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ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON
COMMERCIAL, PERSONAL USE, SPORT, AND SUBSISTENCE
REGULATORY PROPOSALS
COMMITTEE OF THE WHOLE–GROUPS 1–3,
FOR

ARCTIC–YUKON–KUSKOKWIM FINFISH

ALASKA BOARD OF FISHERIES MEETING
FAIRBANKS, ALASKA

JANUARY 12–16, 2016

Regional Information Report No. 3A15-06

The following staff comments were prepared by the Alaska Department of Fish and Game for use at the Alaska Board of Fisheries (board) meeting, January 12–16, 2016 in Fairbanks, 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.

Acronyms and Abbreviations

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

Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Acronyms

Acceptable Biological Catch	ABC
Alaska Board of Fisheries	board
Alaska Department of Fish and Game	department
Alaska Department of Law	DOL
Amount Necessary for Subsistence	ANS
Alaska Wildlife Troopers	AWT
Biological Escapement Goal	BEG
Catch Per Unit Effort	CPUE
Central Gulf of Alaska	CGOA
Commercial Fisheries Entry Commission	CFEC
Customary and Traditional	C&T
Emergency Order	EO
Fishery Management Plan	FMP
Gulf of Alaska	GOA
Global Positioning System	GPS
Guideline Harvest Level	GHL
National Marine Fisheries Service	NMFS
No Data	ND
North Pacific Fishery Management Council	NPFMC
Optimal Escapement Goal	OEG
Prince William Sound	PWS
Prohibited Species Catch	PSC
Statewide Harvest Survey	SWHS
Sustainable Escapement Goal	SEG
Total Allowable Catch	TAC
Total Allowable Harvest	TAH

REGIONAL INFORMATION REPORT 3A15-06

ALASKA DEPARTMENT OF FISH AND GAME

STAFF COMMENTS ON COMMERICAL, PERSONAL USE, SPORT, AND SUBSISTENCE REGULATORY PROPOSALS COMMITTEE OF THE WHOLE–GROUPS 1–3, FOR

ARCTIC–YUKON–KUSKOKWIM

ALASKA BOARD OF FISHERIES MEETING FAIRBANKS, ALASKA

JANUARY 12–16, 2016

by

Alaska Department of Fish and Game

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

December 2015

ABSTRACT

This document contains Alaska Department of Fish and Game (department) staff comments on commercial, personal use, sport, and subsistence regulatory proposals for the Arctic–Yukon–Kuskokwim Finfish meeting. These comments were prepared by the department for use at the Alaska Board of Fisheries (board) meeting, January 11–16, 2016 in Fairbanks, Alaska. The comments are forwarded to assist the public and board. The comments contained herein should be considered preliminary and subject to change, as new information becomes available. Final department positions will be formulated after review of written and oral public testimony presented to the board.

Key words: Alaska Board of Fisheries (board), Alaska Department of Fish and Game (department), staff comments, regulatory proposals, fisheries, commercial, personal use, sport, subsistence, supplemental issues.

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Summary of department positions on regulatory proposals for Arctic–Yukon–Kusksokwim Finfish Board of Fish Meeting – Fairbanks, January 12–16, 2016.

Proposal No.	Department Position	Issue
92	N	Modify the Kuskokwim River Salmon Management Plan to manage the king salmon subsistence fishery based on the Bethel Test Fishery.
93	N	Modify the Kuskokwim River Salmon Management Plan to establish an inriver run goal of king salmon above the Bethel Test Fishery.
94	N	Establish an inriver run goal for the Kuskokwim River Salmon Management Plan.
96	N	Separate the amounts necessary for subsistence use of king salmon into three parts on the Kuskokwim River.
222	N	Establish a permit system for regulating the king salmon subsistence fishery during times of low king salmon runs.
95	N	Create a Tier II subsistence king salmon fishery in the Kuskokwim River.
97	S	Create a permitting system for king salmon subsistence fishing in the Kuskokwim River.
98	S	Establish descriptions of subsistence fishing sections for the Kuskokwim River during times of king salmon conservation.
99	N	Modify gear operation in the Kuskokwim River by limiting four-inch mesh subsistence gear to one gillnet per household.
100	S	Establish subsistence beach seine specifications in the Kuskokwim Area.
101	S	Repeal Kuskokwim Area depth specifications for commercial gillnets greater than six-inch mesh.
102	N	Change gillnet mesh size from six inches or smaller to five and three-quarters inches or smaller in District 4 of the Kuskokwim Area.
103	S	Amend the Kuskokwim Area District 4 Salmon Management Plan to include District 5.
104	O	Increase the commercial fishing area in District 5 of the Kuskokwim Area
105	O	Modify gear specifications to reduce king salmon harvest in the Kanektok and Arolik rivers.
106	O	Extend the Nelson Island herring fishing district from Atrnak Point toward Cape Vancouver.
107	O	Close the Yukon River summer chum salmon commercial fishery to protect king salmon.
108	S	Reduce management triggers in the Yukon River Summer Chum Salmon Management Plan based on the run size of summer chum salmon.
109	S	Modify the Yukon River Summer Chum Salmon Management Plan triggers.
110	N	Increase the commercial fishery threshold trigger in the Yukon River Drainage Fall Chum Salmon Management Plan.
111	N	Eliminate the use of GHLs in the Yukon River King Salmon Management Plan.
112	O	Allow all gear used in Yukon Area commercial fisheries to be allowed in Yukon Area subsistence fisheries.
113	O	Prohibit the use of drift gillnets in the Yukon Area subsistence fishery and in the Yukon Area commercial fishery.
114	N	Require subsistence salmon fishing permits in Yukon Area District 5 and set permit limits for king salmon during times of king salmon conservation.
115	N	Allow for the retention of king salmon less than 25 inches in length in Yukon Area fish wheel subsistence fisheries.

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

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Summary of department positions on regulatory proposals for Arctic–Yukon–Kusksokwim Finfish Board of Fish Meeting – Fairbanks, January 12–16, 2016 (page 2 of 3)

Proposal No.	Department Position	Issue
116	S	During times of salmon conservation in the Yukon Area, require fish wheels with live boxes to be manned and require immediate release of the specified salmon.
117	N	Prohibit the use of beach seines in the Yukon Area subsistence salmon fishery and in the Yukon River and Anvik River summer chum salmon commercial fisheries.
118	S	Establish specifications for a beach seine used for subsistence fishing in the Yukon Area.
119	S	Require live release of king salmon from subsistence beach seines during times of king salmon conservation in the Yukon Area.
120	N	Allow subsistence fall chum salmon fishing seven days per week in District 5 of the Yukon Area once a fall chum salmon commercial fishery is opened.
121	S	Expand the area of allowable subsistence drift gillnet fishing for chum salmon in Subdistrict 4-A of the Yukon Area.
122	S	Modify Yukon Area commercial set gillnet length specification to an aggregate length standard.
123	S	Further define commercial beach seine specifications for summer chum salmon in the Yukon Area.
124	S	Allow for six-inch or smaller mesh gillnets in the commercial salmon fishery in Yukon River District 6 by emergency order.
125	N	Establish gillnet gear provisions to allow a directed pink salmon commercial fishery in districts 1–3 of the Yukon Area.
126	N	Add purse seine gear as an allowable commercial salmon fishing gear to target summer chum salmon in districts 1–3 of the Yukon River during times of king salmon conservation.
127	N	Expand the commercial fishing area of Yukon Area District 1.
128	N	Extend commercial fishing three miles offshore and north to Point Romanof in District 1 of the Yukon Area.
129	S	In the Norton Sound-Port Clarence Area during times of conservation, require the return of a specified salmon species immediately to the water unharmed when beach seining.
130	S	Allow the restriction of gillnet mesh size during times of conservation for chum and king salmon in any portion of the Norton Sound-Port Clarence Area.
131	N	Increase subsistence fishing time with gillnets and beach seines in Subdistrict 1 of Norton Sound District.
132	N	Add cast net as a legal subsistence fishing gear and allow both dip net and cast net gear to be used in all subsistence fisheries in the Norton Sound-Port Clarence Area.
133	N	Allow the use of beach seines for commercial harvest of chum and pink salmon in Subdistricts 5 and 6 of the Norton Sound District during times of king salmon conservation.
134	S	Change the boundary line separating the Norton Sound-Port Clarence Area and Yukon Area at Point Romanof in area and district descriptions.
223	S	Establish an aggregate pot limit of no more than 20 pots per permit holder for the Norton Sound Section winter through-the-ice commercial fishery.
135	O	Prohibit the use of set lines in Grizzly and Jack lakes.
136	O	Allow only one fishing line per angler during the Fielding Lake winter fishery.
137	O	Allow the use of bait during the winter fishery on Fielding Lake.

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

-continued-

Summary of department positions on regulatory proposals for Arctic–Yukon–Kusksokwim Finfish Board of Fish Meeting – Fairbanks, January 12–16, 2016 (page 3 of 3)

Proposal No.	Department Position	Issue
138	O	Allow retention of Arctic grayling on the Chena River.
139	S	Update the Tanana River Area stocked waters regulation.
140	S	Repeal Yukon River Area rainbow trout regulations.
141	N	Recognize rod and reel fishing as a legal means for subsistence fishing in all of the Kotzebue District.
142	N	Change the dates gillnet gear may be used in the South Fork and Middle Fork of the Koyukuk River from November 1 to June 30 to August 20 to June 30.
143	N	Reduce the bag and possession limit of northern pike in the Minto Flats Northern Pike Management Plan.
144	O	Allow the use of five and one-half inch mesh gillnets across an entire channel in portions of the Koyukuk River for the purpose of targeting northern pike.
145	S	Repeal the regulation that prohibits the taking of northern pike in the Tanana River drainage personal use fishery.
146	O	Create a directed commercial fishery for cisco in Norton Sound or Port Clarence Districts.

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

COMMITTEE OF THE WHOLE–GROUP 1 : KUSKSOKWIM AREA SALMON AND HERRING (16 PROPOSALS)

Kuskokwim Salmon Management Plan (3 proposals)

PROPOSAL 92 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

PROPOSED BY: Orutsararmiut Native Council.

WHAT WOULD THE PROPOSAL DO? This would modify the *Kuskokwim River Salmon Management Plan* to direct the department to manage the king salmon subsistence fishery conservatively until the approximate first 50% of the current run has been determined to have passed the Bethel Test Fishery (BTF) project. This approach would be in place if the preseason forecast is below a return of 150,000 king salmon.

WHAT ARE THE CURRENT REGULATIONS? Salmon may be taken for subsistence purposes 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 and ensure the drainagewide escapement goal is achieved (5 AAC 01.270 and 5 AAC 07.365(c)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? When the preseason forecast of king salmon returning to the Kuskokwim River is below 150,000 fish, the department would be directed to close the subsistence salmon fishery until it has been determined that 50% of the king salmon run has passed the BTF site. This would eliminate management flexibility to provide some subsistence opportunity early in the season as warranted based on inseason run assessment information, and subsistence harvest of king salmon would likely decrease.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the recently established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the subsistence salmon fishery was closed for approximately 32 days each year. In 2014 and 2015, the subsistence fishery was closed at the beginning of the king salmon run by EO.

The 2014 and 2015 Kuskokwim River king salmon runs were expected to be similar or slightly better than the 2013 run. In anticipation of low runs, management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Commercial fishing remained closed until the majority of the king salmon run had passed upriver to minimize potential incidental king salmon harvest. Due to these restrictive actions, the drainagewide escapement goal was met in 2014 and 2015 and the majority of tributary escapement goals were achieved in these recent years. Additionally, USFWS enacted SAs in 2014 and 2015 to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge and

implement a community permit system to provide a limited allocation of king salmon for harvest by federally qualified subsistence users. King salmon subsistence harvest from the Kuskokwim River has fallen below the lower end of the ANS range since 2011.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel discussed this proposal but took no final action.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. The department is **OPPOSED** to aspects of this proposal that reduce management flexibility. The department currently has the management tools to move a group of king salmon through the river prior to directed subsistence harvest opportunity. If adopted, this proposal would prevent subsistence opportunity early in the season even if a limited harvest was warranted based on inseason information.

The department's preferred approach to addressing this proposal is an early season subsistence salmon fishery closure in the lower river during the approximate first quartile of the king salmon run, on average June 10–16 at BTF. This provides for a group of fish to be available for escapement and subsistence harvest in middle and upper river areas prior to establishing directed king salmon harvest opportunity in the lower portion of the river where the majority of harvest occurs. An early season fishing closure would be most necessary during times of conservation because it allows for assessment of king salmon run strength prior to providing directed harvest opportunity commensurate with run strength, and for more evenly spreading harvest opportunity along the drainage while still managing for escapement goals.

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a nonsubsistence area? No.
2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for king 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 uses? 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.

PROPOSAL 93 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

PROPOSED BY: Kuskokwim Native Association.

WHAT WOULD THE PROPOSAL DO? This would establish a king salmon inriver run goal of 95,000 fish upstream of BTF.

WHAT ARE THE CURRENT REGULATIONS? The department manages the Kuskokwim River king salmon run to achieve escapement goals, primarily a drainagewide SEG of 65,000–120,000, and provide harvest opportunity on fish in excess of escapement needs (5 AAC 07.365). Salmon may be taken at any time from the Kuskokwim River for subsistence purposes, except that the commissioner may, by EO, close subsistence fishing periods and restrict fishing gear to conserve king salmon (5 AAC 01.270).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? An inriver run goal of 95,000 fish upstream of the Bethel Test Fishery (BTF) would likely allocate additional harvestable surplus of king salmon to subsistence and sport users upstream of Bethel and may result in exceeding escapement goals.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the recently established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days.

The 2014 and 2015 Kuskokwim River king salmon runs were expected to be similar or slightly better than the 2013 run. In anticipation of low runs, management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Commercial fishing remained closed until the majority of the king salmon run had passed upriver to minimize potential incidental king salmon harvest. Due to these restrictive actions, the drainagewide escapement goal was met in 2014 and 2015 and the majority of tributary escapement goals were achieved. Additionally, USFWS enacted Special Actions (SAs) in 2014 and 2015 to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge and implement a community permit system to provide a limited allocation of king salmon for harvest by federally qualified subsistence users. King salmon subsistence harvest from the Kuskokwim River has fallen below the lower end of the ANS range since 2011.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in

January and August 2015 to discuss and develop options for consideration by the board. The panel discussed this proposal but took no action.

The BTF is the primary tool used to assess Kuskokwim River salmon run abundance and run timing inseason. It produces an index of inriver run abundance based on catch per unit effort. The department is in the process of conducting feasibility work on a mainstem Kuskokwim River sonar project that, if viable, would provide inseason salmon run abundance information in numbers of fish as opposed to the index of abundance provided by BTF. Sonar feasibility work is ongoing with expectations for further refinement and final evaluation over the next several years. Additionally, radio telemetry data confirms that king salmon destined for the Kuskokwim River headwaters enter the river earlier than king salmon destined for tributaries lower in the drainage. Although information on harvest composition of specific spawning stocks is not available, this indicates king salmon bound for spawning tributaries in upper portions of the drainage are primarily harvested in the lower river during the early part of the run.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on allocative aspects of this proposal. The department is **OPPOSED** to aspects of this proposal that would require achievement of an inriver run goal based on numbers of fish because inseason assessment of Kuskokwim River salmon run abundance is not based on numbers of fish, but on an index of abundance determined by the BTF. While BTF king salmon abundance indices can be related to total run in numbers of fish postseason, uncertainty in the relationship cannot provide a reasonably accurate and defensible measure of numbers of fish inseason. There are currently no tools available to effectively assess the run inseason against the proposed inriver run goal.

The department's preferred approach to addressing this proposal is an early season subsistence salmon fishery closure in the lower river during the approximate first quartile of the king salmon run, on average June 10–16 at BTF. This provides for a group of fish to be available for escapement and subsistence harvest in middle and upper river areas prior to establishing directed king salmon harvest opportunity in the lower portion of the river where the majority of harvest occurs. An early season fishing closure would be most necessary during times of conservation because it allows for assessment of king salmon run strength prior to providing directed harvest opportunity commensurate with run strength, and for more evenly spreading harvest opportunity along the drainage while still managing for escapement goals.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for king 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 uses? 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.

PROPOSAL 94 – 5 AAC 07.365. Kuskokwim River Salmon Management Plan.

PROPOSED BY: Stony-Holitna Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would establish a king salmon inriver run goal of 120,000–218,000 to provide king salmon for escapement and communities upstream of Bethel.

WHAT ARE THE CURRENT REGULATIONS? The department manages the Kuskokwim River king salmon run to achieve escapement goals, primarily a drainagewide SEG of 65,000–120,000, and provide harvest opportunity on fish in excess of escapement needs (5 AAC 07.365). Salmon may be taken at any time from the Kuskokwim River for subsistence purposes, except that the commissioner may, by EO, close subsistence fishing periods and restrict fishing gear to conserve king salmon (5 AAC 01.270).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would establish an inriver run goal for king salmon of 120,000–218,000 king salmon for communities upstream of Bethel, which exceeds the upper end of the established drainagewide SEG of 65,000–120,000. This would result in escapements in excess of current escapement goals and allocate additional harvestable surplus of king salmon to subsistence and sport users upstream of Bethel. In order to achieve the lower end of the proposed inriver goal, the department would have to close all directed salmon fisheries within the Kuskokwim River until such time that it could be determined, inseason, that the inriver goal for king salmon would be met. Kuskokwim River subsistence and sport users would have to forego harvest opportunity on surplus king salmon, and potentially other salmon species, in excess of escapement needs.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the recently established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days each year.

The 2014 and 2015 Kuskokwim River king salmon runs were expected to be similar or slightly better than the 2013 run. In anticipation of low runs, management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Commercial fishing remained closed until the majority of the king salmon run had passed upriver to minimize potential incidental king salmon harvest. Due to these restrictive actions, the drainagewide escapement goal was met in 2014 and 2015 and the majority of tributary escapement goals were achieved. Additionally, USFWS enacted Special Actions (SAs) in 2014 and 2015 to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge and implement a community permit system to provide a limited allocation of king salmon for

harvest by federally qualified subsistence users. King salmon subsistence harvest from the Kuskokwim River has fallen below the lower end of the ANS range since 2011.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel discussed this proposal but took no final action.

The Bethel Test Fishery (BTF) is the primary tool used to assess Kuskokwim River salmon run abundance and run timing inseason. It produces an index of inriver run abundance based on catch per unit effort. The department is in the process of conducting feasibility work on a mainstem Kuskokwim River sonar project, that if viable, would provide inseason salmon run abundance information in numbers of fish as opposed to the index of abundance provided by BTF. Sonar feasibility work is ongoing with expectations for further refinement and final evaluation over the next several years. Additionally, radio telemetry data confirms that king salmon destined for the Kuskokwim River headwaters enter the river earlier than king salmon destined for tributaries lower in the drainage. Although information on harvest composition of specific spawning stocks is not available, this indicates king salmon bound for spawning tributaries in upper portions of the drainage are primarily harvested in the lower river during the early part of the run.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on allocative aspects of this proposal. The department is **OPPOSED** to aspects of the proposal that would preclude harvest opportunity on salmon when a surplus has been identified. Additionally, the department does not have the inseason assessment capability to manage for the proposed inriver run goal.

The department's preferred approach to addressing this proposal is an early season subsistence salmon fishery closure in the lower river during the approximate first quartile of the king salmon run, on average June 10–16 at BTF. This provides for a group of fish to be available for escapement and subsistence harvest in middle and upper river areas prior to establishing directed king salmon harvest opportunity in the lower portion of the river where the majority of harvest occurs. An early season fishing closure would be most necessary during times of conservation because it allows for assessment of king salmon run strength prior to providing directed harvest opportunity commensurate with run strength, and for more evenly spreading harvest opportunity along the drainage while still managing for escapement goals.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for king 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 uses? 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.

Subsistence Salmon (7 proposals)

PROPOSAL 96 – 5 AAC 01.286. Customary and traditional subsistence uses of fish stocks and amounts necessary for subsistence uses.

PROPOSED BY: Stony-Holitna Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would revise the ANS for Kuskokwim River king salmon by subdividing the existing finding into three equal parts representing three geographic areas of the Kuskokwim River drainage described as below Bethel, around Bethel, and above Bethel (Figure 96-1). The ANS finding for Kuskokwim River king salmon would be amended as follows: (b)(1) 67,200–109,800 king salmon in the Kuskokwim River drainage, including: (A) 22,400–36,600 in the Kuskokwim River from the Yukon Delta National Wildlife Refuge boundary at the mouth of the Kuskokwim (a line between 59° 59.958′ N, 162° 30.458′ W and 59° 59.945′ N and 162° 11.154′ W) upstream to Graveyard Point; (B) 22,400–36,600 in the Kuskokwim River from Graveyard Point to an area known locally as the "Kwethluk Y", which is downstream of the community of Kwethluk at the mouth of Kuskokwaq Slough; and (C) 22,400–36,600 in the Kuskokwim River from the Kwethluk Y upstream to the headwaters.

WHAT ARE THE CURRENT REGULATIONS? The board determined in January 2013 that the ANS for king salmon in the entire Kuskokwim River drainage is 67,200 to 109,800 king salmon (5 AAC 01.286(b)(1)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would require more discrete management of Kuskokwim River subsistence salmon fisheries to ensure subsistence harvest opportunity provided in the proposed geographic areas results in king salmon harvests that fall within the proposed subdivided ANS ranges.

BACKGROUND: In AS 16.05.258, the board is instructed to identify the fish stocks that are customarily and traditionally taken or used for subsistence, after recommendation from the department. This is commonly referred to as a "C&T" finding. Once a positive C&T finding has been made, the board is instructed, by the same law, to determine whether a portion of that fish stock can be harvested consistent with sustained yield; if so, then the board is instructed to determine the "amount of the harvestable portion that is reasonably necessary for subsistence uses" (AS 16.05.258(b)). This is commonly called an ANS.

An ANS is one way for the board to measure if reasonable opportunity for subsistence uses is being provided. "Reasonable opportunity" is defined at 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." ANS findings also assist the board in allocating among subsistence and nonsubsistence uses, which is why ANS findings are typically adopted as a range. ANS ranges are not used as inseason management tools, although they typically are considered by fishery managers

in preseason projections and management outlooks. ANS findings cannot be made for specific communities or groups of Alaskans. Kuskokwim River king salmon subsistence harvest has fallen below the lower end of the ANS range since 2011 (Figure 96-2).

Reporting of Kuskokwim River king salmon harvested for subsistence is voluntary and data are not collected as to where individuals and individual households harvest king salmon. Recent research conducted by the department demonstrates where many Kuskokwim River subsistence users fish for salmon, but this information was not collected specifically for king salmon. These data demonstrate that Kuskokwim River subsistence users fish in a variety of locations along the drainage. For example, in 2012 some Bethel residents harvested salmon along the Bering Sea coast; in the lower Yukon River drainage; downstream of Bethel to the river mouth; in Kuskokwim Bay; in the Kwethluk, Kisaralik, Tuluksak, and Holitna river drainages; in areas of the mainstem between Kalskag and Aniak; and just below the mouth of the Holokuk River. There is also a lack of information as to whether people fish for king salmon in the same locations each year, or whether locations vary annually based upon available openings, weather conditions, or access considerations. The pattern of fishing behavior is likely related to familial relationships between residents of different communities, people returning to customary and traditional fishing areas, as well as efforts to harvest salmon during times of conservation with limited fishing opportunities and rolling closures.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel discussed this proposal but did not make a recommendation.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on allocative aspects of this proposal. The board may determine subdividing the existing ANS finding into three different parts of the river provides an additional tool to determine whether reasonable opportunity for king salmon is being provided. However, the department **OPPOSES** subdividing the current ANS finding for Kuskokwim River king salmon due to the lack of necessary king salmon harvest location data on which to base subdivided ANS ranges. Residents of the Kuskokwim Area fish for salmon in a variety of locations other than areas close to their community of residence. The lack of comprehensive subsistence harvest location information in combination with the lack of comprehensive king salmon subsistence harvest timing and stock composition of harvest information within the proposed geographic areas would limit the department's ability to manage for reasonable opportunity as provided through a subdivided ANS. In addition, if one or more of the three proposed ANS ranges were not being consistently achieved, harvest opportunity might need to be reallocated among the three geographic areas to address it.

The department's preferred approach to addressing this proposal is an early season subsistence salmon fishery closure in the lower river during the approximate first quartile of the king salmon run, on average June 10–16 at BTF. This provides for a group of fish

to be available for escapement and subsistence harvest in middle and upper river areas prior to establishing directed king salmon harvest opportunity in the lower portion of the river where the majority of harvest occurs. An early season fishing closure would be most necessary during times of conservation because it allows for assessment of king salmon run strength prior to providing directed harvest opportunity commensurate with run strength, and for more evenly spreading harvest opportunity along the drainage while still managing for escapement goals.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for king 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 uses? 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.

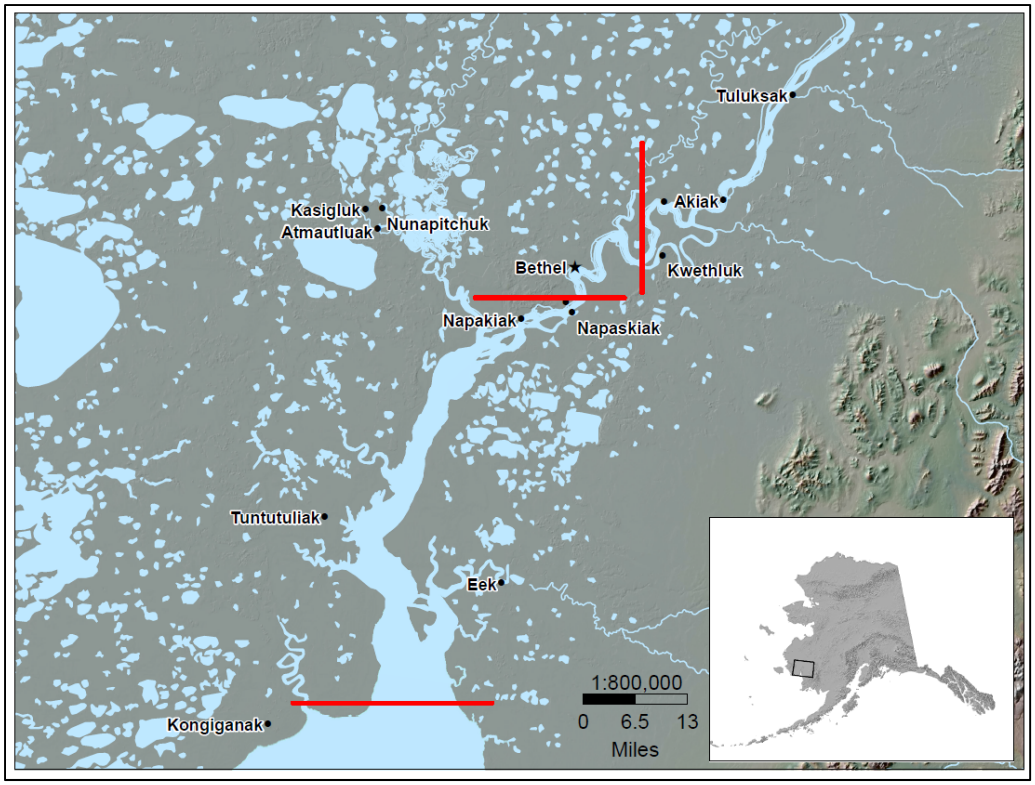


Figure 96-1.–Proposed boundaries along the Kuskokwim River for which subdivided ANS findings would apply.

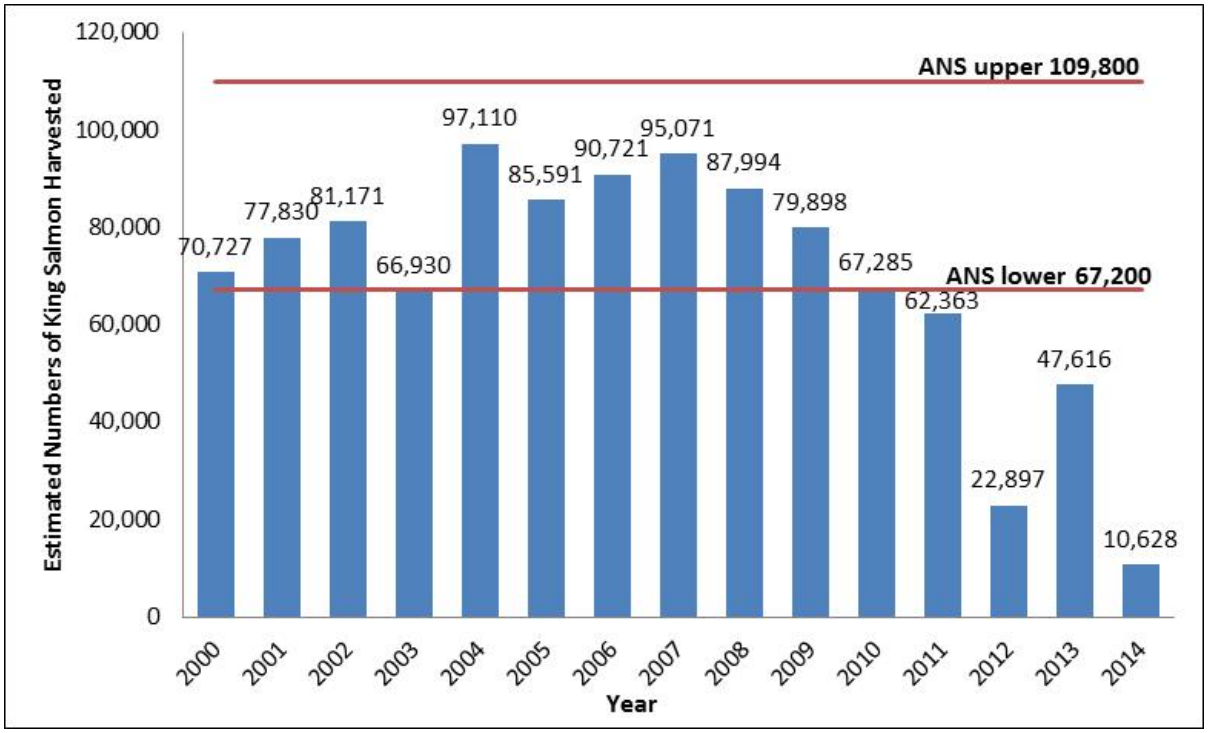


Figure 96-2.–Kuskokwim River king salmon subsistence harvest, 2000–2014.

PROPOSAL 222 – 5 AAC 01.280. Subsistence fishing permits.

PROPOSED BY: Alaska Board of Fisheries.

WHAT WOULD THE PROPOSAL DO? Create a limited subsistence permit program that would apply only during times of king salmon conservation for the Kuskokwim River drainage and would provide for either community harvests of king salmon as described in a board finding, or household harvests of king salmon; the permit program would also sunset after an undetermined date. Annual permit limits, season dates, and recording and reporting requirements for each permit fishery would also be adopted.

WHAT ARE THE CURRENT REGULATIONS? Fish may be taken for subsistence uses without a subsistence fishing permit (5 AAC 01.280). 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).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? During times of king salmon conservation, either a community or a household permit would be required to subsistence fish for king salmon within the Kuskokwim River drainage. Permits may provide estimates of the number of king salmon taken for subsistence uses by place of residency. Harvest limits would provide the department more management flexibility to maximize subsistence opportunity while ensuring escapement goals are achieved.

