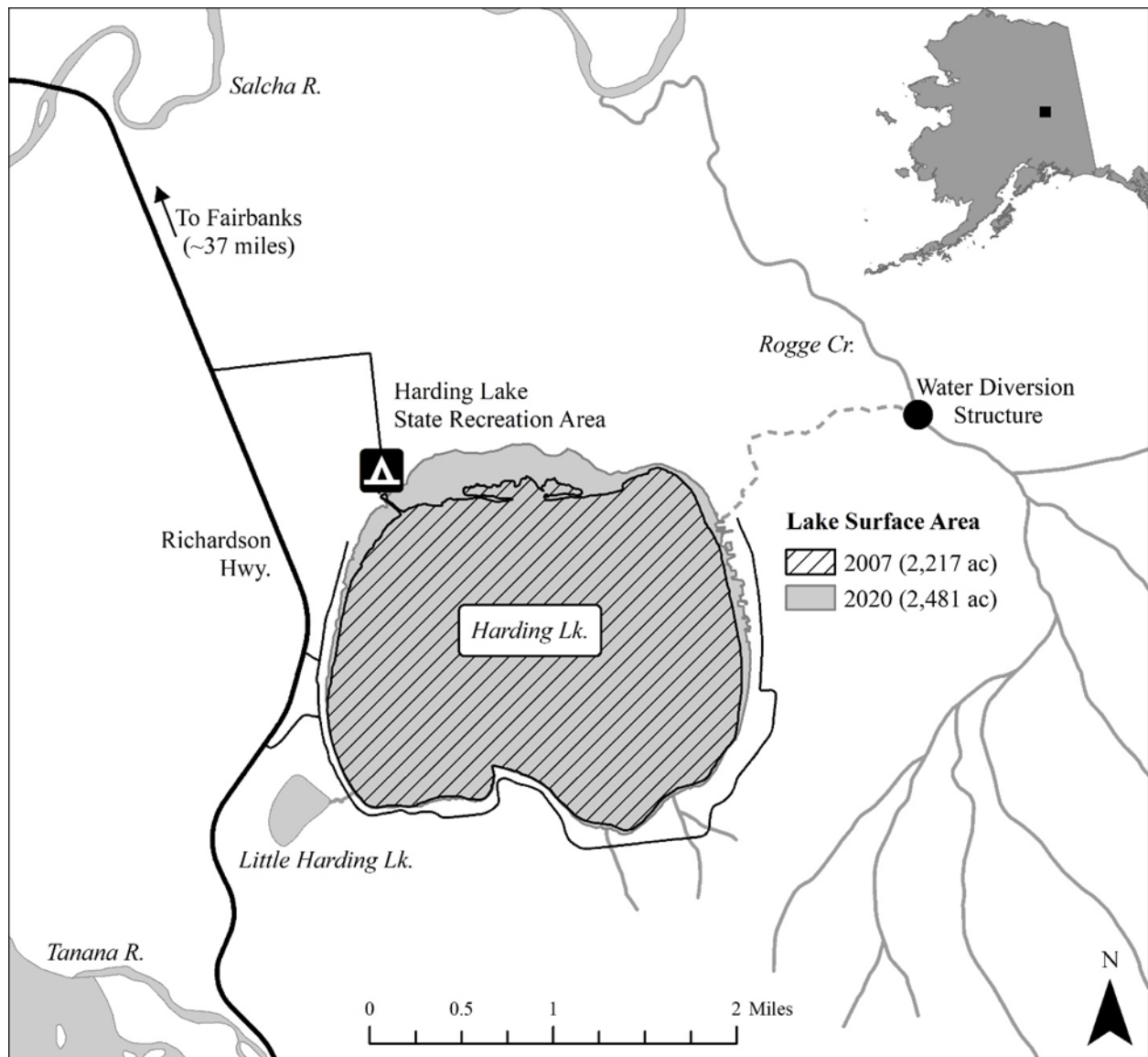


Figure 66-1.—Harding Lake and the recent changes in lake surface area.

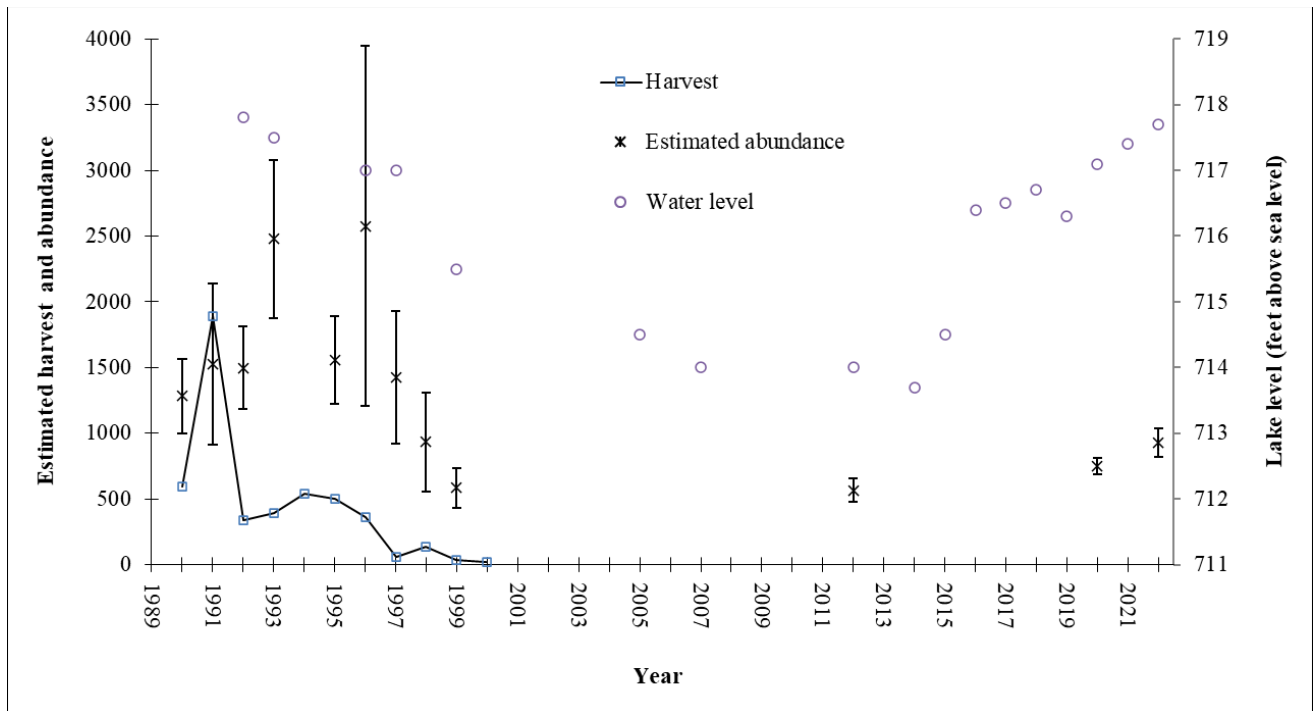


Figure 66-2.—Estimated abundance of northern pike ≥ 18 in, estimated harvest, and water elevation in Harding Lake.

Table 66-1.—Sport fishing effort (angler-days), catch, and harvest of northern pike in Harding Lake, 1983–2000. Fishing for northern pike was closed in 2000.

Year	Angler-days	Catch	Harvest
1983	708	ND	178
1984	1,707	ND	766
1985	850	ND	503
1986	2,064	ND	673
1987	5,125	ND	1,886
1988	3,256	ND	2,092
1989	4,935	ND	1,764
1990	3,895	3,629	591
1991	5,155	5,071	1,888
1992	5,068	3,400	341
1993	4,885	8,471	391
1994	4,913	5,559	539
1995	6,743	3,852	502
1996	6,734	4,070	363
1997	3,383	1,665	62
1998	3,410	1,425	139
1999	2,973	828	38
2000	2,538	396	24

Note: The SWHS did not differentiate between catch and harvest prior to 1990. ND = no data.

PROPOSAL 67 – 5 AAC 74.030. Method, means, and general provisions.

PROPOSED BY: Midnight Sun Flycasters.

WHAT WOULD THE PROPOSAL DO? Prohibit retention of northern pike caught on set lines in the Tanana River drainage.

WHAT ARE THE CURRENT REGULATIONS? Set lines are currently not legal gear for the taking of northern pike.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? There would be no effect because retention of northern pike on set lines is already prohibited in regulation.

BACKGROUND: In the Tanana River drainage, retention of northern pike caught on set lines has not been allowed since 1988. Legal gear for northern pike includes sport fishing gear, two closely attended lines when fishing through the ice, and spears and bow and arrow where allowed. Sport fishing gear is defined as a closely attended line attached to no more than one plug; one spoon; one spinner or series of spinners; two artificial flies; or two hooks. Set lines, which are unattended, are only allowed for the taking of burbot under statewide regulations (5 AAC 75.033) – not for any other species.

The department regularly tries to add clarity when disseminating regulatory information and within the regulation summary booklet. Within the current summary it does not explicitly state that set lines cannot be used for northern pike but does describe that legal sport fishing gear must be closely attended for all species, including northern pike, and what legal gear may be used to take burbot.

DEPARTMENT COMMENTS: The department recommends **NO ACTION**. The current regulations already prohibit retention of northern pike caught on set lines. To reduce public confusion, the department will provide better clarity in future versions of regulation summaries and other media content.

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. Approval of this proposal is not expected to result in an additional cost to the department.

PROPOSAL 68 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Upper Tanana/Fortymile Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would repeal the set line prohibition and bag and possession limit for burbot in T Lake.

WHAT ARE THE CURRENT REGULATIONS? In T Lake, the bag and possession limit for burbot is two fish, no size limit, and the use of set lines is prohibited.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Increase harvest potential of burbot in T Lake and increase incidental fishing mortality of northern pike caught on set lines which may not be retained.

BACKGROUND: T Lake is a small (425 acre), remote lake located approximately 9 mi northeast of the community of Dot Lake, is accessible only by float plane, and is outside the Fairbanks Nonsubsistence Area (Figure 68-1). The lake supports small northern pike and burbot populations. Prior to 1986, T Lake had no bag, possession, or length limits for burbot and set lines were allowed. In 1988, set lines were prohibited and the bag and possession limit for burbot was reduced to two fish based on stock assessments and sustainability concerns. The abundance of burbot ≥ 18 in T Lake was estimated four times from 1987 to 1990 and estimates ranged between 69 and 134 fish. At the same time, the northern pike population was assessed, and estimates ranged from 271 to 516 fish ≥ 18 in. There have been no assessments since. It is unknown how much fishing effort and harvest occurs at T Lake due to poor response rates from the Statewide Harvest Survey, but both are assumed to be low. During 1977–1999, only a single record exists of burbot being harvested (1984), and there have no responses since 2000.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. T Lake has a small population of burbot that could be easily overexploited with even a small level of fishing effort if set lines were allowed and the bag and possession limit were increased. Incidental fishing mortality of northern pike caught would also increase because they may not be retained on set lines.

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. Approval of this proposal is not expected to result in an additional cost to the department.

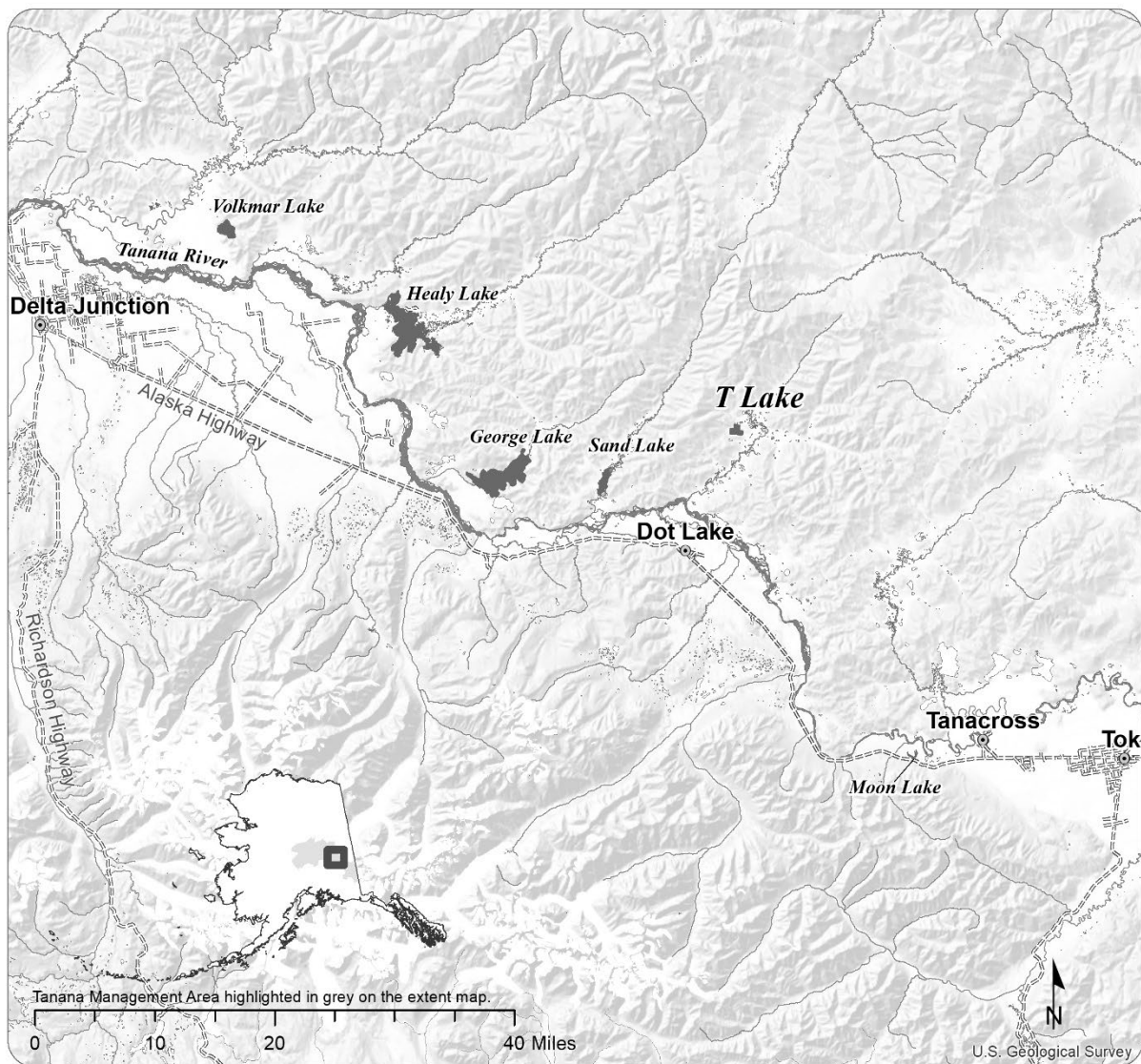


Figure 68-1.—Location of T Lake in the Upper Tanana River drainage.

PROPOSAL 69 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Shann Paul Jones.

WHAT WOULD THE PROPOSAL DO? Close the catch-and-release fishery for Arctic grayling in the lower Chena River (beginning 300 ft downstream of the Moose Creek Dam to the Tanana River) and its tributaries, including Badger Slough from April 1 through May 15.

WHAT ARE THE CURRENT REGULATIONS? Arctic grayling may be taken by catch-and-release fishing only, except that a person under 16 years of age may retain Arctic grayling in the Chena River downstream from an ADF&G regulatory marker located 300 ft downstream from the Chena River flood control structure during a designated youth sport fishery. The youth fishery allows a bag and possession limit of one fish (no size limit) during four weekend periods each summer downstream of Moose Creek Dam.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would eliminate sport fishing opportunity for Arctic grayling downstream of the Moose Creek Dam during April and a portion of May.

BACKGROUND: The Chena River and its tributaries, including Badger Slough (Figure 69-1), have been catch-and-release for Arctic grayling since 1992. The drainage is within the Fairbanks Nonsubsistence Area. During the late 1970s and early 1980s, annual harvests of Arctic grayling in the Chena River that averaged 30,000 fish had reduced the abundance of Arctic grayling and shifted the size composition to smaller fish. Harvest restrictions were initiated in 1983 when bag limits were reduced from 10 to five fish. By 1992, only catch-and-release fishing was allowed for Arctic grayling, and this regulation has remained in effect other than a special youth only fishery that began in 2019. The youth fishery allows a bag limit of one fish during four weekends each summer in the lower river downstream of the Moose Creek Dam. Chena River Arctic grayling are currently managed under the special management approach of the *Tanana River Wild Arctic Grayling Management Plan* (5 AAC 74.055).

The Arctic grayling fishery in the upper Chena River, which flows through the Chena River Recreation Area, has multiple access points for floating and motorized boating, and good catch rates of adult-sized Arctic grayling (i.e., >12 in). Downstream of the Moose Creek Dam, where spawning for Arctic grayling occurs in spring, much of the lower Chena River flows through developed areas, including the city of Fairbanks. Badger Slough and the Chena River where it flows through Fairbanks become ice free earlier than upstream areas of the Chena River. Anglers seek the first open water of the year to catch Arctic grayling although turbid conditions after break-up can make fishing challenging in the Chena River, whereas Badger Slough remains clear.

Based on the Statewide Harvest Survey, fishing effort in the Chena River has decreased substantially since the 1980s and 1990s. Estimates of fishing effort (all species combined) averaged 15,000 angler-days in the lower 46 miles of the Chena River during 1997–2001, but the most recent 5-year average for 2017–2021 was 3,769 angler-days (Table 69-1). Estimates of catch also indicate less fishing pressure. In the lower river, catches averaged 21,000 fish during 1997–2001, but the most recent 5-year average 2017–2021 was 8,018 Arctic grayling.

Historically, the abundance of Arctic grayling was assessed during mid-summer in the Chena River within a 93-mi index study area (Table 69-2). In 2021, the timing was changed to sampling in spring after ice-out to provide a more direct assessment of the spawning population, which was

24,896 (SE=1,518) adult Arctic grayling ≥ 12 in length within the index area. An estimated 15,627 (SE=968) were in the lower 46 miles of the index area downstream of the Moose Creek Dam. The 2021 assessment did not include Badger Slough, a tributary located downstream of the Moose Creek Dam, which approximately 3,000 Arctic grayling use for spawning based on a 1995 study.