BACKGROUND: Subsistence fishing permits have not been required in the Kuskokwim Area. Since 1989 the department, in partnership with local Tribal organizations, has conducted postseason surveys to estimate Kuskokwim Area subsistence salmon harvest. Postseason surveys document subsistence harvest by household using a stratified sampling design that results in an estimate of total subsistence harvest by community. Kuskokwim River subsistence users annually harvest approximately 80,000 king salmon on average, which is the largest king salmon harvest in the state. The community of Bethel harvests a larger number of king salmon than other Kuskokwim River communities, which is likely attributable to Bethel's larger population (Figure 222-1).

Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the recently established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days.

The 2014 and 2015 Kuskokwim River king salmon runs were expected to be similar or slightly better than the 2013 run. In anticipation of low runs, management actions were

taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Due to these restrictive actions, the drainagewide escapement goal was met in 2014 and 2015 and the majority of tributary escapement goals were achieved. Additionally, USFWS enacted special actions to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge and implement a community permit program to provide a limited allocation of king salmon for harvest by federally qualified subsistence users. King salmon subsistence harvest from the Kuskokwim River has fallen below the lower end of the ANS range since 2011.

The Kuskokwim Subsistence Salmon Panel (panel) was established at the board's October 2014 work session 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. Membership was comprised of four board members, representatives of several Kuskokwim River drainage organizations and entities, and several at-large members of the public.

The panel held two-day meetings in Bethel in January 2015 and August 2015. In June 2015, board members also held a public meeting in Aniak, and met with stakeholder groups in Bethel. During the panel meetings, testimony was given regarding the growing population trend in Bethel and its impact on fishing opportunities for smaller villages, particularly those upriver. The panel also heard testimony from panel members in support of a limited permit program that would allow for the harvest of king salmon during times of conservation. The Bethel Fish and Game AC presented the panel with several recommendations, including a permit program that incorporated customary and traditional use criteria conditions and potential harvest limits, among other suggestions. The panel was also presented with an example of discretionary permit conditions for a community subsistence hunt. And finally, the panel was presented with a draft concept proposal for incorporating the customary and traditional use pattern involved with air drying and smoking of king salmon including,, but not limited to the following:

1. Long-term drying racks with a smokehouse established for processing quantities of fish and significant time/effort required for participation in this pattern of use;
2. Salvage/preservation of the majority of the king salmon carcass (excluding viscera) for human consumption;
3. Extended sharing of activities involving harvest, processing, and preservation in processing activities, and extended sharing of harvest within the community;
4. A pattern of use dependent on earlier season harvest for preservation due to more favorable weather conditions that reduce waste and spoilage concerns; and recognizes conflict with later seasonal subsistence activities that are also dependent on, and/or limited to, short periods for effective harvest due to weather factors, etc., inherent to the seasonal round aspect of subsistence activities;

Panel input into this proposal suggested other permit aspects could include preseason registration; a range of harvest limits as determined by preseason run forecasts and observed surplus inseason; start date of the approximate first quartile of the run (June 10–

16); and requiring an affidavit and/or physical location of drying racks and smokehouses associated with the permit.

The panel tied the community permit to traditional king salmon patterns of use, including sharing, use of a drying rack, and use of a smokehouse to cold smoke fish. The panel tied the household permit to a pattern of use by individual households, including freezing, canning, and more contemporary uses.

In 2009–2014, the department conducted studies on subsistence salmon use patterns in Kuskokwim River drainage communities, including Bethel. Household surveys were completed in 1,349 Kuskokwim households, department staff visited more than 18 fish camps, and conducted ethnographic interviews with 194 Kuskokwim residents.

One reason for the importance of king salmon to subsistence economies along the Kuskokwim River drainage is their early arrival, which helps fill gaps in winter and spring food supplies and provides fresh food for immediate consumption. Families in the lower Kuskokwim River normally begin harvesting and processing king salmon in early June. The early arrival of king salmon is significant because traditional and preferred methods of preservation—making "cold smoke" strips—work best at this time of year, when the fish can be more easily dried and preserved for winter use. King salmon are sliced into lengthwise strips, which are then brined, hung to dry in covered, outdoor fish racks for a few days to a week, then hung in a smokehouse to dry more completely. This process is referred to as a cold-smoke process because drying occurs at temperatures sufficiently low to prevent cooking of the fish. Cold-smoking of strips is one of the preferred processing methods for king salmon in many parts of the Kuskokwim River because king salmon tend to be very large, and if processed into fillets, the fillets will not dry thoroughly and will spoil.

King salmon harvested at the end of the run, or other species of salmon that arrive after king salmon, are more difficult to process and preserve using traditional methods because the weather later in the summer is wetter, and there are more insects, which make it difficult to preserve fish properly to keep them from spoiling.

Kuskokwim River drainage residents prepare and preserve salmon in many different ways, often using every part of the fish, including heads, hearts, and eggs. Preservation methods include freezing, salting, drying, smoking, and fermenting. Many preservation methods of the past continue to strongly influence how people along the river process and prepare their salmon today. Subsistence fishing, processing, and preparing of king salmon continue to be key elements of Kuskokwim River Yup'ik and Athabascan cultures and identity, and key to passing knowledge and experience from one generation to the next, especially at fish camp.

The 2009–2014 studies also found that going to fish camp is an important part of subsistence activities for some families, while other families prefer to fish in Bethel. Increasing obligations to employment have restricted many survey respondents' ability to travel away from permanent communities for the time typically required to fish from a

seasonal camp. With the recent rise in gasoline costs, fuel conservation strategies have included staying longer at fish camps (particularly for retired or unemployed individuals), eliminating short trips between permanent residences and fish camps, and fishing as close to permanent communities as possible, purchasing more fuel-efficient boat motors, and finding ways to cooperate with other families and share the cost of fishing. Some people said that they preferred to fish at fish camp because they could be away from daily life in town and enjoy quality time as a family. They said it is easier to make a good quality smoke fish in fish camp, and that fishing at fish camp is an important part of cultural and family traditions.

Other people said they preferred to fish in Bethel because it is more convenient. People who are employed and elders who cannot easily travel can participate in fishing and processing. They said when fish are not abundant and there are more restrictive regulations, fishing in Bethel is more efficient than going to fish camp.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on allocative aspects of this proposal. The department **SUPPORTS** the intent of this proposal. Permits, or harvest records, could be an effective way of more precisely determining subsistence harvest and provide an effective means of managing the harvest of king salmon through permit limits, when run strength only allows for a limited harvest. However, an inseason harvest reporting requirement (permit) for all salmon species, independent of the need for conservation from year to year is better suited to the department's management and administrative capabilities. Implementation of a permit program for king salmon only and only during times of king salmon conservation would still require annual postseason surveys to estimate harvest of remaining species. This would result in a duplication of effort, increased costs to the department, and possibly affect comparability of harvest estimates between species and among years based on differing harvest assessment methodologies. The department would incur additional costs to oversee and administer a permit program from issuing, collecting, and entering harvest information from the permits and from increased public education and outreach efforts to facilitate permit program implementation. Reporting of all subsistence salmon harvests through a permit program may also increase the accuracy of harvest estimation, which would improve run-reconstruction estimates and forecasting abilities.

However, if permits are only required during years of king salmon conservation, the department would **SUPPORT** a community or group permit program over a household permit system. The administrative requirements needed to implement a community or group permit program are better aligned with the department's existing capacity.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is this stock customarily and traditionally taken or used for subsistence? Yes. The board found that king, chum, sockeye, coho, and pink salmon in the Kuskokwim River drainage are customarily and traditionally taken or used for subsistence (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 uses? The board established a range of 67,200–109,800 Kuskokwim River king salmon are reasonably necessary for subsistence ((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.

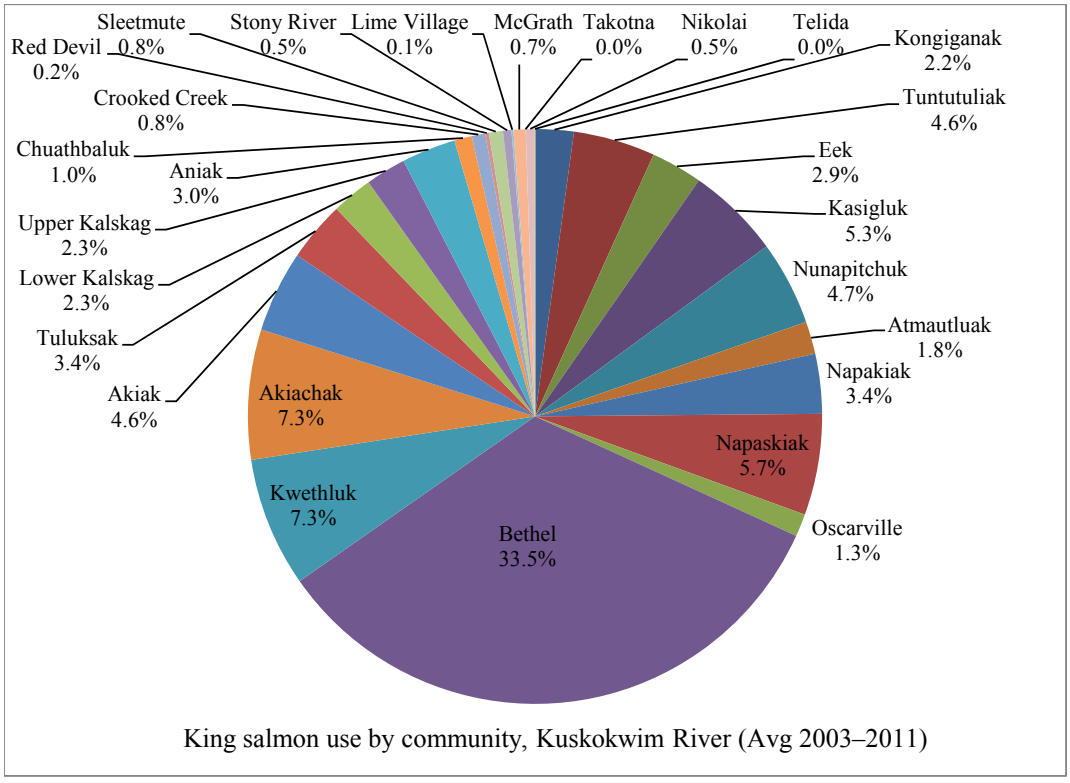


Figure 222-1 –Average percentage of Kuskokwim River king salmon use by community, 2003–2011.

PROPOSAL 95 – 5 AAC 01.286. Customary and traditional subsistence uses of fish stocks and amounts necessary for subsistence uses; and 5 AAC 01.2xx. Tier II subsistence salmon fishing permits for the Kuskokwim River fishery.

PROPOSED BY: Grant Fairbanks.

WHAT WOULD THE PROPOSAL DO? This would eliminate nonsubsistence uses of Kuskokwim River king salmon and distinguish among subsistence users by establishing a Tier II subsistence king salmon fishery. Alternatively, this seeks an effective system to equitably distribute limited harvestable surpluses of king salmon throughout the drainage when ANS cannot be met.

WHAT ARE THE CURRENT REGULATIONS? See below for current C&T and ANS findings. Fish may be taken for subsistence purposes without a subsistence fishing permit (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).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? All Alaska residents wanting to subsistence fish for king salmon in the Kuskokwim River drainage 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 pursuant to AS 16.05.258(b)(4), to distinguish among Alaskans based on 1) their customary and traditional direct dependence upon Kuskokwim River king salmon by the subsistence user for human consumption as a mainstay of livelihood; and 2) the ability to obtain food if subsistence use is restricted or eliminated).[1] Applications would be scored by the department, and then ranked, and the highest ranking applicants would receive a subsistence king salmon fishing permit to participate in any subsistence king salmon fishing opportunity provided. The amount of king salmon available for subsistence harvest would depend upon the annual forecasted harvestable surplus of Kuskokwim River king salmon.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon returns. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the recently established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days each year.

[1] The second criteria in AS 16.05.258(b)(4)(B)(ii), proximity of the domicile of the subsistence user to the stock or population, has been ruled invalid by the Alaska Supreme Court; thus, no Tier II opportunity may consider proximity of a resource to a person's domicile.

The 2014 and 2015 Kuskokwim River king salmon runs were expected to be similar or slightly better than the 2013 run. In anticipation of low runs, management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing king salmon harvest to a level that would allow for achievement of escapement goals. Commercial fishing remained closed until the majority of the king salmon run had passed upriver to minimize potential incidental king salmon harvest. Due to these restrictive actions, the drainagewide escapement goal was met in 2014 and 2015 and the majority of tributary escapement goals were achieved in these recent years. Additionally, USFWS enacted Special Actions (SAs) in 2014 and 2015 to limit the harvest of king salmon to federally qualified individuals within the boundaries of the Yukon Delta National Wildlife Refuge and implement a community permit system to provide a limited allocation of king salmon for harvest by federally qualified subsistence users.

In AS 16.05.258(b)(4), the board is instructed that 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). While Kuskokwim River king salmon subsistence harvest has fallen below the lower end of the ANS range since 2011 (Figure 95-1), ANS is one way for the board to measure 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 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 Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel was unanimously opposed to the Tier II aspect of this proposal.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. As an alternative to Tier II management, the proposal suggests the board could implement community permits or quotas to equitably distribute limited subsistence king salmon harvestable surpluses throughout the Kuskokwim River drainage.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for king 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 uses? 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.

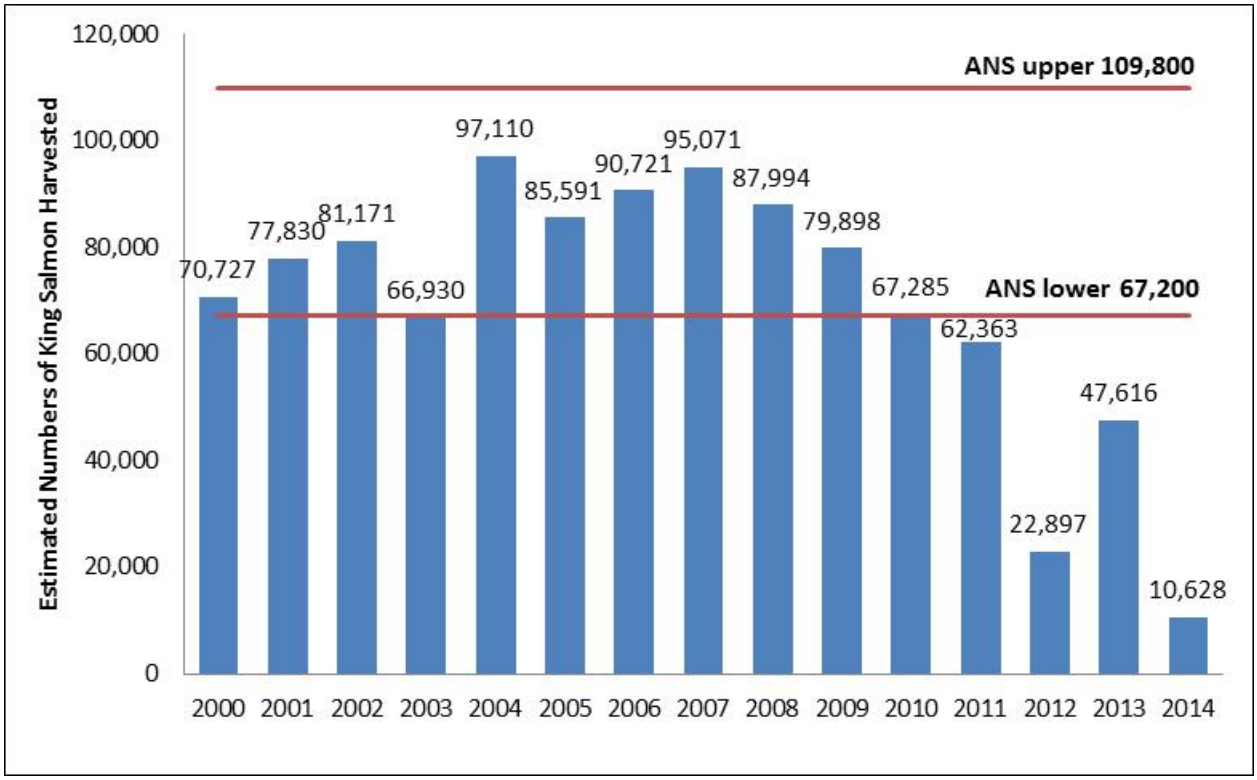


Figure 95-1.–Kuskokwim river king salmon subsistence harvest, 2000–2014.

PROPOSAL 97 – 5 AAC 01.280. Subsistence fishing permits.

PROPOSED BY: Stony-Holitna Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would establish a requirement for a household permit for subsistence fishing for king salmon in the Kuskokwim River drainage. The intent of the proposal is to utilize a permitting system as a management tool to equitably distribute subsistence king salmon fishing opportunities throughout the drainage during times of king salmon conservation.

WHAT ARE THE CURRENT REGULATIONS? Fish may be taken for subsistence purposes without a subsistence fishing permit (5 AAC 01.280).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would require all Alaska residents who intend to subsistence fish for king salmon in the Kuskokwim River drainage to obtain a subsistence fishing permit. Permits would be limited to one per household. King salmon harvest reporting would become mandatory. An annual king salmon household harvest limit would be determined by the department pursuant to 5 AAC 01.015(b). Other information may also be obtained from the household as stipulated, such as daily records of the number of fish taken, gear used, and locations of king salmon harvest (5 AAC 01.015). Since subsistence permits have not been required in the Kuskokwim Area it is unknown what effect a permit program would have on subsistence harvest and effort. However, a permit program would provide for more effective management through the use of harvest limits, when warranted, which is a mechanism that would allow for maximizing subsistence harvest opportunity when surplus king salmon are limited.

BACKGROUND: In recent years, nonsubsistence uses of Kuskokwim River king salmon have been significantly reduced or eliminated due to poor king salmon production; in addition, subsistence fishing opportunities for king salmon have been severely restricted. Kuskokwim River king salmon subsistence harvest has fallen below the lower end of the ANS range since 2011.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel discussed this proposal, and recommended a concept blending community permits and household permits. The concept proposal was generated by the board at their October 2015 Work Session as Proposal 222.

Alaska statute 16.05.330(c) provides the authority to the board to adopt regulations providing for the issuance and expiration of subsistence fishing permits for areas, villages, communities, groups, or individuals as needed for authorizing, regulating, and monitoring the subsistence harvest of fish. This statute states that the board shall adopt

regulations requiring permits when the subsistence preference requires a reduction in the harvest of a fish stock by nonsubsistence users.

DEPARTMENT COMMENTS: The department **SUPPORTS** the intent of this proposal. Permits could be an effective way of more accurately determining subsistence harvests of king salmon, and provide an effective means of managing the number of king salmon harvested for subsistence through permit limits, when a limited harvest is allowable. However, the department recommends the board consider establishing a harvest reporting requirement (permit) for all salmon species. Currently, subsistence harvest is determined annually based on results from a voluntary postseason household survey program that uses a stratified sampling design. Implementation of a permit program only for king salmon would still require annual postseason surveys to estimate harvest of remaining species. This would result in a duplication of effort, increased costs to the department, and possibly affect comparability of harvest estimates between species based on differing harvest assessment methodologies. The department would incur additional costs to oversee and administer a permit program from issuing, collecting, and entering harvest information from the permits and from increased public education and outreach efforts to facilitate permit program implementation. However, reporting of all subsistence salmon harvests through a permit program may increase the accuracy of harvest estimation, which would improve run-reconstruction estimates and forecasting abilities.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made a positive customary and traditional use finding for king 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 uses? 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.

PROPOSAL 98 – 5 AAC 01.255. Description of districts and subsections.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would establish, in regulation, sections of the Kuskokwim River the department defined by EO to manage the subsistence salmon fishery (Figure 98–1).

WHAT ARE THE CURRENT REGULATIONS? Commercial salmon fishing areas are currently defined in regulation (5 AAC 07.200). The department uses EO authority to establish and define areas where specific subsistence fishery management actions need to occur.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Establishing these sections in regulation would provide recognition of areas that were previously only defined in EO. It would formally define areas that the department intends to continue using during times it is necessary to place restrictions on the subsistence fishery. Establishing these sections in regulation would also provide clarity to users and the department, which would help eliminate confusion and increase participation in harvest opportunities.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the 3 lowest on record. From 2010 through 2013, the majority of tributary escapement goals were not achieved and the recently-established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days.

The 2014 and 2015 Kuskokwim River king salmon runs were expected to be similar or slightly better than the 2013 run. In anticipation of a low run, management actions were taken to close the subsistence and sport king salmon fisheries with the intent of reducing direct harvest of king salmon to a level that would allow for achievement of escapement goals. Commercial fishing remained closed until the majority of the king salmon run had passed upriver to minimize potential incidental king salmon harvest. Due to these restrictive actions, the drainagewide escapement goal was met in 2014 and 2015.

In 2014 and 2015, USFWS enacted Special Actions (SAs) in that portion of the Kuskokwim River within the boundaries of the Yukon Delta National Wildlife Refuge. Because of the federal SAs, it was necessary to change the definitions of the subsistence fishing sections from what they were prior to 2014.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in

January and August 2015 to discuss and develop options for consideration by the board. The panel discussed this proposal but did not make a recommendation.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal because it would provide consistency in defining areas when subsistence fishing restrictions are necessary. It would place into regulation the approach taken by the department since 2014 and that the department will likely continue to use in the subsistence fishery during times of salmon conservation. The areas defined in this proposal are consistent with those used inseason by both the department and USFWS.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for salmon in the Kuskokwim Area (5 AAC 01.286(a)(2)) and specifically 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 uses? The board has found that 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 reasonably necessary for subsistence uses in the Kuskokwim River (5 AAC 01.286(b)(1-5)); 6,900–17,000 salmon are reasonably necessary for subsistence uses in districts 4 and 5 (5 AAC 01.286(b)(6)); and 12,500–14,400 salmon are reasonably necessary in the remainder of the Kuskokwim Area (5 AAC 01.286(b)(7)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

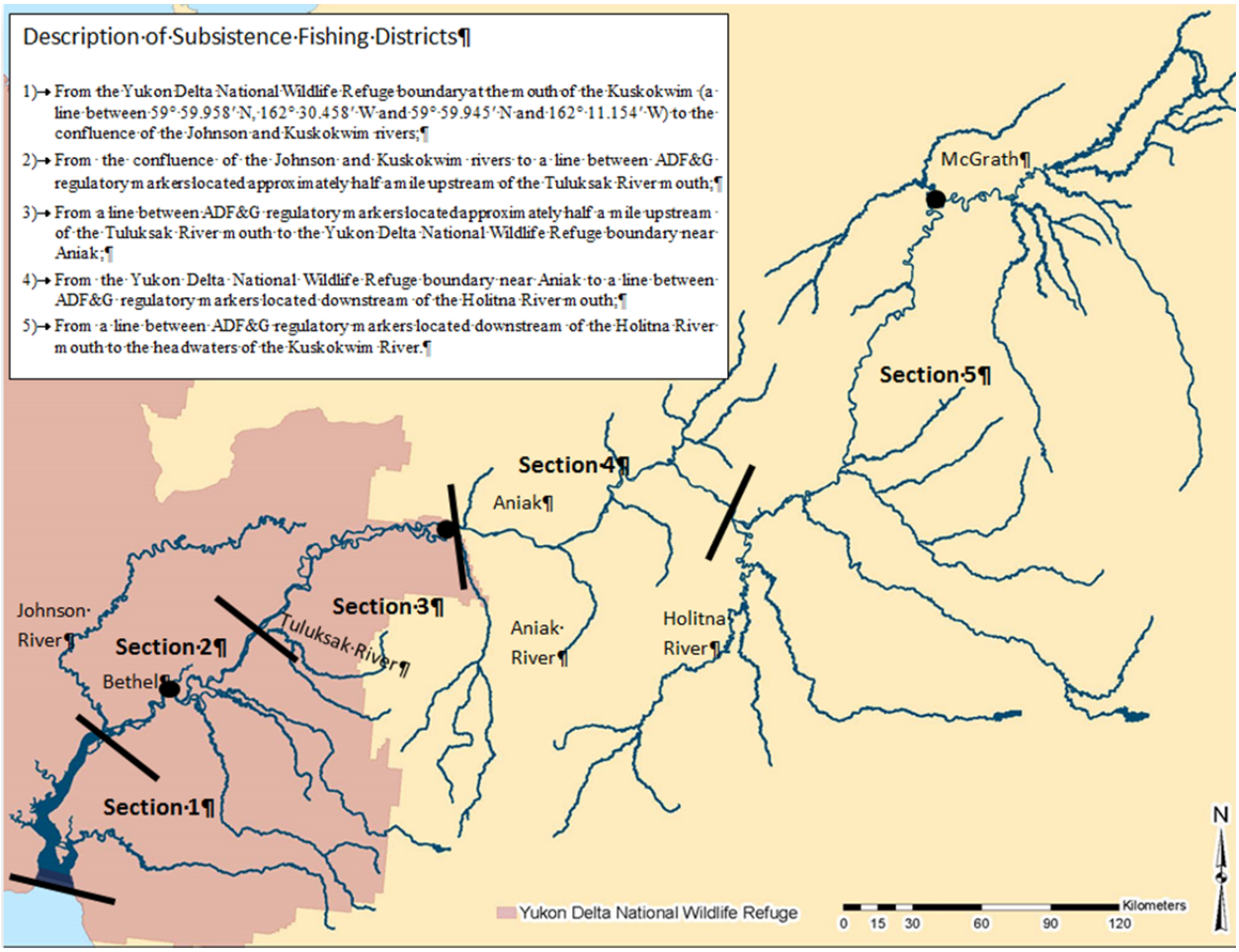


Figure 98-1.–Proposed Kuskokwim River subsistence management sections.

PROPOSAL 99 – 5 AAC 01.270. Lawful gear and gear specifications and operation.

PROPOSED BY: Orutsararmiut Native Council.

WHAT WOULD THE PROPOSAL DO? This would limit the operation of four-inch mesh subsistence gillnets to one per household in the Kuskokwim River.

WHAT ARE THE CURRENT REGULATIONS? During times of king salmon conservation, four-inch mesh gillnets may be operated for subsistence purposes as set gillnets only, may not exceed the length specified by the commissioner in an emergency order, and no part of the gillnet may be more than 100 feet from the ordinary high water mark (5 AAC 01.270). Time and area where four-inch mesh gillnets may be used is at the department's discretion under EO authority. Operation of gillnets is currently "by an individual", allowing households comprised of several individuals to operate several gillnets.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The operation of four-inch mesh gillnets would be limited to one gillnet per household during times of king salmon conservation. The amount of gillnet gear fished would likely decrease and harvest of fish for subsistence purposes may decrease as a result.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the three lowest on record. From 2010 through 2013 the majority of tributary escapement goals were not achieved and the recently established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days.

Four-inch mesh gillnets not exceeding 60 feet in length have been allowed during times of king salmon conservation by EO as an opportunity for subsistence fishermen to harvest species of fish other than salmon. It was observed that subsistence fishermen were setting multiple four-inch mesh gillnets and targeting king salmon with this gear. This was a direct conflict with the intent of this fishing opportunity. In an effort to address the targeting of king salmon with small mesh gear, in March 2015 the board provided the department the authority to specify that during times of conservation, four-inch mesh gillnets could be operated only as set gillnets and no part of the gillnet may be more than 100 feet from the ordinary high water mark. In 2015, to further reduce the potential incidental harvest of king salmon, the department decreased the amount of fishing time with four-inch mesh gillnets.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel discussed and expressed consensus to support this proposal.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal, but is supportive of additional management tools that provide for conservation while maximizing reasonable subsistence harvest opportunity on other fish species. The department currently has the authority to manage fishing effort with this gear type by adjusting allowable time and area under EO authority.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for salmon in the Kuskokwim Area (5 AAC 01.286(a)(2)), and specifically for king, chum, sockeye, coho, and pink salmon in the Kuskokwim River Drainage (5 AAC 01.286(a)(3)). The board also made a positive customary and traditional use finding for halibut, Pacific cod, and all other finfish in the Kuskokwim Area (5 AAC 01.286(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board has found that 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 reasonably necessary for subsistence uses in the Kuskokwim River (5 AAC 01.286(b)(1-5)); 6,900–17,000 salmon are reasonably necessary for subsistence uses in districts 4 and 5 (5 AAC 01.286(b)(6)); and 12,500–14,400 salmon are reasonably necessary in the remainder of the Kuskokwim Area (5 AAC 01.286(b)(7)). While not in codified regulations, in the December 1997 the board found that 1,583,033 – 2,638,384 pounds of all freshwater finfish excluding salmon is the amount reasonably necessary for subsistence uses 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 100 – 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 specifications for subsistence beach seines in the Kuskokwim Area, such that a beach seine may not exceed 50 fathoms in length or 100 meshes in depth and that seine mesh size may not exceed three and one-half inches stretched measure.

WHAT ARE THE CURRENT REGULATIONS? Beach seines are currently legal gear for the subsistence harvest of fish in the Kuskokwim Area. There are currently no length, depth, or mesh size specifications for beach seines.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Establishing gear specifications would provide clarification to the department and users by setting maximum allowable gear for beach seines in the Kuskokwim Area. Adoption of this proposal would also provide clarification for the department and enforcement. Effects of this proposal on subsistence harvest and effort are unknown because the construction of beach seine gear currently used for subsistence in the Kuskokwim Area is not well documented.

BACKGROUND: Since 2010, the Kuskokwim River has experienced poor king salmon runs. Total run estimates for Kuskokwim River king salmon in 2010, 2012, and 2013 are the 3 lowest on record. From 2010 through 2013, the majority of tributary escapement goals were not achieved and the recently-established Kuskokwim River drainagewide escapement goal was not achieved in 2013. In 2012, 2014, and 2015, the department closed the subsistence salmon fishery for approximately 32 days each year.

The department received numerous inquiries regarding the use of beach seines because of the conservation measures that have been taken for king salmon in recent years. Dip nets and fish wheels equipped with live boxes or chutes have been allowed during times of king salmon conservation since they are selective gear types that allow for live release of king salmon. The lack of beach seine specifications in the Kuskokwim Area has raised questions about the viability of beach seines as an effective gear for live release of king salmon.

The Kuskokwim Subsistence Salmon Panel was established at the board work session in October 2014 to seek public input on how to ensure an equitable distribution of subsistence salmon resources throughout the Kuskokwim River drainage and potential tools for equitable distribution in times of low abundance. The panel met in Bethel in January and August 2015 to discuss and develop options for consideration by the board. The panel discussed and expressed consensus to support this proposal.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal since it would provide clarity to current regulations allowing the use of beach seines.

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

SUBSISTENCE REGULATION REVIEW:

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

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for salmon in the Kuskokwim Area (5 AAC 01.286(a)(2)), and specifically 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 uses? The board has found that 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 reasonably necessary for subsistence uses in the Kuskokwim River (5 AAC 01.286(b)(1-5)); 6,900–17,000 salmon are reasonably necessary for subsistence uses in districts 4 and 5 (5 AAC 01.286(b)(6)); and 12,500–14,400 salmon are reasonably necessary in the remainder of the Kuskokwim Area (5 AAC 01.286(b)(7)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

Commercial Salmon (4 proposals)

PROPOSAL 101 – 5 AAC 07.331. Gillnet specifications and operations.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This seeks to remove the depth specifications for commercial gillnets greater than 6-inch mesh size.

WHAT ARE THE CURRENT REGULATIONS? Gillnets with greater than 6-inch mesh may not be more than 35 meshes in depth (5 AAC 07.331(b)(2)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would simplify regulations and remove unnecessary regulatory language. This regulation change would not affect the current management of or participation in the fishery because the regulation allowing commercial gillnets greater than six-inch mesh size was repealed in 2013.