A radiotelemetry study in 2022 demonstrated that approximately 71% of radiotagged Arctic grayling spawning downstream of Moose Creek Dam, including fish in Badger Slough, migrated out of the area by June 2 and nearly 98% by mid-July. These fish migrated upstream of the Moose Creek Dam to summer in the mainstem Chena River or tributary reaches away from the road system. This behavior of adults spawning in the lower river areas and migrating long distances upstream for summer has been observed in other rivers, such as the Goodpaster River. In the lower Chena and Goodpaster Rivers, studies have shown that Arctic grayling are mostly ($\geq 80\%$) composed of juvenile Arctic grayling (age-0 to age-5), which have higher levels of natural recruitment and higher natural mortality compared to older mature fish. The lower river areas are more productive rearing areas for juvenile Arctic grayling because of warmer water and smaller prey items compared to cooler, upper river areas where adult Arctic grayling reside during summer.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The fishery is sustainable because abundance estimates of Arctic grayling in the Chena River indicate an increasing spawning population and fishing effort and catches have decreased over the last 30 years. The mainstem Chena River is high and turbid after breakup, which greatly limits catch rates, but Badger Slough is spring-fed and remains clear.

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. Approval of this proposal is not expected to result in an additional cost to the department.

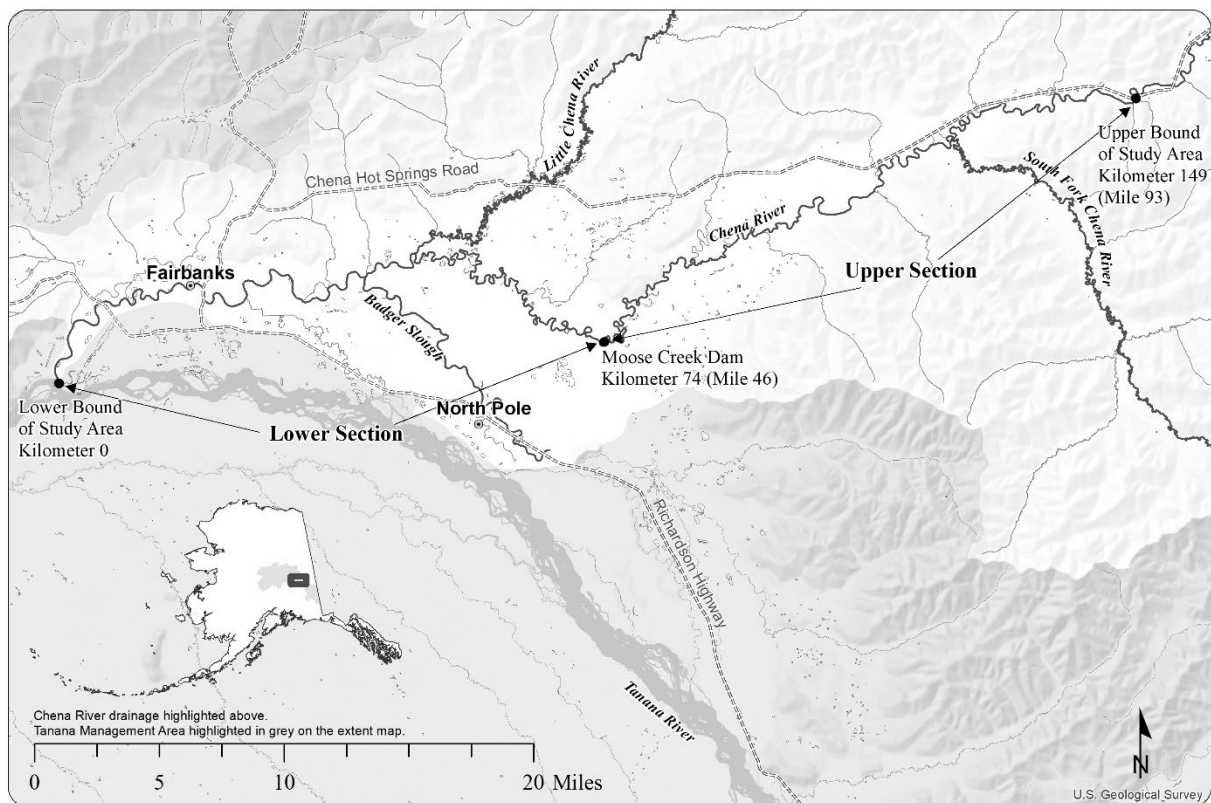


Figure 69-1—The Chena River stock assessment area delineating the lower and upper sections.

Table 69-1.—Estimates of sport fishing effort and catch of Arctic grayling from the Chena River, 1992–2021.

(Angler Days)	5-Year Periods ^a					
	1992–96	1997–01	2002–06	2007–11	2012–16	2017–21
Chena River	28,886	27,769	20,609	16,288	13,408	6,788
Upper Chena	9,489	11,639	7,593	6,628	4,647	3,049
Lower Chena	18,852	15,662	13,016	9,660	8,760	3,769
Catch						
Chena River	43,133	70,363	39,977	28,709	26,760	18,320
Upper Chena		34,022	22,543	18,846	14,240	10,302
Lower Chena		21,366	16,123	9,883	12,520	8,018

^a. The Chena River upper and lower river boundary for the Statewide Harvest Survey changed in 2007. Previously the boundary was at the South Fork Chena River (river mile 77), but it was changed to Moose Creek Dam (river mile 46).

Table 69-2.—Estimated abundance for Arctic grayling ≥ 12 inches within the 93-mile Chena River index area during July 1991–1998 and 2005 and during May 1998 and 2021.

Study Date	Combined		Lower Chena		Upper Chena	
	Abundance	SE	Abundance	SE	Abundance	SE
July 1991	7,143	867	1,426	188	5,717	846
July 1992	6,459	730	1,921	338	4,538	647
July 1993	8,410	1,470	1,533	311	6,877	1,486
July 1994	8,936	876	2,335	274	6,601	1,228
July 1995	9,335	1,273	2,059	294	7,276	1,292
July 1996	13,989	1,252	2,780	245	11,209	1,229
July 1997	11,502	1,729	2,044	374	9,458	1,688
July 1998	14,322	1,840	1,804	427	12,519	2,051
July 2005	7,393	606	2,190	268	5,203	543
May 1998	18,861	2,491	7,704	1,673	11,157	1,846
May 2021	24,657	1,477	15,637	969	9,842	1,401

PROPOSAL 70 – 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, Fisheries Sub-Committee.

WHAT WOULD THE PROPOSAL DO? Establish a bag and possession limit of one Arctic grayling, with no size limit, in the lower Chena River and its tributaries, including Badger Slough, downstream of the Moose Creek Dam to the Tanana River between June 1 and March 31. This would also repeal the four weekends (eight days) of the youth-only fishery in June and July.

WHAT ARE THE CURRENT REGULATIONS? Arctic grayling may be taken by catch-and-release fishing only. A person under 16 years of age may retain Arctic grayling in the Chena River downstream from an ADF&G regulatory marker located 300 feet downstream from the Chena River flood control structure during a designated youth sport fishery. The youth fishery allows a bag and possession limit of one fish (no size limit) during four weekend periods each summer downstream of the Moose Creek Dam.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The harvest of Arctic grayling downstream of the Moose Creek Dam would increase and anglers of all ages would have the opportunity to harvest an Arctic grayling in the Chena River. Opportunity for youth to fish free of competition from anglers 16 years or older would be lost when the youth fishery regulations are repealed.

BACKGROUND: The Chena River and its tributaries, including Badger Slough (Figure 70-1), have been catch-and-release for Arctic grayling since 1992. The drainage is within the Fairbanks Nonsubsistence Area. During the late 1970s and early 1980s, annual harvests of Arctic grayling in the Chena River that averaged 30,000 fish had reduced the abundance of Arctic grayling and shifted the size composition to smaller fish. Harvest restrictions were initiated in 1983 when bag limits were reduced from 10 to five fish. By 1992, only catch-and-release fishing was allowed for Arctic grayling, and the regulation has remained in effect other than a special youth only fishery that began 2019. The youth fishery allows a bag limit of one fish during four weekends each summer in the lower river downstream of the Moose Creek Dam. Chena River Arctic grayling are currently managed under the special management approach of the *Tanana River Wild Arctic Grayling Management Plan* (5 AAC 74.055).

The Arctic grayling fishery in the upper Chena River, which flows through the Chena River Recreation Area, has multiple access points for floating and motorized boating, and good catch rates of adult-sized Arctic grayling (i.e., >12 in). Downstream of the Moose Creek Dam, where spawning for Arctic grayling occurs in spring, much of the lower Chena River flows through developed areas including the city of Fairbanks. Badger Slough and the Chena River where it flows through Fairbanks become ice free earlier than upstream areas of the Chena River. Anglers seek the first open water of the year to catch Arctic grayling although turbid conditions after break-up can make fishing challenging in the Chena River, whereas Badger Slough remains clear.

Based on the Statewide Harvest Survey, fishing effort has decreased substantially since the 1990s (Table 70-1). Estimates of fishing effort (all species combined) averaged 15,000 angler-days in the lower 46 miles of the Chena River during 1997–2001, but the most recent 5-year average for 2017–2021 was 3,769 angler-days (Table 69-1). Estimates of catch also indicate less fishing pressure. In the lower river, catches averaged 21,000 fish during 1997–2001, but the most recent 5-year average 2017–2021 was 8,018 Arctic grayling.

Historically, the abundance of Arctic grayling was assessed during mid-summer in the Chena River within a 93 mi index study area (Table 70-2). In 2021, the timing was changed to spring after ice-out to provide a more direct assessment of the spawning population, which was 24,896 (SE = 1,518) adult Arctic grayling ≥ 12 in within the index area. An estimated 15,627 (SE = 968) were in the lower 46 miles of the index area downstream of the Moose Creek Dam. The 2021 assessment did not include Badger Slough, a tributary located downstream of the Moose Creek Dam, which approximately 3,000 Arctic grayling use for spawning based on a 1995 study.

A radiotelemetry study in 2022 demonstrated that approximately 71% of radiotagged Arctic grayling spawning downstream of the Moose Creek Dam, including fish in Badger Slough, migrated out of the area by June 2 and nearly 98% by mid-July. These fish migrated upstream of the Moose Creek Dam to summer in the mainstem Chena River or tributary reaches away from the road system. This behavior of adults spawning in the lower river areas and migrating large distances upstream for summer has been observed in other rivers, such as the Goodpaster River. In the lower Chena and Goodpaster Rivers, studies have shown that Arctic grayling are mostly ($\geq 80\%$) composed of juvenile Arctic grayling (age-0 to age-5), which have higher levels of natural recruitment and high natural mortality than older mature fish. The lower river has more productive rearing areas for juvenile Arctic grayling because of warmer water and smaller prey items compared to cooler, upper river areas where adult Arctic grayling reside during summer.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal with modification: the department supports maintaining youth-only fishing opportunity by providing youth-only fishery weekends at the same or some lesser level than what is currently established in regulation. Allowing a 1-fish bag limit during summer in the lower river is likely sustainable because the spring spawning population of Arctic grayling in the Chena River drainage remains protected in the upper section during summer.

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. Approval of this proposal is not expected to result in an additional cost to the department.

Table 70-1.—Estimates of sport fishing effort and catch of Arctic grayling from the Chena River, 1992–2021.

Angler Days	5-Year Periods ^a					
	1992–96	1997–01	2002–06	2007–11	2012–16	2017–21
Chena River	28,886	27,769	20,609	16,288	13,408	6,788
Upper Chena	9,489	11,639	7,593	6,628	4,647	3,049
Lower Chena	18,852	15,662	13,016	9,660	8,760	3,769
Catch						
Chena River	43,133	70,363	39,977	28,709	26,760	18,320
Upper Chena		34,022	22,543	18,846	14,240	10,302
Lower Chena		21,366	16,123	9,883	12,520	8,018

^a. The Chena River upper and lower river boundary for the Statewide Harvest Survey changed in 2007. Previously the boundary was at the South Fork Chena River (river mile 77), but it was changed to the Moose Creek Dam (river mile 46).

Table 70-2.—Estimated abundance for Arctic grayling ≥ 12 inches within the 93-mile Chena River index area during July 1991–1998 and 2005 and during May 1998 and 2021.

Study Date	Combined		Lower Chena		Upper Chena	
	Abundance	SE	Abundance	SE	Abundance	SE
July 1991	7,143	867	1,426	188	5,717	846
July 1992	6,459	730	1,921	338	4,538	647
July 1993	8,410	1,470	1,533	311	6,877	1,486
July 1994	8,936	876	2,335	274	6,601	1,228
July 1995	9,335	1,273	2,059	294	7,276	1,292
July 1996	13,989	1,252	2,780	245	11,209	1,229
July 1997	11,502	1,729	2,044	374	9,458	1,688
July 1998	14,322	1,840	1,804	427	12,519	2,051
July 2005	7,393	606	2,190	268	5,203	543
May 1998	18,861	2,491	7,704	1,673	11,157	1,846
May 2021	24,657	1,477	15,637	969	9,842	1,401

PROPOSAL 71 – 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, Fisheries Sub-Committee.

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

WHAT ARE THE CURRENT REGULATIONS? Lake trout may only be taken from October 1 through August 31, with 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 harvest of lake trout in Fielding Lake would increase. Anglers who want to retain a lake trout would not be required to measure their fish.

BACKGROUND: Fielding Lake is an alpine lake located off the Richardson Highway near the community of Paxson and is outside the Fairbanks Nonsubsistence Area (Figure 71-1). The lake supports populations of burbot, lake trout, and Arctic grayling. Due to concerns of overharvest in Fielding Lake, the board previously adopted several regulation changes to limit the harvest of lake trout. These include decreasing the bag limit to one fish and a 22-inch minimum size limit (1993), increasing the minimum size limit to 26 inches, establishing a spawning closure in September, prohibiting set lines, and restricting the use of bait to one single hook when fishing for burbot and lake trout (2001), and only allowing the use of unbaited, single-hook artificial lures (2007). Based on the Statewide Harvest Survey (SWHS), the regulations have been effective at reducing harvest from an average of 231 fish annually in the early 1990s to only 21 fish in 2016 (Table 71-1). Fishing effort in general has trended downward as evidenced by having too few SWHS respondents in recent years to produce estimates of annual harvest or catch.

In 2007, the board adopted the *Tanana River Area Wild Lake Trout Management Plan* (5 AAC 74.040). This plan directs the department to manage wild lake trout populations by employing a conservative regulatory regime, maintaining harvest below the maximum sustained yield, and providing guidelines to maintain harvest at sustainable levels. If harvest guidelines are exceeded, the department uses estimates of abundance and total fishing mortality (estimated harvest plus an estimated 10% hooking mortality of fish that are caught and released) to ensure total fishing mortality does not exceed maximum sustained yield for this long-lived species. The department considers an annual 10% exploitation rate to be a conservative guideline for management and below maximum sustained yield.

Previous estimates of lake trout abundance at Fielding Lake were of mature males during the spawning season, which were potentially biased low and did not enumerate the full population vulnerable to angling. To better assess the status of the population and evaluate sustainability, the abundance of the lake trout population ≥ 14 in was estimated during summer 2021 using typical angling gear. Estimated abundance of lake trout ≥ 14 in was 1,637 (SE=240) fish, of which 1,262 (SE=200) fish were ≥ 18 in. Based on these more robust estimates of total abundance, the recent exploitation rates have likely remained below 10% total mortality under current regulations.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. Removal of the length limit may increase overall harvest; however, annual fishing mortality would likely remain below 10% of the current abundance of lake trout at Fielding Lake. The proposed regulation is consistent with the *Tanana River Area Wild Lake Trout Management Plan*.

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. Approval of this proposal is not expected to result in an additional cost to the department.

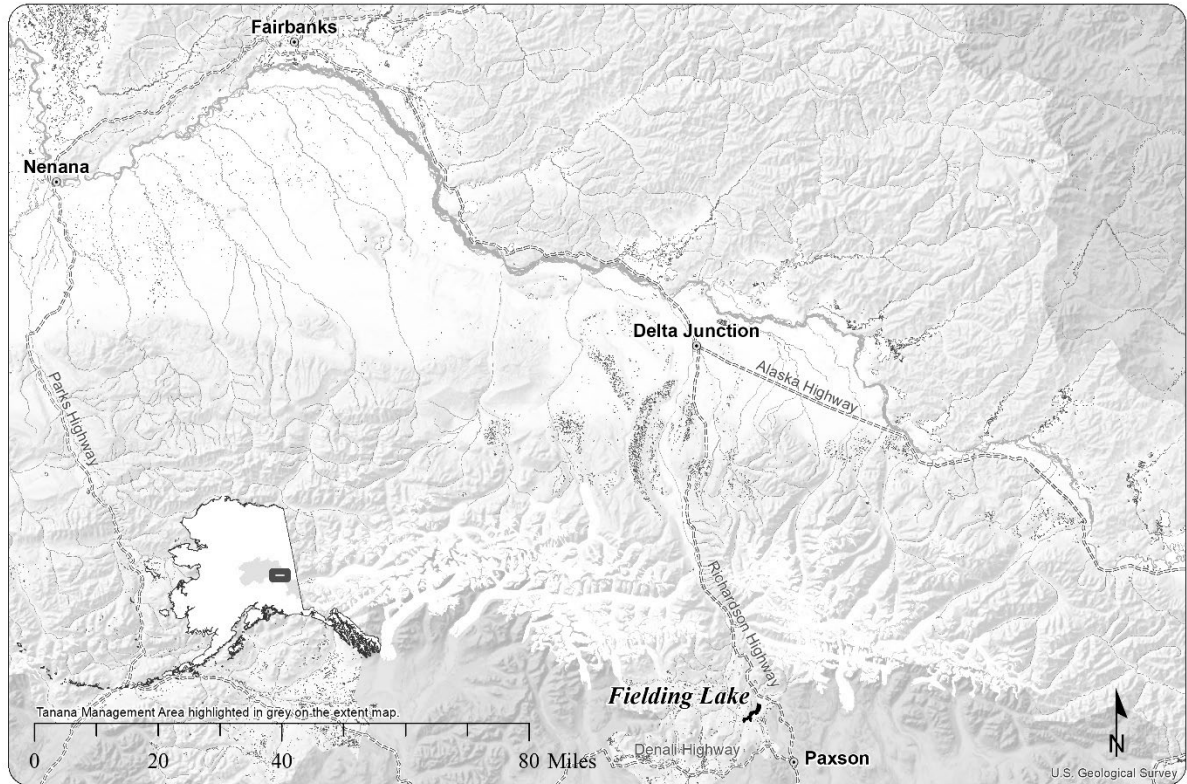


Figure 71.—Location of Fielding Lake.

Table 71.—Estimated annual sport effort, harvest, catch, and total fishing mortality of lake trout in Fielding Lake, 1990 – 2021. Annual estimates with fewer than 12 respondents are not reported and are represented by en dash (–).