BACKGROUND: Gillnet depth regulations have been in place for Kuskokwim River commercial salmon fishing since before 1985. Commercial fishing in the Kuskokwim River was restricted to gillnets with six-inch or less mesh from 1986–2007. During that same time period, directed king salmon commercial fisheries were closed. These restrictions were adopted as conservation measures to improve king salmon escapement, provide for the subsistence preference for king salmon and to allow for a directed commercial fishery on more abundant chum salmon in June and July. In January 2007, the board adopted new regulations allowing for up to 8-inch mesh gillnets in the District 1 commercial fishery by EO. The 8-inch gillnet mesh size regulation was repealed in 2013 because it was unlikely to be utilized by the department and because of the recent decline in king salmon abundance.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Since gillnets greater than 6-inch mesh size are no longer legal gear for commercial salmon fishing in the Kuskokwim Area, there is no need to have a mesh depth regulation specified for that mesh size.

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

PROPOSAL 102 – 5 AAC 07.331. Gillnet specifications and operations.

PROPOSED BY: Native Village of Kwinhagak.

WHAT WOULD THE PROPOSAL DO? This would reduce the maximum allowable mesh size for commercial salmon gillnets from six inches to 5 ¾ inches in District 4.

WHAT ARE THE CURRENT REGULATIONS? In districts 4 and 5, salmon may be taken only with gillnets with six-inch or smaller mesh size (5 AAC 07.331(d)(2)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Decreasing gillnet mesh size may increase harvest and catch rates on more abundant and smaller-sized sockeye and chum salmon, while potentially reducing harvest of king salmon. This may lead to increased opportunity to harvest the more abundant species. As written, the proposal appears to make the mesh size change effective for the entire commercial fishing season and to include District 5.

BACKGROUND: The mesh size restriction of six-inch or smaller mesh was first implemented in districts 4 and 5 in 1971 and has remained in place ever since. Since 2012, there has been a decline in king salmon abundance with Kanektok River weir escapements and District 4 commercial harvests of king salmon well below recent year averages (Table 102-1). During the same time period sockeye and chum salmon escapements to the Kanektok River have been average to above average. Most notably in 2014, when 249,406 sockeye salmon were enumerated through the weir and 148,800 were enumerated during an aerial escapement survey, exceeding the aerial based SEG of 14,000–34,000 fish. This high escapement was partially due to the postponement of the commercial salmon fishing season because of king salmon conservation.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on allocative aspects of this proposal. The department **SUPPORTS** the concept of reducing maximum mesh size to provide more opportunity to harvest more abundant sockeye and chum salmon, while conserving king salmon. The department supports the intent of this proposal; however, fish size selectivity data from Bristol Bay fisheries suggest the optimum mesh size for harvesting sockeye and chum salmon is 5 ½ inches or even smaller. By reducing mesh size to 5 ½ or 5 inches, the department expects harvest of sockeye and chum salmon would be maximized while still conserving king salmon. During public meetings held in the village of Quinhagak, fishermen were opposed to a major change in gillnet mesh size. Current regulations allow for fishermen to use smaller mesh size gillnets, and the department would encourage fishermen to do so. In the future, a mesh size study conducted in District 4 (Quinhagak) would provide valuable information to help better manage this fishery for maximum commercial harvest opportunity and providing for conservation as warranted.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery. By reducing the maximum mesh size in

District 4 from six inches to smaller mesh size gear, area fishermen will likely have to procure new commercial salmon gillnets.

Table 102-1.–Commercial salmon harvest and effort, and escapement counts, District 4, Kanektok River, 2005–2015.

	Permits	Hours	Commercial Harvest			Weir Escapement	
Year	Fished	Fished	King	Sockeye	Chum	King	Sockeye
2005	145	276	24,195	68,801	13,529	14,177	268,537
2006	132	348	19,184	106,308	39,151	[a]	[a]
2007	125	384	19,573	109,343	61,228	13,965	304,086
2008	146	372	13,812	69,743	57,033	[a]	[a]
2009	179	342	13,920	112,153	91,158	7,065	305,756
2010	241	312	14,230	138,362	106,610	6,537	204,954
2011	219	312	15,387	38,543	104,959	5,170	88,177
2012	179	264	6,675	37,688	61,140	1,561	115,021
2013	197	216	2,054	26,393	21,126	3,569	128,761
2014	194	216	2,265	58,879	14,563	3,594	259,406
2015	189	204	7,547	30,269	16,051	10,416	106,751
Average 2005–2014	176	304	13,130	76,621	57,050	6,955	209,337

[a] Counts were incomplete or weir did not operate.

PROPOSAL 103 – 5 AAC 07.367. District 4 Salmon Management Plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would incorporate District 5 into the District 4 management plan. In addition, this will add language to the management plan that specifically addresses king salmon conservation within District 5.

WHAT ARE THE CURRENT REGULATIONS? Currently, District 5 does not have a standalone management plan and is in not encompassed into a particular management plan within the Kuskokwim Area. The *District 4 Salmon Management Plan* is contained in 5 AAC 07.367.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would direct the department to use applicable aspects of the *District 4 Salmon Management Plan* to manage District 5. This will make fisheries management strategies clearer to District 5 fishermen and the department and align regulations with current management practices. This proposal would place into regulation a management tool that has been recently implemented in District 5 by EO during times of king salmon conservation.

BACKGROUND: District 5 (Goodnews Bay) was established in regulation in 1968. Since that time, the department has managed the commercial salmon fishery in District 5 by using particular elements of the *District 4 Salmon Management Plan,* as well as adjusting time and area under EO authority.

Beginning in 2012, the Goodnews River drainage has seen a decline in king salmon abundance. At the start of the 2013 fishing season, the department analyzed harvest patterns from the previous two years in District 5 and determined that there was a higher harvest of king salmon in the eastern portion of the district (near the mouth of Goodnews River) compared to the western portion of the district (near the entrance to Goodnews Bay). A temporary boundary line was put in place, and commercial fishing was closed by EO within that portion of the district east of the line (Figure 103-1). This half district closure was implemented in an effort to decrease king salmon harvests, while still allowing for the harvest of more abundant sockeye and chum salmon. This management action was successful for its intended purpose.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Incorporating District 5 into the District 4 management plan would place into regulation the general management strategy the department has been using since the establishment of District 5. Adding the half district closure into the management plan would place into regulation a management tool the department has used, and plans on continuing to use, during times of king salmon conservation.

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

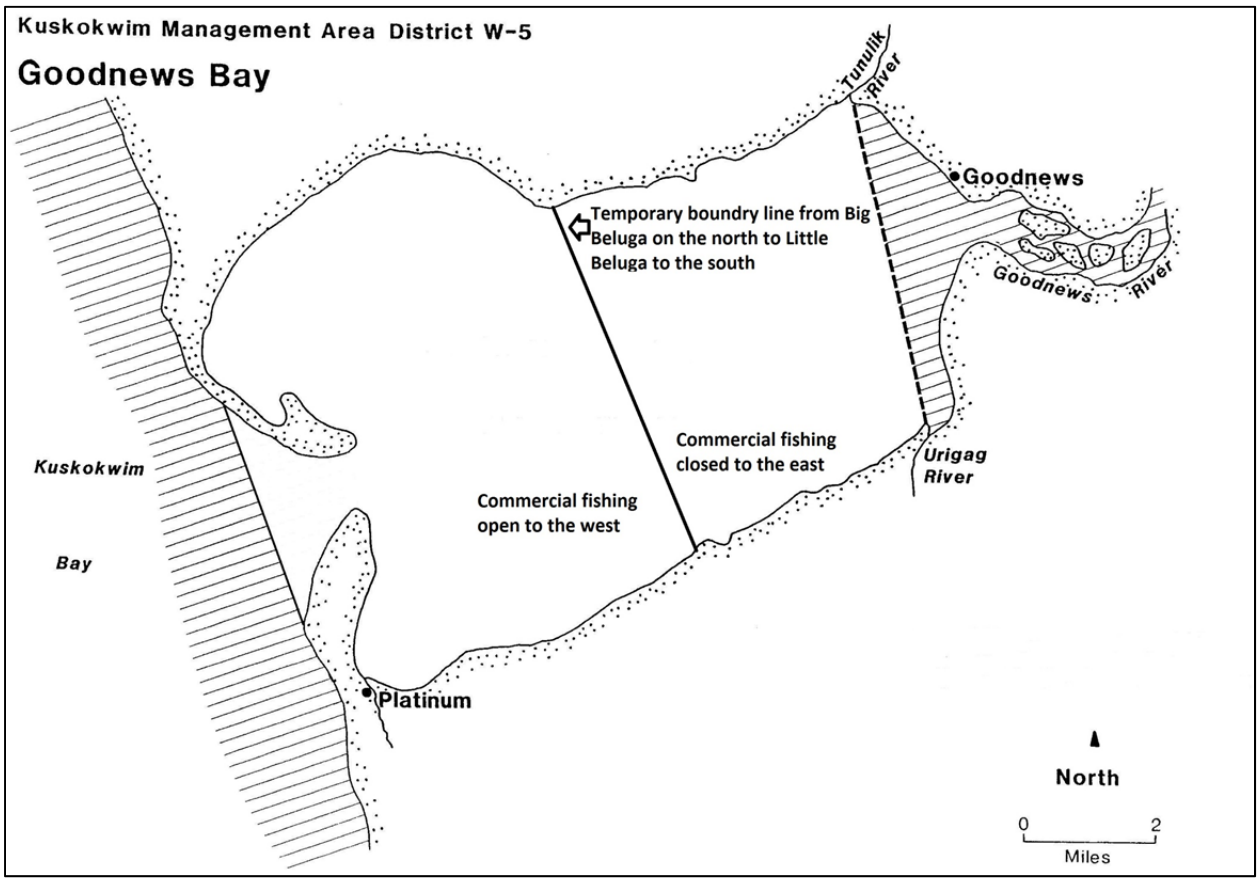


Figure 103-1.–Map of the half district closure, District 5, Goodnews Bay.

PROPOSAL 104 – 5 AAC 07.200. Fishing Districts, subdistricts, and sections.

PROPOSED BY: Peter Julius, Native Village of Goodnews Bay.

WHAT WOULD THE PROPOSAL DO? This would increase the commercial fishing area in District 5 (Goodnews Bay) along its western boundary, by approximately one mile north and approximately two miles south of current regulations. The eastern boundary would remain unchanged.

WHAT ARE THE CURRENT REGULATIONS? District 5 consists of that portion of Goodnews Bay east of a line from a department regulatory marker located approximately two miles south on the seaward side of the entrance of Goodnews Bay to a department regulatory marker located approximately two miles north on the seaward side of the entrance of Goodnews Bay and west of a line between the mouth of Ukfigag Creek at 59° 04.17′ N. lat., 161° 36′ W. long. and the mouth of the Tunulik River at 59° 08′ N. lat., 161° 37′ W. long. (5 AAC 07.200(d)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would extend the western boundary of District 5, increase the area open to commercial salmon fishing, increase the fishing area within the district during times of low water, and could increase the harvest of salmon bound for other areas (Figure 104-1).

BACKGROUND: District 5 was established in regulation in 1968. Since that time, the only modification to the western boundary was in 2004 when it was extended outward from the entrance of the bay to the current boundary. At that time (in the early 2000s), there were few permits fished (Table 104-1) because of poor salmon markets. Fishing effort was much higher from 1992–1995 with 118 permits being fished in 1995. More recently, in 2015, a total of 61 permits made at least one delivery in District 5; which is above the most recent 10-year average (2005–2014) of 43 permits.

DEPARTMENT COMMENTS: The department is **OPPOSED** to extending the western boundary of District 5. This would allow for more area outside of Goodnews Bay to be fished, which would potentially lead to the interception of other salmon stocks bound for other western Alaska rivers. In addition, the department has implemented a half district closure (eastern half of the bay) in the early part of the fishing season to conserve king salmon bound for the Goodnews River. It would be counterproductive to increase the fishing district when the department is restricting the size of the district in an attempt to lower king salmon harvest during times of king salmon conservation. The department is able to manage for escapement while providing for harvest opportunity under the current district definition.

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

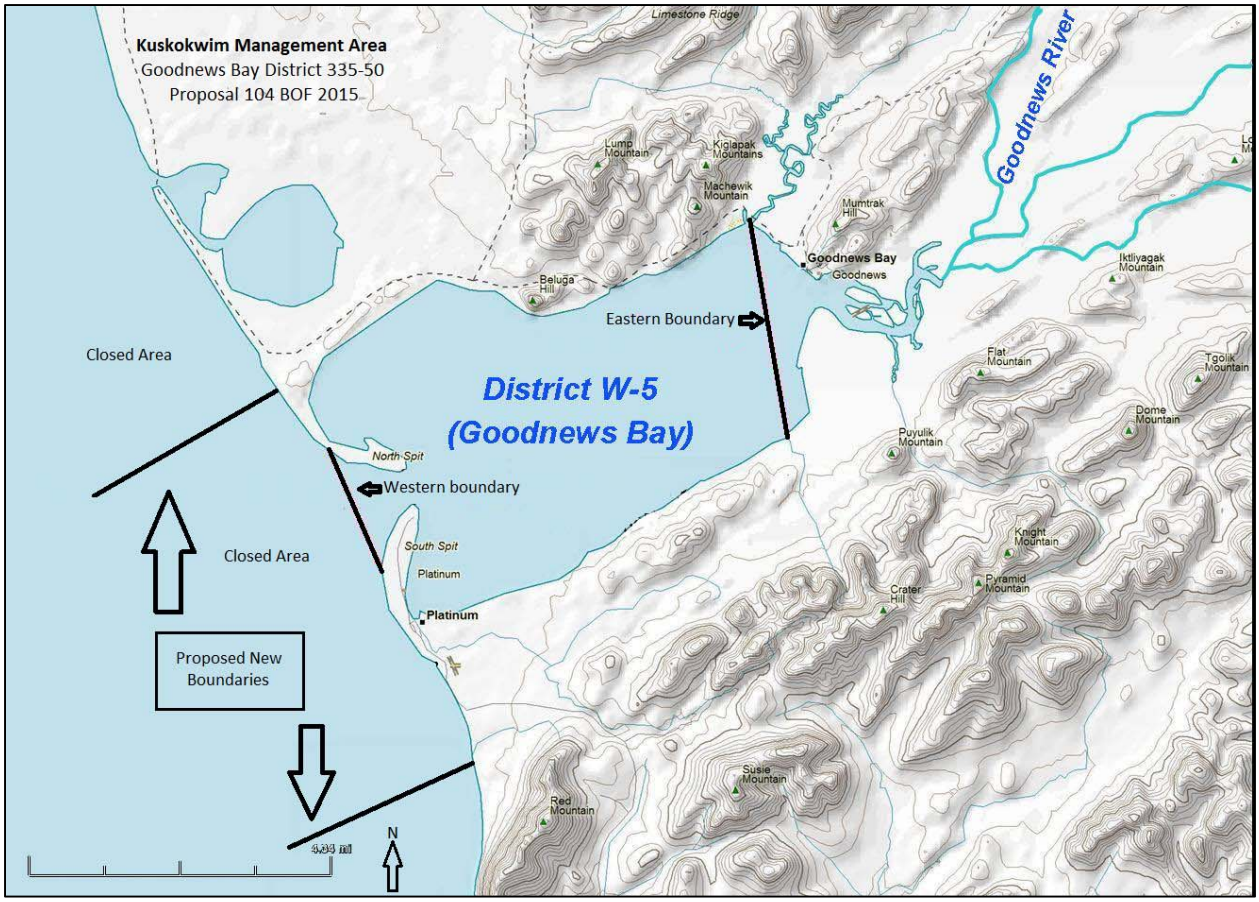


Figure 104-1.–Current and proposed boundaries for District W-5, Goodnews Bay.

Table 104-1.–Commercial salmon harvests, including salmon retained for personal use, and permits fished, District 5, Goodnews Bay, 1990–2015.

Year	Permits	King	Sockeye	Coho	Chum	Total
1990	82	3,303	35,823	7,804	13,194	60,124
1991	72	912	39,838	13,312	15,892	69,954
1992	111	3,528	39,194	19,875	18,520	81,117
1993	114	2,117	59,293	20,014	10,657	92,081
1994	116	2,570	69,490	47,499	28,477	148,036
1995	118	2,922	37,351	17,875	19,832	77,980
1996	53	1,375	30,717	43,836	11,093	87,021
1997	54	2,039	31,451	2,983	11,729	48,202
1998	50	3,675	27,161	21,246	14,155	66,237
1999	73	1,888	22,910	2,474	11,562	38,834
2000	46	4,442	37,252	15,531	7,450	64,675
2001	32	1,519	25,654	9,275	3,412	39,860
2002	30	979	6,304	3,041	3,799	14,123
2003	34	1,412	29,423	12,658	5,593	49,086
2004	29	2,565	20,523	24,089	5,965	53,142
2005	29	2,035	23,933	11,735	2,568	40,271
2006	24	2,892	29,857	12,436	11,568	56,753
2007	28	3,126	43,766	13,697	7,853	68,442
2008	25	1,281	27,237	22,547	10,408	61,473
2009	39	1,509	32,544	8,406	16,985	59,444
2010	48	1,752	41,074	4,900	26,914	74,640
2011	48	2,092	24,573	15,358	13,191	55,214
2012	58	1,531	50,635	25,515	24,487	102,168
2013	71	495	24,521	21,581	12,651	59,248
2014	61	205	20,515	52,158	3,403	76,281
2015[a]	61	705	25,861	7,030	4,510	38,106
Average 2005–2014	43	1,692	31,866	18,833	13,003	65,393

[a] Preliminary numbers, subject to change.

Sport Salmon (1 proposal)

PROPOSAL 105 – 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 modifies allowable sport fishing gear in an attempt to reduce king salmon catch and harvest in the Kanektok and Arolik rivers. Sport fishing gear would be limited to no more than 9-weight for fly fishing rods, fishing line of no more than 200-grains, and no more than a 10-foot section of sink tip on fishing lines for the Kanektok and Arolik rivers.

WHAT ARE THE CURRENT REGULATIONS? Current regulations do not restrict fly fishing rods to a certain weight, nor do they restrict fishing lines to a certain grain. There is also no restriction on the length of sink tips on the Kanektok and Arolik rivers. In current regulations in the Kanektok River, only one unbaited, single-hook, artificial lure may be used. In both the Kanektok and the Arolik rivers, king salmon may only be taken May 1 through July 25, with a bag and possession limit of three king salmon 20 inches or longer, only two of which may be over 28 inches. For king salmon less than 20 inches, the bag and possession limit is 10 fish.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Only lighter sport fishing gear than might normally be used for king salmon fishing could be used, rather than the more complete complement of gear that is currently allowed. This would increase the complexity of regulations and be difficult to enforce. This may actually increase hooking mortality of king salmon due to a longer retrieve time using lighter sport fishing gear. Shorter retrieve time related to the use of heavier gear that is designed for the target fish species has been shown to contribute to reduced mortality when practicing catch-and-release due to less stress on the fish.

BACKGROUND: The king salmon sport fishing season closure after July 25 provides protection to king salmon while they are on the spawning grounds. In the Kanektok River, only one unbaited, single-hook, artificial lure is allowed. This reduces the impact on fish (both king salmon and other fish species) from taking hooks too deeply and thus getting foul-hooked. Escapements on the Kanektok River have made the lower bound of the SEG in all but one of the last 10 years, and catches and harvests of king salmon are at sustainable levels (Tables 105-1 and 105-2). Catches and harvests of king salmon are also very low on the Arolik River (Table 105-1). Sport harvests of king salmon in the area are relatively small in relation to commercial and subsistence harvests (Table 105-3). In addition, existing bag and possession limits are fairly restrictive. Management of this fishery has been conservative in response to projected low run strengths; in recent years preseason or inseason management actions have included complete closure by emergency order or restriction to a one king salmon bag and possession limit. The 2015 weir and aerial survey numbers suggest a stronger return of king salmon than in previous years, with the following year class of 2016 expected to be similar.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The sport fisheries for king salmon in these two rivers are managed based on abundance, and in times of low king salmon abundance, the sport fishery has been closed or restricted either inseason or preseason by emergency order, without putting complicated regulations into permanent status. Conservation concerns for king salmon on these two rivers are currently being addressed through the existing regulatory and management structure. The language of the proposal also only addresses rod and line size for fly-fishing gear, but does not address spin fishing gear.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in this fishery. If individual sport fishermen do not have the gear that is suggested in this proposal, that gear would have to be purchased.

Table 105-1.–Sport fishery catch and harvest of king salmon in the Kanektok and Arolik rivers, 2004-2014.

	Kanektok River		Arolik River	
Year	Harvest	Catch	Harvest	Catch
2004	228	2,758	12	1,074
2005	520	10,116	0	0
2006	754	7,292	0	399
2007	633	6,331	50	1,997
2008	220	2,495	0	69
2009	400	2,522	51	210
2010	552	2,619	0	82
2011	891	6,911	34	1,288
2012	591	4,322	0	444
2013	30	3,215	0	0
2014	0	633	0	0
2015	[a]	[a]	[a]	[a]
2004–2013 Average	482	4,858	15	556
2009–2013 Average	493	3,918	17	405

[a]Data not yet available.

Table 105-2.Kanektok River king salmon spawning escapement estimates, 2005 – 2015.

Year	Weir Escapement	Aerial Survey Escapement
2005	14,177	14,202
2006	[b]	8,433
2007	13,965	[c]
2008	[b]	3,659
2009	7,065	[c]
2010	6,537	1,228
2011	5,170	[c]
2012	1,561	[c]
2013	3,569	2,346
2014	3,594	1,871
2015	10,416	4,919
Average 2005 -2014	7,345	5,974

[a] King salmon SEG is 3,500-8,000 fish.
[b] Weir did not operate or counts were incomplete.
[c] Survey was either not flown or did not meet acceptable survey criteria.

Table 105-3.–King salmon harvest near Quinhagak, 2004-2015.

Year	Commercial	Subsistence[a]	Sport[b]
2004	25,465	4,563	228
2005	24,195	3,505	520
2006	19,184	5,163	754
2007	19,573	4,686	633
2008	13,812	3,125	220
2009	13,920	3,312	400
2010	14,320	2,793	552
2011	15,387	2,588	891
2012	6,675	2,396	591
2013	2,054	3,143	30
2014	2,265	3,723	0
2015	7,547	[c]	[c]
Average 2009-2013	8,140	2,846	482
Average 2004-2013	15,459	3,527	493

[a] Subsistence harvest is both marine and riverine.
[b] Kanektok River only-no saltwater harvest.
[c] Data not available.

Commercial Herring (1 proposal)

PROPOSAL 106 – 5 AAC 27.875. Description of Kuskokwim Area districts.

PROPOSED BY: Peter Julius.

WHAT WOULD THE PROPOSAL DO? This would expand the area open to commercial herring fishing within the Nelson Island District to include waters east of Cape Vancouver and west of Umkumiut, along the western shore of Nelson Island (Figure 106-1).

WHAT ARE THE CURRENT REGULATIONS? The Nelson Island District consists of the waters north of the latitude of Chinigyak Cape (60° 27' N. lat.) and east of the longitude of Atrnak Point (165° 15' W. long.) (approximately two miles west of Umkumiut), and all waters north of the latitude of Talurarevuk Point (60° 35' N. lat.) and south of the latitude of the southernmost tip of Chinit Point (60° 36' N. lat.) and east of 165° 30' W. long., and all waters north of the latitude of the northernmost tip of Chinit Point (60° 37' N. lat.) and south of the latitude of the southeastern most tip of Kigigak Island (60° 49' N. lat.) and east of 165° 30' W. long (5 AAC 27.875(c)).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide commercial herring fishermen additional fishing area. This may impact subsistence herring fishing opportunity by creating conflicts between commercial and subsistence users. Adoption of this proposal would have little effect on harvest because the fishery is managed using a GHL.

BACKGROUND: In 1985, commercial herring fishing was initiated in the Nelson Island district. Waters within the Nelson Island District from Atrnak Point and Talurarevuk Point and waters between the southern and northern edges of Chinit Point were closed by EO at the request of local governing groups to prevent interference with the traditional subsistence herring fishery. By 1988, these waters were closed to commercial herring fishing by regulation.

During the peak of the Nelson Island District commercial herring fishery in 1994–2000, exploitation rates averaged approximately 15%, with the GHL being exceeded in three of those years (Table 106-1). Since that time, the fishery has been in a state of decline because of poor market conditions and lack of processors in the area. This has led to the fishery not being opened from 2007–2012 and again in 2014–2015. In 2013, 355 tons of herring were harvested by 12 permit holders with an exploitation rate of 7.3 percent.

DEPARTMENT COMMENTS: The department **OPPOSES** expanding the Nelson Island District. Generally, area commercial fishermen have been able to harvest herring to meet the GHL within the current district boundaries.

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

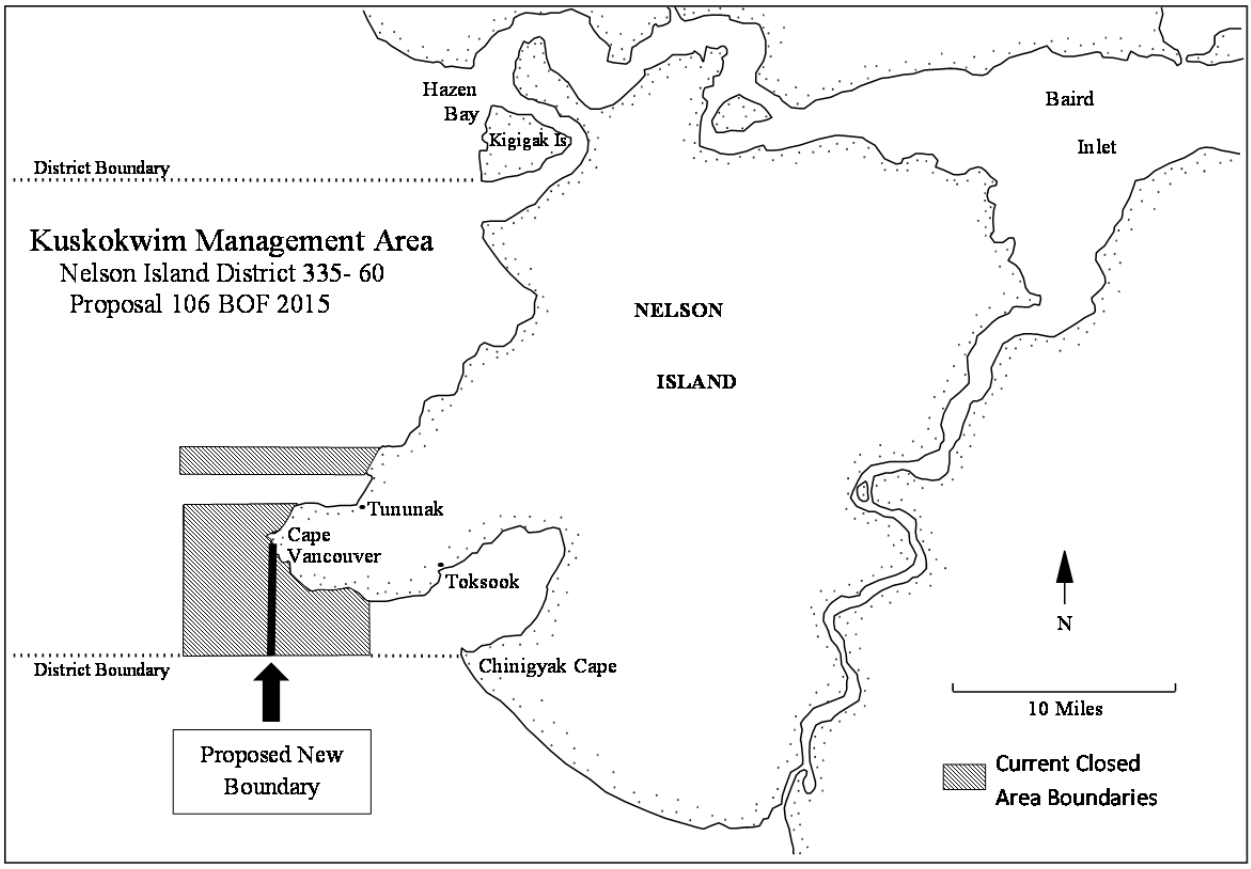


Figure 106-1.–Current and proposed boundaries for commercial herring fishing in the Nelson Island District. Proposal 106 seeks to open the currently closed area east of the proposed boundary line to commercial herring fishing.

Table 106-1.–Estimated biomass and commercial harvest of herring, Nelson Island District, 1990–2015.

Year	Estimated Biomass	GHL [a,b]	Harvest	Number of Permits	Exploitation Rate
1990	2,705	341	0	0	0
1991	2,385	277	0	0	0
1992	5,275	855	246	85	4.7
1993	4,944	789	739	73	14.9
1994	5,564	913	717	104	12.9
1995	7,754	1,351	1,113	100	14.4
1996	6,638	1,128	1,031	109	15.5
1997	7,909	1,382	778	105	9.8
1998	7,136	1,227	1,250	86	17.5
1999	6,655	1,131	1,366	94	20.5
2000	4,672	734	813	86	17.3
2001	6,057	1,011	678	49	11.2
2002	6,130	1,026	950	54	15.5
2003	6,130	1,026	816	44	13.3
2004	5,085	817	825	39	16.2
2005	4,440	688	665	27	15
2006	3,809	562	262	25	6.9
2007	3,614	523	0	0	0
2008	3,424	485	0	0	0
2009	5,152 [c]	830	0	0	0
2010	5,449 [c]	890	0	0	0
2011	5,252 [c]	850	0	0	0
2012	4,703 [c]	741	0	0	0
2013	4,893	779	355	12	7.3
2014	58,285	11,457	0	0	0
2015	30,228 [c]	5,846	0	0	0

[a] Prior to 1998, the Nelson Island GHL was 15% of the projected biomass.
[b] After 1997, the Nelson Island GHL is 20% of projected biomass minus 200 tons for subsistence harvest (5 AAC 27.895 (d)).
[c] Estimated biomass is the projection. Aerial surveys were inadequate or not flown.

COMMITTEE OF THE WHOLE–GROUP 1 : YUKON AREA SALMON (22 PROPOSALS)

Yukon Management Plans (5 proposals)

PROPOSAL 107 – 5 AAC 05.362. Yukon River Summer Chum Salmon Management Plan.

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

WHAT WOULD THE PROPOSAL DO? This proposal would close the Yukon River summer chum salmon commercial fishery in order to protect king salmon.

WHAT ARE THE CURRENT REGULATIONS? Under current regulations, the *Yukon River Summer Chum Salmon Management Plan* provides the department with guidelines to manage for the sustained yield of summer chum salmon using the best available information. The projected run size of summer chum salmon determines if subsistence, commercial, sport, and personal use fisheries will be prosecuted. The summer chum salmon management plan also provides managers the flexibility to use gear types that allow for the live-release of king salmon, such as attended fish wheels, dip nets, and beach seines during times of king salmon conservation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? The summer chum salmon commercial fishery would be closed regardless of the projected run size during times of king salmon conservation. Numerous commercial fishermen on the Yukon River would lose a significant source of income. Additionally, in years of large summer chum salmon runs, escapement goals would be exceeded if the harvestable surplus is not utilized.

BACKGROUND: Yukon River king salmon have experienced declines in run size since the late 1990s. Consequently, directed commercial fisheries for king salmon have not been allowed since 2007 and the subsistence fishery has been heavily restricted since 2009. Conversely, summer chum salmon runs on the Yukon River have averaged approximately 2.4 million fish from 2005–2014, providing a surplus for commercial harvest. In some years (e.g., 2012 and 2013), the commercially harvestable surplus has been in excess of one million summer chum salmon. However, the summer chum salmon commercial fishery has been affected by a weak king salmon run that migrates concurrently with the summer chum salmon run. The need to protect king salmon to meet escapement objectives has necessitated management actions that reduced the incidental harvest of king salmon. From 2008–2012, to protect king salmon, the department typically delayed opening the gillnet summer chum salmon-directed commercial fishery until nearly 75% of the king salmon run had passed.

In 2012, the board adopted new gear regulations that allowed commercial fishermen to target summer chum salmon while minimizing the incidental harvest of king salmon (i.e., 5.5-inch or smaller mesh size gillnets not exceeding 30 meshes in depth in the lower Yukon Area (Districts 1–3) and attended fish wheels requiring the release of king salmon

in Subdistrict 4-A). Further, in 2013, the board adopted an additional regulation that allowed the department the flexibility to restrict gear in the summer chum salmon commercial fishery to types that allow for the live-release of king salmon in Districts 1–3 (e.g., dip nets and beach seines). These selective gear types were implemented in 2013–2015 for the majority of the summer chum salmon run in the lower river. Fishermen in the upper Yukon Area were required to use attended fish wheels and all king salmon were to be released to the water alive. Gillnets were not allowed in the commercial summer chum salmon fishery until 84% (2013), 97% (2014), and 84% (2015) of the king salmon run had passed the Lower Yukon Test Fishery near Emmonak. These delayed openings to protect king salmon have effectively shortened the summer chum salmon commercial season and have resulted in lost harvest opportunity. Additionally, gillnets have been restricted to 6-inch or smaller mesh size in the summer chum salmon gillnet commercial fishery since 2008 in an effort to minimize the incidental harvest of king salmon.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Existing regulations provide the department with the flexibility to restrict time, area, and gear types in the summer chum salmon-directed commercial fishery to protect king salmon. Emergency order authority also gives fishery managers the ability to open and close fishing periods around, and in between, pulses of king salmon migrating upstream to further reduce incidental catch of king salmon. In the last five years, commercial fishermen on the Yukon River have adapted to new gear types that minimize the incidental harvest of king salmon or allow the immediate and live-release of king salmon. Yukon River fishermen have made an average of 1.4 million dollars each year by harvesting summer chum salmon commercially under the new regulations passed by the board. The loss of this income would be a significant hardship for the commercial fishermen on the Yukon River where other employment options are limited. Finally, closing the summer chum salmon commercial fishery runs the risk of losing commercial markets and affecting the sustainability of the fishery.

COST ANALYSIS: Approval of this proposal would not result in an additional direct cost to Yukon River fishermen.

PROPOSALS 108 and 109 – 5 AAC 05.362. Yukon River Summer Chum Salmon Management Plan.

PROPOSED BY: Kwik'pak Fisheries (Proposal 108) and Alaska Department of Fish and Game (Proposal 109).

WHAT WOULD THE PROPOSALS DO? Proposals 108 and 109 are similar in addressing modifications to the *Yukon River Summer Chum Management Plan* based upon a preliminary drainagewide escapement goal analysis (600,000–1,200,000 summer chum salmon) by the department. Proposal 108 would reduce the management triggers in the *Yukon River Summer Chum Management Plan* such that no less than 400,000 salmon are allowed to spawn, the commercial exploitation rate shall be 50% of the harvestable surplus of runs between 700,000 and 800,000, and the commercial exploitation rate shall be up to 100% of the harvestable surplus of runs in excess of 800,000. Proposal 109 would modify the management triggers in the plan to provide the department the ability to close or restrict subsistence fisheries when the projected run size of summer chum salmon is less than 600,000 fish. Additionally, Proposal 109 would allow subsistence fishing when the projected run size is between 600,000 and 750,000 fish and the department may open commercial, sport, and personal use fisheries in a district, subdistrict, or portion of a district if indicators show that escapement goals in that district, subdistrict, or portion of a district will be met, and a commercial fishery may be opened drainagewide if the projected run size is greater than 750,000 fish.

WHAT ARE THE CURRENT REGULATIONS? Current regulations require closing subsistence fisheries if the run size is projected to be less than 600,000 fish; however, certain districts, subdistricts, or portions of a district may have subsistence fisheries if escapement goals are likely to be met in those districts, subdistricts, or portions of a district. If the projected run size is more than 600,000 but less than 700,000, the department must manage subsistence fisheries such that a drainagewide escapement of 600,000 summer chum salmon is achieved. Commercial, sport, and personal use fisheries are closed if the run size of summer chum salmon is projected to be less than 700,000 fish. For projected run sizes of 700,000 to 1,000,000 summer chum salmon, subsistence fisheries may open on their regulatory schedules and commercial, personal use, and sport fisheries may open in a district, subdistrict, or portion of a district if escapement goals are likely to be met in those districts, subdistricts, or portions of a district. If the projected run size is greater than 900,000 but less than 1,000,000 fish, up to 50,000 summer chum salmon may be taken for commercial use. Commercial fisheries may be opened drainagewide to harvest surplus summer chum salmon if the projected run size is larger than 1,000,000 fish.

WHAT WOULD BE THE EFFECT IF THE PROPOSALS WERE ADOPTED? If adopted, the proposals would reduce the triggers necessary for managing and closing commercial, sport, personal use and subsistence fisheries. More opportunities for subsistence, commercial, sport, and personal use fisheries could be provided at lower summer chum salmon run sizes if new triggers are adopted.

BACKGROUND: Management triggers within the *Yukon River Summer Chum Salmon Management Plan* were last modified by the board in 2010. The main element of the plan is a threshold below which all fishing is closed to provide for a minimum level of drainagewide escapement. The threshold of 600,000 summer chum salmon was established in 2001. Subsistence fishing is provided a higher priority than other uses by allowing subsistence harvest on runs of lower abundance, and drainagewide commercial harvest to only occur when projected runs exceed 900,000 summer chum salmon. There is a positive C&T finding for king, summer chum, fall chum, coho, and pink salmon. The ANS for summer chum salmon is 83,500–142,192 fish, with the majority of the subsistence harvest taken in Yukon Area Districts 1 and 2 and the Coastal District. Recent drainagewide subsistence harvests from 2010–2014 have ranged from 88,000–127,000 summer chum salmon (Figure 109-1).

During the past decade, summer chum salmon production was slightly above average, with estimated total run size ranging from 1.4 to 4.0 million fish (2005–2014, Figure 109-1). Currently, there is no drainagewide escapement goal for summer chum salmon. A preliminary analysis by the department in spring 2015 suggested a goal of 600,000 to 1,200,000. Subsequent review has resulted in the department recommending a goal of 500,000 to 1,200,000 summer chum salmon drainagewide. Currently, only the East Fork Andreafsky and Anvik rivers have established escapement goals. It is noteworthy that lower escapements of approximately 500,000 summer chum salmon in 2000 and 2001 resulted in large returns in subsequent years.

DEPARTMENT COMMENTS: The department **SUPPORTS** the concept of modifying management triggers within the management plan to increase summer chum salmon harvest opportunity. Based upon the recommended escapement goal, subsistence fishing may be allowed on run sizes below the current management plan trigger and the department supports providing subsistence fishing opportunity at the maximum biologically allowable level. The new escapement goal also indicates that other uses – commercial, personal use, and sport fisheries – may be allowed at lower levels of abundance than allowed under current triggers in the plan. A BEG of 500,000–1,200,000 summer chum salmon suggests that subsistence fisheries may be opened at a projected run size above 500,000 and commercial and other fisheries opened at projected run sizes of above 650,000 fish. A projected run size of 650,000 would achieve the lower end of the escapement goal (500,000 fish) and the harvestable surplus of 150,000 summer chum salmon would allow for reasonable subsistence opportunity. Furthermore, based upon the steps in the current plan, for projected run sizes between 650,000 and 750,000, a drainagewide commercial fishery might be opened by emergency order to harvest up to 50,000 fish above the run size of 650,000 distributed by district or subdistrict in proportion to the guideline harvest levels established in regulation. For projected run sizes above 750,000, a drainagewide commercial fishery may be opened by emergency order with the harvestable surplus distributed by district or subdistrict in proportion to the guideline harvest levels established in regulation. The department has the tools inseason to manage the summer chum salmon run, primarily based on the mainstem sonar project near Pilot Station.

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

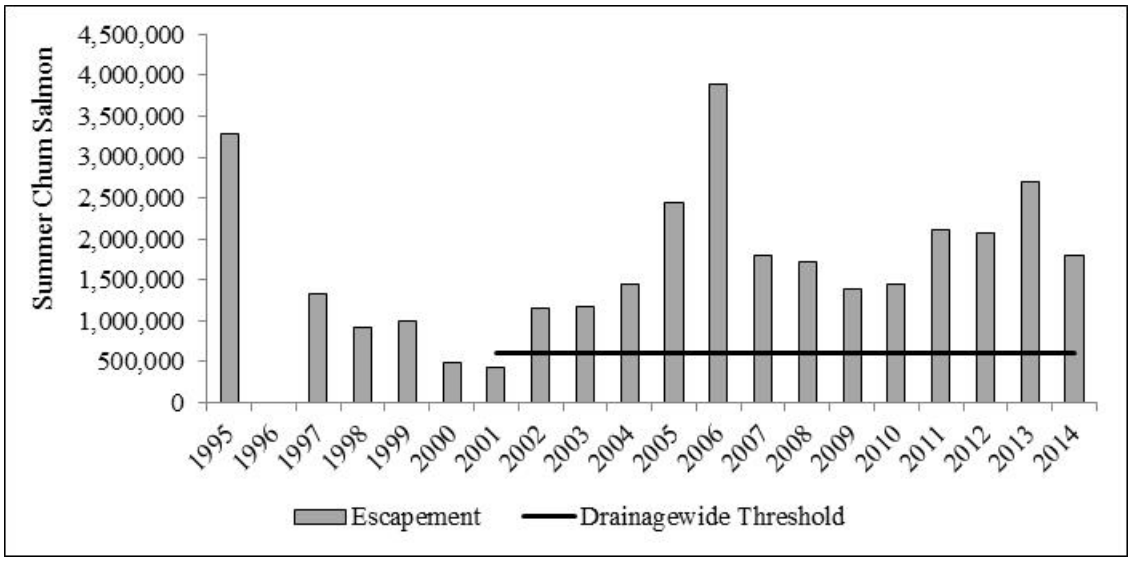


Figure 109-1.–Historical summer chum salmon escapement and harvest estimates on the Yukon River. The drainagewide threshold represents the current management plan trigger of 600,000 fish.

PROPOSAL 110 – 5 AAC 01.249. Yukon River Drainage Fall Chum Salmon Management Plan.

PROPOSED BY: Eastern Interior Alaska Subsistence Regional Advisory Council.

WHAT WOULD THE PROPOSALS DO? Increase the *Yukon River Drainage Fall Chum Salmon Management Plan* commercial fishing trigger point to 600,000 fish.

WHAT ARE THE CURRENT REGULATIONS? Under the current *Yukon River Drainage Fall Chum Salmon Management Plan*, a drainagewide fall chum salmon-directed commercial fishery may be allowed when the projected run size is more than 500,000 fish.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would increase the number of fall chum salmon contributing to the drainagewide escapement. Increasing the threshold would likely result in an increase of foregone commercial harvest of fall chum salmon with the potential for loss of future markets while surpluses go into the drainagewide escapement.

BACKGROUND: The *Yukon River Drainage Fall Chum Salmon Management Plan* was adopted by the board in 1994 and has been amended several times since. The most recent amendment to the *Fall Chum Salmon Management Plan* was adopted in 2010. This amendment reduced the commercial threshold from 600,000 to 500,000 fish because 600,000 fish was more than the amount necessary to meet both escapement and subsistence uses combined. According to the current plan, 300,000 fish is a minimum threshold below which all harvest is prohibited to provide for a minimum level of drainagewide escapement. After escapement, subsistence harvest is provided the highest priority over other uses by allowing subsistence fishing opportunity on run sizes between 300,000 and 500,000 fish. Commercial, sport, and personal use fisheries are allowed on the projected harvestable surplus above escapement and subsistence uses. A further constraint on fisheries may result from managing for an interim management escapement goal of 70,000–104,000 fall chum salmon to Yukon River mainstem in Canada plus harvest sharing under the U.S./Canada Yukon River Salmon Agreement.

Inseason management is based on projections of run size, which are typically underestimated by the mainstem sonar project (particularly for larger run sizes) and although this is taken into account during assessment, management remains conservative. Postseason run reconstruction indicates that at run sizes of at least 500,000 fish, the drainagewide escapement goal, and the majority of tributary goals has been met or exceeded (Table 110-1) while allowing for subsistence harvests (Figure 110-1). Subsistence harvests of fall chum salmon have risen in recent years likely because users are targeting fall chum salmon in light of the severe king salmon restrictions. However, when compared to historical levels, subsistence harvests have decreased substantially because of the decline in the number of dog teams and, therefore, less reliance on fall chum salmon for dog food. Commercial harvesting power is considerably lower and the distribution of effort along the river is much different than experienced in the late 1990s. These changes in the fishery have also made it difficult to increase harvest rates,

particularly when large condensed pulses of fall chum salmon enter the river. Thus, during larger runs, the drainagewide escapement typically has been easily met or exceeded, such as in 2012–2014. Markets have continued to show improvement since 2005 (years after the population crash), and may increase fishing effort in the future.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal, however we are **OPPOSED** to this proposal because of biological and management concerns. The current commercial fishing threshold allows managers to provide for the drainagewide escapement goal and provides for reasonable opportunity for subsistence. Raising the threshold to 600,000 fish would increase both drainagewide and tributary escapements; most fall chum salmon escapement goals in the Yukon Area are already being met or exceeded. Recent subsistence harvests have only slightly increased because of king salmon fishing restrictions, but overall, subsistence harvests have decreased from historical levels because of less reliance on fall chum salmon for dog food. Finally, increasing the threshold runs the risk of losing commercial markets and affecting viability of the fishery during smaller run sizes.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional direct costs for private individuals to participate in this fishery.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found that 89,500–167,900 fall chum salmon is the amount reasonably necessary for subsistence uses in the Yukon Area (5 AAC 01.236(b)(3)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

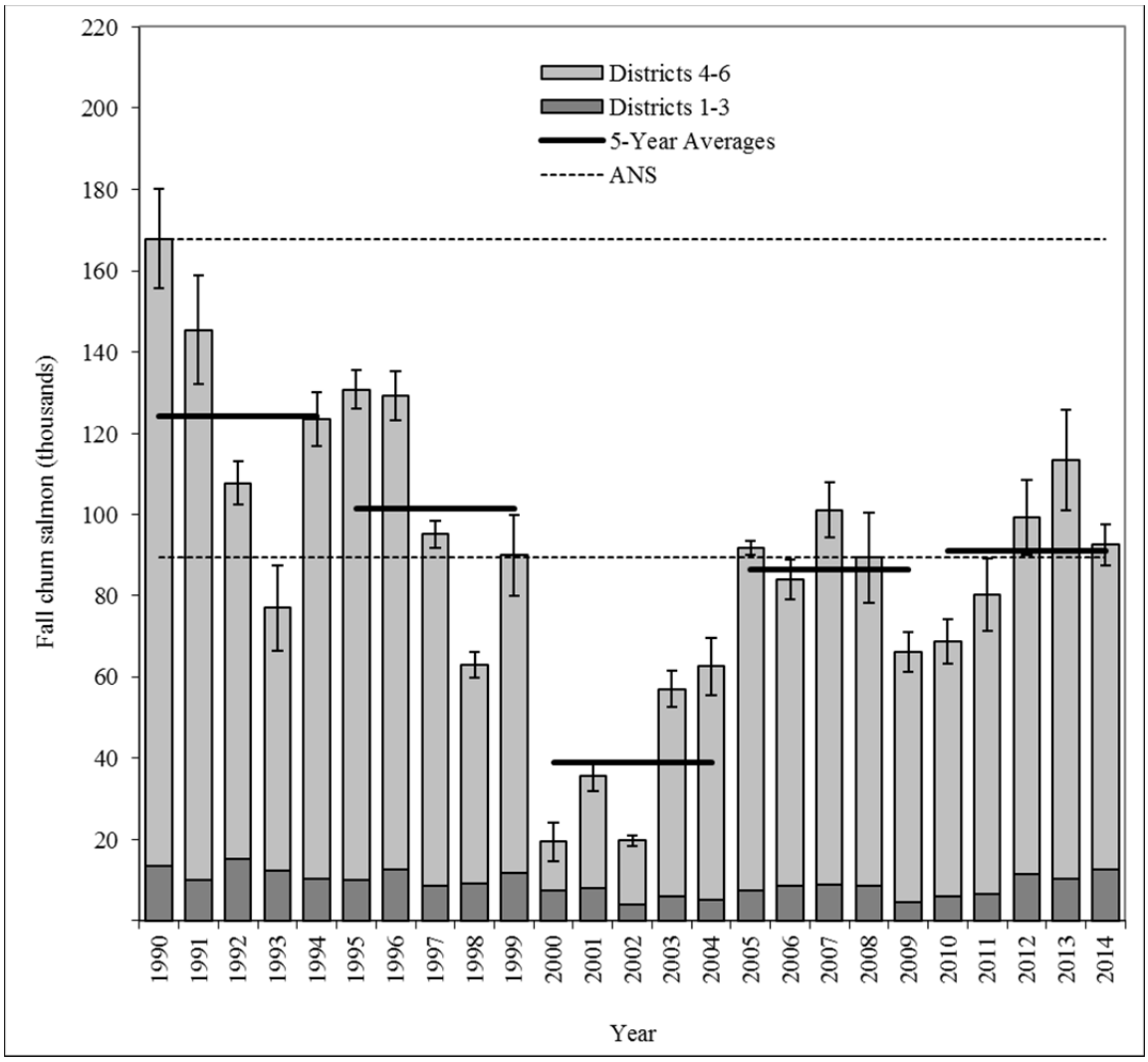
6. Is it necessary to reduce or eliminate other uses to provide a reasonable opportunity for subsistence use? This is a board determination.

Table 110-1.–Historical fall chum salmon run reconstruction data and select spawning escapements, sorted in ascending order of estimated run size, Yukon River, 1995–2014.

				Escapements					
Year	Reconstructed Run Size	U.S./Canada Harvests	Estimated Escapement	Delta	Tanana	Chandalar	Sheenjek	Fishing Branch	Mainstem Canada
2000	251,153	28,553	222,600	3,001	55,983	65,894	30,084	5,057	53,742
1998	350,923	70,823	280,100	7,804	82,475	75,811	33,058	13,687	46,305
2001	373,126	45,026	328,100	8,103	116,012	110,971	53,932	21,737	*33,851*
1999	416,675	131,175	285,500	16,534	109,309	88,662	14,229	12,958	58,682
2002	424,585	27,485	397,100	11,992	163,421	89,850	31,642	13,600	98,695
2010	566,405	80,005	486,400	17,993	212,660	157,998	22,053	15,773	117,789
2009	597,119	93,319	503,800	13,492	159,828	150,000	33,000	25,828	93,626
2004	650,396	76,296	574,100	25,073	187,409	136,706	37,878	20,417	154,080
1997	703,779	170,079	533,700	7,705	88,641	199,874	80,423	27,031	85,439
2003	789,379	79,079	710,300	22,582	263,302	214,416	44,047	29,713	142,683
2008	829,504	218,104	611,400	23,055	264,200	178,278	43,000	19,086	167,898
2014	1,006,663	206,663	800,000	32,480	216,739	226,489	ND	ND	156,796
2012	1,075,489	396,589	678,900	9,377	102,096	205,791	73,000	22,399	137,662
2007	1,114,567	205,667	908,900	18,610	357,016	228,056	42,000	32,150	236,987
1996	1,137,623	260,923	876,700	19,758	132,922	208,170	246,889	77,302	122,429
2006	1,191,186	270,486	920,700	14,055	233,193	245,090	114,000	30,954	220,898
2011	1,215,666	325,666	890,000	23,639	270,846	295,335	62,000	13,085	205,566
2013	1,281,026	357,626	923,400	31,955	275,103	252,710	ND	ND	200,262
1995	1,608,147	461,147	1,147,000	20,587	230,643	280,999	241,855	51,971	158,092
2005	2,161,418	290,418	1,871,000	28,132	372,758	496,484	299,000	119,058	437,733
Average	887,241	189,756	697,485	17,796	194,728	195,379	83,449	30,656	146,461
Minimum	251,153	27,485	222,600	3,001	55,983	65,894	14,229	5,057	33,851
Maximum	2,161,418	461,147	1,871,000	32,480	372,758	496,484	299,000	119,058	437,733
Current							Rt Bank Only		
Escapement			300,000	6,000	61,000	74,000	50,000	22,000	70,000
Goals:			600,000	13,000	136,000	152,000	104,000	49,000	104,000

Note: No color =Escapement Above Goal Range | Within Goal Range | Below Goal Range | ND=no data

Figure 110-1.–Estimated fall chum salmon subsistence harvest, Yukon Area, 1990–2014.



Note: Harvest estimates and 95% confidence interval are provided. In 2001, the board defined ANS as 89,500 to 167,900 fall chum salmon based on harvests from 1990–1999 (excluding 1993 and 1998, years in which subsistence restrictions occurred).

PROPOSAL 111 – 5 AAC 05.360. Yukon River King Salmon Management Plan.

PROPOSED BY: Kwik'pak Fisheries.

WHAT WOULD THE PROPOSAL DO? Eliminate the use of guideline harvest ranges for the commercial king salmon fishery, as defined by numbers of fish, in the *Yukon River King Salmon Management Plan* and instead use the associated percentages already in regulation.

WHAT ARE THE CURRENT REGULATIONS? Current regulations state that the department will manage the king salmon commercial fishery for a GHR of 67,350–129,150 king salmon to be distributed among the six districts as follows: districts 1 and 2: 60,000–120,000 king salmon; District 3: 1,800–2,200 king salmon; District 4: 2,250–2,850 king salmon; District 5 (not including Subdistrict 5-A): 2,700–3,300; and District 6: 600–800 king salmon. If the commercial harvest range for districts 1–6 combined is below 67,350 king salmon, the commercial harvest would be allocated by percentage for each district.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? The department would allocate any harvestable surplus of king salmon using the percentages outlined in 5 AAC 05.360(3) *Yukon River King Salmon Management Plan*. Yukon Area districts 1 and 2 would be allocated 89.1 percent; District 3: 2.7 percent; District 4: 3.3 percent; subdistricts 5-B and 5-C: 3.6 percent; subdistrict 5-D: 0.4 percent; and District 6: 0.9 percent.

BACKGROUND: King salmon management shifted from quotas to GHRs starting in 1979. A GHR was established for king salmon and allocated to each of the districts in 1981. In 2001, the board provided a harvest allocation by district/subdistrict using percentages if the projected commercial harvest of king salmon is 0–67,350 fish. Because a GHR was established for each district based on numbers of fish for commercial harvests above 67,350 fish, the percent allocation varies slightly for any projected commercial harvests above 67,350 (Table 111-1).

From 1979–2006, the average Alaska commercial harvest of king salmon on the Yukon River was 93,000 fish. Commercial harvest of king salmon has not been within the GHR since 1999. Starting in the late 1990s, Yukon River king salmon have experienced declines in run size; consequently there has been no directed commercial fishery for king salmon since 2007. Additionally, the sale of incidentally caught king salmon has been prohibited from 2009–2015 in the summer season commercial fishery and from 2012–2015 in the fall season commercial fishery. The king salmon run sizes in 2014 and 2015 met all the escapement goals that could be assessed; however, meeting these escapement goals was only possible after strict conservative management measures placed on subsistence users. At this time it is unknown when the Yukon River king salmon stock could reach run sizes that would support a directed commercial fishery for king salmon.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. If the GHR for king salmon is removed from the *Yukon River King Salmon Management Plan,* the allowable commercial harvest for each district would be based on the percent allocation for each district also outlined in the plan. The percent allocations are currently based on the lower end of the GHRs for each district and would cover any allowable commercial harvest size.

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

Table 111-1.– Breakdown of commercial king salmon GHRs and percent allocation by district for different levels of projected harvest. For harvests below 67,350, allocations are based on the percentages. For harvests above 67,350, allocations are based on the GHRs listed.

District or Subdistrict	Guideline Harvest Range					
	Lower		Midpoint		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	0 to 60,000	89.1	90,000	91.6	120,000	92.9
3	0 to 1,800	2.7	2,000	2.0	2,200	1.7
4	0 to 2,250	3.3	2,550	2.6	2,850	2.2
5B, C	0 to 2,400	3.6	2,600	2.6	2,800	2.2
5D	0 to 300	0.4	400	0.4	500	0.4
6	0 to 600	0.9	700	0.7	800	0.6
Total	67,350	100.0	98,250	100.0	129,150	100.0

Yukon Subsistence (10 proposals)

PROPOSAL 112 – 5 AAC 01.220. Lawful gear and gear specifications.

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

WHAT WOULD THE PROPOSAL DO? This would allow fishing gear used in one section of the Yukon River for a commercial fishery to be allowed in any area of the Yukon River for subsistence fishing unless run sustainability is an issue.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow salmon to be taken for subsistence in the Yukon Area by gillnet, beach seine, hook and line attached to a rod or pole, handline, or fish wheel subject to the regulations laid out in 5 AAC 01.220. *Lawful gear and gear specifications*. In Districts 1–3, subsistence fishermen may use set or drift gillnets. In districts 4–6, fishermen using gillnets for subsistence salmon fishing may only use set gillnets; however, fishermen in Subdistrict 4-A may use drift gillnets during specific dates outlined in regulation. Additionally, during times of king salmon conservation, dip nets may be used in the Yukon Area for subsistence fishing by emergency order.

For commercial fishing, the allowable gear types in Yukon River Districts 1–3 include set or drift gillnet; and dip nets and beach seines during times of king salmon conservation. In Districts 4–6 set gillnets and fish wheels may be used in the commercial salmon fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? Fishing gear allowed in a commercial fishery anywhere in the Yukon Area could be used for subsistence fishing along the entire river, unless run sustainability is an issue. The only additional gear allowed for subsistence salmon fishing by this proposal would be drift gillnets in Districts 4–6. Harvest of all salmon species could increase since drift gillnets are more efficient at harvesting salmon than set gillnets. Additionally, local knowledge suggests that larger king salmon migrate farther offshore, in the middle of the river and deeper in the water column. These larger king salmon are less likely to be targeted by shore-based gear such as set gillnet and fish wheel gear. Drift gillnets, which can be operated farther offshore, may increase the harvest of larger king salmon. An additional effect of this proposal would be to allow dip nets for subsistence salmon fishing at all times. Dip nets are used in the commercial fishery in the lower Yukon River but are only allowed for subsistence salmon fishing in times of king salmon conservation and by emergency order only.

BACKGROUND: In November 1973, the board prohibited use of drift gillnets for commercial fishing on the Yukon River above the mouth of the Bonasila River. This action was based on the historically negligible use of drift gillnets in the upper Yukon Area and attempted to prevent possible gear conflicts in the future. In December 1976, prior to passage of the state's first subsistence law, the board prohibited use of drift gillnets, of which there was also negligible use, for subsistence purposes in the upper Yukon Area. The board discussion at that time indicated the possible increase in the use of drift gillnets, which are efficient in capturing salmon, could seriously impact both conservation and allocation of upper Yukon Area salmon stocks, which were being harvested at maximum levels.

Given the decline in run size of king salmon and subsequent closures of king salmon-directed commercial and subsistence fisheries, the summer chum salmon run has become an important resource for both subsistence and commercial use on the Yukon River. The department attempts to balance protecting a weak king salmon run while providing both subsistence and commercial opportunity on abundant summer chum salmon. Once the majority of the king salmon run has migrated through a district, or if inseason indicators show that escapement goals are likely to be met, 6-inch or smaller mesh size gillnets have been used to more efficiently harvest summer chum salmon. However, drift gillnets for summer chum salmon commercial and subsistence fishing are only allowed in Districts 1–3 and for subsistence fishing in the upper portion of Subdistrict 4-A.

In 2013, the board adopted a proposal that gave the department the flexibility to restrict gear in the summer chum salmon commercial fishery to types that allow for the live-release of king salmon in Districts 1–3 by emergency order (e.g., dip nets and beach seines). These selective gear types were implemented in 2013–2015 for the majority of the summer chum salmon run in the lower river. Beach seines are currently a legal subsistence salmon fishing gear. Dip nets can be used for subsistence salmon fishing in times of king salmon conservation by emergency order only. All king salmon caught in dip net gear must be returned to the water alive. Typically, dip nets have only been used for subsistence salmon fishing in districts that see high concentrations of summer chum salmon and where other selective gear types (e.g., live-release fish wheels) are not used.

DEPARTMENT COMMENTS: The department is **OPPOSED** to the proposal because of management and biological concerns. The current subsistence fishing schedule for districts 4–6 is based on less efficient set gillnets and fish wheel gear that is used in the area. The regulatory subsistence salmon fishing schedules for districts 4–6 allow for more fishing time than what is allowed in districts 1–3. Allowing fishing with more efficient drift gillnets under the more liberal regulatory subsistence schedule would undoubtedly increase king salmon harvest; however, the magnitude of increase is unknown and could create difficulties assessing potential harvest, which may result in the inability to meet escapement objectives.

COST ANALYSIS: Adoption of this proposal would not result in an additional direct cost for a private person to participate in this fishery unless fishermen opted to purchase alternate gear.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon;

83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 113 – 5 AAC 01.220. Lawful gear and gear specifications; and 5 AAC 05.330. Gear.

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

WHAT WOULD THE PROPOSAL DO? This would prohibit the use of drift gillnets in Yukon River subsistence and commercial fisheries for king salmon.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow salmon to be taken for subsistence and commercial purposes by drift gillnet in districts 1–3. Regulations also allow subsistence fishing with drift gillnets for king salmon in Subdistrict 4-A. The remainder of District 4 and Districts 5 and 6 may not use drift gillnets for subsistence or commercial salmon fishing. Additionally, fishing time, area, and gear can be adjusted to target or conserve king salmon as necessary.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? Subsistence and commercial fishermen in the Yukon Area would not be able to use drift gillnet gear for king salmon. Many lower and middle river subsistence fishermen would likely find it difficult to meet their subsistence needs for king salmon. Subsistence and commercial fishermen would be required to expend more effort to harvest king salmon. The river in these areas is very wide as opposed to the narrow and more channelized areas in the upriver districts. Additionally, adequate set net sites may be difficult for fishermen to find and there would be competition among the 500 fishermen in the lower river to locate and claim those sites. A decrease in harvest by subsistence and commercial drift gillnet fishermen may reallocate harvest opportunity to other districts, gear types, and user groups.

BACKGROUND: Drift gillnets are the dominant gear type used to harvest king salmon for subsistence and commercial purposes in districts 1–3 and for subsistence in Subdistrict 4-A, except for the coastal area of District 1 where set gillnets predominate. Drift gillnet gear is an efficient method of harvesting king salmon when utilized in these locations.