Year	Number of respondents	Effort ^a	Harvest	Catch	Total fishing mortality ^b	Regulation
1990	33	1,255	186	321	200	- 2 fish bag and possession limit, 18-inch minimum size limit
1991	36	1,572	295	870	353	- setlines prohibited
1992	42	1,910	170	247	178	- bait allowed
1993	41	1,827	276	939	342	
1994	40	2,129	52	213	68	
1995	46	3,575	44	486	88	
1996	23	960	42	260	64	- 1 fish bag and possession limit, 22-inch minimum size
1997	23	1,259	55	270	77	- setlines prohibited
1998	25	1,601	19	300	47	- bait allowed
1999	25	1,154	43	279	67	
2000	20	827	18	221	38	
2001	17	525	12	106	21	- Open season, October 1 – August 31
2002	18	826	0	137	14	- 1 fish bag and possession limit, 26-inch minimum size
2003	17	840	83	423	117	- setlines prohibited
2004	15	1,010	101	520	143	- bait allowed
2005	17	1,190	112	862	153	- single-hook only
2006	16	1,034	108	634	161	
2007	16	1,085	40	227	59	
2008	17	1,203	7	103	17	
2009	15	569	357	1,211	71	
2010	20	1,483	48	309	74	
2011	7	–	–	–	–	- Open season, October 1– August 31
2012	14	1,163	64	299	88	- 1 fish bag and possession limit, 26-inch minimum size
2013	9	–	–	–	–	- setlines prohibited
2014	9	–	–	–	–	- bait prohibited
2015	15	1,732	32	291	62	- single-hook artificial lures only
2016	14	992	21	117	33	
2017	10	–	–	–	–	
2018	8	–	–	–	–	
2019	7	–	–	–	–	
2020	10	–	–	–	–	
2021	7	–	–	–	–	

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

^b. Total fishing mortality accounts for catch-and-release hooking mortality and is calculated as the harvest plus 10% of the catch after subtracting the harvest (Catch – Harvest) + (10% of Catch).

PROPOSAL 72 – 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 for catch-and-release fishing in Bathing Beauty Pond, Bear Lake, Moose Lake, Polaris Lake, Piledriver Slough, and Moose Creek.

WHAT ARE THE CURRENT REGULATIONS? By emergency order, fishing for all finfish in Bathing Beauty Pond, Bear Lake, Moose Lake, Polaris Lake, Piledriver Slough, and Moose Creek has been restricted to catch-and-release only because of per- and polyfluoroalkyl (PFOS/PFAS) contamination.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Sport fish regulations for these waters would be more easily accessed by anglers because the regulations currently implemented by emergency order would be established in regulation and be included in the annual regulation summary. The department would no longer issue annual emergency orders prohibiting retention of potentially contaminated fish.

BACKGROUND: In 2019, the board provided the department emergency order authority to restrict stocked waters to catch-and-release fishing when potentially unsafe levels of per- and polyfluoroalkyl substances (PFAS) were detected in the water or fish tissue. Several previously stocked lakes (Bathing Beauty Pond, Bear Lake, Moose Lake, Polaris Lake) and flowing waters (Piledriver Slough and Moose Creek) are within or immediately adjacent to ground water plumes contaminated with PFAS, and this contamination is likely to persist for an extended period. These waters in the vicinity of Eielson Air Force Base (within the Fairbanks Nonsubsistence Area) still provide fishing opportunity because they are accessible and support wild fish populations, primarily northern pike and Arctic grayling.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Adopting this proposal would prevent the consumption of potentially contaminated fish but still provide for fishing opportunity in these waters.

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. Approval of this proposal is not expected to result in an additional direct cost for the department.

PROPOSAL 73 – 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 and add lake trout to stocked species with modified bag and possession limits. The following water bodies would be added to the stocked waters in regulation: Horseshoe Lake Parks 258; Pyrite and Sansing Ponds; and Weigh Station #1 and #2. The following would be removed: Bathing Beauty Pond; Bear, Cathers, Polaris, and Moose Lakes; and Steese Hwy 28.8 Mile Pit.

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 in or greater in length.

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

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, insufficient fishing effort, or contamination. In 2020, lake trout were added to the stocking plan. As new waters are identified and stocked fish species are added 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 for species stocked, both to newly stocked waters and to waters no longer stocked.

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. Approval of this proposal is not expected to result in an additional direct cost for the department.

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? Update the Tanana River Area Stocked Waters management plan to include lake trout.

WHAT ARE THE CURRENT REGULATIONS? For all stocked species (rainbow trout, Arctic char/Dolly Varden, landlocked salmon, and Arctic grayling), the combined limit is 10 fish under the regional approach, and five fish for the conservative approach. For both combined limits, only one fish may be 18 in or greater in length, the fishing season is open year-round, and bait may be used.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would make regulations consistent for all stocked species and waters and would provide consistency for lake trout between general regulations and stocked waters in the Tanana Management Area.

BACKGROUND: In 2020, the department added lake trout to the stocking program. Within the *Tanana River Area Stocked Waters Management Plan* (5 AAC 74.065), current regulations for stocked waters do not include lake trout. Under the regional management approach, which is the least restrictive of the management approaches, the regulations are 10 fish in combination of all stocked species, only one of which may be 18 in or greater in length. The conservative management approach is the moderately restrictive management approach, and the regulations are five fish in combination of all stocked species, only one of which may be 18 in or greater in length. The general background regulation for lake trout in the Tanana River Area is a bag and possession limit of two fish with no size limit.

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. Approval of this proposal is not expected to result in an additional direct cost for the department.

COMMITTEE OF THE WHOLE – GROUP 3: KOTZEBUE AND NORTON SOUND COMMERCIAL AND SPORT FISHERIES (4 PROPOSALS)

NORTON SOUND COMMERCIAL FISHERIES (1 PROPOSAL)

PROPOSAL 75 – 5 AAC 70.011. Seasons and bag, possession, annual, and size limits for the Northwestern Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Remove the minimum length limit and reduce the bag and possession limit for Arctic grayling in Northern Norton Sound drainages.

WHAT ARE THE CURRENT REGULATIONS? In Northern Norton Sound, which is described as all waters draining into Norton Sound from Cape Darby to Cape Prince of Wales (Figure 75-1), the bag and possession limit for Arctic grayling is five fish, of which only one fish may be greater than 15 in or greater in length. There are four rivers with differing regulations. In the Pilgrim and Snake Rivers, the bag and possession limit for Arctic grayling is two fish, only one of which may be 15 in or greater in length. In the Nome and Solomon Rivers, sport fishing for Arctic grayling is closed due to low abundance.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Harvests of Arctic grayling greater than 15 in may increase in some drainages and anglers would not be required to measure their fish. Eliminating the 15-inch minimum size limit for harvest and maintaining the five-fish bag and possession limit, with no size limit, may result in unsustainable harvest. However, a bag limit of 2 fish, with no size limit, would be sustainable, still maintain desired population size structure, and allow anglers to harvest more large fish. In the Pilgrim and Snake Rivers, smaller population sizes and the presence of multiple roadside access points put Arctic grayling stocks at greater risk of overharvest than the larger or less accessible rivers. For the Pilgrim and Snake Rivers, reducing the bag and possession limit from 2 fish (only one fish ≥ 15 in) to one fish (no size limit) still allows for harvest and would not alter the size structure of the Arctic grayling populations.

BACKGROUND: Most fishing effort for Arctic grayling within Northern Norton Sound occurs on five streams that are accessible from Nome Road system, which makes some of these smaller systems vulnerable to overharvest. These Arctic grayling populations are primarily composed of fish ≥ 15 where smaller fish are difficult for anglers to locate and catch, which can result in anglers only being able to harvest a single fish. Consistent with the conservative management approach outlined in the *Northwestern Alaska Wild Arctic Grayling Management Plan* (AAC 70.055), the management objective for the Nome roadside Arctic grayling fisheries is to maintain populations with characteristics of a high-quality sport fishery, while protecting minimum spawning stock abundances for long-term sustained yield. The current 15-in length limit is a conservative measure used to protect larger fish from overexploitation and protect the size structure desired by anglers.

Due to the low number of respondents to the Statewide Harvest Survey, the department cannot estimate Arctic grayling catch and harvest levels with precision for individual

systems such as the Pilgrim, Sinuk, Snake, Niukluk, and Fish Rivers. However, aggregation of reports for Northern Norton Sound shows a clear downward trend in fishing effort, harvest, and catch (Table 75-1). An unknown number of Arctic grayling are harvested in the subsistence fishery each year using nets and hook and line. The bag and possession limits for subsistence fishing with a hook and line attached to a rod or pole during open water are the same as sport fishing regulations (5 AAC 01.172).

Stock assessments of Arctic grayling for select rivers used to monitor sustainability have shown estimates of abundance above management objectives (Table 75-2). The populations in the Pilgrim and Snake Rivers are small, very accessible, and cannot sustain increases in harvest without altering the size structure of the Arctic grayling populations. The Nome and Solomon Rivers have been closed to fishing for Arctic grayling because those populations have not recovered sufficiently from overexploitation. The remaining rivers along the road system appear to have relatively large populations, low fishing effort, and can sustain an increase in harvest.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This proposal is consistent with the conservative management approach as outlined in the *Northwestern Alaska Wild Arctic Grayling Management Plan* 5 AAC 70.055(f)(3). Where bag and possession limits are reduced, the board may wish to consider whether reasonable opportunity for subsistence is still provided.

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. Approval of this proposal is not expected to result in an additional cost to the department.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No, the Northern Norton Sound drainages are outside of any nonsubsistence areas.
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 and all finfish other than 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 uses? The board has not adopted an amount reasonably necessary for subsistence (ANS) finding for Norton Sound-Port Clarence Area finfishes other than 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 use? This is a board determination.

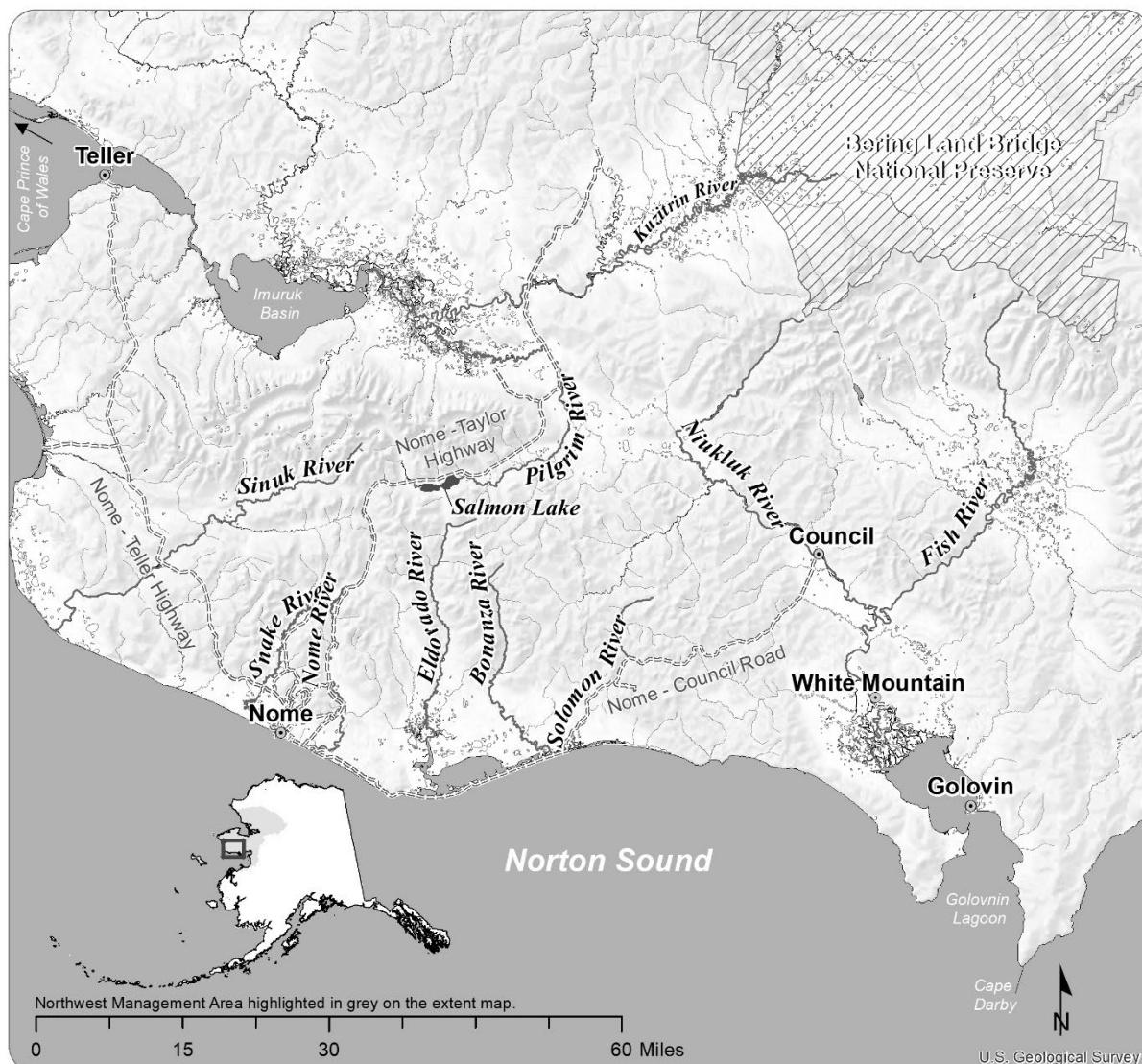


Figure 75-1.—Map of Northern Norton Sound showing the Nome area road system and road accessible waters.

Table 75-1.—Number of Statewide Harvest Survey respondents, sport fishing effort, and Arctic grayling sport harvest and catch in all northern Norton Sound drainages from Cape Darby to Cape Prince of Wales (excluding the Nome and Solomon River drainages), 2006–2021.

Year	Number of Respondents	Effort (angler-days)	Catch	Harvest
2006	58	6,459	2,889	359
2007	55	5,988	5,138	256
2008	84	9,604	5,282	354
2009	74	6,712	7,731	490
2010	75	4,513	4,301	84
2011	33	6,171	3,277	1,388
2012	56	4,635	4,749	520
2013	42	3,734	3,655	72
2014	30	2,527	1,310	0
2015	31	2,836	4,725	58
2016	27	6,298	1,317	1,086
2017	39	914	183	183
2018	19	1,871	229	0
2019	24	2,504	752	161
2020	32	3,249	2,683	313
2021	31	4,650	2,439	180
Average 2011–2020	33	3,474	2,288	378
Average 2016–2020	28	2,967	1033	349

Table 75-2.—Most recent abundance estimates within defined index areas for populations of Arctic grayling ≥ 15 in in five road-accessible rivers near Nome.

River	Index section length (km)	Year of last assessment	Estimated abundance (SE)	Minimum population objectives
Niukluk	22	2013	11,916 (2,139)	3,500
Fish	26	2007	21,146 (5,577)	4,500
Sinuk	40	2003	2,534 (363)	1,000
Snake	19	2016	764 (151)	600
Pilgrim	9	2002	580 (115)	350

KOTZEBUE COMMERCIAL FISHERIES (1 PROPOSAL)

PROPOSAL 76 – 5 AAC 04.320. Fishing periods.

PROPOSED BY: Seth Kantner.

WHAT WOULD THE PROPOSAL DO? Allow permit holders to leave their set gillnets fishing and depart the area and only require them to return when taking catch from their gillnets.

WHAT ARE THE CURRENT REGULATIONS? Under 5 AAC 39.107. Operation of gear., a commercial permit holder for stationary fishing gear must be physically present at a beach or riparian fishing site during operation of net gear, except when the permit holder is at or travelling to or from the location of a sale of fish caught in the gear, or other stationary gear of the permit holder. The permit holder shall be within reasonable distance of the gear when at a point of sale or at the location of other stationary gear of that permit holder. A “reasonable distance” means a distance that ensures that the CFEC permit holder retains competent supervision of the gear.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Allow commercial permit holders to leave their stationary gear operating when departing the fishing area and later return to the gear to remove the catch. This may result in increased gear loss and catch of non-target species.

BACKGROUND: In recent years several permit holders were cited for leaving their gear and returning home where they could not visually observe their gear. Permit holders can fish their setnet gear far from shore because of the shallowness of Kotzebue Sound. Prior to the 2000s, fishing periods could be 72 hours long and the department never expected permit holders to attend their gear during the entire fishing period. In the 2000s, fishing periods have ranged from 4 to 14 hours and the department did not expect permit holders to attend their gear during the entire fishing period. Alaska Wildlife Troopers issued citations to permit holders in 2019 for not being physically present when their gear was fishing. The department requested that the citations be waived and AWT has not issued citations in the last three years for this issue but has requested a change in the regulation to allow permit holders to leave the area while their gear is fishing.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal to allow commercial permit holders to leave their stationary fishing gear unattended. Commercial permit holders still need to be present when fish are picked from gear.

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

NORTON SOUND COMMERCIAL FISHERIES (2 PROPOSALS)

PROPOSAL 77 – 5 AAC 04.362. Guideline harvest range for Port Clarence District.

PROPOSED BY: Charlie Lean.

WHAT WOULD THE PROPOSAL DO? Convert 5 AAC 04.362. Guideline harvest range for Port Clarence District. into a management plan with a suggested optimal escapement goal (OEG) of 7,000 to 12,000 sockeye salmon for the Salmon Lake drainage.

WHAT ARE THE CURRENT REGULATIONS? A commercial fishery in the marine waters of the Port Clarence District can occur if the department projects an inriver abundance of 30,000 sockeye salmon for the Pilgrim River with a guideline harvest range of 0 to 10,000 sockeye salmon. A subsistence household salmon permit is required for all waters of the Port Clarence District, including Pilgrim River. However, Pilgrim River and Salmon Lake each require a separate subsistence household salmon permit. Pilgrim River has an annual limit of 25 sockeye salmon unless modified by emergency order. Only the northeastern half of Salmon Lake can be opened by emergency order and has an annual limit of 200 sockeye salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The sustainable escapement goal (SEG) at the Pilgrim River weir in the Salmon Lake drainage is 6,800 to 36,000 sockeye salmon. The proposed OEG would likely not result in any change by the department in the timing of modifying the Pilgrim River annual subsistence limit. There has not been a buyer for the commercial fishery since 2008. The reduced upper bound of the escapement goal range would allow the department to waive the subsistence harvest limit earlier in the run. Also, a change to the management plan lowering the inriver goal could allow commercial fishing earlier in the season if there was buyer interest.