Given the decrease in productivity of the Yukon River king salmon, king salmon-directed commercial fisheries have not occurred since 2007. Additionally, conservative management measures have been implemented in the Yukon River subsistence fishery to reduce the harvest of king salmon. These conservation measures included restricting subsistence fishing time and area when king salmon were migrating through a district, closing subsistence fishing on both the first and second pulses of king salmon when inseason projections determined the run was weak, mandatory first pulse protection, and restricting gillnet mesh size to 7.5-inch or smaller. There was no directed king salmon subsistence fishing along the majority of the river and for the majority of the season in 2014 and 2015. Subsistence and commercial fishing gear was limited to only selective gear types that allowed the live-release of king salmon and 6-inch or smaller mesh size gillnets (after a majority of king salmon had passed) that were intended to target summer chum salmon and minimize the harvest of incidental king salmon.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The department has the ability and flexibility to take conservative management action during times of king salmon conservation, by restricting subsistence salmon fishing to selective gear types or by

limiting time and area of fishing. Gillnet gear typically used to target king salmon, 7.5 inch or smaller mesh size, has not been widely implemented in recent years during times of king salmon conservation. Drift gillnet gear is recognized in the C&T use worksheet adopted by the board, and it was noted that drift gillnets were the predominant gear type used on the lower river; however, at the time of the C&T finding, drift gillnets were prohibited above Subdistrict 4-A by regulation.

COST ANALYSIS: Adoption of this proposal is expected to result in additional direct costs for private individuals to participate in this fishery because fishermen may incur costs of procuring new gear such as fish wheels, modifying existing gear, or traveling longer distances to available setnet sites.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board has found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 114 – 5 AAC 01.230. Subsistence fishing permits.

PROPOSED BY: Gene J. Sandone.

WHAT WOULD THE PROPOSAL DO? This would require subsistence salmon fishing permits in all of District 5 in the Yukon Area and allow for specifying limits for king salmon during times of king salmon conservation.

WHAT ARE THE CURRENT REGULATIONS? Current regulations require subsistence salmon permits in certain areas of the Yukon River: in District 5 upstream from the westernmost tip of Garnet Island to the mouth of the Dall River and for the Yukon River drainage upstream from the upstream mouth of Twenty-two Mile Slough to the U.S./Canada border; and for the Tanana River drainage below the mouth of the Wood River in Subdistricts 6-A and 6-B, and in the upper Tanana River upstream of the Fairbanks Nonsubsistence Area (Figure 114-1). Personal use salmon permits are required in Subdistrict 6-C. Subsistence salmon permits are not required in the remainder of the Yukon Area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? All subsistence salmon fishermen in District 5 would be required to obtain subsistence salmon fishing permits. This would also allow implementation of subsistence king salmon permit limits in District 5 during low king salmon runs. It would provide more adaptive management and the potential to utilize a small harvestable surplus in an area subject to more severe subsistence fishing restrictions in recent years of low king salmon run sizes. Permit limit stipulations would need to be defined during times of king salmon conservation.

BACKGROUND: The department currently implements a postseason harvest survey, and uses data from permits returned to the department with harvest information, as well as harvest calendars to estimate subsistence harvests, by community, in the Yukon Area. Subsistence fishing permits are required in selected areas of the Yukon River, primarily near road systems. The department can stipulate king salmon limits with these permits and in some locations, fishermen are required to report harvest numbers to the department weekly. For the remainder of the Yukon Area, a postseason survey program employs a stratified sampling protocol to survey households and expands the data for un-surveyed households. As a result, harvest information is typically not available to the department until well after the season.

Given the declines in king salmon run sizes experienced on the Yukon River, substantial subsistence salmon fishing restrictions have been implemented in recent years. Subsistence restrictions have typically been the most severe in District 5 for several reasons. The district is very large and it can be difficult to accurately assess king salmon run timing and magnitude through this area, resulting in considerable data uncertainty. Additionally, the majority of king salmon migrating through that district are of Canadian origin. In order to ensure the U.S./Canada Yukon River Salmon Agreement objective for king salmon escapement is met, a more cautious management approach is often necessary when run sizes have been small and/or run assessment data uncertainty is high.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The costs and effort required to implement a permit program across a large section of the river would be significant. Additionally, issuing permits to widespread and remote communities, obtaining accurate reporting, and collecting completed permits would be challenging. Furthermore, the public has not been supportive of subsistence fishing permits in the past. For such a program to succeed, it would be necessary to begin with an outreach program to gain broad public support for such a substantial change, so as to ensure compliance and accurate reporting. Given the closures and restrictions in recent years, allowing a limited harvest via a permit program could allow more subsistence fishing opportunity for king salmon during poor runs or when data uncertainty is high. The board would need to determine if a community, household, or individual permit program would be most efficient at harvesting a limited number of king salmon during times of king salmon conservation and how the permit limit would be determined in low run years when escapement goals may not be met.

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 non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

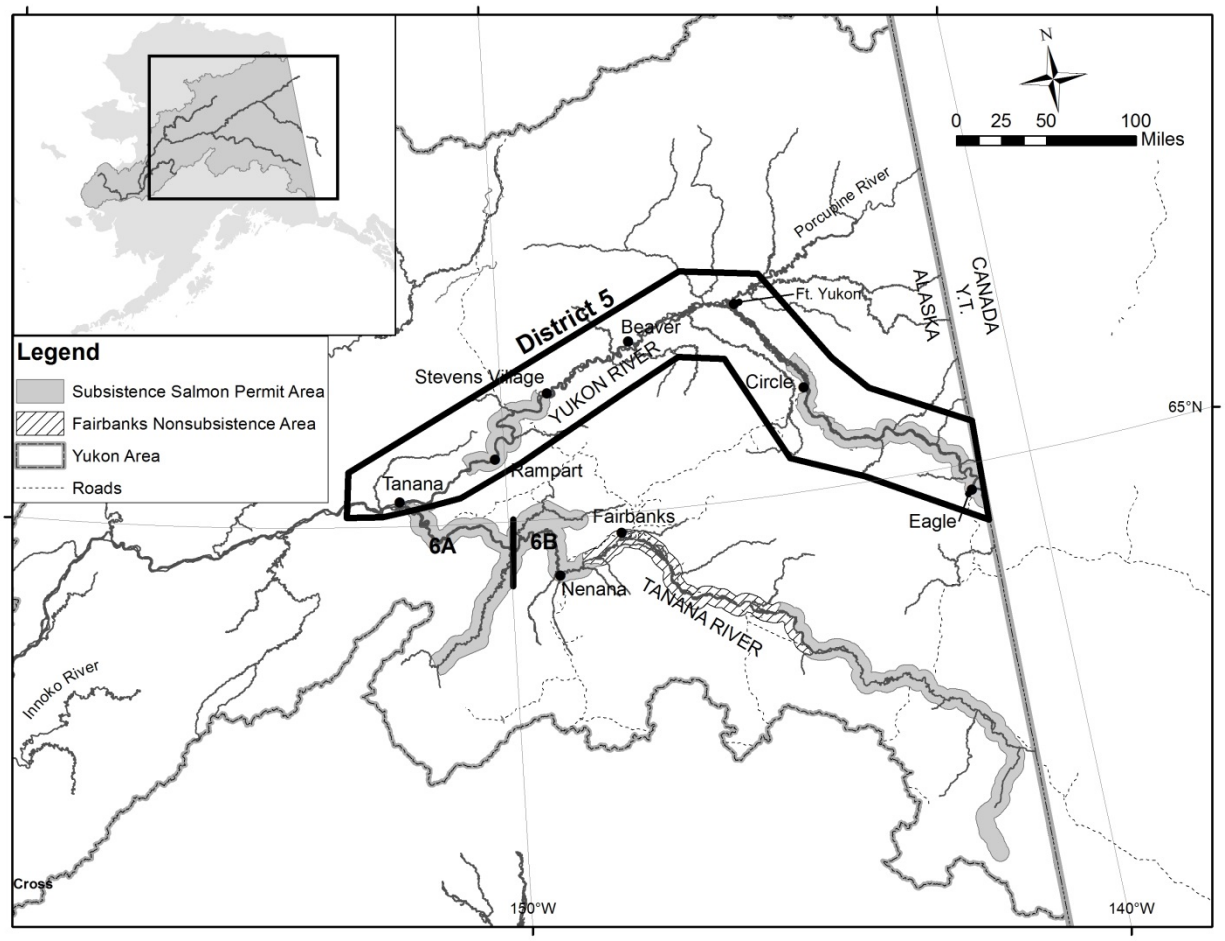


Figure 114-1.–Area where subsistence salmon fishing permits are proposed to be required. Portions of the Yukon Area requiring subsistence salmon permits are shaded in gray.

PROPOSAL 115 – 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would allow subsistence fishermen using fish-friendly fish wheels to retain king salmon that are less than 25 inches in length in Yukon Area subsistence fisheries.

WHAT ARE THE CURRENT REGULATIONS? There are currently no regulations requiring fish-friendly fish wheels for subsistence salmon fishing in the Yukon Area. During times of king salmon conservation, fishery managers may open a commercial fishery by emergency order with fish-friendly fish wheels, as described in regulation (5 AAC 05.362. *Yukon River Summer Chum Salmon Management Plan (j*)), to target summer chum salmon and live-release king salmon. When confidence is gained that escapement goals will be met, the department can allow retention of king salmon for subsistence purposes from subsistence and commercial fish wheels. However, there are currently no size stipulations for retention of king salmon from this fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? Commercial fishermen who use a fish-friendly fish wheel for subsistence salmon fishing purposes would be able to retain king salmon less than 25 inches in length for subsistence uses. During times of low king salmon abundance, the removal of any king salmon could impact the ability to achieve escapement goals. Additionally, fishermen would need to develop a mechanism for retaining small king salmon and releasing large king salmon back to the water immediately. This may include having to attend the wheels to determine size of king salmon before releasing them back to the water immediately or outfitting the fish wheels with a size excluder device that could selectively retain small king salmon and release larger king salmon back to the water.

BACKGROUND: Yukon River king salmon run sizes have undergone substantial declines since the late 1990s. As a result of these declines, conservative management measures have been put in place to reduce the harvest of king salmon in an attempt to meet escapement goals. For subsistence fishermen, restrictions have included subsistence closures, restricted fishing times, the use of selective gear types requiring the live-release of king salmon (e.g., dip nets and fish wheels), and restricting gillnets to 6-inch or smaller mesh size. Efforts have been made to balance low king salmon run sizes with abundant summer chum salmon run sizes by providing opportunity with selective gear types that can target summer chum salmon and live-release king salmon. Upriver commercial fishermen in Subdistrict 4-A and District 6 have been using specially constructed, fish-friendly fish wheels with basket sides and bottoms consisting of soft mesh material similar to that of seine web, and with a slide or chute with a smooth bottom, and with closed cell foam-lined sides which return king salmon immediately back to the water. These construction specifications are intended to reduce the potential for injuring king salmon that are being released back to the water alive when targeting the abundant summer chum salmon. In 2015, the board passed a regulation that provides the department flexibility to allow all fish wheel users to retain king salmon once inseason assessment projects indicate that the run is likely to meet escapement goals.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The department already has the flexibility by emergency order authority to allow the retention of any king salmon from fish wheel gear once inseason assessment projects indicate escapement goals are likely to be met. While larger king salmon tend to be older females, there are no empirical data to support that a particular size, age, or sex composition of king salmon escaping to spawning grounds improves productivity. If this proposal is adopted, the department would like emergency order authority to implement it inseason during times of king salmon conservation and in order to ensure escapement goals are met.

COST ANALYSIS: Approval of this proposal may result in a direct cost to fishermen who need to modify existing gear to meet the specifications of a fish-friendly fish wheel.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 116– 5 AAC 01.220. Lawful gear and gear specifications; and 5 AAC 05.368. Anvik River Chum Salmon Fishery Management Plan.

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

WHAT WOULD THE PROPOSAL DO? This would eliminate holding of a salmon caught in fish wheels in liveboxes prior to live release.

WHAT ARE THE CURRENT REGULATIONS? During times of king and chum salmon conservation, fish wheels must be equipped with a livebox that contain no less than 45 cubic feet of water volume while in operation, the livebox must be checked at least once every six hours, and either king or chum salmon must be released alive. A fish wheel may be operated without a livebox if it is equipped with a chute that returns fish to the water alive, the operator closely attends the fish wheel while in operation, and the operator returns all king or chum salmon caught to the water alive.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would require operators to attend their fish wheels at all times of operation when the release of any species of salmon is required. It would eliminate the ability for fish wheel users to use liveboxes and would increase time and effort attending a fish wheel at all times when live release is required. This would reduce mortality of salmon caught in fish wheels and released.

BACKGROUND: Fish wheels are a legal gear type for subsistence salmon fishing in the Yukon Area. After declines in chum and king salmon runs occurred in 1998–2000, regulations were adopted to allow, during times of chum or king salmon conservation, fish wheels equipped with a livebox where chum or king salmon must be released alive. Operators do not need to be present at their fish wheel when using a livebox, but must check the livebox at least once every six hours.

Research suggests that crowding and holding times greater than four hours can cause delayed mortality and reduced travel rates in chum salmon. These studies focused on fall chum salmon in the Yukon River and on chum salmon in the Kuskokwim River. However, these studies indicate that other factors (e.g., how many times the fish has been captured and released) may be interacting with holding times to cause negative effects to migrating fish. Of importance to note, the studies also mention that fish holding is not solely responsible for delays in migration witnessed in the tagged and tracked fall chum on the Yukon River.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. During times of salmon conservation, reducing salmon mortality is very important for achieving escapement objectives. Other selective gear types implemented during times of king salmon conservation – namely dip nets and beach seines – require the immediate and live release of king salmon. Fish wheels have been used recently to selectively target summer chum salmon while releasing king salmon. Research has shown that crowding of salmon in a confined area increases stress, which can influence upriver migration behavior and ability to spawn.

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 non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 117– 5 AAC 01.220. Lawful gear and gear specifications; **5 AAC 05.362. Yukon River Summer Chum Salmon Management Plan**; and **5 AAC 05.368. Anvik River Chum Salmon Fishery Management Plan.**

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

WHAT WOULD THE PROPOSAL DO? This would prohibit the use of beach seines in the Yukon Area subsistence fishery and in Yukon River summer chum salmon commercial fishery.

WHAT ARE THE CURRENT REGULATIONS? Beach seines are a legal gear type for subsistence salmon fishing as outlined in 5 AAC 01.220(a). In the Anvik River Special Management Area, hand beach seines are a legal gear type for commercial summer chum salmon fishing. In times of king salmon conservation, beach seines (not exceeding four inches in stretched mesh) may be used for commercial fishing in Districts 1–3. In the commercial fishery, all king salmon caught in beach seine gear must be returned to the water alive immediately. The department has also required king salmon to be immediately released alive from subsistence beach seine gear.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? Fishermen would not be allowed to use beach seines for subsistence or commercial salmon fishing on the Yukon River. Although beach seines are not widely used throughout the Yukon River, it would eliminate the opportunity to subsistence fish for salmon with this gear type. Prohibiting use of beach seines in the summer chum salmon commercial fishery during times of king salmon conservation may decrease the harvest of surplus summer chum salmon.

BACKGROUND: Harvest of surplus summer chum salmon has been greatly reduced in recent years because of the need to minimize the incidental harvest of king salmon. In 2013, the board adopted new regulations to allow commercial fishing opportunity with dip net and beach seine gear to harvest surplus summer chum salmon in Yukon Area Districts 1–3, since king salmon can be immediately released from these selective gear types. Dip nets were surprisingly successful harvesting economically viable numbers of summer chum salmon and accounted for the majority of the harvest taken with these two new gear types. The number of fishermen in Districts 1 and 2 using beach seines to commercially harvest summer chum salmon is relatively low compared to fishermen using dip nets: four fishermen in 2013, 16 fishermen in 2014, and 15 fishermen in 2015. Additionally, because the use of beach seine gear in the Yukon River is still developing, the number of king salmon caught and released from beach seine gear is relatively low: 19 king salmon in 2013 (2% of the total number of king salmon caught and released), 172 king salmon in 2014 (3% of the total number of king salmon caught and released), and 850 in 2015 (9% of the total number of king salmon caught and released). Studies on Columbia River king salmon caught in beach seine gear showed that post-release survival is generally high considering that these fish were also handled and tagged before release. However, post-release survival likely depends on the ability of fishermen to detect a king salmon among the abundant summer chum salmon and quickly release it unharmed.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. Currently, the number of commercial and subsistence fishermen using beach

seines is low compared to those using dip nets and fish wheels. In the commercial fishery, the rate of incidentally-caught king salmon with beach seines is monitored closely and the department has the flexibility to discontinue the use of beach seines if there is a concern for king salmon conservation. The department has submitted two proposals for the board to consider beach seine specifications in both the commercial and subsistence fisheries. Additionally, the department has submitted a proposal that would require the live release of king salmon from subsistence beach seine gear. It is currently a management practice to require the release of king salmon from subsistence beach seine gear during times of king salmon conservation, but adoption of that proposal would put it into regulation.

While addressing this proposal, the board should evaluate whether proposed changes to subsistence fishing gear still provide reasonable opportunity for subsistence users to harvest summer chum salmon during times of king salmon conservation.

COST ANALYSIS: Approval of this proposal would likely result in an additional direct cost for private persons to participate in this fishery if they need to procure new fishing gear to replace beach seines (e.g., dip nets).

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 118– 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would establish beach seine specifications for subsistence salmon fishing in the Yukon Area.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow salmon to be taken for subsistence uses by beach seine. However, there are no specifications on mesh size, length and depth for beach seines in regulation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would specify that beach seines used for subsistence salmon fishing may not exceed 150 fathoms in length or 100 meshes in depth, with a mesh size that does not exceed 3.5 inches stretched measure. Adoption of this proposal would align with proposed commercial beach seine specifications and regulations in Proposal 123 and would make enforcement easier when concurrent subsistence and commercial fishing occurs in the Yukon Area.

BACKGROUND: Beach seines are a legal gear type for subsistence salmon fishing, though no mesh size, length or depth specifications currently exist. Therefore, any combination of length and depth may currently be used to harvest salmon. Starting in 2014, the department opened subsistence salmon fishing with beach seines concurrent with commercial beach seine fishing and required the live-release of king salmon. Beach seine opportunity provides subsistence users with a means to harvest summer chum salmon while minimizing the incidental harvest and mortality of king salmon.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The commercial beach seine regulations currently specify that mesh size may not exceed 4 inches stretched measure. However, the department proposes aligning this proposal with the commercial beach seine specifications proposed in Proposal 123. Specifying the length, depth, and mesh size of beach seines may assist in conserving king salmon, and aligning subsistence specifications with commercial regulations will make enforcement easier.

COST ANALYSIS: Approval of this proposal would likely result in an additional direct cost for private persons to participate in this fishery if they needed to modify existing fishing gear to comply with the regulation.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 119– 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would require the live release of king salmon from subsistence beach seines during times of king salmon conservation.

WHAT ARE THE CURRENT REGULATIONS? Beach seines are a legal gear type for subsistence salmon fishing. During times of king salmon conservation, current regulations require the live release of king salmon from dip nets but do not specify that king salmon caught in beach seines must also be released alive. Also, king salmon are required to be released alive from beach seines in the commercial summer chum salmon fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would align regulations for beach seine gear with regulations already in place for selective gear types. Additionally, it would align subsistence beach seine regulations with commercial beach seine regulations used during times of king salmon conservation. It would make enforcement easier when concurrent subsistence and commercial fishing occurs in the Yukon Area. Releasing king salmon caught in beach seines would reduce mortality of king salmon during times of king salmon conservation.

BACKGROUND: In 2014 and 2015, subsistence salmon fishing in the lower and middle portions of the Yukon River was restricted to dip nets and beach seines to target summer chum salmon in order to minimize the impact to king salmon. During times of king salmon conservation, king salmon caught in dip net gear are required to be released alive. However, there is no regulation specifying that king salmon caught in beach seine gear must also be released alive in the subsistence fishery. Studies on Columbia River king salmon caught in beach seine gear showed that post-release survival is generally high considering that these fish were also handled and tagged before release. However, post-release survival likely depends on the ability of fishermen to detect a king salmon among the abundant summer chum salmon and quickly release it unharmed.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Approval of this proposal would align beach seine regulation with other selective gear type regulations that require the live release of king salmon. Additionally, requiring the release of king salmon in both the commercial and subsistence fisheries would make enforcement easier when commercial and subsistence fishing opportunity is offered concurrently.

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 non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 120 – 5 AAC 01.210. Fishing seasons and periods.

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

WHAT WOULD THE PROPOSALS DO? Allow subsistence fall chum salmon subsistence fishing seven days per week in all of District 5 of the Yukon Area once a fall chum salmon commercial fishery is opened.

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

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The historical windowed subsistence fishing schedule in subdistricts 5-A, 5-B, and 5-C would no longer be in effect once a commercial fall chum salmon fishery was opened based upon opening a commercial fall chum salmon fishery. Management flexibility to liberalize subsistence fishing schedules, when inseason run assessment warrants it, would be eliminated.

BACKGROUND: The windowed subsistence fishing schedule in subdistricts 5-A, 5-B, and 5-C has been in effect for decades and allows some spreading of harvest over the various salmon stocks migrating through this area. Since 2012, preseason projections have indicated a commercial surplus of fall chum salmon each year and all Yukon Area districts and subdistricts were placed on their full regulatory subsistence fishing schedules at the beginning of the fall chum salmon run. Since 2012, the department has liberalized the subsistence fishing schedules in subdistricts 5-A, 5-B, and 5-C to 7 days per week to increase the opportunity to harvest fall chum salmon for subsistence use because of the inseason run assessment and the severe king salmon restrictions. Subdistrict 5-D has returned to a full regulatory schedule (seven days per week) as soon as the king salmon run has completed passing through that area.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. However, adopting the proposal would reduce management flexibility. Current management practices have liberalized the subsistence schedules to increase subsistence opportunity on fall chum salmon because of the severe king salmon restrictions. If king salmon stocks rebound and subsistence opportunity to target king salmon increases, dependence on fall chum salmon will likely decrease, and 7-days per week schedules may not be necessary, or even prudent, depending on fall chum salmon run strength.

It is unclear if the subsistence schedule could be reinstated if the latter portion of the fall chum salmon run comes in weaker and fall chum salmon directed commercial fishing has already occurred, but has since been closed.

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 non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 121– 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would expand the area of allowable subsistence drift gillnet fishing for chum salmon in Subdistrict 4-A of the Yukon Area.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow king salmon to be taken for subsistence uses by drift gillnet in Subdistrict 4-A from June 10 through July 14. The upper portion of Subdistrict 4-A above Stink Creek may also use drift gillnets for subsistence chum salmon fishing from June 10 to August 2 by EO only.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would extend subsistence drift gillnet opportunity to harvest summer chum salmon to all of Subdistrict 4-A. Subsistence users in all of Subdistrict 4-A would have a more efficient means to harvest summer chum salmon during times of king salmon conservation. Summer chum salmon harvest is likely to increase, and the effect on king salmon would be minimal after July 14 since the majority of king salmon have migrated out of Subdistrict 4-A by this date.

BACKGROUND: In March 2015, the board adopted regulations allowing subsistence salmon drift gillnet fishing, by EO, for chum salmon in the upper portion of Subdistrict 4-A from June 10 to August 2. The intent of this regulation was to provide subsistence opportunity to target summer chum salmon with drift gillnets because there are few setnet sites in the area and river conditions can be dangerous for setnetting during high water events. Fishermen in the upper portion of Subdistrict 4-A noted that there was missed opportunity to harvest summer chum salmon for subsistence uses because of the aforementioned reasons. At the time of the March 2015 meeting, the proposal could not be extended to include the lower portion of Subdistrict 4-A because of the meeting notice. However, fishermen in the lower portion of Subdistrict 4-A have also expressed difficulty in meeting their subsistence needs for summer chum salmon using setnets.

In recent years, the department has provided subsistence opportunity to target abundant summer chum salmon with selective gear types, such as live-release fish wheels and dip nets. However, few fishermen have utilized fish wheels or dip nets in the area. In an effort to provide more efficient subsistence opportunity, the department has provided short subsistence openings with 6-inch or smaller mesh gillnets in between pulses of king salmon. These openings were often less than 8 hours in length and setnet fishermen struggled to meet their subsistence needs.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Approval of this proposal would provide fishery managers the flexibility to open and close drift gillnet subsistence fishing targeting summer chum salmon in times of king salmon conservation in all of Subdistrict 4-A, not just the upper portion of Subdistrict 4-A. Access to adequate setnet sites can impact the ability for fishermen in the lower portion of Subdistrict 4-A to meet their subsistence needs for summer chum salmon during times of king salmon conservation, especially when gillnet openings are short to reduce the incidental harvest of king salmon.

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

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made a positive customary and traditional use finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area (5 AAC 01.236(a)(1)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found the following amounts reasonably necessary for subsistence in the Yukon Area: 45,500–66,704 king salmon; 83,500–142,192 summer chum salmon; 89,500–167,900 fall chum salmon; 20,500–51,980 coho salmon; and 2,100-9,700 pink salmon (5 AAC 01.236(b)).

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

Yukon Commercial (7 proposals)

PROPOSAL 122 – 5 AAC 05.331 (a)(1). Gillnet specifications and operations.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSALS DO? Modify Yukon Area commercial set gillnet length specification to an aggregate length standard.

WHAT ARE THE CURRENT REGULATIONS? In the Yukon Area, no commercial fisherman may operate set gillnet gear that exceeds 150 fathoms in length.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Commercial fishermen would clearly be allowed to use multiple set gillnets with a combined total length of 150 fathoms, which is already common practice.

BACKGROUND: Operating multiple set gillnets with a total combined length of 150 fathoms is a current commercial fishing practice on the Yukon River. Set gillnet gear is currently permitted with gear specifications on length for subsistence and commercial fishing. Subsistence regulations specify set gillnet gear as an aggregate length to clearly allow for multiple nets to be fished, with the combined total length of nets limited to 150 fathoms.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Adopting this proposal would clarify that commercial fishermen operating set gillnet gear may use multiple set gillnets with a maximum combined length of nets of 150 fathoms. This will clarify regulations for fishermen and for enforcement purposes.

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

PROPOSAL 123– 5 AAC 05.362. Yukon River Summer Chum Salmon Management Plan.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would amend commercial beach seine specifications for summer chum salmon in the Yukon Area.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow salmon to be taken for commercial purposes by beach seine during times of king salmon conservation. Commercial beach seine gear must have a mesh size that does not exceed 4 inches stretched measure and all king salmon caught in beach seine gear must be released immediately and returned to the water unharmed. However, there are no specifications on length and depth for beach seines in regulation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would specify that beach seines used for commercial salmon fishing may not exceed 150 fathoms in length or 100 meshes in depth, with a mesh size that does not exceed 3.5 inches stretched measure. This would align commercial beach seine specifications with subsistence beach seines specifications in Proposal 118 and would make enforcement easier when concurrent subsistence and commercial fishing periods are provided. Additionally, defining maximum specifications for beach seines could limit incidental harvest of other species when beach seines are large and unwieldy to control effectively.

BACKGROUND: The summer chum and king salmon runs on the Yukon River overlap both spatially and temporally. As a result of weak king salmon runs, the summer chum salmon commercial fishery has not been able to harvest the abundant surplus of summer chum salmon available. From 2008–2012, the summer chum salmon fishery has been delayed until 75% of the king salmon run has migrated through. This delay in opening resulted in large foregone harvests of summer chum salmon. In 2013, the board adopted new regulations that allow dip net and beach seine gear to harvest surplus summer chum salmon in Yukon Area districts 1–3 in the commercial fishery. Beach seine and dip net gear used for commercial fishing during times of king salmon conservation require live release of king salmon. However, there are no specifications on length and depth for commercial beach seines. Therefore, any combination of net length and depth could currently be used within the Yukon Area.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. Since adopted in 2013, beach seines have been utilized to harvest summer chum salmon for commercial purposes during times of king salmon conservation. Yukon River fishermen have been experimenting with different configurations of length and depth of beach seine gear to more effectively harvest summer chum salmon while live-releasing king salmon. Reducing the mesh size allowed in beach seines aligns with existing gear used in the fishery and may reduce contact rates with king salmon. Furthermore, fishermen experimenting with this gear type agree that beach seine gear larger than 150 fathoms in length or 100 meshes in depth becomes too unwieldy, heavy, and difficult to effectively operate. Large beach seines may make it difficult to release king salmon immediately and to the water unharmed.

COST ANALYSIS: Approval of this proposal would likely result in an additional direct cost for private persons to participate in this fishery if they needed to modify existing beach seine gear to comply with the regulation.

PROPOSAL 124– 5 AAC 05.331. Gillnet specifications and operations.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would allow the use of 6-inch or smaller mesh size gillnets in the commercial salmon fishery in District 6 of the upper Yukon Area by emergency order.

WHAT ARE THE CURRENT REGULATIONS? Current regulations allow commercial set gillnets and fish wheels to be operated in Yukon River districts 4–6. In districts 1–4, the department has authority to restrict gillnet mesh size to 6-inch or smaller to direct harvest at summer chum salmon. Currently, in District 4, salmon may be taken only with gillnets of 6-inch or smaller mesh size after a date specified by EO. The department does not have the authority to specify 6-inch or smaller mesh size for commercial set gillnet gear in District 6. Fish wheels may be used in the summer chum salmon-directed commercial fishery in District 6 during times of king salmon conservation.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would give the department EO authority to allow 6-inch or smaller mesh size gillnets in the District 6 summer chum salmon-directed commercial fishery. Additionally, the proposal would provide the department flexibility to establish gear specifications by periods rather than after a date specified in District 4. Harvest of summer chum salmon is likely to increase.

BACKGROUND: A commercial fishery for summer chum salmon has been allowed in Yukon River District 6 since 1974. Given the decline in productivity of king salmon in recent years, the summer chum salmon commercial fishery has either been delayed until the majority of the king salmon run has migrated through a district or prosecuted with new gear types (e.g., attended fish wheels that are specially constructed) in order to minimize the incidental harvest of king salmon. In 2014 and 2015, gillnets restricted to 6-inch or smaller mesh size were allowed in summer chum salmon-directed commercial fishery in districts 1 and 2 after a majority of the king salmon had migrated through the area. However, the department does not have the authority to specify 6-inch or smaller mesh size for commercial set gillnet gear in District 6. Six-inch or smaller mesh size gillnets target summer chum salmon and incidental king salmon caught tend to be smaller 4- or 5-year old fish.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This would align the common management practice of specifying gear specifications by period in regulation. It would provide the department the tools necessary to specify 6-inch or smaller mesh size gillnets in the commercial fishery in District 6 by EO and the department the flexibility to open and close the set gillnet fishery by period when there is a king salmon conservation concern.

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

PROPOSAL 125– 5 AAC 05.331. Gillnet specifications and operations.

PROPOSED BY: Kwik'pak Fisheries.

WHAT WOULD THE PROPOSAL DO? This seeks to establish gillnet specifications for a pink salmon directed commercial fishery in Districts 1–3 of the Yukon River.

WHAT ARE THE CURRENT REGULATIONS? Current regulations specify that salmon may be taken by 7.5-inch or smaller mesh gillnets or may only be taken in a commercial fishery by 6-inch or smaller mesh size gillnets in districts 1–3 during periods established by emergency order. Additionally, 6-inch or smaller mesh size gillnets may not be more than 50 meshes in depth.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This would give the department emergency order authority to close the fishing season and immediately reopen it so that a commercial fisherman may take salmon with a 4-inch or smaller mesh size gillnet that is no more than 50 meshes in depth. Harvest of pink salmon is likely to increase and the incidental harvest of whitefish and other small non-salmon species may increase.