BACKGROUND: Pilgrim River drains Salmon Lake and the lake has been fertilized since 1997 except for four years in the first decade of the 2000s. A weir project was established on Pilgrim River 2003 replacing a tower project that operated for several years previously. The escapement goal was changed in 2019 from an aerial survey goal of 4,000 to 8,000 sockeye salmon at Salmon Lake to weir-based SEG of 6,800 to 36,000 fish,

In the early 2000s, sockeye salmon began to return in great numbers and subsistence household permits issued have increased over ten-fold since then. The household permit annual limit for sockeye salmon varied by year and ranged from 25 to 250 fish until 2010. After the record low escapement of 953 sockeye salmon in 2009 (Table 77-1) the Northern Norton Sound Fish and Game Advisory Committee (NNSAC) requested that the department set the limit at 25 sockeye salmon and raise or waive the limit as appropriate in large run years. The 25-sockeye salmon annual limit has been in place since 2010 and the limit had been waived mid-season from 2015–2019, and in 2020 the limit was doubled near the end of August. In only 6 years in the 2000s have permits been requested for Salmon Lake and subsistence sockeye salmon harvest has ranged from 0 to 56 fish.

In 2019 a proposal was submitted to the board by the NNSAC to repeal the guideline harvest range for the Port Clarence District commercial fishery and replace it with a salmon management plan that established criteria to open the fishery and set commercial period duration. The proposal also requested the management plan to set the annual household subsistence sockeye salmon catch limit in Pilgrim River based on the average sockeye salmon escapement from the two previous years under three scenarios of increasing catch limits aligned with higher average escapements; the

proposal failed. In the 2000s there was a commercial harvest of 1,152 sockeye salmon in 2007 and 89 sockeye salmon in 2008. There has been no commercial fishery after 2008. The local buyer received complaints from subsistence fishers about having a commercial fishery and the buyer suspended operations in Port Clarence District.

In the last two years the department has closed subsistence net fishing in the Pilgrim River because of low sockeye salmon runs and in both years the escapement goal was not reached. In 2021 the closure was after July 21, near the historical midpoint of sockeye salmon passage at the weir, with the escapement count at 3,253 fish and the final count at 5,946 fish. In 2022 the closure was after July 8, near the historical first-quarter point of sockeye salmon passage at the weir, with the escapement count at 314 fish and the final count at 1,518 fish.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The lower bound of the proposed escapement goal range is like the department's lower bound, and the upper end would be one-third of the present upper bound. The department has waived sockeye salmon catch limits in large run years once the escapement goal has been projected to exceed 15,000 fish. The current management plan has allowed for commercial fishing most recently in the years 2017 through 2019 because inriver abundance was projected to exceed 30,000 sockeye salmon; however, there was no buyer interest.

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

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 salmon and all finfish other than 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 for salmon in the Norton Sound-Port Clarence Area at 96,000 to 160,000 fish (5 AAC 01.186(b)(1)). 3,430–5,716 chum salmon are reasonably necessary for subsistence uses in Subdistrict 1 of the Norton Sound District (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.

Table 77-1. -Pilgrim River sockeye salmon harvest and escapement and Port Clarence District sockeye salmon harvest, 1999 - 2022.

Year	Pilgrim River Subsistence Permits Issued	Pilgrim River Subsistence Households Reporting Fishing	Pilgrim River and Salmon Lake Sockeye Salmon Subsistence Harvest	Pilgrim River Sockeye Salmon Escapement	Port Clarence Subsistence Permits Issued	Port Clarence District Subsistence Sockeye Harvest, exc. Pilgrim River and Salmon Lake Harvest	Total District Sockeye Salmon Subsistence Harvest
1999	31	10	180	4,650	Not Required	2,392	2,572
2000	11	3	31	9,683	Not Required	2,851	2,882
2001	19	8	165	No data	Not Required	3,692	3,857
2002	26	9	165	3,888	Not Required	3,732	3,897
2003	101	51	1,421	42,729	Not Required	3,074	4,495
2004	223	130	3,546	85,543	149	5,142	8,688
2005	210	107	4,754	55,951	120	3,738	8,492
2006	198	109	5,556	52,323	145	4,384	9,940
2007	201	91	5,306	43,432	161	4,178	9,484
2008	255	113	3,495	20,452	150	1,574	5,069
2009	190	37	694	953	136	949	1,643
2010	146	21	234	1,654	144	590	824
2011	133	24	356	8,824	137	1,255	1,611
2012	188	42	651	7,632	147	771	1,422
2013	265	129	2,761	12,428	162	2,482	5,243
2014	260	120	2,134	9,719	170	1,835	3,969
2015	377	251	10,706	36,150	171	3,166	13,872
2016	506	273	9,454	15,184	158	2,686	12,140
2017	489	285	12,148	55,764	178	3,276	15,424
2018	500	217	9,073	39,976	189	3,308	12,381
2019	474	227	8,598	30,451	197	3,711	12,309
2020	592	308	5,946	15,298	193	1,808	7,754
2021	405	140	1,543	4,607	153	1,326	2,869
2022	335	46	231	1,518	150	443	674
5-year average ^a	461	188	5,078	18,370	176	2,119	7,197

^a 2018–2022.

PROPOSAL 78 – 5 AAC 27.910. Fishing seasons and periods for Bering Sea-Kotzebue Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Allow herring to be harvested and sold as bait during the same period as the sac roe herring season in Norton Sound.

WHAT ARE THE CURRENT REGULATIONS? Herring may be taken from May 15 through June 30 (sac roe season) and during periods established by emergency order. Herring may be taken from July 1 through November 15 (food and bait season) or in Subdistrict 1 (Nome) from June 15 through November 15 (food and bait season).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Allow commercial herring permit holders to harvest herring for food and bait during the sac roe season. This would likely increase harvest of herring in Norton Sound and increase value of the commercial herring fishery in Norton Sound.

BACKGROUND: Since 2013 there has been no buyer interest in a Norton Sound sac roe herring fishery. By regulation a food and bait herring fishery can occur after June 14 in Subdistrict 1 (Nome) and after June 30 elsewhere in the Norton Sound District. Because there is a demand for herring as food and bait, and to provide economic opportunity to local communities the department has opened the herring fishery continuously during the sac roe season. A local buyer has purchased an average of 50 tons a year for bait.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to be consistent with current fishery practices and to provide social and economic benefits that might otherwise be foregone.

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

COMMITTEE OF THE WHOLE – GROUP 4: YUKON SUBSISTENCE, PERSONAL USE, COMMERCIAL AND SPORT FISHERIES (11 PROPOSALS)

YUKON SUBSISTENCE AND PERSONAL USE FISHERIES (7 PROPOSALS)

PROPOSAL 79 – 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Koyukuk River Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Allow hook and line attached to a rod or pole when subsistence fishing upstream of the Nulato River mouth, to and including the Koyukuk River drainage up to the closed waters of the Koyukuk River and the subsistence permit area (Figure 79-1).

WHAT ARE THE CURRENT REGULATIONS? A hook and line attached to rod or pole may be used to take salmon and nonsalmon for subsistence purposes from the Coastal District up to and including the Nulato River. In the Yukon River drainage upstream from the Nulato River a sport fishing license is required to fish with hook and line attached to a rod or pole for finfish during ice-free months, but not while fishing through the ice.

A subsistence permit is required in portions of the Koyukuk River drainage near the Dalton Highway, in the South Fork of the Koyukuk River drainage upstream from the mouth of the Jim River and the Middle Fork of the Koyukuk River drainage upstream from the mouth of the North Fork. Subsistence fishing is closed in the Kanuti River drainage upstream from a point five miles downstream of the state highway crossing; Fish Creek drainage upstream from the mouth of Bonanza Creek; Bonanza Creek drainage; and Jim River drainage, including Prospect Creek and Douglas Creek. (Figure 79-1).

Since 2003, during times when determined to be necessary for the conservation of salmon, the commissioner may, by emergency order, close the fishing season for salmon, and immediately reopen the season during which restrictions apply to the waters, seasons, bag, possession, and size limits, and method and means for subsistence fishing for salmon with a hook and line attached to a rod or pole. These provisions do not apply to fishing through the ice.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Hook and line attached to a rod or pole would be allowed year-round as subsistence gear for salmon and nonsalmon extending upstream of the Nulato River up through the Koyukuk River drainage, except the areas that are closed or require a permit (Figure 79-1). This would reduce confusion by aligning federal and state subsistence gear regulations regarding the use of hook and line attached to a rod or pole.

BACKGROUND: Since 2000, in the Yukon Area below Paimiut Slough (located in District 3 below Holy Cross), hook and line attached to a rod or pole has been legal gear to harvest salmon and nonsalmon year-round. In 2019, this area was extended upriver from Paimiut Slough to include waters up to and within the Nulato River in District 4. Currently, above the Nulato River, subsistence fishing with hook and line attached to a rod or pole is limited to ice fishing only.

Hook and line attached to a rod or pole is commonly used for subsistence fishing in the Yukon Area year-round for a variety of whitefish, sheefish, grayling, and Dolly Varden. Up to 60% of nonsalmon harvest in the Koyukuk River drainage is estimated to be taken with hook and line attached to a rod or pole based on subsistence household surveys.

Hook and line attached to a rod or pole is currently legal sport fishing gear in the Yukon Area. To participate in the sport fishery an Alaska resident 18 years of age or older must obtain a Resident Sport Fishing License (currently \$20); however, a resident who has an annual family or household income equal to or less than the most recent poverty guidelines (in Alaska, \$16,990 for a household of one; \$28,790 for a household of three) for the state set by the U.S. Department of Health and Human Services for the previous year may obtain a resident hunting, trapping, and sport fishing license for \$5. An Alaska resident who is 60 years of age or older may obtain a sport fishing, hunting, and trapping identification card free of charge with submission of an application to the department. An Alaska resident must obtain a hunting license when participating in any hunt unless they meet the hunting license exemptions.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal to be consistent with current fishery practices and to support social and economic benefits. This proposal would add options to legal subsistence gear in a portion of District 4. Currently state and federal regulations are inconsistent: in federal public waters of the Yukon River drainage, rod and reel is legal gear for subsistence harvest of salmon and nonsalmon species by federally qualified users.

COST ANALYSIS: Adoption of this proposal will lower the fishery entry cost to the private person, because the price of a hook and line attached to a rod or pole is less expensive than purchasing a gillnet or building a fish wheel. If this proposal is accepted, Alaska residents fishing in a portion of the Koyukuk River drainage would no longer be required to purchase a sport fishing license to fish using a hook and line attached to a rod or pole. Approval of this proposal is not expected to result in an additional cost to the department.

SUBSISTENCE REGULATION REVIEW:

1. Is the stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board has made a positive customary and traditional use finding for (1) king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (2) freshwater fish species, including sheefish, whitefish, lamprey, burbot, sucker, grayling, pike, and char; (3) herring and herring roe, within 20 miles of the coast between the terminus of the Black River and the westernmost point of the Naskonat Peninsula; and (4) all finfish other than salmon and herring, in the salt waters of the Yukon Area. (5 AAC 01.236 (a)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? Per 5 AAC 01.236 (b), the amounts reasonably necessary for subsistence are:
 - (1) king salmon: 45,500–66,704;
 - (2) summer chum salmon: 83,500–142,192;
 - (3) fall chum salmon: 89,500–167,900;
 - (4) coho salmon: 20,500–51,980;
 - (5) pink salmon: 2,100–9,700.
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.

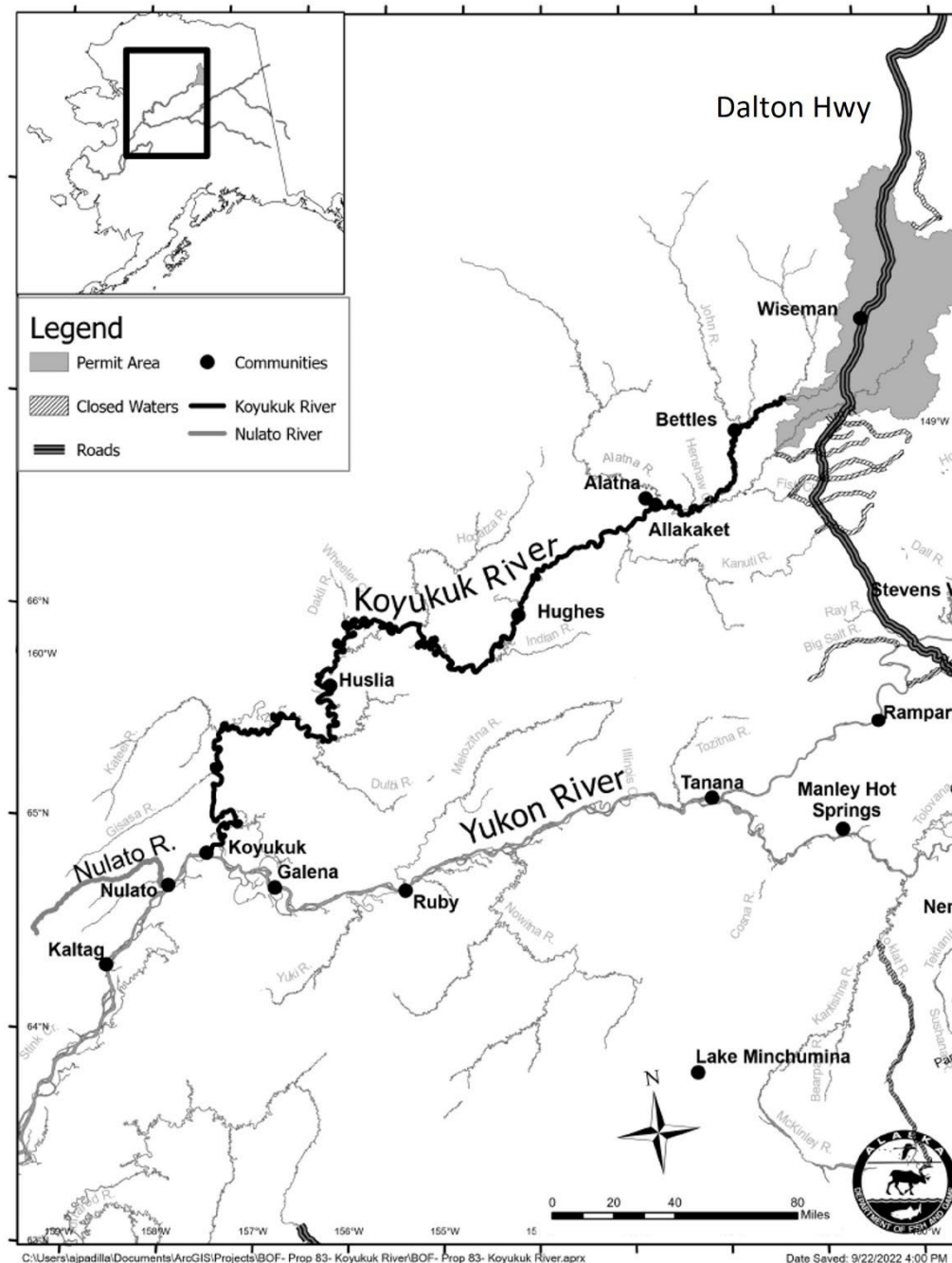


Figure 79-1.—Map of the extended area for subsistence fishing with hook and line attached to a rod or pole upstream of Nulato River and including the Koyukuk River drainage.

Note: Area for hook and line attached to a rod or pole gear would extend in the Yukon River drainage from upriver of the Nulato River to the mouth of the Koyukuk River and in the drainage of the Koyukuk River up to the permit area (shaded gray). Fishing would remain closed in closed waters (hashmarked stream drainages along the Dalton Highway).

PROPOSAL 80 – 5 AAC 01.XXX. Subsistence Limits for King Salmon on the Yukon River.

PROPOSED BY: John H. Lamont.

WHAT WOULD THE PROPOSAL DO? Restrict subsistence king salmon harvest in the middle and upper Yukon River (Districts 4–6).

WHAT ARE THE CURRENT REGULATIONS? There are no king salmon annual harvest limits for subsistence fishing in much of the Yukon Area. Salmon runs are managed by time, area, and gear to meet escapement goals and provide harvestable surplus when available. In a portion of District 6 (Tanana River) there is a subsistence fishery with a permit annual harvest limit of 60 king salmon per household.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Households in Districts 4, 5, and 6 would harvest a limited number of king salmon. This would likely require an expansion of the current subsistence permit system.

BACKGROUND: In much of the Yukon Area, subsistence fishing is limited by time, area, and gear and no permit is required. During open salmon fishing periods, households may harvest salmon to meet their subsistence needs. Household size and composition vary widely, and the needs are highly individualized. Several households may coordinate fishing and processing tasks, and then share a portion of the harvest later with other fishing and nonfishing households. If household harvest limits are considered, a system would need to account for the traditional needs of those nonfishing households. Department data demonstrate that a much smaller portion of households harvest salmon than those that use salmon. This indicates that the sharing of salmon is widespread and the harvest responsibility for entire communities often falls to only a few households. Limiting the number of salmon harvested by household would ignore these traditional practices and the adaptive responses of communities in times of low salmon abundance.

Usage patterns of salmon are variable throughout the Yukon Area because salmon species' distribution and quality varies by district. For example, Lower Yukon districts can harvest all five salmon species whereas only king salmon and fall chum salmon migrate to District 5. Harvest is documented through a subsistence fishing permit in portions of District 5 and 6, while subsistence surveys are conducted in the remainder of the Yukon Area (Table 80-1).

While subsistence harvest amounts are estimates, with associated confidence intervals, the number of 'unaccounted' king salmon is well beyond the documented levels of harvest. Fishery researchers are exploring explanations for differences in inseason projections and abundance between the Pilot Station and Eagle sonar projects and factors causing en route mortality of king salmon. From 2020 to 2022 subsistence fishing for salmon was restricted or closed for much of the king salmon run. The estimated subsistence harvest of king salmon in 2020 was 21,500 fish. During the full king season closures in 2021 and 2022, small numbers of king salmon were taken as incidental harvest by nonsalmon gear and by test fisheries. Household surveys, news reports, and personal accounts provide additional information about the loss of fishing opportunity and the inability of households to meet subsistence needs for king salmon in recent years.