BACKGROUND: Pink salmon enter the Yukon River from late June to late July; on average they weigh about two to three pounds. They primarily spawn in the lower portion of the drainage, downstream of the community of Grayling (river mile 336). In the past decades, pink salmon have exhibited a cycle of alternating high and low abundance every two years, with high abundance observed during even-numbered years (Figure 125-1). Pink salmon were harvested and sold during the summer chum salmon directed commercial fishery in 2008 (14,100 fish) and 2014 (54,572 fish). Pink salmon are harvested for subsistence uses primarily in the lower river (the majority taken in the Coastal District). In 2013, the board established an ANS for pink salmon of 2,100–9,700 fish. Even-year and odd-year subsistence harvests for the entire drainage have averaged 6,700 and 2,200 pink salmon, respectively, since 2004. There is no assessment project designed specifically to count the pink salmon run in the Yukon River; however, several projects do produce estimated counts which can be used as a relative indicator of abundance (Table 125-1). Subsistence harvests of pink salmon are also estimated during post-season subsistence surveys undertaken by the department. No escapement goals exist for pink salmon.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The establishment of a pink salmon commercial fishery would bring more income to commercial fishermen of the lower Yukon Area. However, a directed pink salmon fishery would be feasible only in even-numbered years when run sizes are large enough to support subsistence needs and a harvestable commercial surplus (Figure 125-1). The gillnet specifications proposed for use in the pink salmon commercial fishery would likely have a minimal impact to king salmon due to the small mesh size and shallow depth and that the pink salmon run tends to occur toward the end of the king salmon run in the lower river. Additionally, gillnets of similar specifications are allowed during subsistence salmon closures (although with a length restriction of 60 feet). Allowing the department the flexibility to open and close a pink salmon-directed commercial fishery by emergency order would allow the department to consider inseason run assessment

indicators for both king and pink salmon and decide whether a pink salmon commercial fishery may be allowed.

COST ANALYSIS: Approval of this proposal may result in a direct cost to fishermen if they need to procure new gillnets to participate in this fishery.

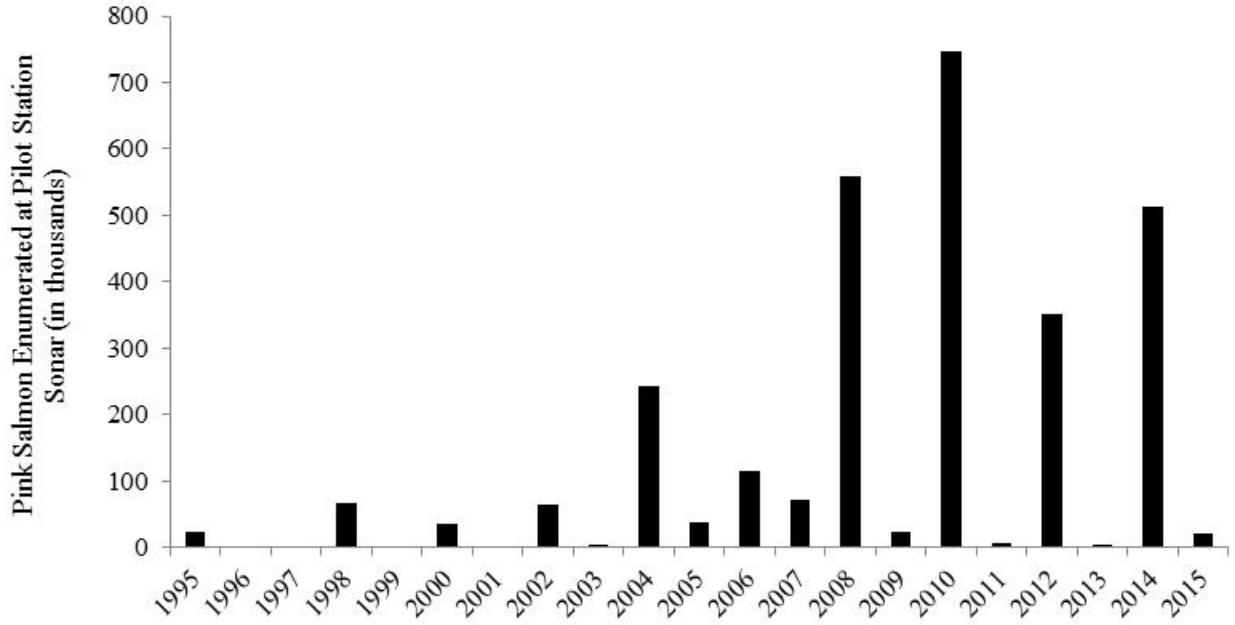


Figure 125-1.– Minimum pink salmon passage at the sonar project near Pilot Station from 1995–2015. The project avoids counting pink salmon while estimating passage of other salmon species by excluding nearshore fish counts particularly during large pink salmon runs. Estimates from 1996 are not available because the sonar project did not operate. Passage estimate from 2015 is preliminary.

Table 125-1.– Estimates of pink salmon passage as escapement projects and estimated total Yukon River subsistence harvest, 2000–2014.

Year	East Fork Andreafsky Weir	Anvik River Sonar	Total Subsistence Harvest
2000	43,477	24,859	595
2001	820		403
2002	165,990	131,482	8,423
2003	4,303		2,167
2004	399,670	4,512	9,697
2005	39,030		3,132
2006	196,360		4,854
2007	10,092		2,118
2008	189,908	734,837	9,529
2009	2,395		2,300
2010	339,058	505,509	4,199
2011	1,219		2,291
2012	74,682	591,387	5,150
2013	589		1,076
2014	58,995	973,254	6,812

Note: Blank cells denote no estimates available.

PROPOSAL 126– 5 AAC 05.362. Yukon River Summer Chum Salmon Management Plan.

PROPOSED BY: Kwik'pak Fisheries.

WHAT WOULD THE PROPOSAL DO? This seeks to add purse seine gear with a mesh size that does not exceed three and one-half inches stretched measure and a total length of no more than 150 fathoms as an allowable gear type to commercially target summer chum salmon in Districts 1–3 during times of king salmon conservation. It would require that all king salmon caught in purse seine gear to be released immediately and returned to the water unharmed.

WHAT ARE THE CURRENT REGULATIONS? Current regulations specify that during times of king salmon conservation, summer chum salmon may be harvested by dip nets, beach seines, or 5.5-inch or smaller mesh size gillnets not exceeding 30 meshes in depth in Districts 1–3 by emergency order. All king salmon are required to be released unharmed from dip net and beach seine gear.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WAS ADOPTED? This could allow commercial fishermen in Districts 1–3 additional opportunity to harvest surplus summer chum salmon by authorizing use of a new gear type that could allow for the live release of king salmon during times of king salmon conservation. Purse seine gear would be an option, in addition to dip nets and beach seines, to harvest summer chum salmon during times of king salmon conservation. Use of purse seine gear could increase commercial summer chum salmon harvest in the lower Yukon River when gillnet commercial opportunity is not allowed due to conservation concerns for king salmon

BACKGROUND: In response to a poor king salmon run and a concurrent strong summer chum salmon run in 2013, the board adopted new regulations to provide commercial fishing opportunity with selective gear types (dip nets and beach seines) to harvest surplus summer chum salmon in Yukon Area districts 1 and 2. The total summer chum salmon commercial harvest for districts 1 and 2 with all gear types combined was approximately 430,000 fish in 2014, which is the largest on record since 1989. In 2015, the total commercial harvest for all gear types in districts 1 and 2 was approximately 350,000 summer chum salmon, which is well above the average commercial harvest of 200,000 fish for the years 2005–2014. Despite the marked improvement in commercial summer chum salmon harvest, there was a foregone commercial harvest of approximately 900,000 fish in 2014 and 360,000 fish in 2015.

The inability to capitalize on the available surplus of summer chum salmon will likely continue because of the inefficiency of the current selective gear used during times of king salmon conservation. To address this issue, feasibility work using purse seine gear has been conducted by YDFDA from 2013 through 2015. Throughout purse seine feasibility work, the department worked collaboratively with YDFDA to observe, monitor, and record data on summer chum salmon catch, effort, number of king salmon

caught, condition of released king salmon, and other aspects of purse seine fishing. The following analysis is based on data recorded by the department and used as the basis for department comments.

In 2013 and 2014 test fishing occurred after the king salmon run was nearly complete in the lower river. While purse seine test fishing efforts led by YDFDA determined that summer chum salmon could be harvested in economically viable numbers, there were too few king salmon encountered during test fishing to effectively evaluate the ability to release king salmon immediately and unharmed.

In 2015, two purse seine configurations were evaluated with powered retrieval methods in District 1 from June 9–June 30, which encompassed nearly 85% of the total king salmon run and 80% of the total summer chum salmon run. Both configurations included a purse seine that was 3.5-inch stretch mesh and 100 meshes deep. The first configuration consisted of a 75 fathom net with a 24 foot boat and skiff traditionally used in this area of the river; the second configuration consisted of a 100 fathom net was used with a modified herring boat (35+ feet in length) and a skiff traditionally used in this area of the river. The smaller net and boat configuration proved more efficient than the larger operation, making more sets per day and catching more summer chum salmon per set. The larger configuration had more difficulty with hydraulic malfunctions, purse line problems, snags affecting pursing or net retrieval, or tangled rings. As such, data summarized here are based on operations with the smaller configuration only.

Once a purse seine was closed, summer chum salmon and king salmon were individually removed from the purse seine using rubberized dip nets to reduce injury. King salmon were placed in an onboard recovery tank to allow for visual inspection. Qualitatively the condition (e.g., vigorous or lethargic) and size (e.g., small, medium, large) of king salmon upon capture was visually assessed and recorded by the onboard department observer. Condition ratings of king salmon was based on guidelines and definitions found in the literature. Additional data collected included net residency time (the time interval between when the net began closing to when a king salmon was removed from the net) and total number of all species caught. The post-release mortality of king salmon could not be assessed in this test fishery.

The smaller configuration made 95 sets and averaged 24 summer chum salmon per set with a total of 2,135 chum salmon caught. The test fishery was conducted primarily in the mornings, prior to dip net and beach seine commercial fishing periods, but did overlap with the first hours of those openings. The average catch rate for summer chum salmon in the purse seine gear was significantly higher for sets made before the commercial fishing period than for sets made during the commercial fishing period (39 summer chum salmon versus 13 summer chum salmon; $t = 2.18$, $df = 36$, $p < 0.05$). It is possible that competition with dip net and beach seine gear reduced catch rates. However, it is also possible that catch rates decreased as an area was fished out. The test fishermen did make efforts to find a new fishing location if an area was no longer producing or if an area was being fished by dip net and beach seine commercial fishermen.

A total of 158 king salmon were incidentally caught in the smaller configuration, which represented approximately 7% of the total salmon catch. Of the king salmon caught in the purse seine gear, 3% were killed on landing, < 1% were bleeding, 36% were deemed lethargic, and 61% were identified as vigorous. Medium and large king salmon were more likely to be lethargic after capture than small king salmon (36% versus 8%, respectively; $X^2 = 11.82$, df = 1, $p < 0.001$). The average net residency per set was highest on day one of the test fishery (approximately 20 minutes), but then stabilized after day four of the test fishery. Net residency time averaged 11.8 minutes per set and there was no correlation between net residency time and king salmon condition.
Non-target species caught include: 98 ciscoes, 62 burbot, 11 sheefish, 174 whitefish species (includes humpback, broad, and round), 11 Northern pike, and one pink salmon. Larger non-target species did not appear to suffer direct mortality during seining while the smaller non-target species, namely whitefish species and pink salmon, were prone to being gilled in the seine webbing. Note this was an odd-numbered year so pink salmon were not abundant.

The test fishery did not directly assess delayed mortality of king salmon. However, one radio telemetry study in Johnstone Strait, British Columbia, found that increased net residencies have a positive correlation with increased mortality. Specifically, a net residency of < 15 minutes resulted in 100% survival of salmon captured and released, while landing times of 15–30 minutes resulted in 78% post-release survival of salmon. Any landing times longer than 30 minutes resulted in only 50% long-term salmon survival. Additionally, the Washington Department of Fish and Wildlife conducted tagging and radio telemetry studies to assess long-term post-release survival of non-target king salmon survival after capture and release from beach seine and purse seine gear in the lower Columbia River. Results indicate that for king salmon, long-term post-release survival of fish captured in a purse seine and beach seine was 90% and 87%, respectively. The results from the Columbia River would indicate that delayed post-release mortality might be slightly lower for purse seines than beach seines.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. Purse seine gear could provide more commercial fishing opportunity to harvest surplus summer chum salmon during times of king salmon conservation and has the potential to be an economically viable gear type while conserving king salmon in the Yukon River. However, test fishing conducted by YDFDA revealed that there is competition with other current selective gear types. When a commercial fishing period opened, the ideal purse seine fishing sites would become occupied by dip net and beach seine fishermen. A majority of commercial fishing periods do occur concurrently with subsistence fishing periods so competition with other selective gear types could affect both commercial and subsistence users. Given the high cost to enter a purse seine fishery, it is anticipated relatively few fishermen could afford the new gear to participate in the fishery to start. However, as fishing methods are refined and more fishermen learn how to use the new gear, participation in the fishery may increase over time.

Despite limited available information regarding the post-release mortality of king salmon from this gear type, the test fishery has proven that king salmon can be effectively released to the water. Additionally, studies show that reduced landing time increases post-release survival and that post-release survival from purse seines is actually slightly higher than post-release survival from beach seines, which is already a legal selective gear type used during times of king salmon conservation. The higher incidence of lethargy in large king salmon is of potential biological concern. However, there are no data from Yukon River king salmon to correlate immediate condition after capture with long-term post-release survival. It is of note to add that smaller individuals of incidentally caught species, such as whitefishes and ciscoes, have greater potential of being gilled in purse seine gear.

COST ANALYSIS: Approval of this proposal will result in a direct cost to fishermen to procure new fishing gear to participate in this fishery.

PROPOSALS 127 and 128 – 5 AAC 05.200. Fishing districts and subdistricts; and 5 AAC 05.350 Closed waters.

PROPOSED BY: Kwik'pak Fisheries (proposals 127 and 128).

WHAT WOULD THE PROPOSALS DO? Proposals 127 and 128 both seek to expand commercial fishing area in Yukon Area District 1 from its present terminus at Apoon Pass to Point Romanof (Figure 127-1). Proposal 128 also seeks to expand the current District 1 seaward boundary from the current one mile from any grassland bank to three miles.

WHAT ARE THE CURRENT REGULATIONS? Yukon Area District 1 consists of that portion of the Yukon River drainage from the terminus of Apoon Pass extending west and south along the coast of the delta to the terminus of Black River, and one nautical mile seaward from any grassland bank (Figure 127-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSALS WERE ADOPTED? These proposals may provide more commercial fishing opportunity along the Coastal District north of Apoon Pass and in marine waters offshore of District 1. This may provide opportunities to operate fisheries that target higher-quality pink salmon than status quo. Opening Apoon Pass to Point Romanof to commercial fishing could result in competition with traditional subsistence fishing. It remains unclear if other chum salmon stocks, such as Norton Sound or Kotzebue, would be harvested in the proposed area. Additionally, it is unclear what the impacts would be to local salmon stocks in the Pastolik and Pastoliak rivers. Extending the marine waters of District 1 as requested in Proposal 128 is not expected to greatly increase the harvest of chum or coho salmon; however, it may provide more commercial fishing opportunity along the coast, alleviate congestion in existing fishing sites, and improve fish quality.

BACKGROUND: It is likely that the Coastal District was not originally opened to commercial fishing at statehood in an effort to ensure the fishery would not harvest Yukon River stocks. Additionally, the marine boundaries of District 1 were likely set at one nautical mile from any grassland bank to avoid harvesting salmon that were bound for other areas, such as Norton Sound and Kotzebue. However, genetic information on harvests in the marine portion of District 1 in both the summer and fall commercial fisheries suggests that the bulk of the commercial harvests of chum salmon include coastal Western Alaska (CWAK) and Upper Yukon River (UY) stocks. Some Norton Sound stocks may be included in the CWAK estimate, and a small numbers of Asian and Kotzebue Sound fish are likely present.

There's a positive C&T finding for king, summer chum, fall chum, coho, and pink salmon in the Yukon Area. The board has found that 45,500–66,704 king, 83,500–142,192 summer chum, 89,500–167,900 fall chum, 20,500–51,980 coho, and 2,100–9,700 pink salmon are reasonably necessary for subsistence uses in the Yukon Area.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of these proposals. However, Apoon Pass to Point Romanof has not traditionally been used for commercial fishing in the past, but has been used by subsistence fishermen. Only a small number of commercial set gillnets have been observed fishing in the area around the mouth of Apoon Pass during aerial surveys of commercial openings, and fish ticket information suggests that, on average, three commercial permit holders fished set gillnets in the Set Net Only area of Apoon Pass in 2014. If adopted, buffer areas closed to commercial fishing should be placed around the mouths of the Pastolik and Pastoliak rivers to protect the small salmon stocks in those rivers.

Pink salmon are currently underutilized because of low flesh quality observed in the Yukon River. There is interest in targeting pink salmon and extending fishing seaward of the current District 1 boundary could provide a higher-quality product. If either extension is adopted (Apoon Pass to Point Romanof or seaward to three miles in marine waters of District 1), opening of these areas for commercial fishing should be established by emergency order.

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

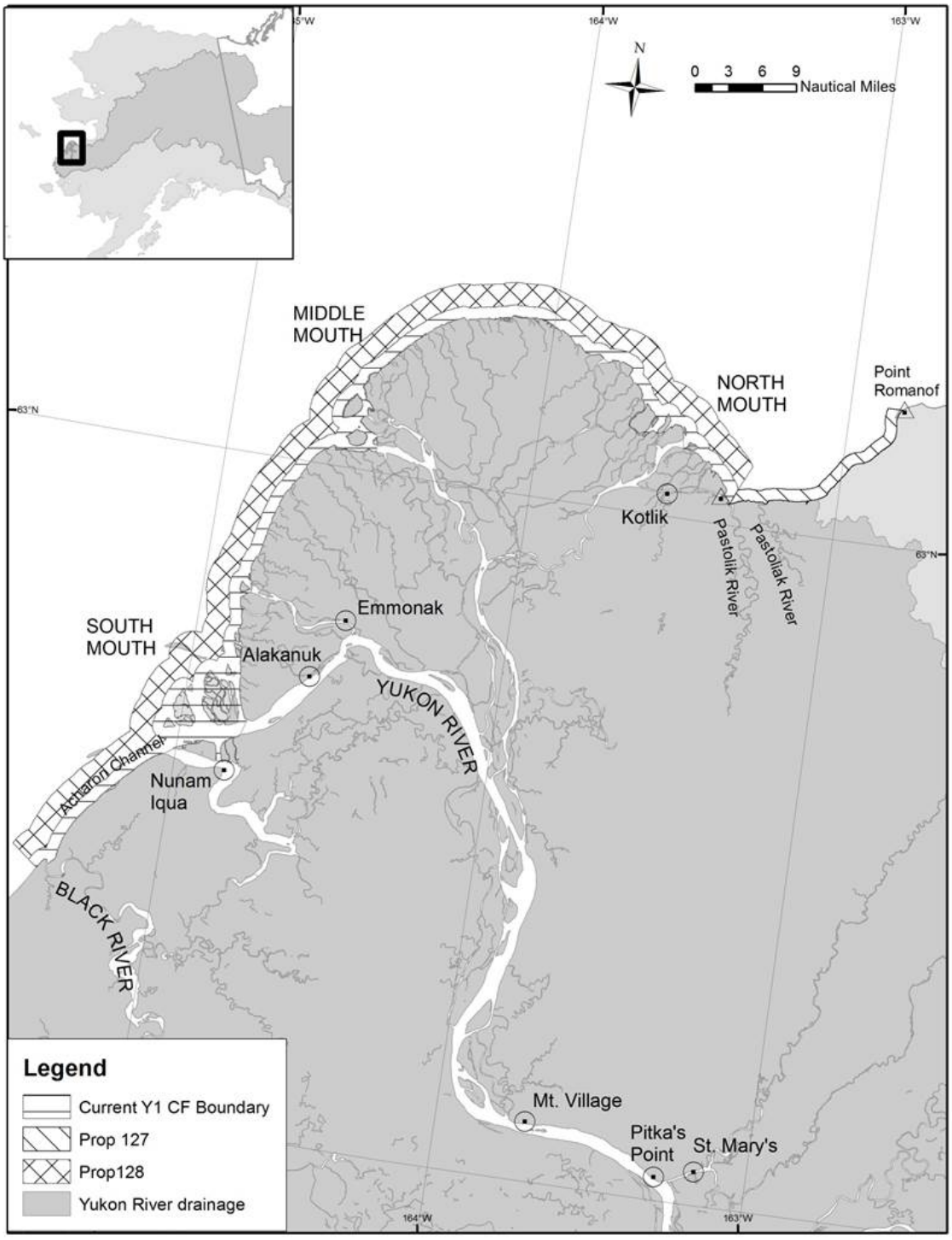


Figure 127/128-1. Map showing coastal district boundary extension to Point Romanof (both proposals 127 and 128) and a portion of the current District 1 boundary with three mile extension (proposal 128).

COMMITTEE OF THE WHOLE - GROUP 3: NORTON SOUND/PORT CLARENCE AREA SALMON AND AYK RESIDENT SPECIES. (19 PROPOSALS)

Norton Sound/Port Clarence Subsistence (4 proposals)

PROPOSAL 129 – 5 AAC 01.170. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would provide the department flexibility throughout the Norton Sound-Port Clarence Area to allow subsistence beach seine gear to harvest abundant salmon species, while protecting a less abundant specific salmon species by requiring the release of that salmon species for conservation purposes.

WHAT ARE THE CURRENT REGULATIONS? Salmon may be taken for subsistence purposes using beach seine gear in all of the Norton Sound-Port Clarence Area. Chum salmon may be required to be released in subdistricts 1–3. Pink salmon may be required to be released in Subdistrict 1. King salmon may be required to be released in subdistricts 5 and 6.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would expand the area where the department can allow beach seine gear to target abundant salmon species while still protecting a specific salmon species (or multiple species) for conservation purposes. This would require live release of any identified salmon species for which conservation is needed to support sustainable management. This provides an adaptive conservation tool that can be used to provide reasonable opportunities for customary and traditional uses.

BACKGROUND: Regulations requiring the release of a specific salmon have been used most recently to protect king salmon in subdistricts 5 and 6. However, in northern subdistricts the department does not have the option of requiring king salmon to be released alive from beach seines during times of king salmon conservation. The department has allowed subsistence beach seine fishing with no restrictions because of recent well above average chum and pink salmon runs.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This proposal would provide the department more flexibility in allowing harvest of salmon for subsistence purposes, while still protecting a specific salmon species for conservation purposes. Gear that can accommodate live release of a particular species for conservation purposes, such as beach seines, often increases the potential for greater subsistence fishing opportunities on abundant stocks when conservation needs of less abundant co-migrating species would otherwise restrict those opportunities.

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 non-subsistence 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 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 found that 96,000 – 160,000 salmon are reasonably necessary for subsistence uses in the Norton Sound-Port Clarence Area; and 3,430 – 5,716 chum salmon are reasonably necessary for subsistence uses in Subdistrict 1 of the Norton Sound District.

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 130 – 5 AAC 01.170. Lawful gear and gear specifications.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? This would allow the department to restrict set gillnet mesh size in subsistence fisheries throughout the Norton Sound-Port Clarence Area in years of low chum or king salmon abundance.

WHAT ARE THE CURRENT REGULATIONS? Under current regulations, the department may only implement mesh size restrictions in subdistricts 5 (Shaktoolik) and 6 (Unalakleet) subsistence fisheries. In several areas of the Norton Sound-Port Clarence Area, such as Subdistrict 4 (Norton Bay) and coastal waters near St. Michael and Stebbins, the department must implement complete closures to subsistence fisheries to conserve a particular salmon species because there are no regulatory provisions allowing mesh size restrictions to reduce the harvest of particular species for conservation purposes (Figure 130-1).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would provide the department increased flexibility concerning management of chum and king salmon in years of low abundance. Restrictions on gillnet mesh size would allow the department to keep subsistence fisheries open in areas where a particular species may require conservation measures. This additional regulatory tool would allow the department to conserve less abundant salmon stocks for escapement needs while allowing subsistence users reasonable opportunity to target other relatively abundant stocks. This would also allow consistent management actions throughout the Norton Sound-Port Clarence Area if necessary.

BACKGROUND: In recent years, king salmon runs to Western Alaska have undergone significant declines in abundance, prompting the need for restrictions to commercial, sport, and subsistence fisheries. In much of the AYK Region, the board adopted regulations that provide the opportunity for the department to restrict gillnet mesh size to conserve king salmon while still providing opportunities for customary and traditional uses of other salmon and other fishes. Because such mesh size regulations were not in place in the waters around Stebbins and St. Michael, subsistence fishermen have been able to fish in southern Norton Sound adjacent to the Yukon Area with no gillnet mesh size restrictions. As a result, the department conducted community meetings to encourage subsistence fishermen to voluntarily utilize gillnets with a mesh size of 6 inches or less to reduce harvests of king salmon while still being able to fish for other species. In other areas of Norton Sound, such as the Norton Bay Subdistrict, the department has had to completely close subsistence fisheries in June to conserve king salmon for escapement needs despite strong chum salmon abundance and a desire by subsistence users to utilize these fish.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. In many circumstances, the department could conserve king salmon or chum salmon in times of low abundance by having the option to implement mesh size

restrictions. Mesh size restrictions would provide for a better tool to manage subsistence fisheries in areas such as the Norton Bay Subdistrict, St. Michael and Stebbins coastal areas, or outlying coastal waters not included in Norton Sound fishing subdistricts. Current management in these areas involves the use of temporary closures during anticipated periods of peak king salmon abundance followed by incremental liberalization of subsistence fishing time as king salmon migrate out of these waters. The current management practice is not the preferred method in these areas, where users had previously been able to fish 24 hours per day with no restrictions in the subsistence fishery. Implementing a mesh size restriction in these areas, rather than closing fishing, may provide reasonable opportunities for subsistence uses of other salmon species or other fishes, and still be effective at conserving specific salmon species in times of low abundance.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for private persons if they need to purchase a gillnet with a mesh size of 7 inches or less, 6 inches or less, or 4.5 inches or less.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes; the board made positive customary and traditional use findings for salmon in the Norton Sound-Port Clarence Area (5 AAC 01.186).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found that 96,000 – 160,000 salmon are reasonably necessary for subsistence uses in the Norton Sound-Port Clarence Area; and 3,430 – 5,716 chum salmon are reasonably necessary for subsistence uses in Subdistrict 1 of the Norton Sound District.

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.

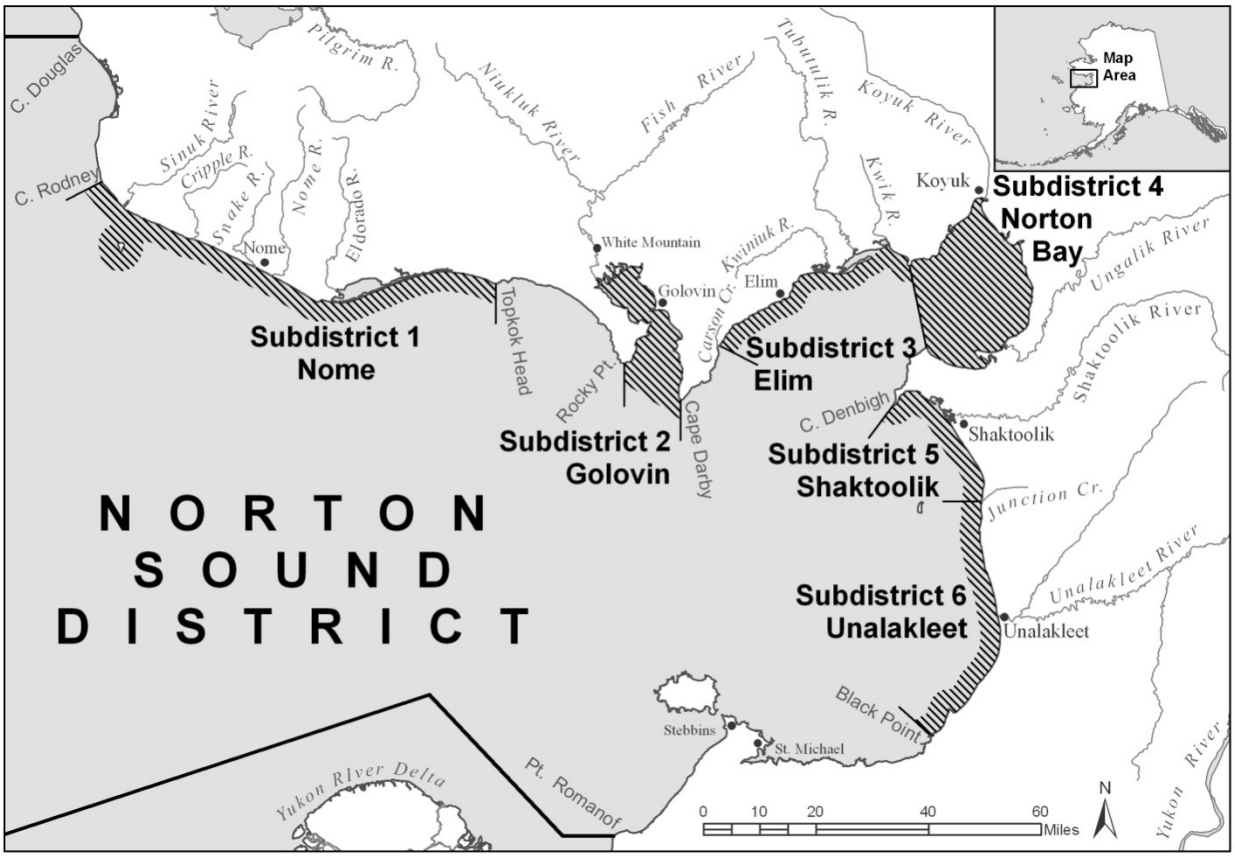


Figure 130-1.–Map showing major salmon producing river drainages and commercial fishing subdistricts in the Norton Sound District.

PROPOSAL 131 – 5 AAC 01.160. Fishing seasons and periods; and 5 AAC 01.170. Lawful gear and gear specifications.

PROPOSED BY: Thomas Sparks.

WHAT WOULD THE PROPOSAL DO? This would increase subsistence fishing time in Subdistrict 1 (Nome) freshwater subsistence areas and in Subdistrict 1 marine waters west of Cape Nome. Also, this would increase the length of the season when beach seining is allowed.

WHAT ARE THE CURRENT REGULATIONS? The freshwater subsistence set gillnet fishing schedule from June 15 through August 31 is two 48-hour fishing periods per week: from 6:00 p.m. Monday until 6:00 p.m. Wednesday and 6:00 p.m. Thursday until 6:00 p.m. Saturday. The marine waters schedule is seven days per week east of Cape Nome throughout the year. The marine waters schedule west of Cape Nome is 72 hours per week from June 15 through July 25, set by emergency order, and five days per week July 26 through August 15, from 6:00 p.m. Monday until 6:00 p.m. Saturday. Beach seining is allowed from June 15 through July 25 in both fresh and marine waters during the subsistence set gillnet fishing schedule. Additional beach seining periods may also be established by emergency order.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The proposed freshwater subsistence schedule would: (1) add an additional 24 hours of fishing, providing for five consecutive fishing days, and (2) shift the fishing time to allow for fishing over the weekend. The subsistence schedule for marine waters east of Cape Nome would remain seven days per week, but the proposed marine schedule for waters west of Cape Nome would: (1) add two days to the fishing schedule from mid-June through late July, providing for five consecutive fishing days, and, (2) shift the fishing time to allow for fishing over the weekend. Expanding the subsistence fishing schedule in the marine waters west of Cape Nome to five days per week would align with the schedule during the early part of coho salmon season, July 26 through August 15.