Customary trade means the limited noncommercial exchange, for minimal amounts of cash, as restricted by the appropriate board, of fish or game resources (AS 16.05.940 (8)). Customary trade has been examined as part of the complex process of sharing and barter of subsistence resources within and between communities. To determine the appropriate limits for customary trade, the

board considers all applicable historical and cultural aspects. Customary trade occurs in communities throughout the entire Yukon Area. Customary trade of subsistence taken finfish is only allowed in the Norton Sound-Port Clarence Area. The sale of subsistence taken finfish is limited to no more than \$500 per household per calendar year, and households must keep a record of the sale and report all sales to the department (5 AAC 01.188). Fish may be gilled and gutted; however, all other methods of processing require a Department of Environmental Conservation permit. Finfish sales, purchases, and deliveries may occur only in the Norton Sound-Port Clarence Area. Failure to return the permit and record keeping form is punishable by a misdemeanor.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal and is **NEUTRAL** on the allocative aspects. Existing regulations already provide the department with management discretion by emergency order to limit the time and gear by district for the harvest of king salmon in the subsistence fishery.

There are some considerations for the process of setting up a permit system to expand to the entire Yukon Area, inclusive of Districts 4–6. The state now uses an online permit system, so households would either need access to the internet or receive a permit application by mail to get an annual permit. There would be startup investments of time on the part of the area staff, administration, data analysts, and programmers.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional direct cost for a private person to participate in this fishery. Approval of this proposal is expected to result in an additional cost to the department through expansion of the subsistence permit program. At the current time, the department does not have funding identified for this program and if it were implemented would require cuts to other programs.

SUBSISTENCE REGULATION REVIEW:

1. Is the stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board has made a positive customary and traditional use finding for (1) king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236 (a)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? Per 5 AAC 01.236 (b), the amount reasonably necessary for subsistence is 45,500 to 66,704 king 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.

Table 80-1.—Salmon fishing households and king salmon subsistence harvest by Lower and Upper Yukon, 2002–2022.

Year	Lower Yukon fishing households	Lower Yukon king salmon harvest ^a	Upper Yukon fishing households	Upper Yukon king salmon harvest ^b	Total king salmon harvest
2002	644	19,818	545	24,050	43,868
2003	636	22,852	651	34,311	57,163
2004	669	22,390	591	33,524	55,914
2005	655	20,193	618	33,354	53,547
2006	713	19,418	665	29,264	48,682
2007	659	22,461	630	32,849	55,310
2008	671	22,336	614	22,976	45,312
2009	585	14,089	615	19,843	33,932
2010	643	20,131	648	24,590	44,721
2011	687	19,227	662	21,842	41,069
2012	694	15,660	663	14,826	30,486
2013	687	4,724	550	7,851	12,575
2014	720	2,583	514	704	3,287
2015	709	4,517	409	3,065	7,582
2016	678	7,714	601	13,970	21,684
2017	716	12,952	680	25,209	38,161
2018	708	10,337	639	21,676	32,013
2019	670	20,621	608	28,002	48,623
2020	593	10,427	465	12,353	22,780
2021 ^c	133	1,509	77	486	1,995
2022 ^{c, d}					
Recent average					
(2017–2021)	564	11,169	494	17,545	28,714
Historical average					
(2002–2021)	644	14,698	572	20,237	34,935

Note: Fishing households are defined in the annual subsistence harvest report and includes households that fished with Subsistence and Personal Use permits. Subsistence harvest numbers include fish caught commercially and retained for personal use and test fishery catches given to subsistence users.

^a Includes the Coastal District.

^b Includes salmon harvested in the Personal Use fishery and from areas with subsistence permits.

^c Salmon fishing was closed. Fishing for nonsalmon with gillnets of 4-inch or smaller mesh remained open.

^d Preliminary harvest information will be available in December 2022.

PROPOSAL 81 – 5 AAC 01.220 (n)(3)(4) Lawful gear and gear specifications.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee, Fisheries Sub-Committee.

WHAT WOULD THE PROPOSAL DO? Implement a Yukon River drainage subsistence salmon permit to allow retention of king salmon less than 24 inches with an annual limit 10 fish during times of king salmon conservation.

WHAT ARE THE CURRENT REGULATIONS? There are no king salmon annual harvest limits for subsistence fishing in much of the Yukon Area. In a portion of District 6 (Tanana River) there is a subsistence fishery with a permit annual harvest limit of 60 king salmon per household. In the Personal Use fishery (Tanana River), permit annual harvest limits are 10 king salmon per household.

In times of king salmon conservation, selective gear types may be used for subsistence, including dip nets, beach seines, and fish wheels. The live release of king salmon from these gear types may be required by emergency order. Hook and line gear is legal gear for subsistence fishing in waters of the Yukon River drainage up to and including the Nulato River drainage. Restrictions on hook and line gear for salmon may be applied by emergency order to waters, seasons, bag, possession, and size limits.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? During times of king salmon conservation, subsistence fishermen may be able to retain up to 10 king salmon 24 inches or less in length during openings with dip nets and closely attended fish wheels when the permit system is implemented. Yukon Area households would be required to obtain a subsistence permit, record king salmon harvest daily, and return permits by October 31.

BACKGROUND: Assessment projects and escapement goals in the Yukon Area for king salmon, including the U.S./Canada treaty objective, are based on total numbers of fish. Salmon may be taken at any time from subsistence areas of the Yukon Area, except that the commissioner may, by emergency order, close subsistence fishing periods and restrict fishing gear to achieve escapement goals.

At the Pilot Station Sonar, estimates are available for large and small king salmon; however, small king salmon at this project are less than 655 mm (25.8 inches) in length, as measured from mid eye to tail fork (METF). Based on a king salmon morphology project in the Yukon Area, a 655 mm fish is likely to be about 30 inches total length. Small king salmon comprise, on average, 21% of the king salmon counted at Pilot Station Sonar. The average number of small king salmon counted at Pilot Station is 37,514 fish (2002–2021; Table 81-1). Small king salmon at the Pilot Station Sonar tend to be young males, but also include some females. Of note, sport fish statewide size restrictions of salmon are measured as total length from tip of nose to tip of tail.

Management considerations include the low number of small king salmon typically present in the population. On average, the number of small king salmon in the run (as assessed at Pilot Station Sonar) is typically less than ANS. Additionally, daily passage of these fish may be low, making them difficult to selectively harvest inriver due to their low density. There is no stock identification information for small king salmon; some of these fish are likely of Canadian origin. The king salmon run at Pilot Station Sonar is typically around 40% Canadian-origin.

The U.S./Canada treaty objective and harvest allocations in both nations are based on total numbers of fish. The Eagle sonar project near the U.S/Canada border does not provide an estimate

of the number of small versus large king salmon that pass by the project. Allowing the harvest of small king salmon may reduce the likelihood of meeting the border passage objective in low run size years.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal and is **NEUTRAL** on the allocative aspects. Implementation of the proposed permit system is inconsistent with current subsistence fishing regulations because the stock assessment, harvest, and abundance data are based on the total number of king salmon of all sizes inseason, and preseason outlooks are highly uncertain. Additionally, it is unclear what the criteria for implementation of this permit system would be based on.

There are some considerations for the process of setting up a permit system to expand to the entire Yukon Area. The state now uses an online permit system, so households would either need access to the internet or receive a permit application by mail to get a permit. There would be start up investments of time on the part of the area staff, administration, data analysts, and programmers.

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. Approval of this proposal is expected to result in an additional cost to the department through expansion of the subsistence permit program. At the current time, the department does not have funding identified for this program and if it were implemented would require cuts to other programs to cover these additional costs.

SUBSISTENCE REGULATION REVIEW:

1. Is the stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board has made a positive customary and traditional use finding for (1) king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236 (a)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? Per 5 AAC 01.236 (b), the amount reasonably necessary for subsistence is 45,500 to 66,704 for king 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.

Table 81-1.–Pilot Station Sonar estimates of large and small king salmon, 2002–2022.

Year	Number of king salmon			Percent of total	
	Large	Small	Total	Large	Small
2002	111,290	40,423	151,713	73	27
2003	287,729	30,359	318,088	90	10
2004	138,317	62,444	200,761	69	31
2005	227,154	31,861	259,015	88	12
2006	192,296	36,467	228,763	84	16
2007	119,622	50,624	170,246	70	30
2008	138,220	36,826	175,046	79	21
2009	128,154	49,642	177,796	72	28
2010	112,605	25,294	137,899	82	18
2011	117,213	31,584	148,797	79	21
2012	106,529	21,026	127,555	84	16
2013	120,536	16,269	136,805	88	12
2014	120,060	43,835	163,895	73	27
2015	105,063	41,796	146,859	72	28
2016	135,013	41,885	176,898	76	24
2017	217,821	45,193	263,014	83	17
2018	122,394	39,437	161,831	76	24
2019	172,242	47,382	219,624	78	22
2020	124,905	37,347	162,252	77	23
2021	104,267	20,578	124,845	84	16
2022	30,389	14,192	44,581	68	32
Average 2002–2021	145,072	37,514	182,585	79	21
Average 2017–2021	148,326	37,987	186,313	79	21

Note: At Pilot Station Sonar, small king salmon are 655 mm (25.8 inches) or less as measured from mid-eye to fork of tail (METF). King salmon with METF length of 24 inches (~610 mm) would make up a portion of this small king salmon size class.

PROPOSAL 82 – 5 AAC 39.250. Gillnet specifications and operations.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Modify the dates sinking of gillnets is allowed in the Yukon Area from October 1 to April 30.

WHAT ARE THE CURRENT REGULATIONS? The current regulations allow float line and floats on gillnets to be submerged year-round during open fishing periods in the Yukon Area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would require gillnets to have visible float line and floats on the surface of the water in the Yukon Area between May 1 and September 30 for subsistence, personal use, and commercial fishing.

BACKGROUND: The majority of Yukon Area salmon fishermen use gillnets with visible float line and floats on the surface of the water, but a small proportion of fishermen submerge the float line and floats to fish deeper and reduce the amount of driftwood caught. When submerged, the net is typically fished as an unattended set net. During winter, most gillnet fishermen submerge gillnets to either fish under the ice or to prevent ice from damaging the net.

Department and enforcement staff rely on boat and aerial surveys for monitoring of fishers and gear in the expansive Yukon Area. Visible float lines and floats assist in determining fishing effort and location and help enforcement to identify illegal activities such as fishing during closed periods or when gillnets obstruct more than one-half the channel width.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. In the Yukon Area, float lines and floats that are visible on the water surface between May 1 and September 30 are beneficial for boater safety, salmon stock management, and enforcement. Fully submerged gillnets will still be allowed during winter fisheries.

COST ANALYSIS: Adoption of this proposal is not expected to result in an additional direct cost for fishers. Approval of this proposal is not expected to result in an additional cost to the department.

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 has made a positive customary and traditional use finding for (1) king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (2) freshwater fish species, including sheefish, whitefish, lamprey, burbot, sucker, grayling, pike, and char; (3) herring and herring roe, within 20 miles of the coast between the terminus of the Black River and the westernmost point of the Naskonat Peninsula; and (4) all finfish other than salmon and herring, in the salt waters of the Yukon Area. (5 AAC 01.236 (a)).
3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? Per 5 AAC 01.236 (b), the amounts reasonably necessary for subsistence for salmon are:
 - (1) king salmon: 45,500–66,704;
 - (2) summer chum salmon: 83,500–142,192;
 - (3) fall chum salmon: 89,500–167,900;

- (4) coho salmon: 20,500–51,980;
- (5) pink salmon: 2,100–9,700.

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 83 – 5 AAC 77.171. Lawful gear for personal use finfish fishing.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? After August 15, a person may not take salmon with a gillnet that has a mesh size greater than 6 inches in the Yukon Area Personal Use Salmon Fishery.

WHAT ARE THE CURRENT REGULATIONS? Personal use salmon fishing is open with 7.5-inch or less mesh size gillnets and fish wheels in Subdistrict 6-C in late June until October 15.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The maximum mesh size would be reduced from 7.5 to 6 inches for set gillnets in the personal use salmon fishery after August 15.

BACKGROUND: From August 15 to October 15 in Subdistrict 6-C, the personal use salmon fishery is managed for fall chum and coho salmon. During this time, the king salmon run is nearly over. Currently, set gillnets up to 7.5-inch or less mesh size and fish wheels are allowed. In 2019, the last year this fishery was open, the majority of permit holders indicated their primary gear was 4.1 to 6.0-inch mesh size set gillnets with a secondary gear of 6.1 to 7.5-inch mesh size set gillnets. The smaller mesh size used in the 2019 personal use fishery applied to king, summer chum, fall chum, and coho salmon fishing.

A 6-inch maximum mesh size gillnet more likely targets fall chum and coho salmon proportional to population size composition. The department uses a 6-inch gillnet as a standard mesh size to assess fall chum salmon in the Lower Yukon Test Fishery. Similarly, the Pilot Station Sonar test fishery catches the majority of fall chum and coho salmon with 5- to 6.5-inch mesh, while 7.5-inch catches make up 9% of the fall chum salmon and 4% of the coho salmon runs (1999–2021). Commercial fisheries for fall chum and coho salmon also use 6-inch or less mesh size gillnets by regulation.

Based on permit data, the participation and harvest in this personal use fall fishery is relatively low. In the last 10 years (2012–2021), on average 66 households were issued a personal use salmon permit while only 37 permit holders fished between August 15 and October 15. The recent 10-year (2012–2021) average harvest has been 301 fall chum and 130 coho salmon.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This would make the use of 6-inch or less mesh size gillnets uniform between commercial, subsistence, and personal use fisheries for fall chum and coho salmon. The 6-inch or less mesh sizes are already commonly used and would reduce directed harvest on larger, older fall chum salmon that make up a smaller portion of the population and allow for greater protection of late-arriving king salmon when conservation is warranted. The department submitted a similar proposal (84) for subsistence fishing during the fall season within the Yukon River drainage.

COST ANALYSIS: Adoption of this proposal is expected to result in additional direct cost for a private person to participate in this fishery. Six-inch mesh nets are commonly used throughout the Yukon River drainage. However, a small number of households that do not have a 6-inch or smaller net may need to purchase a new net in order to comply with this regulation if adopted. Approval of this proposal is not expected to result in an additional cost to the department.

PROPOSAL 84 – 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Repeal and readopt Yukon Area subsistence fishery lawful gear and gear specifications. Additions to subsistence fishing regulations include: adding eel stick; clarifying dip net operations; relaxing the minimum distance between subsistence gear with low harvest potential and maintaining 200 feet between set gillnets and fish wheels; applying 7.5-inch mesh size to gillnet fishing year-round for salmon and nonsalmon; reducing the maximum gillnet mesh size to 6-inch or less during the fall chum and coho salmon season; and reducing the maximum mesh size to 4-inch or less gillnets in portions of Beaver and Birch creeks. References to 8-inch or greater mesh size set gillnet regulations are being replaced with maximum mesh size of 7.5 inches.

During times of salmon conservation, new gear additions would include: 4.75-inch or less mesh size gillnets; gillnets including 4- to 7.5-inch maximum mesh sizes may be required to be operated as a set net and within 100 feet of ordinary high-water mark; and net length can be specified. The department could also apply gear types available during times of salmon conservation to all salmon species.

WHAT ARE THE CURRENT REGULATIONS? Four-inch or less mesh gillnets may be operated as drift gillnets for nonsalmon. In the portion of Beaver Creek open to subsistence fishing, gillnet mesh size may not exceed 3.5 inches. In Birch Creek, gillnet mesh size may not exceed 3 inches. References to 8-inch or greater mesh size gillnets still exist and conflict with the current 7.5-inch maximum mesh size for salmon fishing. In Districts 4–6, all subsistence fishing gear types must be 200 feet apart while in operation, with few exceptions.

During times of salmon conservation, coho salmon are not required to be released from selective gear types. Beach seines may be used as a conservation gear only for king salmon.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? During times of king, chum, or coho salmon conservation, this proposal would allow for more flexibility in the management of overlapping king, chum, and coho salmon runs. It would provide additional management tools that could allow better targeting of abundant salmon species while minimizing or eliminating the harvest of less abundant salmon species to achieve escapement goals.

References to 8-inch mesh would be removed. Operation of 4-inch or smaller mesh for nonsalmon would be made uniform throughout the drainage. During times of conservation gillnets may be required to be operated as a set net and could be limited in distance from the shore.

BACKGROUND: In 2011, the maximum mesh size for gillnets in the Yukon Area was restricted to 7.5 inches for salmon. Several gear regulations still refer to mesh larger than this size. The proposed regulation changes also clarify that 7.5-inch or less mesh is the maximum mesh size allowed for subsistence fishing for salmon and nonsalmon in the Yukon Area.

During subsistence salmon fishing closures, 4-inch or less mesh gillnets remain open for nonsalmon in the Yukon Area, except for Birch Creek and the portion of Beaver Creek open to subsistence fishing. In 2001, gillnets were restricted to 3-inch or less mesh in Birch Creek and 3.5-inch mesh in the subsistence fishery in Beaver Creek. Since adoption, this regulation has rarely been announced, or to our knowledge, enforced. These proposed changes only apply to the subsistence fishery in Beaver Creek.

In 2001, 2016, and 2019 gear types available during times of conservation were adopted for king and chum salmon. These selective gear types can require the release of a salmon species during times of conservation. Dip nets and closely attended fish wheels can be applied to king and chum salmon, while beach seines may only be applied to king salmon. Coho, pink, and sockeye salmon are not included in any conservation gear regulations.

Nonsalmon species, such as whitefish, tend to be more abundant in nearshore areas of the Yukon River. In 2004, the board adopted a regulation requiring gillnets greater than 4-inch mesh size to be removed from the water during subsistence closures. Fishery managers often limit 4-inch or less mesh gillnets to 60 feet or less in length to reduce the incidental harvest of salmon. Adding a requirement to operate a set gillnet close to shore or to reduce the net length will likely decrease the incidental harvest of salmon during times of conservation. These regulation changes would be similar to ones adopted in the Kuskokwim River in 2016.

Adding eel sticks to nonsalmon gear types would recognize a traditionally used gear type that has not previously been included in regulation. Proposal 87 provides more information about the definition, history, and use of this gear type.

Reducing the maximum mesh size to 6-inch or less gillnets for the fall salmon season will align subsistence and commercial regulations. Proposal 83 provides additional information on the use of 6-inch maximum mesh size during the fall season personal use fishery. A 6-inch maximum mesh size gillnet will most likely target fall chum and coho salmon proportional to the population.

Relaxing the minimum distance between subsistence gear with low harvest potential and maintaining 200 feet between set gillnets and fish wheels would align with common practice and allow family members (such as children) to fish with low harvest gear types near gillnets and fish wheel sites. In Districts 4, 5, and 6, subsistence fishing gear may not be set within 200 feet of other operating gear, and there is no minimum distance between subsistence fishing gear in the Lower Yukon. This regulation change would provide clarity about distances required between gear.

Proposed regulation changes would clearly state that a subsistence fisherman may operate more than one type of subsistence gear at the same time and align with current practices. Maintaining the current regulations, fishermen would still not be allowed to operate any combination of subsistence, personal use, and commercial fishing gear at the same time.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. The department submitted and **SUPPORTS** this proposal containing modifications to Yukon Area regulations that provide subsistence fishing opportunity while conserving salmon to meet escapement goals and to clarify existing regulations.

The Yukon Area currently has several gear options available for the protection of king and chum salmon, while still being able to provide harvest opportunity on more abundant salmon species that have overlapping run timings. Conservation gear options available for chum salmon are inadequate and nonexistent for coho salmon or other salmon species (sockeye or pink salmon). Furthermore, current regulations are not aligned with specific gear operations for chum and king salmon when concurrent conservation measures are needed for both species (beach seines). Under conservation gear regulations, additional options were added for specifying mesh size, net length, and distance from shore by emergency order. Gillnets of 4.75-in or less mesh are already allowed in the Lower Yukon during the pink salmon commercial fishery. Adding this mesh size to

conservation gear will provide management flexibility to allow harvest opportunity for pink salmon while conserving chum and king salmon.

In general subsistence regulations, the proposed changes are aligning with current subsistence fishing practices in the Yukon Area (distance of gear, eel sticks, dip net operations, etc.) or aligning maximum gillnet mesh size with commercial fishing regulations for fall chum and coho salmon. Other portions of the proposed changes simplify management and align a maximum mesh size of 4-inch or less gillnets in Birch Creek and portions of Beaver Creek with nonsalmon gear in the rest of the drainage.

Proposals 83, 85, 87, 88, and 89 provide additional detail on subsistence gear regulations and align personal use and commercial regulations with proposed subsistence 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. Approval of this proposal is not expected to result in an additional cost to the department.

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; 5 AAC 01.236(a) lists the following stocks that are customarily and traditionally used for subsistence:
 - (1) king, summer chum, fall chum, coho, and pink salmon in the Yukon Area;
 - (2) freshwater fish species, including sheefish, whitefish, lamprey, burbot, sucker, grayling, pike, and char;
 - (3) herring and herring roe, within 20 miles of the coast between the terminus of the Black River and the westernmost point of the Naskonat Peninsula; and
 - (4) all finfish other than salmon and herring, in the salt waters of 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? Per 5 AAC 01.236 (b), the amounts of salmon reasonably necessary for subsistence are:
 - (1) king salmon: 45,500–66,704;
 - (2) summer chum salmon: 83,500–142,192;
 - (3) fall chum salmon: 89,500–167,900;
 - (4) coho salmon: 20,500–51,980;
 - (5) pink salmon: 2,100–9,700.
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 85 – 5 AAC 77.171. Lawful gear for personal use finfish fishing.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Modify Yukon Area Personal Use Salmon Fishery specifications for selective gear types and gillnet mesh size during times of salmon conservation. Extend the conservation gear options for chum salmon to include coho salmon in the personal use fishery. Gillnets including 4- to 7.5-inch maximum mesh sizes may be required to be operated as a set net and within 100 feet of ordinary high-water mark. Unintended references to 8-inch or greater mesh size set gillnet regulations are being replaced with maximum mesh size of 7.5 inches. Gillnets of 4-inch or less mesh size will be a new option for king salmon conservation.

WHAT ARE THE CURRENT REGULATIONS? During times of conservation for chum and king salmon, closely attended fish wheels and dip nets may be operated while requiring the release of either species. For chum salmon conservation, there are 4-inch or less and 8-inch or greater mesh size options for set gillnets of a specified length and depth. For king salmon conservation, gillnet options only include 6-inch or less mesh size set gillnets.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? These gear changes will likely reduce incidental salmon harvest during poor salmon runs and allow conservation gear to apply to all salmon species as needed.

BACKGROUND: The personal use salmon fishery is limited to set gillnets and fish wheels for chum, coho, and king salmon. If a conservation concern exists for king or summer chum salmon, the department can require the release of these species from dip nets and closely attended fish wheels. During the fall season, fall chum and coho salmon runs overlap. Currently, only fall chum salmon can be required to be released if a conservation concern exists, not coho salmon. Fishermen can only be asked to voluntarily release coho salmon, as in 2021 when the Yukon River subsistence fishery was targeting nonsalmon.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The options of selective gear will benefit Tanana River personal use permit holders. The proposed changes allow more flexibility to conserve coho salmon while providing harvest opportunity for fall chum salmon when the fishery might have been closed. The modifications to the conservation gear type and operation provide more flexibility to offer harvest opportunity instead of fishery closures. These changes would align with subsistence conservation gear regulations in Proposal 84.

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

YUKON SPORT FISHERIES (1 PROPOSAL)

PROPOSAL 86 – 5 AAC 73.010. Seasons, bag, possession, and size limits, and methods and means for the Yukon River area.

PROPOSED BY: Midnight Sun Flycasters.

WHAT WOULD THE PROPOSAL DO? This would require retention of sport caught salmon, if removed from the water, in the Yukon River Area.

WHAT ARE THE CURRENT REGULATIONS? In the Yukon River Area there are no regulations that prohibit removing salmon from the water that are intended to be released. Regulations from other management areas that specify “a person may not remove a salmon from the water before releasing the fish” are in the Upper Copper River and Upper Susitna River Area (5 AAC 52.022), Knik Arm Drainages Area (5 AAC 60.120), Kenai Peninsula Area (5 AAC 56.120), and Kenai River Drainage Area (5 AAC 57.120).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would change angling habits in ways that are difficult to anticipate. Anglers may choose to harvest fish that would have otherwise been photographed and released for the sake of obtaining a photo. For many anglers, the trophy is the photo, and this may increase retention in situations that would have otherwise resulted in a catch-and-release event. This may also reduce catch-and-release mortality by an unknown, but likely minimal amount and may increase harvest by an unknown amount. This would increase regulatory complexity.

BACKGROUND: Salmon are conservatively managed within the Yukon River drainage, where recent runs of king, chum, and coho salmon have been poor. Based on the Statewide Harvest Survey and the Freshwater Sport Fish Guide Logbook, sport fishing effort, catch, and harvest of salmon within the Yukon River Area is relatively low (Tables 86-1 and 86-2). Fishing for salmon has been restricted or closed by emergency order when run sizes were inadequate for meeting subsistence needs or achieving escapement objectives. For example, sport fishing for king salmon has been restricted or closed since 2011, chum salmon was closed or restricted during 2016, 2018, and 2020–2022, and coho salmon was closed during 2021–2022.

Past catch-and-release mortality studies conducted by the department on king salmon in the Kenai and Nushagak Rivers and coho salmon in the Unalakleet River have illustrated low mortality rates for salmon caught and released with typical sport fishing gear, with the additional stress of using radiotelemetry techniques to tag and track handled fish.

Several studies have demonstrated that air exposure below 60 seconds is not a significant factor in catch-and-release mortality. Roth et al. (2018, NAJFM) demonstrated within the Snake River drainage that there was no increase in mortality in trout that were exposed to air for up to 60 seconds. A catch-and-release study on sockeye salmon in Bear Lake, Alaska showed that these fish were largely resilient to the physiological stress associated with catch-and-release if handled carefully and air exposure was minimized (Smukall et al. 2019, CJFAS). A study on Canadian rainbow trout showed reduced survival for fish that were exposed to air for 60 seconds after exhaustive exercise, but survival greatly increased when exposure was reduced to 30 seconds (Ferguson and Tufts, 1992, CJFAS.)

Catch-and-release mortality is not only dependent on air exposure, but also other factors such as water temperature, gear type, hook placement, landing times, and fish size, many of which impact mortality more than air exposure. The department actively promotes proper catch-and-release using various media including brochures, web-based content, and social media. This outreach promotes the use of single barbless hooks, landing the fish as quickly as possible, and limiting handling time and air exposure.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. This would increase regulatory complexity and unnecessarily impact sport fishing opportunity in the absence of a measurable biological benefit. The department encourages anglers to use best practices when handling and releasing all sport caught 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. Approval of this proposal is not expected to result in an additional cost to the department.

Table 86-1.—Annual estimates of sport catch, effort, and harvest for king, coho, sockeye, pink, and chum salmon in the Yukon River Management Area, 2010–2021.

Year	Effort (angler- days)	Pacific Salmon					
		Total	King	Coho	Sockeye	Pink	Chum
		Harvest					
2010	9,134	1,877	161	575	20	0	1,121
2011	10,291	498	102	179	0	0	217
2012	8,671	537	231	47	0	51	208
2013	10,332	1,697	155	127	0	0	1,415
2014	12,917	1,959	0	1,639	0	0	320
2015	8,230	804	0	413	61	136	194
2016	7,548	398	0	29	35	70	264
2017	8,592	218	0	55	0	0	163
2018	7,542	266	0	62	0	19	185
2019	7,584	55	19	0	0	0	36
2020	10,142	2,941	0	1,257	0	0	1,684
2021	10,066	13	0	13	0	0	0
Average							
2011–2020	9,185	937	51	381	10	28	469
2016–2020	8,282	776	4	281	7	18	466
Catch							
2010	9,134	9,258	745	1,983	85	1,768	4,677
2011	10,291	3,530	899	558	43	92	1,938
2012	8,671	3,107	544	174	11	802	1,576
2013	10,332	13,374	927	1,597	47	78	10,725
2014	12,917	12,270	156	10,479	143	258	1,234
2015	8,230	2,253	124	1,100	89	409	531
2016	7,548	4,000	268	29	66	2,753	884
2017	8,592	1,225	398	223	0	0	604
2018	7,542	4,655	141	318	0	1,597	2,599
2019	7,584	5,012	316	0	15	3,518	1,163
2020	10,142	3,216	24	1,332	0	0	1,860
2021	10,066	972	209	33	24	54	652
Average							
2011–2020	9,185	5,264	380	1,581	41	951	2,311
2016–2020	8,282	3,622	229	380	16	1,574	1,422

Table 86-2.—Sport fishing effort (i.e. angler-days), and estimated harvest of salmon provided by the Freshwater Sport Fish Guide Logbook for the Yukon River Area, 2006–2016.

Year	Angler-days resident	Angler-days nonresident	King harvest	King released	Coho harvest	Coho released	Sockeye harvest	Sockeye released	Other species harvest	Other species released ^a
2006	32	832	79	318	330	2,305	0	47	174	7,783
2007	31	1,222	143	566	164	2,218	2	18	264	2,240
2008	45	941	72	366	244	1,559	1	25	169	1,880
2009	36	520	31	94	120	918	0	0	0	43
2010	39	1,060	74	287	238	1,888	0	121	178	1,761
2011	58	873	163	703	153	646	0	49	266	1,778
2012	20	884	101	267	205	609	0	69	186	1,791
2013	5	1,095	64	386	198	385	4	48	326	2,577
2014	35	1,172	0	4	351	2,064	1	17	213	3,131
2015	5	1,071	2	9	297	735	35	84	301	2,566
2016	57	901	0	8	560	1,381	42	93	438	2,205
Average 2006–2016	33	961	73	273	260	1,337	8	52	229	2,523

^a. This category includes chum salmon, pink salmon and all other unidentified species.

YUKON COMMERCIAL FISHERIES (3 PROPOSALS)

PROPOSAL 87– 5 AAC 39.105. Types of legal gear.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Establish a definition of an eel stick.

WHAT ARE THE CURRENT REGULATIONS? Eel sticks are not included as allowable gear.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Eel sticks would become allowable legal fishing gear for subsistence and would be recognized as a commercial fishing gear type for lamprey. It is unlikely that eel sticks will substantially change the quantity of lamprey harvested.

BACKGROUND: Eel sticks (i.e., “eel rakes”) have been historically used for the subsistence and commercial harvest of lamprey. An eel stick is typically 6 to 10 feet long and several inches wide; the lower 2–4 feet are drilled with holes that are fitted with nails or pegs; and the end of the eel stick may also be notched and angled. The eel stick is swept through water in narrow channels cut through river ice. When a lamprey is encountered, the lamprey bends around the pole and rests on the nails, pegs, or notches. The stick is swept out of the water and the lamprey are deposited on the ice, where they freeze in the open air.

Lamprey harvest occurs in late fall and winter in the Yukon Area from District 1 up through Grayling in District 4. Lamprey have been a traditional subsistence food with highly variable annual harvests in communities in Districts 2–4. There is an experimental commercial fishery for lamprey that has occurred from 2003 to present.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to be consistent with current and traditional fishery practices and to provide for social and economic benefits that might otherwise be forgone.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional costs for a private person to participate in this fishery. Because eel sticks are easy to manufacture with local supplies, it may lower the cost of entering the subsistence and commercial fishery. Approval of this proposal is not expected to result in an additional cost to the department.

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 has made a positive customary and traditional use finding for lamprey (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? There is currently no ANS for lamprey.
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 05.331. Gillnet specifications and operations.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Repeal and replace Yukon Area commercial salmon fishing gear specifications. The maximum gillnet mesh size for commercial salmon fishing would be 6-inch or less in District 5, aligning with current regulations for all Yukon River districts. References allowing 8-inch or greater mesh size gillnets would be removed. Selective gear including closely attended fish wheels, dip nets, and beach seines would be options by emergency order in times of salmon conservation for any salmon species while commercial fishing.

WHAT ARE THE CURRENT REGULATIONS? Districts 1–4 and 6 have a maximum gillnet mesh size of 6-inch or less for commercial salmon fishing, while District 5 is the only Yukon River district with a maximum mesh size of 7.5-inch set gillnets. References to 8-inch or greater mesh size gillnets still exist and conflict with the current maximum mesh size. Under general regulations, allowable commercial salmon fishing gear consists of gillnets and/or fish wheels, depending on the district and salmon species. During times of conservation, king salmon are the only species required to be released from selective gear (dip nets, beach seines, and closely attended fish wheels).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would simplify and align Yukon Area commercial salmon regulations, remove an outdated maximum mesh size, and apply selective gear for conservation to all salmon species.

BACKGROUND: During the 2016 board cycle, the maximum mesh size in District 6 commercial fisheries was reduced from 7.5 to 6-inch for the summer chum commercial fishery to align with the maximum mesh size allowed in Districts 1–4. District 5 was not addressed at this time since summer chum commercial fisheries had not occurred since 2006 in that district. However, small-scale commercial fisheries with fish wheels and set gillnets have occurred for fall chum salmon in District 5 in most years since 2006. The standard mesh size for gillnets in regulation to target fall chum, coho, and summer chum salmon in the Yukon Area commercial fisheries is 6-inch or less mesh size. In regulation there are still unintended references to mesh sizes 8-inch greater, but these cannot be implemented because the current legal maximum mesh size is 7.5 inches.

Since 2012, the Yukon Area commercial fisheries have been adopting selective gear types that allow harvest on abundant summer chum salmon while requiring the live release of king salmon. Current legal gear options for other species do not allow for live release of salmon during times of conservation. Chum and coho salmon commercial fisheries can only be prosecuted with gillnet and fish wheel gear. Pink salmon commercial fisheries may only occur with gillnets limited to four and three-quarter inch mesh size or less.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This aligns all districts with a maximum mesh size and selective gear options for all salmon species. This provides management flexibility to allow commercial harvest opportunity on abundant salmon, while conserving a particular salmon species.

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

PROPOSAL 89 – 5 AAC 05.362. Yukon River Summer Chum Salmon Management Plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Modify Yukon Area commercial dip net gear operations in the commercial fishery to include a single rigid handle with a single line attached.

WHAT ARE THE CURRENT REGULATIONS? Dip nets must have a single rigid handle and be operated by hand (5 AAC 39.105.(d)(24)) and all gear shall be operated in a manner conforming to its basic design (5 AAC 39.105.(a)). 5 AAC 05.362.(k)(1)(A) also describes a dip net.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal clarifies an enforcement issue created by an innovative use of dip nets by the Yukon River commercial salmon fleet, which is different than the statewide regulation for dip nets. If adopted, this proposal would provide a clear definition of a commonly used dip net method and may increase fishing efficiency.

BACKGROUND: Due to low king salmon run sizes, directed commercial fishing for king salmon has not occurred since 2007; however, the summer chum salmon run size has been large enough to provide for commercial fishing opportunity in most years. Dip nets have been successful in offering selective commercial harvest opportunity on summer chum salmon with live release of king salmon.

This proposal would allow the Yukon River commercial salmon fleet to continue using an innovative dip net method now known as “Yukon style” wherein the dip net is tied by a rope to the boat and suspended in the water. By regulation 5 AAC 05.362 (k)(1)(A), a permit holder may fish with up to four dip nets: this method reduces the number of crewmembers needed to operate the gear. The crewmember hauls up the rope, retains selected fish, and throws the dip net back out into the river. Although this method can target fish that are running deeper in the water column, the nets must be frequently checked to successfully capture the fish, therefore non-target species spend little time in the net before being released.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal to be consistent with current fishery practices and to provide for social and economic benefits that might otherwise be foregone. The department worked with enforcement staff on this proposal, and they have supported this definition. There is a similar proposal for the Kuskokwim River (Proposal 97).

COST ANALYSIS: Adoption of this proposal may reduce the costs for a commercial permit holder to participate in this fishery. This method allows one crewmember to operate more than one dip net, thus reducing the number of crew members needed. Approval of this proposal is not expected to result in an additional cost to the department.

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 has made a positive customary and traditional use finding for (1) king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (2) freshwater fish species, including sheefish, whitefish, lamprey, burbot, sucker, grayling, pike, and char; (3) herring and herring roe, within 20 miles of the coast between the terminus of the Black River and the westernmost point of the Naskonat Peninsula;

and (4) all finfish other than salmon and herring, in the salt waters of the Yukon Area. (5 AAC 01.236 (a)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.
4. What amount is reasonably necessary for subsistence use? Per 5 AAC 01.236 (b), the amounts reasonably necessary for subsistence for salmon are:
 - (1) king salmon: 45,500–66,704;
 - (2) summer chum salmon: 83,500–142,192;
 - (3) fall chum salmon: 89,500–167,900;
 - (4) coho salmon: 20,500–51,980;
 - (5) pink salmon: 2,100–9,700.

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.

COMMITTEE OF THE WHOLE – GROUP 5: KUSKOKWIM SUBSISTENCE, COMMERCIAL, AND SPORT FISHERIES (8 PROPOSALS: CHAIR – JENSEN)

KUSKOKWIM SUBSISTENCE FISHERIES (4 PROPOSALS)

PROPOSAL 90 – 5AAC 01.280. Subsistence fishing permits.