Additionally, beach seining opportunity would be extended later in the season for both fresh and marine waters: (1) west of Cape Nome the present closure date of July 26 would be extended to August 1, and, (2) east of Cape Nome the present closure date of July 26 would be extended to August 15. Increasing beach seining opportunity east of Cape Nome by three weeks would slightly increase harvest of coho salmon, although the majority of coho salmon in Subdistrict 1 are in rivers west of Cape Nome. Beach seining opportunity would be extended by one week west of Cape Nome, which may slightly increase the harvest of coho salmon. Fishermen may be confused by having different ending dates for beach seining for areas east and west of Cape Nome.

BACKGROUND: The Subdistrict 1 chum salmon run was designated a stock of concern in 2000. The current subsistence fishing schedules have been in effect since that time, with the exception of the Subdistrict 1 marine waters subsistence gillnet fishing schedule, which was expanded to seven days per week east of Cape Nome in 2013.

Additionally, beach seining was allowed, by the board, in both fresh and marine waters from June 15 through July 25 during the gillnet fishing schedule beginning in 2013. Improved abundance of Subdistrict 1 chum salmon has allowed the department to increase fishing time by emergency order in the marine waters west of Cape Nome to five days per week much earlier in July during the past three years.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal because, under current regulations, fishing time may be increased by emergency order when escapement goals are projected to be met, effectively accomplishing the intended goals of increased opportunity requested by 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.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made positive customary and traditional use findings for salmon in the Norton Sound-Port Clarence Area (5 AAC 01.186).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found that 96,000 – 160,000 salmon are reasonably necessary for subsistence uses in the Norton Sound-Port Clarence Area; and 3,430 – 5,716 chum salmon are reasonably necessary for subsistence uses in Subdistrict 1 of the Norton Sound District.

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 132 – 5 AAC 01.170. Lawful gear and gear specifications.

PROPOSED BY: Dan Reed.

WHAT WOULD THE PROPOSAL DO? This would include cast nets and dip nets as legal subsistence fishing gear in the Norton Sound-Port Clarence Area to take salmon and fish other than salmon.

WHAT ARE THE CURRENT REGULATIONS? Salmon may only be taken by gillnet, beach seine and fish wheel throughout the Norton Sound-Port Clarence Area and by a hook and line attached to a rod or pole in the northern portion of the area. In the Pilgrim River, salmon may be taken by dip net. Fish other than salmon may be taken only by set gillnet, drift gillnet, beach seine, fish wheel, pot, longline, fyke net, dip net, jigging gear, spear, and lead, or, in northern Norton Sound by a hook and line attached to a rod or a pole.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Allowing use of cast nets and dip nets may increase subsistence harvest of some finfish species. However, these gear types would likely harvest fish in limited amounts compared to gillnets and beach seines.

BACKGROUND: Although cast nets are not a legal gear type, they have been used to harvest a small amount of capelin during spawning events on Nome beaches. A dip net is a legal gear type in Norton Sound, but not for salmon, except in the Pilgrim River. In the three seasons that dip nets have been a legal gear in Pilgrim River no salmon have been reported harvested by dip nets on subsistence salmon permits. The 1993 customary and traditional use worksheet for salmon in the Norton Sound-Port Clarence and Kotzebue-Arctic areas identified that gill nets, seine nets, and hook and line attached to a rod or pole were the most common subsistence salmon fishing methods; however fish wheels were also adopted as legal subsistence gear for the taking of salmon, despite not being discussed in the customary and traditional use worksheet. The 1993 customary and traditional use worksheets for freshwater finfishes and marine finfishes in the Norton Sound-Port Clarence and Kotzebue-Arctic areas identified that gill nets set in open water and under the ice, seine nets, hook and line attached to a rod or pole and rod and reel in open water and through the ice are the most common subsistence freshwater and marine water fishing methods; however, a number of additional gear types were adopted as legal subsistence gear for fish other than salmon despite not being discussed in the customary and traditional use worksheets, including drift gillnets, fish wheel, pot, longline, fyke net, dip net, jigging gear, spear, and lead.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. The proposed gear types would be more economical to purchase than other net gear. Dip nets have been used in other locations to selectively harvest abundant fish species while live releasing species that are less abundant. The addition of dip nets as a legal gear type would allow for the potential to use this gear in this manner when conservation needs arise.

COST ANALYSIS: Approval of this proposal may to result in an additional direct cost for a private person voluntarily purchasing a new gear type.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made positive customary and traditional use findings for (1) herring and herring roe along the coast between Point Romanof and Cape Prince of Wales and along the coast of St. Lawrence Island; (2) salmon, and all finfish other than salmon, except as specified in (1) and (3) of this subsection, in the Norton Sound-Port Clarence Area; and (3) chum salmon in Subdistrict 1 of the Norton Sound District (5 AAC 01.186(a)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? The board found that 96,000 – 160,000 salmon are reasonably necessary for subsistence uses in the Norton Sound-Port Clarence Area; and 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)). While not in codified regulations, in December 1997, the board determined that 225,084 – 375,140 lb of all freshwater finfish, excluding salmon, was the amount reasonably necessary for subsistence uses. The board also determined that 95,789 to 159,648 lb of all marine finfish, excluding salmon and herring, was the amount reasonably necessary for subsistence uses. The board also determined that 66.58 tons of herring was the amount reasonably necessary for subsistence uses (AYK BOF 2004, RC 4, Tab 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 use? This is a board determination.

Norton Sound/Port Clarence Commercial (1 proposal)

PROPOSAL 133 – 5 AAC 04.395. Subdistricts 5 and 6 of the Norton Sound District and the Unalakleet River King Salmon Management Plan.

PROPOSED BY: Southern Norton Sound Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would establish a commercial beach seine fishery for chum and pink salmon in subdistricts 5 and 6 that could be opened by emergency order in times of low king salmon abundance. If adopted, Norton Sound set gillnet permit holders could use beach seines to commercially harvest chum and pink salmon before July 1 even when additional king salmon conservation measures are necessary. Language in the proposal also stipulates that commercial beach seine gear would be restricted to mesh size no greater than four inches in stretched measure.

WHAT ARE THE CURRENT REGULATIONS? There are no regulatory provisions allowing a commercial beach seine fishery for salmon in Norton Sound. Set gillnets are the only legal gear type used in the Norton Sound commercial salmon fishery. In subdistricts 5 (Shaktoolik) and 6 (Unalakleet), the king salmon management plan prohibits commercial salmon fishing before July 1 if additional restrictions are needed to achieve king salmon escapement goals.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The department could allow Norton Sound commercial salmon permit holders to use beach seine gear prior to July 1 to commercially harvest chum and pink salmon. This management option could be implemented even in times of low king salmon abundance. Compared to gillnets, properly operated beach seine gear would allow most king salmon to be released alive and unharmed while potentially allowing for an increased harvest of chum salmon.

BACKGROUND: In recent years, king salmon runs to Norton Sound drainages have undergone significant declines, prompting the need for increasingly severe restrictions to commercial, sport, and subsistence fisheries. In 2010, the subdistricts 5 and 6 king salmon management plan was amended by the board so that commercial chum and pink salmon fisheries could not occur prior to July 1 in years when king salmon escapement goals were not projected to be reached. While king salmon runs have been depressed during the 2000s, chum salmon abundance during this same period has been robust in subdistricts 5 and 6, allowing for stable subsistence harvests and increasing commercial harvests (Table 133-1). However, because of low king salmon returns the directed chum salmon fishery only has occurred on July 1 or later, which has resulted in foregone harvest. The king salmon stocks of subdistricts 5 and 6 have been designated a stock of yield concern since 2004.

Beach seine gear was recently allowed in the Yukon River as a method to allow for the selective harvest of chum salmon while not harming king salmon. Other gear types, like dip nets, have been more successful on the Yukon River because there are more locations where dip nets could be used and live release in this gear type is particularly effective.

There are possibly locations along the subdistricts 5 and 6 coastline where beach seines could be deployed successfully to harvest migrating chum and pink salmon.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal but **SUPPORTS** the intent of exploring new methods to utilize chum and pink salmon harvestable surpluses while conserving king salmon for subsistence uses and escapement needs. Large chum and pink salmon abundance in recent years has supported stable subsistence harvests, and could have supported higher commercial harvests. This was particularly evident during the 2014 and 2015 seasons in which good runs of chum salmon occurred with early to normal run timing. In these years the July 1 start date came too late to target the first peak of the chum salmon run.

COST ANALYSIS: Approval of this proposal would result in an additional direct cost for a private person to participate in the fishery because a permit holder would need to purchase a beach seine and associated gear required for seine operation.

Table 133-1.–Estimates of chum salmon escapement to the Unalakleet River drainage and Subdistrict 6 (Unalakleet) subsistence and commercial harvest of chum salmon, 1996–2015, Norton Sound.

	Escapement Count		Subdistrict 6 Harvest	
Year	North River Tower	Unalakleet River Mainstem Weir	Subsistence	Commercial
1996	9,789		4,227	7,369
1997	6,904		1,603	17,139
1998	1,526		3,038	6,210
1999	5,600		3,692	5,700
2000	4,971		3,000	2,700
2001	6,515		2,918	1,512
2002	5,918		3,877	339
2003	9,859		1,785	3,075
2004	10,036	47,864 [a]	2,154	4,924
2005	11,984	98,269 [a]	2,660	3,192
2006	5,385		2,712	6,721
2007	8,151		2,057	11,788
2008	9,502		2,805	17,648
2009	9,783		2,708	20,647
2010	16,131	70,811	3,159	30,588
2011	19,898	110,731	3,316	34,003
2012	9,120	71,593	3,973	28,161
2013	10,518	113,953	3,129	54,873
2014	13,452	54,562 [b]	2,712	32,313
2015	22,773	97,885	3,258 [c]	41,209
Average (1996-2010)	8,137	72,315	2,826	9,303
Average (2011-2015)	15,152	89,745	3,278	38,112

Note: blank cells denote no data available.

[a] Weir was only operational since 2010. Mainstem estimates in 2004 and 2005 derived from a radiotelemetry study of the proportion of fish spawning above the current mainstem weir site during these years.

[b] Weir in late due to high water levels in June; 2014 estimates considered partial counts.

[c] 2015 subsistence harvest data unavailable. Previous 5-year (2010-2014) average harvest substituted.

Norton Sound/Yukon Area Boundary (1 proposal)

PROPOSAL 134 – 5 AAC 01.150. Description of the Norton Sound-Port Clarence Area; 5 AAC 01.200. Description of Yukon Area; 5 AAC 04.100. Description of Norton Sound-Port Clarence Area; 5 AAC 04.200. Fishing districts and subdistricts; 5 AAC 05.100. Description of Yukon Area; and 5 AAC 05.200. Fishing districts and subdistricts.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Change the boundary line separating the Norton Sound-Port Clarence Area and Yukon Area in area and district descriptions from the latitude of Point Romanof to a line extending northwest (315°) from Point Romanof (Figure 134-1).

WHAT ARE THE CURRENT REGULATIONS? The current boundary line is the latitude of Point Romanof (63° 12.16' N. lat., 162° 49.72' W. long.).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? The area boundary would be clearly defined, would mirror how fisheries have been managed, and would prevent any potential confusion about where different area regulations apply.

BACKGROUND: In recent years the Yukon Area has had numerous subsistence fishing restrictions to protect king salmon. In southern Norton Sound adjacent to the Yukon Area, subsistence fishing has remained open and some subsistence fishermen from the Yukon Area have come into southern Norton Sound to target king salmon. There has been confusion regarding the Yukon Area boundary with Norton Sound-Port Clarence Area. If the latitude line of Point Romanof is extended seaward it bisects part of the Yukon River Delta.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. This proposal clarifies area boundaries so that the entire Yukon River Delta is clearly within the Yukon Area and not the Norton Sound-Port Clarence Area.

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

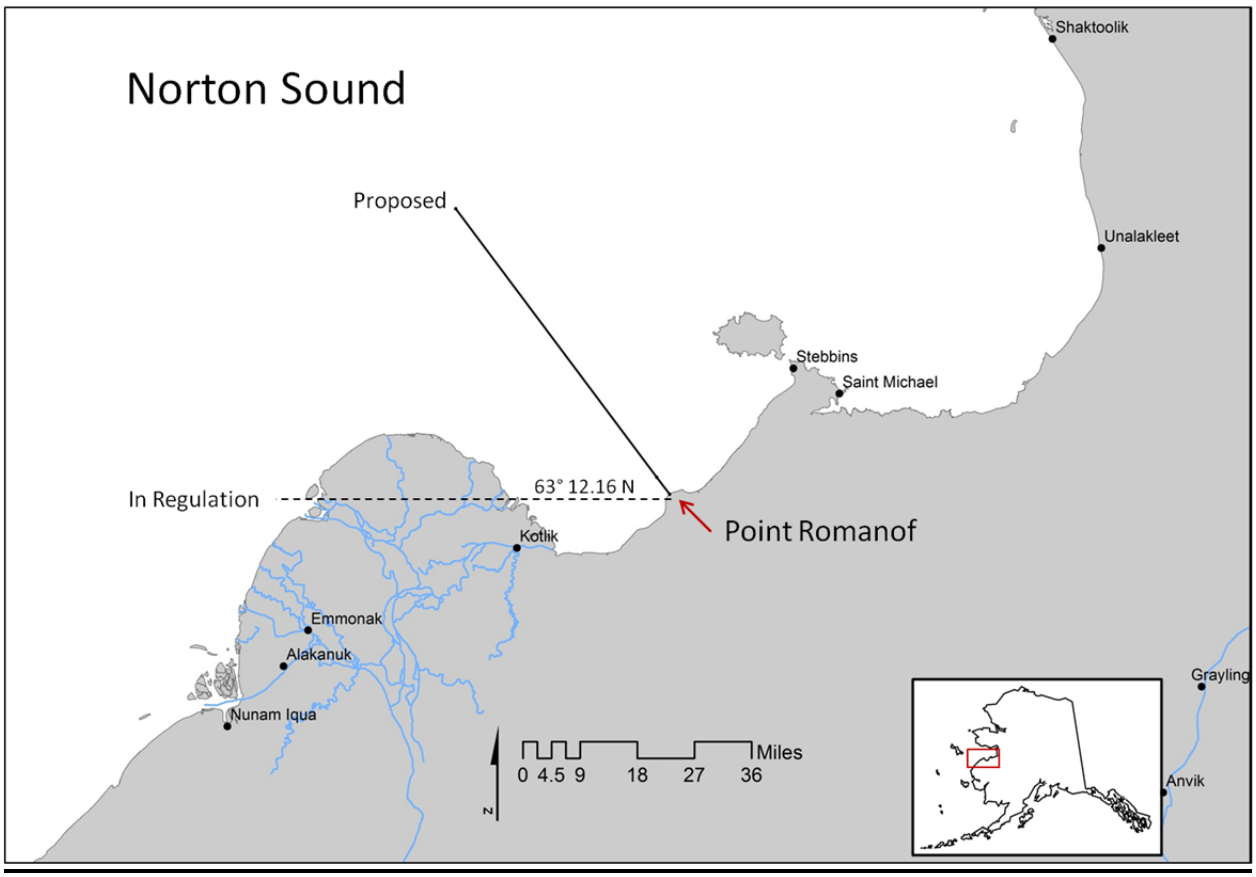


Figure 134-1.–Proposed new boundary line for Point Romanof.

Norton Sound Crab Pot Limits (1 proposal)

PROPOSAL 223 – 5 AAC 34.925. Lawful gear for Registration Area Q.

PROPOSED BY: Northern Norton Sound Advisory Committee.

WHAT WOULD THE PROPOSAL DO? This would limit a Norton Sound commercial king crab permit holder to operating no more than 20 king crab pots during the winter through-the-ice commercial king crab fishery.

WHAT ARE THE CURRENT REGULATIONS? There is no limit on the number of king crab pots that can be deployed by a commercial king crab permit holder during the winter through-the-ice commercial king crab fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would likely result in a reduction in the density of crab pots in certain areas and may reduce the number of crab pots lost during the winter. The department would issue pot tags to the permit holder and a permit holder would need to fill out affidavit if a pot was lost before receiving a replacement tag. King crab harvest-rate may decrease by an unknown amount. The department would be able to estimate number of crab pots being fished to ensure GHLs are not exceeded and maintain a more accurate estimate of pot losses inseason.

BACKGROUND: The Norton Sound winter through-the-ice commercial king crab fishery has recently expanded into a highly competitive fishery. A stable king crab population and high dock prices have led to record levels of fishing effort. Last year a record 44 commercial permit holders participated in the winter through-the-ice fishery and over 700 pots were reported fished during the season. In the 2015 winter subsistence fishery there were 155 permit holders participating and fewer than 200 pots were reported fished. The recent 5-year average (2010—2014) was 146 subsistence permit holders participating in the winter fishery.

Some commercial permit holders now view pots as a consumable item, and are willing to risk pot loss on the more unstable sea ice edge in order to gain additional fishing area. Increasing pot losses have occurred as commercial permit holders work the outer, less stable expanses of sea ice. From 2009—2013 voluntarily reported king crab pot losses in the commercial fishery ranged from three to 64 pots. In the last two years reported commercial king crab pot losses have been slightly over 100 pots each year compared to 16 subsistence crab pots reported lost in each of the last two years.

At the March 2015 statewide meeting, the board modified the Norton Sound red king crab harvest strategy so that the winter commercial red king crab fishery GHL is set at 8% of the total GHL (5 AAC 34.915). As a result, future winter commercial harvests are anticipated to be significantly lower than record breaking harvests observed in the fishery since 2013. The board also shortened the winter through-the-ice commercial fishing season to a period when the sea ice stability is more optimal in an effort to reduce pot losses.

DEPARTMENT COMMENTS: The department **SUPPORTS** this proposal. A pot limit would provide fishery managers with more reliable estimates of the amount of gear actively fishing in order to ensure GHLs are not exceeded. In the absence of a winter pot limit, it will be difficult to reliably assess and more importantly regulate actual fishing power as harvests approach the GHL. Reducing the amount of commercial gear should lessen crowding at the ice edge to prevent leapfrogging of pots onto unstable ice expanses and may reduce pot losses and conflicts with subsistence users competing for space. Although the commercial winter season has been shortened, the new season dates do not entirely eliminate the possibility of pot losses resulting from permit holders working the outer, less stable expanses of sea ice with an unlimited number of pots.

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.

AYK Resident Species Sport (6 proposals)

PROPOSAL 135 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: National Park Service.

WHAT WOULD THE PROPOSAL DO? Prohibit the use of set lines in Grizzly and Jack lakes.

WHAT ARE THE CURRENT REGULATIONS? Set lines may be used to target burbot in both Grizzly and Jack lakes from October 15 through May 15.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would reduce harvest efficiency for burbot and likely result in reduced harvest mortality in Grizzly and Jack lakes. Due to the remote nature of these lakes, this may also reduce effort on these lakes because anglers would be required to closely attend their lines and may choose to fish other lakes that allow the use of set lines or not fish for burbot at all.

BACKGROUND: Grizzly and Jack lakes are located on the Tanana River Area (TRA) side of the geologic divide between the Copper and Tanana river drainages (Figure 135-1). Set lines are allowed in most lakes within the TRA; however set lines are prohibited throughout the entire Upper Copper River and Upper Susitna River Area (UCUS).

The TRA lakes that prohibit set lines are easily accessible (Clearwater, Harding, Fielding and Tangle lakes), or have very low burbot populations (T Lake). Jack Lake is near the road system; however, Grizzly Lake is not. Neither lake receives high fishing pressure: Jack Lake has been reported in the Statewide Harvest Survey (SWHS) only six times in the last 19 years; and Grizzly Lake once during that same time period. In addition to Grizzly and Jack lakes, several nearby lakes also fall under the TRA regulations (Peggy and Nabesna Twin lakes). The lakes in the area that fall under the UCUS regulations are Copper, Sheep, Tanada, Kettle and Long lakes.

Access to Grizzly Lake is limited to aircraft and/or snowmachine, however the snowmachine trail from Tanada Lake is not accessible every year due to difficult trail conditions and low snow cover. In 2013 the winter trail was in good condition and an estimated 53 burbot were harvested based on two respondents to the Statewide Harvest Survey. Anecdotal reports during that same year indicated that a group of 15 people harvested approximately 180 burbot from Grizzly Lake over three days. In the six years that Jack Lake has been captured by the SWHS, no burbot have been reported harvested or caught.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. There are neighboring waterbodies in the TRA with burbot populations where set lines are allowed and this change would further complicate the existing regulations. There are limited population data available for Grizzly and Jack lakes, but based on the sporadic harvest pattern, it is believed that current harvest levels of burbot in these lakes are sustainable.

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

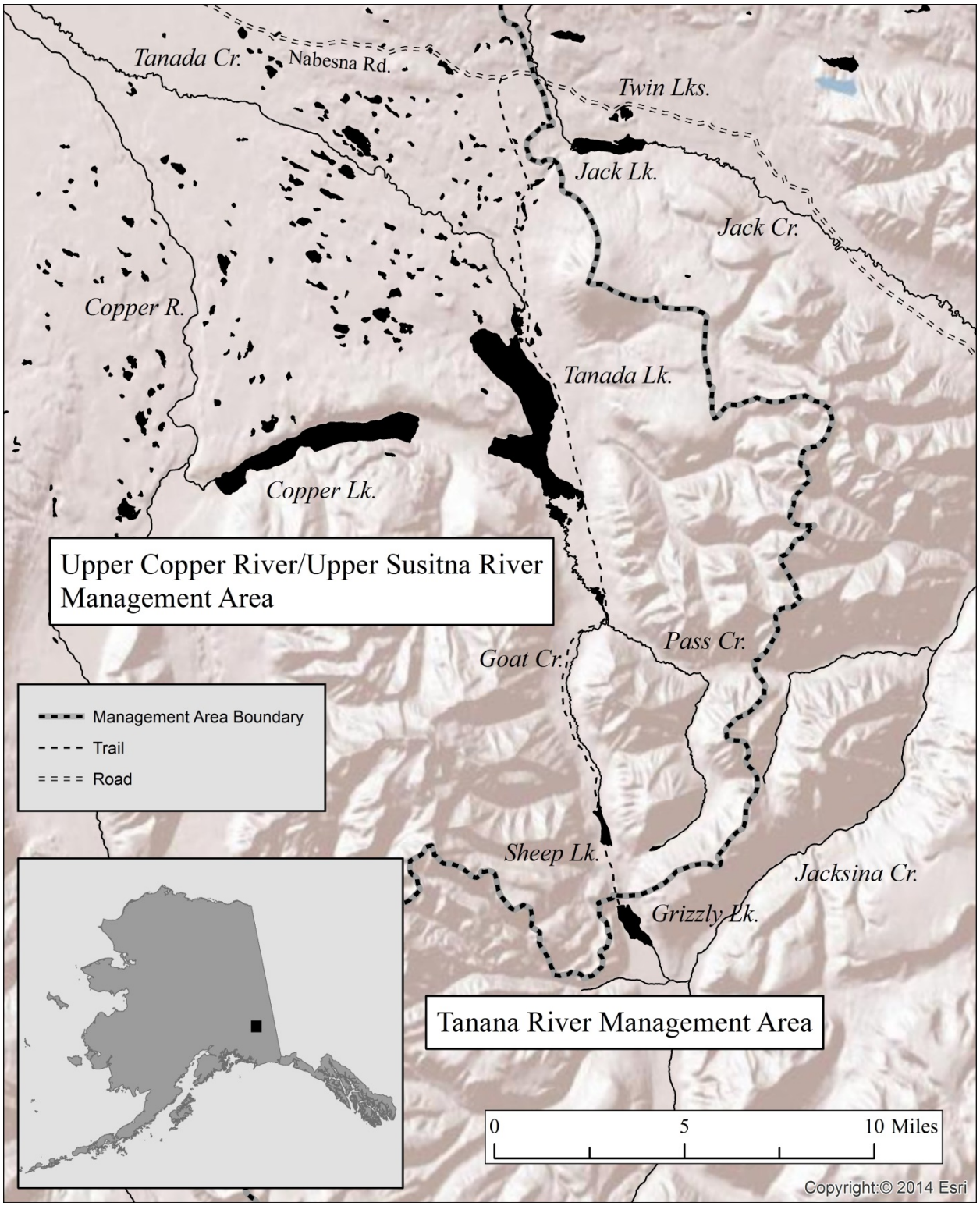


Figure 135-1. –Location of Grizzly and Jack lakes.

PROPOSAL 136 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Ethan Birkholz.

WHAT WOULD THE PROPOSAL DO? This would allow for only one closely attended line while fishing through the ice in Fielding Lake.

WHAT ARE THE CURRENT REGULATIONS? Sport fishing through the ice at Fielding Lake is permitted with the use of two closely attended lines.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would prohibit the use of a second line while ice fishing in Fielding Lake. This could reduce the harvest and catch of burbot and lake trout during the winter fishery.

BACKGROUND: Fielding Lake is an alpine lake located off the Richardson Highway near the community of Paxson. The lake supports populations of burbot, lake trout, and Arctic grayling. Since 2001, the board has adopted regulations to reduce the sport harvest of lake trout in Fielding Lake. These included increasing the minimum size limit for harvest from 22 to 26 inches, establishing a spawning closure in September, and allowing only single hooks for lake trout and burbot to reduce hooking mortality. The lake trout yield potential of Fielding Lake is 78 fish ≥600 mm fork length (~26 inches TL) per year estimated from the lake area model.

In 2007, the board adopted the *Tanana River Area Wild Lake Trout Management Plan* (5 AAC 74.040). This plan provides guideline management actions to maintain lake trout harvest at sustainable levels. In addition, a regulation was adopted to allow the use of only unbaited, single-hook, artificial lures in Fielding Lake. Prior to this action in 2007, other restrictions to reduce lake trout harvest below the sustainable yield of 78 lake trout were unsuccessful (Table 136-1).

Since the bait restriction went into effect, the 5-yr average (2009–2013) lake trout harvest from Fielding Lake has been 59 fish per year. During that same time period the total fishing mortality (harvest and an estimated 10% hooking mortality applied to catch after harvest is subtracted) has averaged 83 lake trout (Table 136-1). This demonstrates that the current regulatory regime at Fielding Lake is maintaining the lake trout fishery at a sustainable level.

The most recent abundance of male lake trout ≥ 26 inches was estimated at 125 fish in 2011 (Table 136-2). Approximately 42% of all fish sampled from 2010-11 were above the 26-inch minimum size limit (Figure 136-1). Fishing effort has remained relatively stable in recent years, averaging just over 1,000 angler-days (Table 136-1).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. The most recent estimate of lake trout abundance in Fielding Lake shows a stable population and current regulations are maintaining the harvests at a sustainable level.

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

Table 136-1.–Estimated sport harvest, catch, fishing mortality, and percent released of lake trout in Fielding Lake, 2004 – 2014.

Year	Effort[a]	Total Harvest	Total Catch	Catch Mortality[b]	Total Mortality[c]	Percent Released
2004	1,010	101	520	42	143	81
2005	1,248	112	862	75	187	87
2006	1,065	108	634	53	161	83
2007	1,139	40	227	19	59	82
2008	1,203	7	103	10	17	93
2009	788	18	552	53	71	97
2010	1,548	48	309	26	74	84
2011	422	2	12	1	3	83
2012	1,163	64	299	24	88	79
2013	1,545	161	335	17	178	52
2014	714	0	145	15	15	100
Average 5-year (2009–2013)	1,060	59	301	24	83	79
10-year (2004–2013)	959	66	385	32	98	82

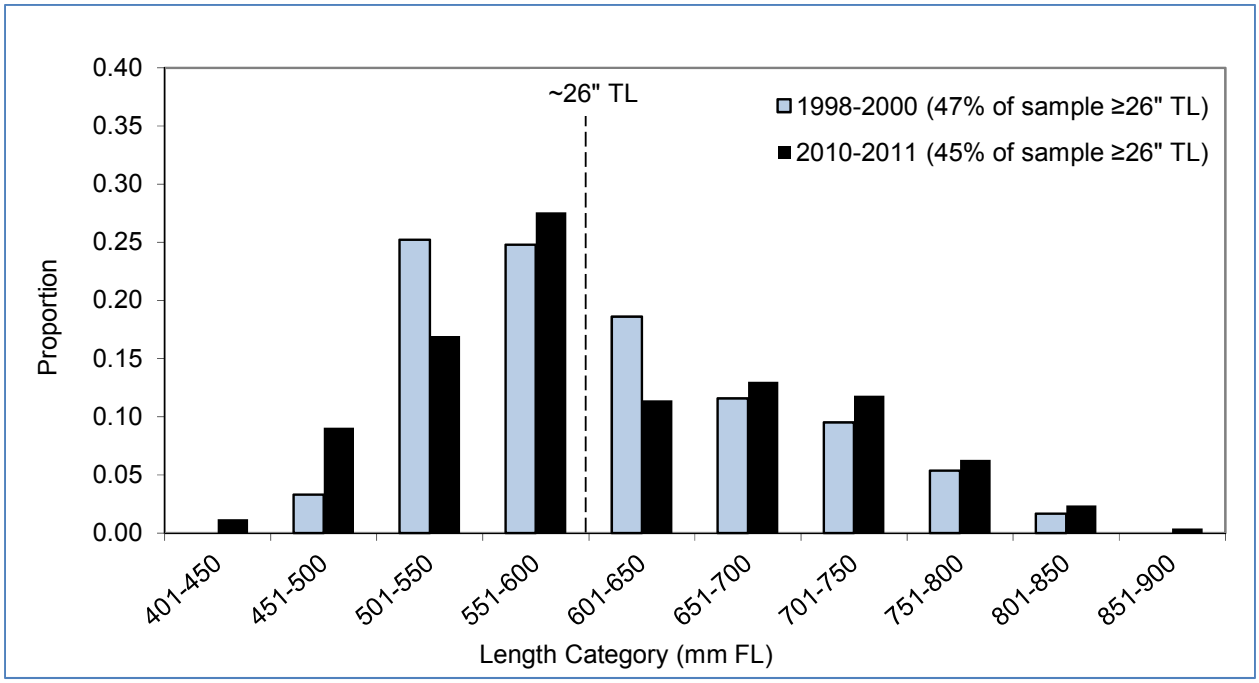
[a] Sport fishing effort is measured in number of days fished and is not apportioned by species.
[b] Catch mortality equals the total catch minus the total harvest multiplied by 10%.
[c] Total mortality equals the catch mortality plus the total harvest.

Table 136-2.–Abundance estimates for male lake trout in Fielding Lake.

Year	Length (mm FL)	Length (inches TL)	Abundance	95% CI
2011	500	21	270	225 – 315
2011	600	26	125	102 - 148

[a] A 50-50 sex ratio is assumed for total abundance.

Figure 136-1. –Length frequencies of male lake trout sampled from Fielding Lake during 1999 and 2011 abundance estimation events.



PROPOSAL 137 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Ethan Birkholz.

WHAT WOULD THE PROPOSAL DO? This would amend the unbaited, single-hook, artificial lure regulation for Fielding Lake by allowing the use of bait from November 1 through April 15.

WHAT ARE THE CURRENT REGULATIONS? In Fielding Lake the use of set lines is prohibited and only unbaited, single-hook, artificial lures may be used.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This proposal would allow the use of bait in Fielding Lake from November 1 through April 15. This will likely increase the catch of burbot and lake trout and increase hooking mortality in lake trout under the minimum size limit for harvest of 26 inches.