PROPOSED BY: Central Kuskokwim Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would establish a household Kuskokwim River Tier II subsistence king salmon fishery for fish >20 in between June 12 and June 24 during times of king salmon conservation.

WHAT ARE THE CURRENT REGULATIONS? Fish may be taken for subsistence purposes without a subsistence fishing permit, except during times of king salmon conservation when a permit with an annual limit of 10 king salmon may be required upriver from the Yukon Delta National Wildlife Refuge Boundary near Aniak (5 AAC 01.280). Salmon may be taken at any time from the Kuskokwim River, except that the commissioner may, by EO, close subsistence fishing periods and restrict fishing gear to conserve king salmon (5 AAC 01.270). There are no harvest limits or annual possession limits for subsistence king salmon fishing, except in that portion of the Aniak River drainage upstream of Doestock Creek, from June 1 through August 31, when subsistence fishing with a hook and line attached to a rod or pole, the bag and possession limit for king salmon is two fish (5 AAC 01.295).

At the 2016 Arctic-Yukon-Kuskokwim (AYK) meeting, the board adopted a proposal to close directed subsistence fishing for king salmon in the Kuskokwim River through June 11 (5 AAC 07.365). In 2017 and 2020, the board provided the department with additional guidance by directing the department to provide at least one subsistence fishing opportunity per week with set gillnets during the closure.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If the harvestable portion of the Kuskokwim River king salmon stock fell below the minimum ANS (67,200 fish, see below), all Alaska residents wanting to subsistence fish for king salmon in the Kuskokwim River drainage between June 12 and June 24 would need to apply for a Tier II subsistence fishing permit. Individuals, or individual households, would have to answer a series of questions, developed by the board, to distinguish among Alaskans based on their customary and traditional direct dependence upon Kuskokwim River king salmon for human consumption as a mainstay of livelihood, and their ability to obtain food if subsistence use is restricted or eliminated, pursuant to state law at AS 16.05.258(b)(4). Individual applications would be scored and ranked by the department, with the highest-ranking applicants receiving a subsistence king salmon fishing permit to participate in any subsistence king salmon fishing opportunity provided. The number of Tier II permits awarded, and amount of king salmon made available for subsistence harvest taken would depend upon the annual forecasted harvestable surplus of Kuskokwim River king salmon. King salmon caught that are 20 inches or less would not count toward the annual household permit allocation.

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 were the three lowest on record. From 2010 through 2013, most tributary escapement goals were not achieved, and the Kuskokwim River drainagewide sustainable escapement goal established in 2013 was not achieved that year. Since 2014, a very conservative management approach has been employed on the Kuskokwim River, which has led to most tributary escapement goals being achieved. In addition, drainagewide escapement levels have been near the upper end or above the established escapement goal of 65,000–120,000 king salmon since 2015 (range: 88,000–187,000 king salmon).

According to the state subsistence law, AS 16.05.258(b)(4), if the harvestable portion of a stock or population is not sufficient to provide a reasonable opportunity for subsistence uses, the board shall adopt regulations eliminating consumptive uses, other than subsistence uses, and then distinguish among subsistence users (i.e., adopt Tier II). The board has multiple tools with which to achieve this, including consideration of the ANS. ANS is one metric by which the board determines if reasonable opportunity is being provided. “Reasonable opportunity” is defined in state law (AS 16.05.258(f)) and “means an opportunity, as determined by the appropriate board, that allows a subsistence user to participate in a subsistence hunt or fishery that provides a normally diligent participant with a reasonable expectation of success of taking of fish or game.” The board may base its determination of ANS and reasonable opportunity on information regarding past subsistence harvest levels of fish in the specific area, and the bag limits, seasons, access provisions, and means and methods necessary to achieve those harvests, or on comparable information from similar areas. The board found a positive customary and traditional use finding for Kuskokwim king salmon in 1987 and reconfirmed that finding in 1993. In 2001, the board modified an “all salmon” ANS for the Kuskokwim River by determining species-specific ranges. At the 2013 AYK board meeting, the board revisited the king salmon ANS and increased the range from 64,500–83,000 to the current range of 67,200–109,800. Kuskokwim River king salmon subsistence harvest has fallen below the lower end of the ANS range since 2011 (Figure 90-1).

The Kuskokwim Subsistence Salmon Panel (panel) was established at the board work session in October 2014 to seek public input on two objectives: 1) how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage; and 2) 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. At the August 2015 meeting in Bethel, the panel heard testimony from panel members in support of a limited permit system that would allow for the harvest of king salmon during times of conservation; however, the panel was unanimously opposed to the Tier II aspects of a proposal (Proposal 95) that was ultimately discussed and tabled at the 2016 AYK Finfish meeting.

The board met in Anchorage during March 20–24, 2017 to discuss proposals relating to subsistence fishing permits within the Kuskokwim River. Two proposals were discussed. The first was Proposal 275 (formerly Proposal 95) that would have created a Tier II subsistence king salmon fishery in the Kuskokwim River. The second proposal, 276, sought to establish a permit system for king salmon in the Kuskokwim River subsistence fishery. The board adopted Proposal 276 with substitute language, establishing a limited household permit system in Kuskokwim River waters from the Yukon Delta National Wildlife Refuge boundary at Aniak upstream to the headwaters of the Kuskokwim River after hearing testimony from subsistence users from throughout the Kuskokwim River. The permit limited harvest to a maximum of 10 king salmon.

The subsistence permit has been implemented twice since its inception: in 2018 and 2021. In 2018, there were 188 permits issued with an estimated 524 king salmon harvested. Permits were not implemented in 2019 because early run strength indicators suggested that the king salmon run was returning near the upper end of the forecast and additional conservation measures were unwarranted because the total run was estimated to be 233,000 fish. In 2020, the projected outlook was much like the 2019 season total run: 193,000–261,000 king salmon. However, since this was the first encouraging king salmon forecast in over a decade, the department took a precautionary management approach during the early part of the 2020 season. Once it was determined that the subsistence harvest above Aniak would not impact achieving escapement goals, the upper Kuskokwim River was opened continuously beginning on June 12. In 2021, the department once again took a cautious approach early in the king salmon run and implemented subsistence harvest permits June 12–18. A total of 128 permits were issued and no estimate of king salmon harvest was produced due insufficient permit reporting. Inseason run strength information indicated that subsistence harvest above Aniak would not impact achieving escapement goals and the Kuskokwim River subsistence fishery was opened continuously upriver from Aniak on June 19, 2021.

Length and sex information dating back to 2001 from Kuskokwim River escapement projects indicates that king salmon, regardless of gender, 20 inches or less make up a small proportion the total run (7%) and are predominantly male (98%). Since 2001, 10% of male king salmon sampled at escapement projects have been 20 inches or less. Less than 1% of all female king salmon sampled at escapement projects since 2001 have been 20 in or less.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. If this proposal is adopted, the board would need to provide the department guidance on the percent of the annual forecasted surplus of king salmon allocated to the Tier II fishery and the criteria that will be used to administer a Tier II permit.

Although ANS has not been met since 2011, the department has provided king salmon harvest opportunity every year. Additionally, escapement goals on the Kuskokwim River have been met consistently. A Tier II permit is an effective tool to use when the harvestable portion of the fish stock cannot support the harvest of all expected subsistence users or when reasonable opportunity to meet the lower bound of the ANS is not being provided. If the harvestable portion of king salmon of any sizes is above the minimum ANS range, then distinguishing among subsistence users is not required. After hearing the assessment of the department of the number of king salmon available for harvest, the board must decide whether these conditions pertain to Kuskokwim River king salmon at this time.

As written, this proposal would create confusion in several ways. First, during times of king salmon conservation, opportunity to harvest fish smaller than 20 inches may still be provided to nonpermit holders. Additionally, because larger fish make up more of the king salmon run on the Kuskokwim than smaller fish do, implementing a Tier II permit for the larger fish could have the unintended consequence of increasing harvest as permit holders try to reach their allocation for larger fish. Additionally, this proposal has the potential to create confusion among subsistence users within the Kuskokwim River drainage by requiring a permit for a short amount of time. This confusion has already been observed when implementing the current upriver harvest permit. Confusion could also be compounded in communities downriver from Aniak when the USFWS issues federal special actions limiting participation in the fishery to federally qualified individuals. Since 2014, USFWS has annually enacted special actions or emergency special actions to limit the

harvest of king salmon to federally qualified users within the boundaries of the Yukon Delta National Wildlife Refuge. When a federal special action is in place limiting fishing to federally qualified individuals, the department is enjoined from implementing any fishery management actions within the Yukon Delta National Wildlife Refuge.

COST ANALYSIS: Approval of this proposal may result in a minimal additional direct cost for a private person to participate in this fishery if, due to poor internet capability, Tier II applications need to be mailed to the department. The department would incur additional costs to oversee and administer a Tier II permit program because of issuing, collecting, and entering harvest information from the permits, and increased public education and outreach efforts to facilitate a permit program. The department does not have funding for this at the present time.

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? The board revised the amount reasonably necessary finding for Kuskokwim River king salmon in January 2013 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.

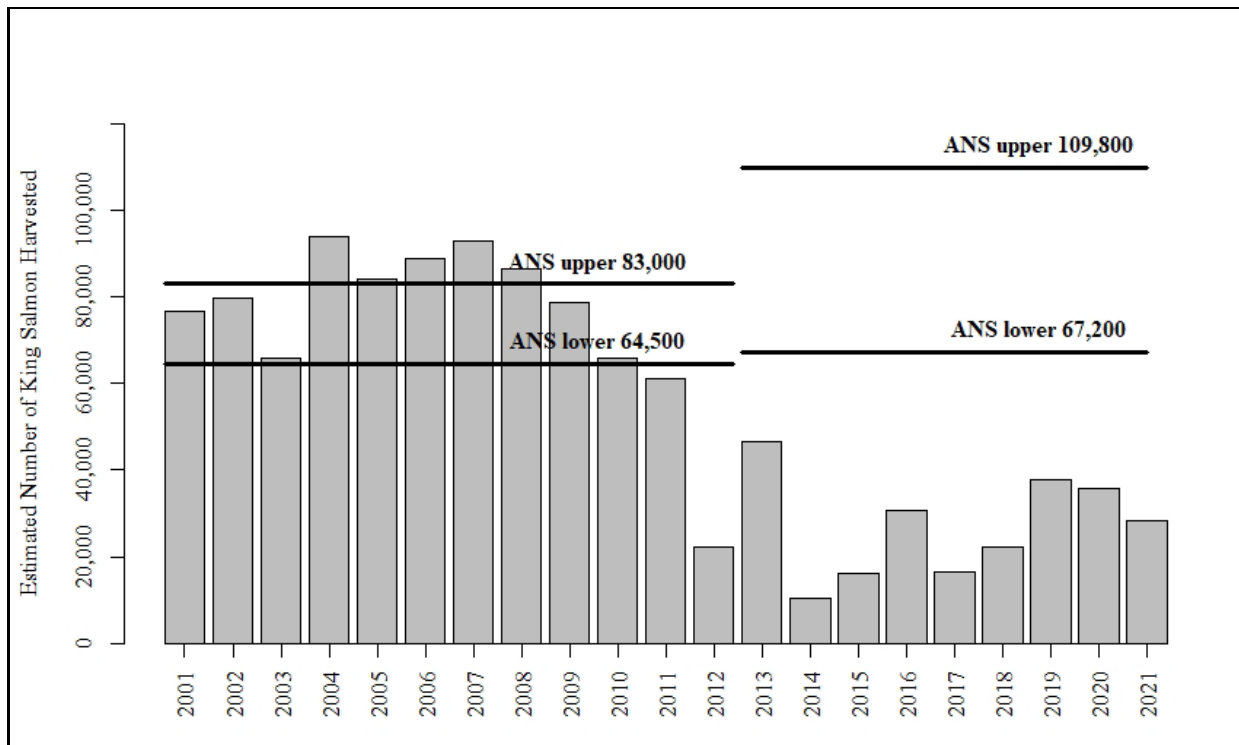


Figure 90-1.—Kuskokwim River king salmon subsistence harvest, 2001–2021.

PROPOSAL 91 – 5 AAC 01.270. Lawful gear and gear specifications and operation.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would establish alternative fishing methods that could be used during times of chum, sockeye, or coho salmon conservation which would allow for a more adaptive management strategy benefitting subsistence fishery users. Further, this proposal would align methods used to conserve king salmon with all other Kuskokwim River salmon species.

WHAT ARE THE CURRENT REGULATIONS? By emergency order, during times of chum salmon conservation, subsistence fish wheels must have live boxes and be checked at least every 12 hours with chum salmon being returned alive to the water; chum salmon can also be required to be released in beach seine and hook and line attached to a rod or pole; and, gillnet mesh can be restricted to seven and one-half inch or greater or four-inch or less with gillnet length being specified by the commissioner (5 AAC 01.270; 5 AAC 01.284).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? During times of chum, sockeye, or coho salmon conservation, this proposal would allow the department to manage these overlapping salmon runs by providing additional management tools that could allow the targeting of abundant salmon species while minimizing or eliminating the harvest of less abundant salmon species to achieve escapement goals.

BACKGROUND: Kuskokwim River chum, sockeye, and coho salmon stock status is evaluated using harvest and tributary escapement data because drainagewide run and escapement cannot be estimated, and current sonar operated near Bethel is still considered experimental. Between 2007 and 2019, chum salmon runs returned to near average levels from lows observed in the late 1990s and early 2000s. The 2020 chum salmon run was well below average, the 2021 chum salmon run had the lowest harvest and escapement on record, and the 2022 chum salmon run was again well below average. During the past three years, restrictions were implemented on the subsistence and sport chum salmon fisheries for the conservation of chum salmon. Sockeye salmon abundance since 2016 has varied between average and above average for both lake and river type life histories. The 2021 sockeye salmon abundance was mixed throughout the drainage with above average lake-type abundance and below average river-type abundance. There is limited information about the size and quality of the coho salmon escapement, but available information indicated run sizes during 2016–2021 have been below average to average. Assessment data indicate that the 2022 coho salmon run may have been one of the lowest on record. Subsistence fishing restrictions were implemented in August and September 2022 to conserve coho salmon.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. The department submitted and **SUPPORTS** this proposal to modify Kuskokwim Area regulations that provide subsistence fishing opportunity while conserving salmon to meet escapement goals. The Kuskokwim Area currently has several management tools available for the protection of king salmon, while still being able to provide harvest opportunity on more abundant salmon species that have overlapping run timings. The number of management tools available for chum salmon conservation is inadequate and non-existent for sockeye or coho salmon. Furthermore, current regulations are not aligned with specific gear operations for chum and king salmon when concurrent conservation measures are needed for both species. For example, restrictions on fish wheel operations are not aligned between king and chum salmon. This creates

confusion when conservative management actions are needed for both king and chum salmon simultaneously to meet escapement goals.

COST ANALYSIS: Adoption of this proposal may result in an additional direct cost for a private person to participate in this fishery through the purchase of additional gear. Approval of this proposal is not expected to result in an additional cost to the department.

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 92 – 5 AAC 01.260. Fishing seasons and periods and 5 AAC 01.275. Waters closed to subsistence fishing.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? In Districts 4 and 5 of Kuskokwim Bay, and in the Goodnews, Kanektok, and Arolik Rivers, this proposal would eliminate exact subsistence closure times during and surrounding a commercial fishing period. Subsistence closures would instead be established by emergency order, thus increasing subsistence opportunity and aligning regulations with those of the Kuskokwim River.

WHAT ARE THE CURRENT REGULATIONS? From June 1 through September 8 in the Goodnews, Kanektok, and Arolik Rivers, and in Districts 4 and 5 of the Kuskokwim Bay, salmon may not be taken for 16 hours before, during, and six hours after each commercial salmon fishing period.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase subsistence opportunity during times when the commercial fishery does occur in Districts 4 and 5 of Kuskokwim Bay. Commercial fisheries managers would have the ability to immediately close and reopen subsistence fishing before, during, and after commercial fishing periods. The immediate reopening of subsistence fishing for salmon would also most likely decrease competition among commercial and subsistence fishermen for fishing areas. Additionally, this proposal would align regulations with those that are already being used in Kuskokwim River Districts 1 and 2.

BACKGROUND: Subsistence fishing closures surrounding commercial salmon openings have been in place in the Kuskokwim Area since at least the early 1980s. These closures were to discourage the sale of salmon harvested as subsistence-caught fish. Exact subsistence closures surrounding commercial salmon fishing openings were eliminated in Kuskokwim River Districts 1 and 2 in the mid-1990s and the early 2000s in favor of closed subsistence fishing periods being announced by emergency order. The establishment of subsistence closures through emergency order in Districts 1 and 2 allowed for a more adaptive management approach, increasing the opportunity for subsistence users to harvest fish.

Commercial salmon fishing in Districts 4 and 5 was relatively stable between 1960 and 2015. Between 2016 and 2019, commercial salmon fishing did not occur due to the lack of a commercial buyer in Kuskokwim Bay. Recently, in 2020 and 2021, a sole commercial buyer returned to Kuskokwim Bay to purchase commercially harvested salmon; however, participation in the fishery was the lowest on record. Most subsistence fishermen are compliant with regulations and only take what salmon they need. Many are both commercial and subsistence fishermen, as well as residents of the area.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal since it would increase subsistence opportunity surrounding commercial fishing openings for subsistence users in Kuskokwim Bay and align regulations with those currently in place in Kuskokwim River Districts 1 and 2.

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. Approval of this proposal is not expected to result in an additional cost to the department.

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 Bay districts 4 and 5 as follows: 6,900–17,000 salmon (5 AAC 01.286(b)(6)). 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 93 – 5 AAC 01.275 Waters closed to subsistence fishing; 5 AAC 71.010. Seasons and bag, possession, annual, and size limits for the Kuskokwim - Goodnews Area.

PROPOSED BY: Central Kuskokwim Fish and Game Advisory Committee

WHAT WOULD THE PROPOSAL DO? Close the Buckstock River to all fishing upstream of a point approximately 1.5 miles from its confluence with the Aniak River (-159.219607, 61.342717) between June 14 and September 1. The proponent's intent is to protect spawning salmon during low flow periods (discharges below 400 cfs) when chum salmon are present and actively spawning.

WHAT ARE THE CURRENT REGULATIONS? The entire Buckstock River is currently open to sport and subsistence fishing year-round under background regulations (5 AAC 01.260; 5 AAC 71.010), and regulations that are specific to the Aniak River drainage upstream of Doestock Creek (5 AAC 01.295).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Adoption of this proposal would eliminate the ability to fish on the Buckstock River above the 1.5-mile mark from June 14 through September 1.

BACKGROUND: The Buckstock River drains the Buckstock River Valley over a distance of approximately 33 miles into the Aniak River. Low water levels generally limit boat traffic to the lower 10 miles of the river. During a 2009 comprehensive subsistence survey in Aniak, the department gathered spatial harvest data for all species. Residents traveled well past the 1.5-mile mark in search of whitefish, salmon, moose, migratory birds, and small land mammals. The Statewide Harvest Survey (SWHS) has documented recreational fishing effort on the Aniak River drainage since 1996. Due to the low number of respondents, the effort and harvest estimates pool all the tributaries of the Aniak River, including the Buckstock River. Effort has been comparatively low with a recent 5-year average of only 2,024 angler-days. Sport and subsistence anglers do not tend to target chum salmon. The recent 5-year (2016–2020) average annual sport catch was estimated to be 490 chum salmon, the harvest was 34 chum salmon for the entire Aniak River drainage (including the Buckstock River). The last in-depth creel survey of recreational angling for the Aniak River drainage occurred during 2001. This department survey did not single out the Buckstock River but concentrated mostly on the Aniak River and documented recreational and subsistence angler effort, and information on salmon and resident species catch and harvests in the entire drainage.

A 1994 master's thesis concluded that jet-boat induced embryo mortality is not obvious relative to other mortality factors and should be expected to be considerably lower than that caused by natural, density-independent factors such as freezing, flooding, dewatering, and channel scouring (Horton 1994). Embryo survival was linked to gravel movement within a 12- to 24-inch wide area immediately underneath the boat at depths less than 9 inches. Mortality was insignificant at water depths of greater than 9 inches.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The Buckstock River is used by Aniak residents for the harvest of many subsistence resources throughout summer. Closing all fishing will not prevent boating activity related to other subsistence harvesting activities or other recreational uses during summer. Spawning fish, spawning redds, and potentially low water will still be present after September 1.

If the board were to adopt regulations limiting subsistence and sport fishing in the Buckstock River, the board should evaluate and consider whether changes outlined in this proposal should be applied to all Kuskokwim Area salmon spawning tributaries across all life stages. The board should also consider whether reasonable opportunity for success in harvesting fish stocks for subsistence uses will still be provided.

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. Approval of this proposal is not expected to result in an additional cost to the department.

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.

KUSKOKWIM SPORT FISHERIES (1 PROPOSAL)

PROPOSAL 94 – 5 AAC 71.010. Seasons and bag, possession, annual, and size limits for the Kuskokwim – Goodnews Area.

PROPOSED BY: Native Village of Kwinhagak.

WHAT WOULD THE PROPOSAL DO? This proposal would close sport fishing for chum salmon in the Kanektok River to nonresidents from June 1–July 15.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow for a bag and possession limit of five chum salmon, with no size limit.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would potentially reduce sport fishing opportunity and effort for chum salmon when a harvestable surplus is available.

BACKGROUND: The Kanektok River flows 85 miles west from headwater lakes in the Ahklun Mountains into Kuskokwim Bay and supports all five Pacific salmon species found in Alaska. Chum salmon run strength has varied throughout Western Alaska and was weaker in 2021 and 2022. Chum salmon generally return to the Kanektok River from mid-June to mid-July, which overlaps with king salmon. There are aerial survey escapement goals for king salmon and sockeye salmon on the Kanektok River, but not for chum salmon. A small commercial fishery operated outside of the mouth of the Kanektok River in 2020 and 2021 (the first since 2015) and did not operate in 2022 due to lack of a fish processor. Neither subsistence fishing nor sport fishing on the Kanektok River have been restricted because of conservation concerns (poor runs sizes) since at least 2000. Most sport fishermen are nonresidents who travel to the Kanektok River to target rainbow trout, and king and coho salmon: chum salmon are target secondarily. Based on the most recent Statewide Harvest Survey (2016–2020), the estimated 5-year average harvest of chum salmon was 323 and catch average was 10,801, which includes both guided and nonguided anglers (Table 94-1). This level of chum salmon catch is more likely reflective of their relative abundance when anglers are targeting other species. The Freshwater Sport Fish Guide Logbook did not provide chum salmon specific harvest and catch estimates for guided anglers (Table 94-2). Some harvest of chum salmon may occur by Alaska residents because hook and line attached to a rod or pole is legal subsistence gear.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Conservation measures, when needed for chum salmon in the Kanektok River, can be addressed by emergency order authority. The harvest of chum salmon is relatively small, and no restrictions on the sport or subsistence fisheries has been required to maintain sustainability since at least 2000.

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. Approval of this proposal is not expected to result in an additional cost to the department.

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, chum, sockeye, coho, and pink 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? The board established the amount reasonably necessary for subsistence (ANS) for salmon species in the Kuskokwim Area as follows: 67,200–109,800 king salmon in the Kuskokwim River drainage; 41,200–116,400 chum salmon in the Kuskokwim River drainage; 32,200–58,700 sockeye salmon in the Kuskokwim River drainage; 27,400–57,600 coho salmon in the Kuskokwim River drainage; 500–2,000 pink salmon in the Kuskokwim River drainage; 6,900–17,000 salmon in Districts 4 and 5, combined; 12,500–14,400 salmon in the remainder of the Kuskokwim Area. (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.

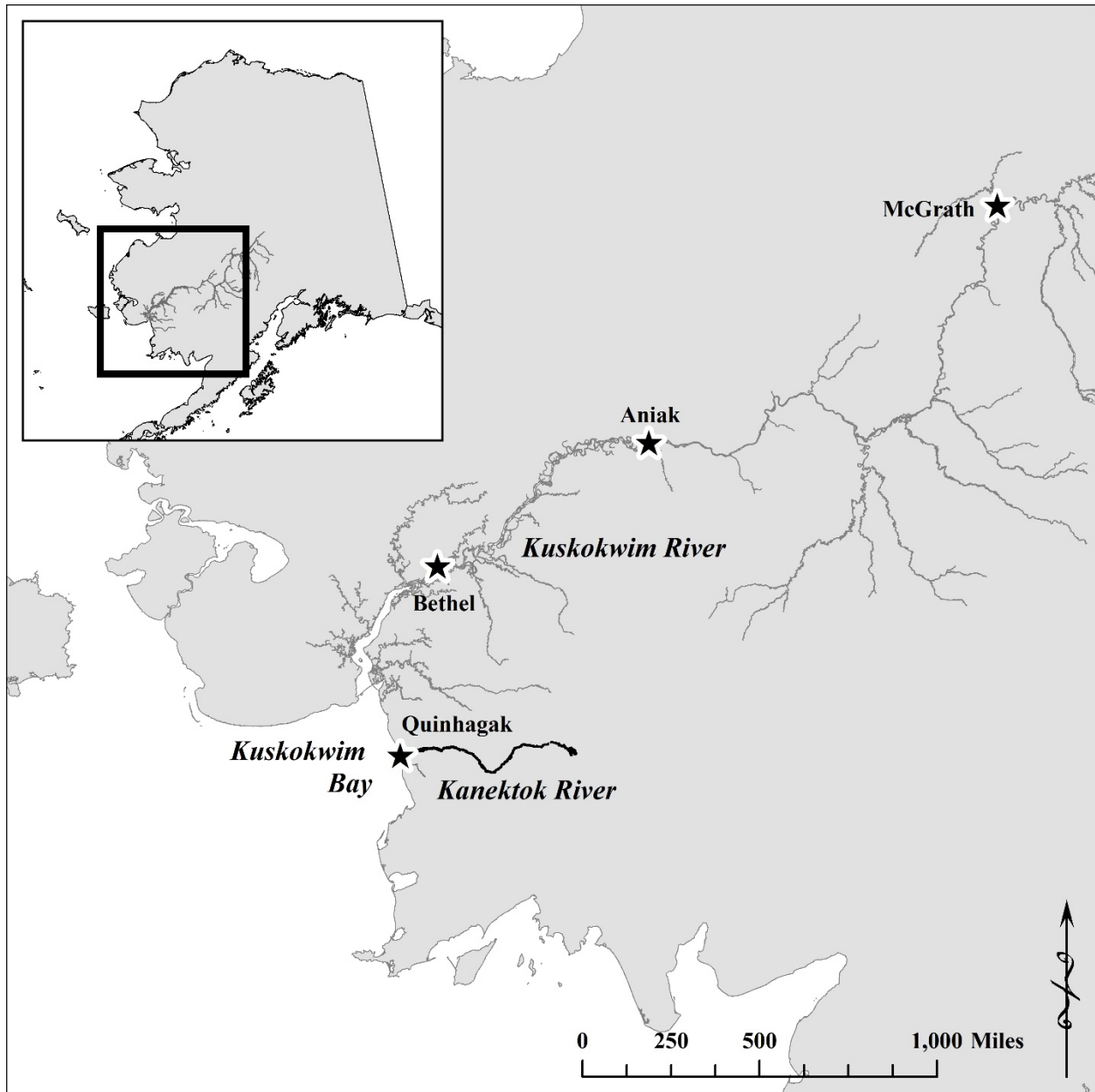


Figure 94-1.—Location of the Kanektok River and Kuskokwim Bay.

Table 94-1.—Estimated sport fishing harvest and catch of chum salmon in the Kanektok River, and for all Kuskokwim Bay rivers combined (including Kanektok River), 2001–2021. Annual estimates with fewer than 12 respondents to the SWHS are not reported; represented by en dash (–).

Year	Kanektok River		Kuskokwim Bay Total	
	Harvest	Catch	Harvest	Catch
2001	43	6,457	64	8,781
2002	446	10,779	545	15,533
2003	14	7,138	14	13,528
2004	33	4,715	33	8,781
2005	108	9,241	108	10,722
2006	145	21,528	145	27,094
2007	15	7,971	15	12,359
2008	48	9,232	141	11,267
2009	44	3,802	66	7,537
2010	150	10,298	150	12,062
2011	271	9,541	271	13,162
2012	127	11,397	300	15,467
2013	320	10,330	320	12,397
2014	110	7,935	155	13,085
2015	83	14,771	83	16,341
2016	466	6,943	493	9,243
2017	201	7,186	201	9,526
2018	226	14,790	226	18,069
2019	400	14,285	418	16,028
2020	–	–	–	–
2021	230	5,549	246	5,971
Average (2011–2020)	245	10,798	274	13,702
Average (2016–2020)	323	10,801	335	13,217

Table 94-2.—Sport fishing effort (i.e. angler-days) by residency and harvest of salmon provided by the Freshwater Sport Fish Guide Logbook for the Kanektok River, 2006–2016^a.

Year	Angler-days			Salmon harvest			
	Total	Resident	Nonresident	King	Coho	Sockeye	Other ^a
2006	2,889	42	2,847	424	1373	247	346
2007	2,705	45	2,660	301	796	210	49
2008	2,811	37	2,774	243	813	194	111
2009	2,103	13	2,090	250	926	137	35
2010	1,818	16	1,802	163	598	210	100
2011	1,904	24	1,880	192	709	38	120
2012	2,157	27	2,130	165	833	39	237
2013	2,248	51	2,197	9	828	21	198
2014	2,515	17	2,498	1	981	152	183
2015	2,308	18	2,290	2	797	95	110
2016	2,339	28	2,311	12	761	101	202
Average (2006–2016)	2,345	29	2,316	160	856	131	154

^a. This category includes chum salmon, pink salmon, and all other unidentified species.

KUSKOKWIM COMMERCIAL FISHERIES (3 PROPOSALS)

PROPOSAL 95 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

PROPOSED BY: Kuskokwim River Inter-Tribal Fish Commission.

WHAT WOULD THE PROPOSAL DO? When the projected escapement of Kuskokwim River king salmon is within the drainagewide escapement goal range, the department would not provide set gillnet fishing periods prior to June 12 in the Kuskokwim River when a federal special action or emergency special action is in effect.

WHAT ARE THE CURRENT REGULATIONS? By emergency order, the commissioner shall open at least one subsistence fishing period per week with 4-in or smaller mesh gillnets before June 12 when the projected king salmon escapement is within the drainagewide escapement goal range. The gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 ft from the ordinary high-water mark.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? When the projected escapement of king salmon is within the drainagewide escapement goal range, the department would be unable to provide subsistence fishing opportunity before June 12 within the Kuskokwim River drainage when a federal special action or emergency special action is in effect. This would force the department to violate constitutional and statutory obligations to sustainably manage salmon returning to the Kuskokwim River.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon during 2012–2014 are the three lowest on record. From 2010 through 2013 most tributary escapement goals were not achieved, and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. Since 2014, the subsistence king salmon fishery has been 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 most tributary escapement goals were achieved in recent years.

The Kuskokwim Subsistence Salmon Panel was established by the board 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 of 2015 to 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, like 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 king salmon throughout the drainage for equitable harvest opportunity and to conserve 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-in or less mesh set gillnets during the closure. In 2020, the board provided further guidance by directing the department to provide at least one subsistence fishing opportunity per week with 6-in or less mesh set gillnets during the closure.

when the projected escapement of king salmon is above the upper bound of the drainagewide escapement goal.

Since 2014, USFWS has annually enacted special actions or emergency special actions to limit the harvest of king salmon to federally qualified users within the boundaries of the Yukon Delta National Wildlife Refuge. In recent years, the federal government has sought to be the sole management authority for Kuskokwim River king salmon. To that end, the federal government has sued the State of Alaska over Kuskokwim River salmon management downriver from Aniak.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal based on its statutory and constitutional implications.

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. Approval of this proposal is not expected to result in an additional cost to the department.

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 96 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

PROPOSED BY: Kuskokwim River Inter-Tribal Fish Commission.

WHAT WOULD THE PROPOSAL DO? When the projected escapement of Kuskokwim River king salmon is within the drainagewide escapement goal range, the department would not provide directed subsistence king salmon fishing periods in the Kuskokwim River after June 11 when a federal special action or emergency special action is in effect.

WHAT ARE THE CURRENT REGULATIONS? By emergency order, the commercial, sport, and subsistence king salmon fisheries shall be closed, and after June 11, to the extent practicable, the commissioner shall open, by emergency order, at least one fishing period per week for a directed subsistence king salmon fishery to provide harvest opportunity on surplus king salmon in excess of escapement needs.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? When the projected escapement of king salmon is within the drainagewide escapement goal range, the department would be unable to provide subsistence fishing opportunity after June 11 within the Kuskokwim River drainage when a federal special action or emergency special action is in effect. This would force the department to violate constitutional and statutory obligations to sustainably manage salmon runs returning to the Kuskokwim River.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2012–2014 are the three lowest on record. From 2010 through 2013 most tributary escapement goals were not achieved, and the Kuskokwim River drainagewide escapement goal established in 2013 was not achieved that year. Since 2014, 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 most tributary escapement goals were achieved in recent years.

The Kuskokwim Subsistence Salmon Panel was established by the board 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 of 2015 to 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, like 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 when directed king salmon harvest may be provided depending on run strength. The intent of this closure was to distribute fish throughout the drainage for equitable harvest opportunity and to conserve 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-in or less mesh set gillnets during the closure. In 2020, the board provided further guidance by directing the department to provide at least one subsistence fishing opportunity per week with 6-in or less mesh set gillnets during the closure when the projected escapement of king salmon is above the upper bound of the drainagewide escapement goal.

Since 2014, USFWS has annually enacted special actions or emergency special actions to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge. In recent years, the federal government has sought to be the sole management authority for Kuskokwim River king salmon. To that end, the federal government has sued the State of Alaska over Kuskokwim River salmon management.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal based on its statutory and constitutional implications and the regulatory confusion that would be created.

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. Approval of this proposal is not expected to result in an additional cost to the department.

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 97 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan and 5 AAC 01.270. Lawful gear and gear specifications and operation.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? In the Kuskokwim River, during times when the commissioner determines that it is necessary for the conservation of king salmon, the department may, by emergency order authority, close the commercial gillnet fishing season and immediately reopen a fishing season during which:

- (1) dip net and beach seine gear may be used; and
- (2) all salmon specified by the commissioner caught in dip net and beach seine gear must be returned immediately to the water alive.

This proposal also modifies Kuskokwim Area commercial and subsistence dip net gear operations to include a single rigid handle with a single line attached.

WHAT ARE THE CURRENT REGULATIONS? Gillnet (set or drift) is the only gear type currently available to harvest salmon in Kuskokwim River commercial fishing districts. Under the current definition, dip nets must have a single rigid handle and be operated by hand.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? If adopted, this proposal would allow Kuskokwim River commercial fishermen additional opportunity to harvest surplus salmon by authorizing the use of gear types that would allow for the live release of less abundant salmon during times of king salmon conservation. Further, adoption of this proposal would provide a clear definition of a commonly used dip net operational method.

BACKGROUND: Kuskokwim River king salmon run sizes are currently at a level where subsistence harvests have fallen below the lower bound of the ANS range since 2010. Despite low king salmon runs, there has generally been annual commercial surpluses of chum and/or sockeye salmon in excess of escapement requirements and ANS. However, because of the concern for king salmon, and more recently chum salmon, harvestable surpluses have been foregone due to overlapping run timing. Since losing the large-scale commercial buyer/processor in 2015, all commercial harvest in recent years has occurred by individuals registered with the department as catcher/sellers. Annually there has been one catcher/seller registered with the department.

There are currently no specifications limiting the length of a dipnet pole on the Kuskokwim River. The use of dip nets and beach seines on the Yukon and Kuskokwim Rivers has become an effective management tool to harvest abundant salmon species while allowing the live release of less abundant king salmon. Dip nets, and to a lesser extent beach seines, used on the lower Kuskokwim River as a method to harvest abundant sockeye salmon by subsistence participants, has increased in recent years.

Yukon River residents developed a novel dip net operational method now known as “Yukon style” to target deeper migrating chum salmon, and, through conversations with Kuskokwim River subsistence users, is starting to become an operational method on the Kuskokwim River. This method consists of using a very short handled dipnet with a length of rope attached to the dipnet handle. The dipnet and rope are then lowered into the river and drifted with the river current. Dipnets using this method are checked regularly and all salmon, other than king salmon, are retained and king salmon are released alive.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal as a means of providing a clear definition of dip net operations and providing more commercial fishing opportunity for surplus salmon while conserving less abundant salmon in the Kuskokwim River.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery to purchase dip net or beach seine gear. Approval of this proposal is not expected to result in an additional cost to the department.

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.
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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.