BACKGROUND: Fielding Lake is an alpine lake located off the Richardson Highway near the community of Paxson. The lake supports populations of burbot, lake trout, and Arctic grayling. Since 2001, the board has adopted regulations to reduce the sport harvest of lake trout in Fielding Lake. These included increasing the minimum size limit from 22 to 26 inches, establishing a spawning closure in September, and allowing only single hooks for lake trout and burbot to reduce hooking mortality. The lake trout yield potential of Fielding Lake is 78 fish ≥600 mm fork length (26 inches TL) estimated from the lake area model.

In 2007, the board adopted the *Tanana River Area Wild Lake Trout Management Plan* (5 AAC 74.040). This plan provides guideline management actions to maintain lake trout harvest at sustainable levels. In addition, a regulation was adopted to allow the use of only unbaited, single-hook, artificial lures in Fielding Lake. Prior to this action in 2007, other restrictions to reduce lake trout harvest below the sustainable yield of 78 lake trout were unsuccessful (Table 137-1).

Since the bait restriction went into effect, the 5-yr average (2009–2013) lake trout harvest has been 59 fish annually from Fielding Lake. During that same time period the total fishing mortality (harvest and an estimated 10% hooking mortality applied to catch after harvest is subtracted) has averaged 83 lake trout (Table 137-1). This demonstrates that the current regulatory regime at Fielding Lake is maintaining the lake trout fishery at a sustainable level.

The most recent abundance of male lake trout ≥26 inches was estimated at 125 fish in 2011 (Table 137-2). Approximately 42% of all fish sampled from 2010-11 were above the 26 inch minimum size limit (Figure 137-1). Fishing effort has remained relatively stable in recent years, averaging just over 1,000 angler days and nearly 80% of all lake trout caught in Fielding Lake are released (Table 137-1). Studies indicate that hooking mortality occurs at a higher rate when bait is used.

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal. Current harvest levels and assumed hooking mortality are very near the estimated sustained yield for the lake trout population in Fielding Lake. Given that allowing bait is likely to increase harvests, and the high proportion of catch-and-release fishing that occurs for lake trout in Fielding Lake, the use of bait and associated hooking mortality will likely result in total lake trout mortality that would exceed sustainable levels in Fielding Lake.

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

Table 137-1.–Estimated sport harvest, catch, fishing mortality, and percent released of lake trout in Fielding Lake, 2004 – 2014.

Year	Effort[a]	Total Harvest	Total Catch	Catch Mortality[b]	Total Mortality[c]	Percent Released
2004	1,010	101	520	42	143	81
2005	1,248	112	862	75	187	87
2006	1,065	108	634	53	161	83
2007	1,139	40	227	19	59	82
2008	1,203	7	103	10	17	93
2009	788	18	552	53	71	97
2010	1,548	48	309	26	74	84
2011	422	2	12	1	3	83
2012	1,163	64	299	24	88	79
2013	1,545	161	335	17	178	52
2014	714	0	145	15	15	100
Average						
5-year (2009-2013)	1,060	59	301	24	83	79
10-year (2004-2013)	959	66	385	32	98	82

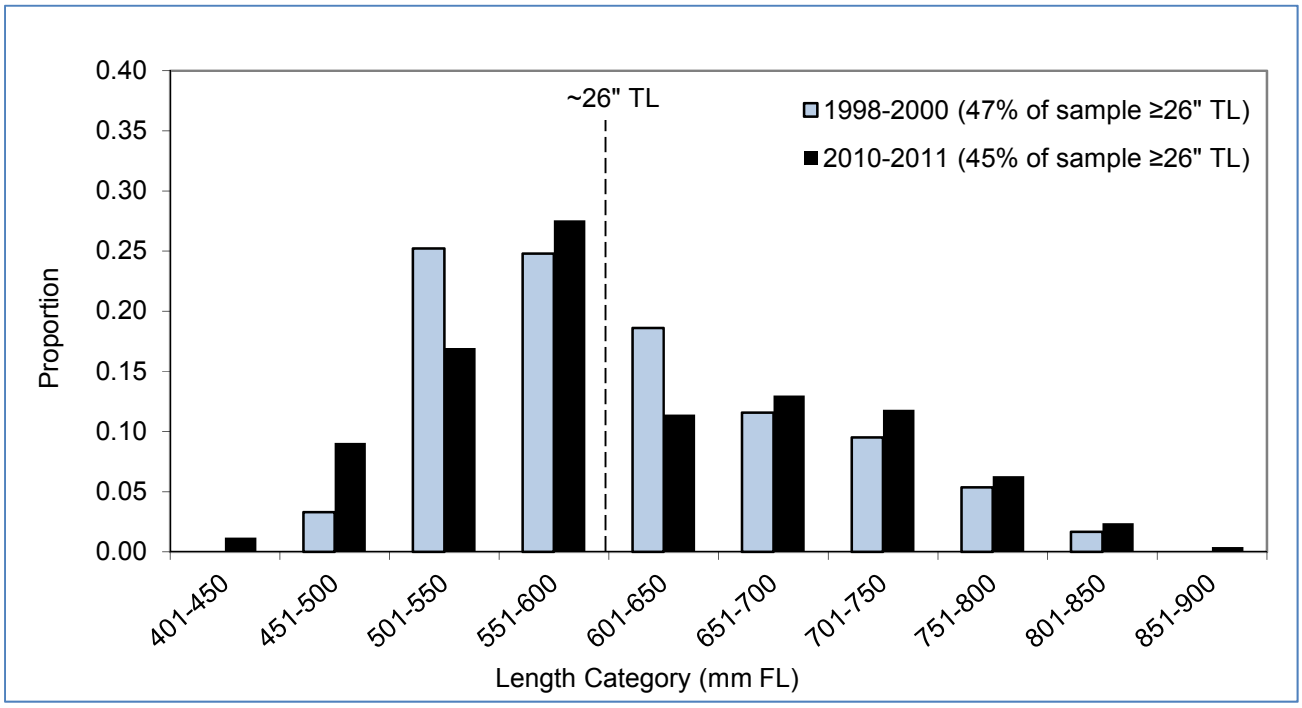
[a] Sport fishing effort is measured in number of days fished and is not apportioned by species.
[b] Catch mortality equals the total catch minus the total harvest multiplied by 10%.
[c] Total mortality equals the catch mortality plus the total harvest.

Table 137-2.–Abundance estimates for male lake trout in Fielding Lake.

Year	Length (mm FL)	Length (inches TL)	Abundance	95% CI
2011	500	21	270	225 – 315
2011	600	26	125	102 - 148

[a] A 50-50 sex ratio is assumed for total abundance.

Figure 137-1. –Length frequencies of male lake trout sampled from Fielding Lake during 1999 and 2011 abundance estimate events.



PROPOSAL 138 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Allow harvest of Arctic grayling less than 12 inches from June 1 – July 15 in the Chena River, from 500 yards downstream of the Nordale Road Bridge to the Chena's confluence with the Tanana River, and in Piledriver Slough (Figure 138-1). From June 1 – July 15 the remainder of the Chena River would remain closed to Arctic grayling retention. From July 16 – May 31 the entire Chena River would be closed to all Arctic grayling retention. This regulation would sunset after three years.

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

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would allow harvest of Arctic grayling less than 12 inches in the Chena River downstream of the Nordale Bridge, and in Piledriver Slough, from June 1 – July 15. The proposal as submitted does not specify a bag and possession limit, but this would increase total fishing mortality of Chena River Arctic grayling because harvest is currently not allowed.

BACKGROUND: The Chena River and Piledriver Slough have been catch-and-release for Arctic grayling since 1992. The 2014 sport catch of Arctic grayling on the Chena River was 24,234 fish. This was below the recent 5-year (2009-2013) average annual catch of 28,154 fish. The 2014 sport fish effort on the lower Chena River was 14,627 days fished; this was 57% above the recent 5-year average of 8,386 days fished (Table 138-1).

The management objectives for the Chena River Arctic grayling sport fishery are:

- In the upper river (above the Moose Creek dam, river miles 45-90) maintain a minimum abundance of 8,500 Arctic grayling ≥12 inches in total length.
- In the lower river (downriver from river mile 45 at the Moose Creek dam) maintain a minimum abundance of 2,200 Arctic grayling ≥12 inches in total length.

The most recent abundance estimate for Chena River Arctic grayling was approximately 27,700 fish, with 5,203 fish (≥12 inches) above the Moose Creek dam, and 2,963 fish (≥12 inches) below the Moose Creek dam (Table 138-2).

Piledriver Slough was last assessed for Arctic grayling abundance in 1997 and the population was estimated at 8,660 total fish. The 2014 catch of 2,939 Arctic grayling in Piledriver Slough was below the recent 5-year average, as was the 2014 effort of 1,167 days fished (Table 138-3).

DEPARTMENT COMMENTS: The department **OPPOSES** this proposal because the most recent abundance estimate does not indicate that we are meeting our minimum objectives necessary to consider opening the Chena River to Arctic grayling retention, and this change would further complicate existing regulations.

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

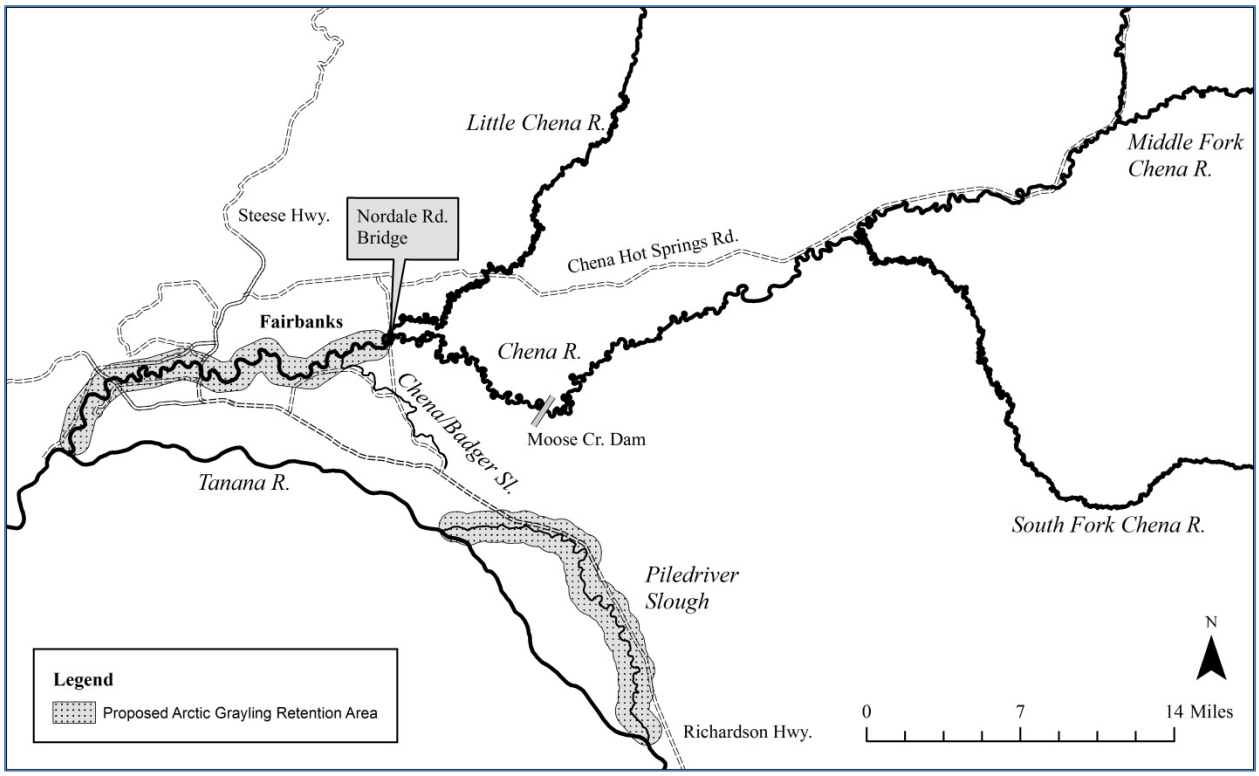


Figure 138-1.–Map of Chena River drainage and proposed Arctic grayling retention areas.

Table 138-1.–Estimates of effort (angler-days) and catch of Arctic grayling in the Chena River, 2004-2014. The "lower river" is the Chena River from the Moose Creek dam downriver to its confluence with the Tanana River.

	Lower River		Upper River		Total River	
Year	Effort	Catch	Effort	Catch	Effort	Catch
2004	20,165	20,666	11,320	34,710	31,485	55,376
2005	8,718	10,659	8,773	20,367	17,491	31,026
2006	9,115	10,837	4,257	15,485	13,372	26,322
2007	14,519	14,307	9,507	31,366	24,026	45,673
2008	9,114	8,594	5,688	20,315	14,802	28,909
2009	10,787	11,960	6,017	14,356	16,804	26,316
2010	7,401	8,793	8,007	18,274	15,408	27,067
2011	6,480	5,759	3,921	9,820	10,401	15,579
2012	4,249	5,054	4,047	13,722	8,296	18,776
2013	13,013	30,772	6,206	22,262	19,219	53,034
2014	14,627	7,931	5,666	16,303	20,293	24,234
2009-2013 average	8,386	12,468	5,640	15,687	14,026	28,154
2004-2013 average	10,356	12,740	6,774	20,068	17,130	32,808

Table 138-2.–Estimated abundance of Arctic grayling by size and by river section of the Chena River, 1991–1998, 2005.

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

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

Table 138-3–Estimates of effort (angler-days) and catch of Arctic grayling in Piledriver Slough, 2004-2014.

Year	Total Effort	Total Catch
2004	2,546	4,789
2005	1,079	3,962
2006	1,293	2,972
2007	1,519	3,316
2008	1,900	5,030
2009	4,695	5,295
2010	2,338	6,717
2011	1,768	3,475
2012	1,585	2,291
2013	2,119	3,202
2014	1,167	2,939
2009-2013 average	2,501	4,196
2004-2013 average	2,084	4,105

PROPOSAL 139 – 5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSAL DO? Update the list of stocked waters in regulation. The following water bodies would be removed from the stocked waters in regulation: Artillery Lake, Cavalry Lake, Horseshoe Lake, Kenna Lake, Kimberly Lake, Luke Lake, No Mercy Lake, Rockhound Lake, South Johnson Lake, and Stryker Lake. Cushman Lake would be added to the stocked waters in regulation.

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

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

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

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. It will eliminate confusion and apply the correct regulations to newly stocked waters and waters no longer stocked.

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

PROPOSAL 140 – 5 AAC 73.010. Seasons, bag, possession, and size limits, and methods and means for the Yukon River Area.

PROPOSED BY: Alaska Department of Fish and Game.

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

WHAT ARE THE CURRENT REGULATIONS? Bag and possession limit is 2 fish, of which only 1 fish may be 20 inches or greater in length.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would eliminate unnecessary sport fishing regulations for the Yukon River Area since rainbow trout are not native to the Yukon River drainage and have not been reported by sport anglers or captured during department sampling. This would also reduce confusion among anglers who may think that rainbow trout are present in the Yukon River Area since bag and possession limits for rainbow trout are included in regulation.

BACKGROUND: Current sport fishing regulations for the Yukon River Area include a bag and possession limit for rainbow trout. Wild populations of rainbow trout are not present in the Yukon River drainage. The species has not been captured or observed during department assessment projects or reported in the Statewide Harvest Survey in the Yukon River Area.

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.

AYK Resident Species Subsistence (4 proposals)

PROPOSAL 141 – 5AAC 01.120. Lawful gear and gear specifications.

PROPOSED BY: Kotzebue Sound Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Expand the area in which hook and line attached to a rod or pole is a legal subsistence gear within the Kotzebue District, and add the term "rod and reel" to the lawful subsistence gear in the proposed expanded area of the Kotzebue District.

WHAT ARE THE CURRENT REGULATIONS? Fish may be taken for subsistence purposes by Alaska residents without a subsistence fishing permit in the Arctic-Kotzebue Area (5 AAC 01.130; which includes the Kotzebue District defined in 5 AAC 03.200). Statewide subsistence regulations generally prohibit the use of a hook and line attached to a rod or pole (5 AAC 01.010(g)). Currently, a hook and line attached to a rod or pole is recognized as a legal subsistence gear in state waters from Cape Espenberg to Cape Prince of Wales of the Kotzebue District during open water, and is also legal throughout the district when fishing through the ice (5 AAC 01.120(b) and (f)) (Figure 141-1). When subsistence fishing with hook and line attached to a rod or pole during the open water season in these state waters, fishermen must conform to sport fishing methods, means, bag limits, and possession limits, except when fishing through the ice (5 AAC 01.122). Under federal regulations, rod and reel fishing in open water is legal subsistence gear for federally-qualified rural residents in federal waters throughout the Kotzebue District.

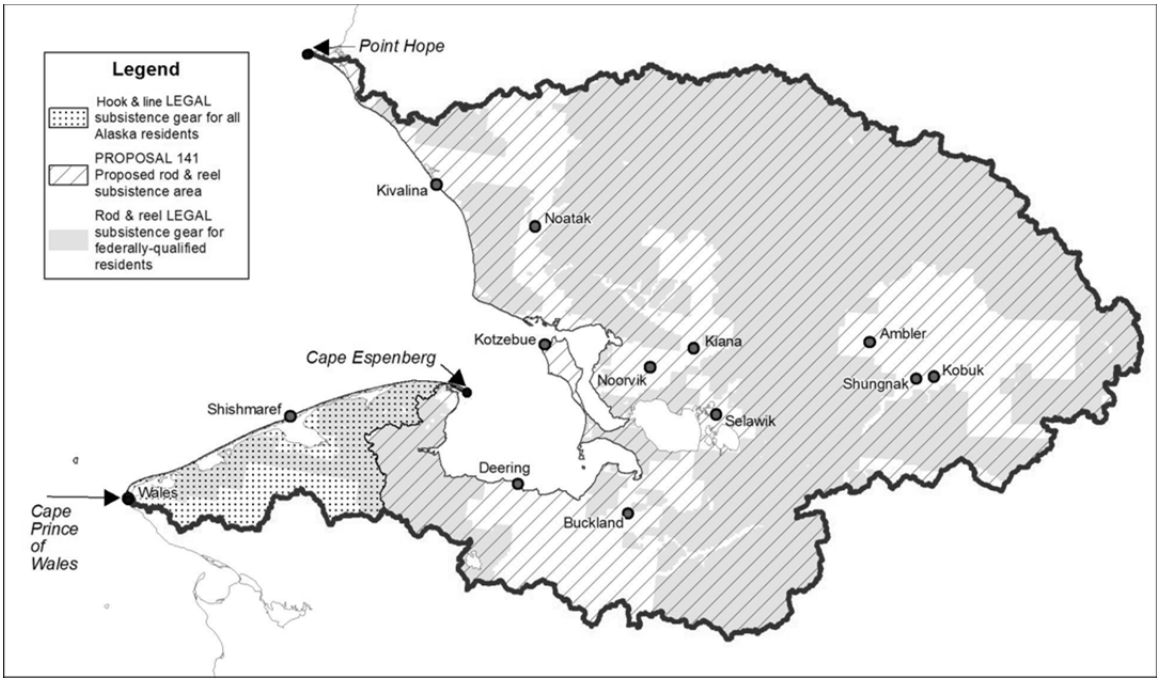


Figure 141-1.–Portion of the Kotzebue District where hook and line attached to a rod or pole is legal subsistence fishing gear, and portions addressed by Proposal 141.

Fishing with hook and line attached to a rod or pole is legal sport fishing gear in Alaska. In many areas of the state, hook and line is the only legal sport fishing gear allowed for finfish. A sport fishing license is generally required. Licenses are not required for Alaska residents under the age of 16. Alaska residents 60 years or older, or disabled military veterans (with a disability of 50% or greater) can apply for a permanent license (free of charge) for hunting, sport fishing, and trapping. For those required to obtain a sport fishing license, licenses are available at a reduced fee for a resident who is blind (25 cents) and for a resident that has received state or federal assistance in the past 6 months or whose annual family income is less than $8,200 ($5).

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? An unknown number of Alaska residents currently fishing under sport fishing regulations could fish under subsistence regulations with a hook and line attached to a rod or pole instead of sport regulations. Any resident of Alaska fishing in state waters of the Kotzebue District could fish using a hook and line attached to a rod or pole under subsistence regulations year round and would no longer be required to obtain a sport fishing license. The small number of individuals reported by the proposer that currently fish with hook and line without a license would be legal.

By obviating the need for Alaska residents fishing with hook and line attached to a rod or pole to obtain a fishing license—both large inherent sport fishery characteristics—this proposal may pose a change to the basic character of the sport fishery.

Duplicating the allowance of hook and line gear in the subsistence, in addition to the sport fishery complicates regulations. Enforcement of sport fishing regulations may become more challenging as enforcement staff would have to determine whether an angler was sport fishing or subsistence fishing with a hook and line attached to a rod or pole. Residents would not need to obtain a license but nonresidents would.

Overall, fishing opportunity effects are likely to be small. This proposal may result in a decline in sport fishing effort and harvest and an increase in subsistence effort and harvest by anglers using a hook and line attached to a rod or pole. Sport fishing effort and harvest by drainage is estimated annually by the SWHS; this effort and harvest would only be estimated (by community) when subsistence household surveys are conducted.

BACKGROUND: A hook and line attached to a rod or pole has not been legal subsistence fishing gear under state regulations, except for fishing through the ice from statehood through 2001. In 2001, the board adopted hook and line attached to a rod or pole as a legal subsistence gear for all Alaska residents fishing in state waters between Cape Espenberg and Cape Prince of Wales. Rod and reel has been legal subsistence gear for federally-qualified subsistence users in the federal waters of the Kotzebue District since 1999. The board has adopted similar regulations recognizing the customary and traditional uses of hook and line attached to a rod or pole as legal subsistence gear in several Western Alaska areas, including Northern Norton Sound, Port Clarence, the lower Yukon River drainage, and the Kuskokwim River drainage. A hook and line attached to a rod or pole is not legal subsistence gear under state regulations in the remainder of the state.

The customary and traditional use worksheet for Arctic freshwater finfish, adopted by the board in 1993, described gillnets, seines, and hook and line fishing as the most common freshwater fishing methods and gear types used to obtain fish for subsistence uses.

The Inupiat of Bering Strait, Northwest Alaska, and Arctic Alaska used hook and line attached to a rod or pole for subsistence fishing. Ethnographic collections from the late 19th century in Bering Strait, Kotzebue Sound and the North Slope include handmade fishing implements including sinkers, line, lures, hooks, and rods (Figure 141.2). This gear, often made of bone, antler, and ivory, was used when subsistence fishing in times of open water as well as through the ice.

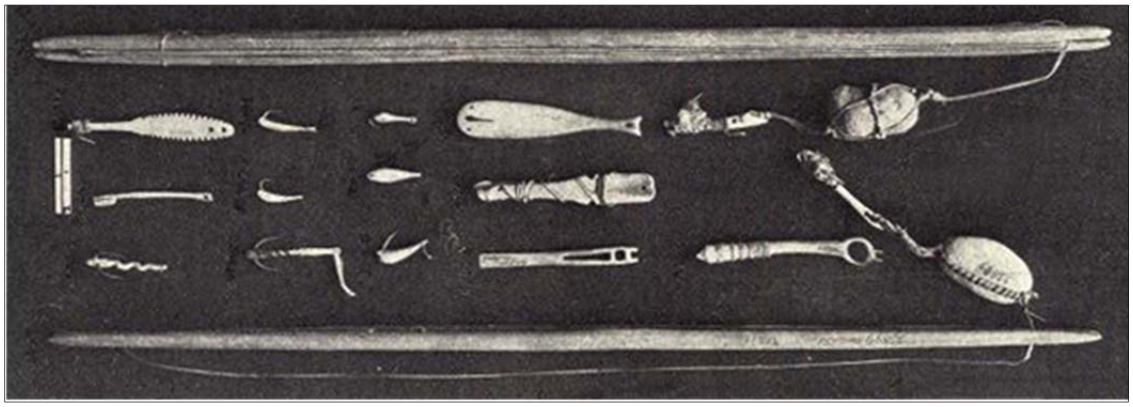


Figure 141.2.–Fishing implements collected by Edward W. Nelson in the Bering Strait area between 1877 and 1881. The pole, line, sinker and hook outfit at the top of this picture were collected at Kotzebue in 1881. (Nelson 1899 Plate LXVIII).

Hook and line attached to a rod or pole allows targeted harvests of small numbers of fish, or of a particular species, for immediate consumption or when circumstances do not support large numbers of fish to be taken because of limited processing capacity.

Arctic–Kotzebue Area subsistence fishermen use a variety of methods and gear types, many of which are used in open water as well as through the ice, including set gillnets, beach seines, jigging, fyke nets (known locally as “basket traps” or “fish traps”), and on occasion, even the use of ditches at select beach locations (*qargisaq*) to harvest fish for subsistence purposes.

Estimates of harvest taken by hook and line attached to a rod or pole are available from two sources: household subsistence harvest surveys, which sample community households without respect to which fishery(ies) members participated in, and the statewide mail-out sport fish harvest survey, which samples licensed angler households.

Comprehensive household harvest surveys conducted between 1990 and 2013 show that salmon and other species of freshwater finfish provide residents of the Kotzebue District, on average, about 218 edible pounds of wild food per person each year, or 42% of the estimated total per capita harvest of all fish and wildlife of 518 pounds per year. Most fish harvested for subsistence purposes were harvested with set gillnets and beach seines.

Results from 650 household surveys (79% sample) conducted in 9 Kotzebue District communities found that nine communities harvested an estimated 223,161 fish (934,425

edible pounds) in 2013, of which 4% (9,816 fish, 69,868 edible pounds) were harvested with hook and line attached to a rod or pole. Taking into consideration the differences between numbers of fish and fish species (size of fish can vary considerably by species) by *edible weight*, 14% of harvest by weight came by hook and line attached to a rod or pole in 2013. The majority of harvest taken by hook and line attached to a rod or pole by edible weight consisted of salmon and sheefish; the remaining 1% comprised northern pike, Dolly Varden, Arctic grayling, and other species of fish (Figure 141-3).

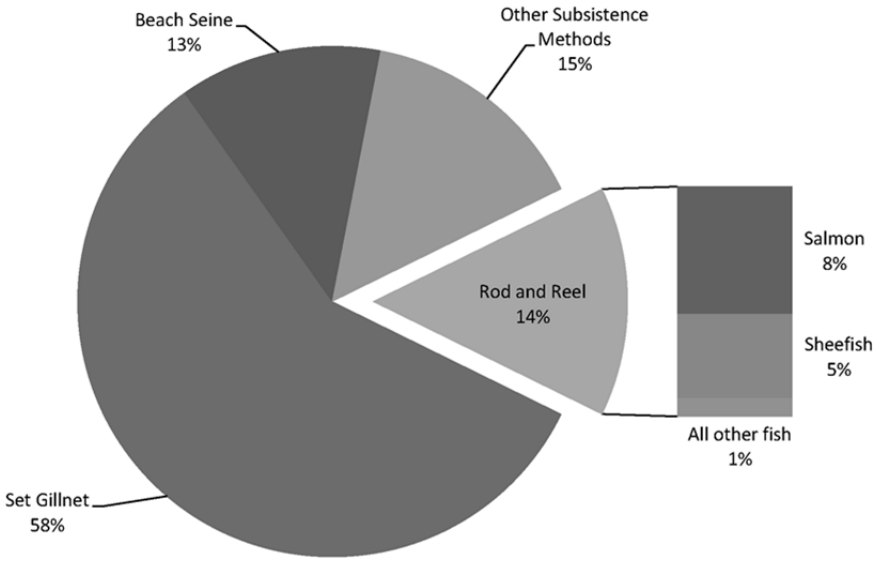


Figure 141.3.–Composition of fish harvests in 2013 from household harvest surveys in the Kotzebue District by gear type, edible weight, and by species for hook and line attached to a rod or pole harvests.

Fishing with hook and line attached to a rod or pole is the principal gear allowed under sport fishing regulations. Use of the gear and a fishing license requirement are two defining characteristics of the sport fishery that distinguish it from subsistence and personal use fisheries in Alaska. SWHS provides harvest, catch, and effort data for all sport fisheries around the state. The SWHS estimated an average annual harvest of 4,824 fish (of all species) in the Kotzebue District between 2000 and 2013. In the 10 of 14 years where Kotzebue District harvests can be statistically stratified by residency, 77% of Alaska resident harvests were by Kotzebue District residents (Figure 141.4).

DEPARTMENT COMMENTS: The department is **NEUTRAL** to the allocative aspects of this proposal. The intent appears to be to allow a small number of individuals who currently fish with rod and reel for certain species—or during specific times—to fish legally under subsistence regulations. Although there are no conservation concerns in this non-road system area, and the proponent states a small number of individuals would be affected, the proposal would apply to all Alaska resident anglers fishing for all species at any time in the Kotzebue area. It carries the potential for individuals now participating under sport regulations to "shift" to fishing under subsistence regulations.

COST ANALYSIS: No additional direct costs for a private person to participate in this fishery are anticipated.

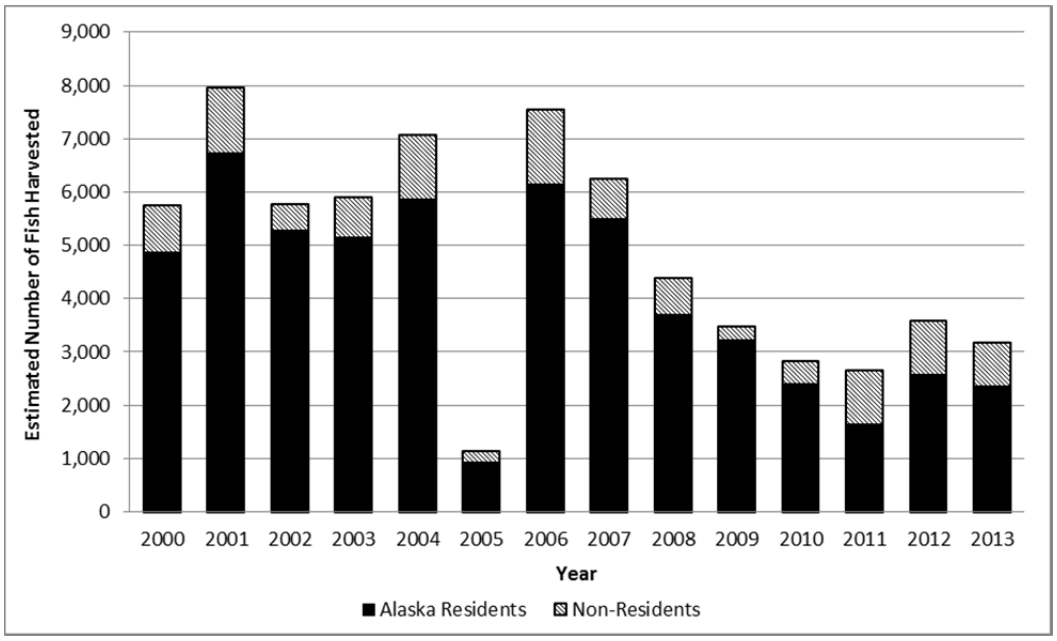


Figure 141.4.–Estimate of sport fish harvests of all fish species in the Kotzebue District from statewide harvest surveys 2000-2013.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes, the board made positive customary and traditional use findings for (1) herring and herring roe along the coast between Cape Prince of Wales and Point Hope and (2) salmon, sheefish, char, and all other finfish in the salt waters and fresh waters of the Arctic-Kotzebue area except as specified in (1) of this section in the Kotzebue District (5 AAC 01.136).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? ANS findings for Arctic-Kotzebue Area subsistence fisheries have not been codified. However, in 1997, the board determined that 671,000–1,118,000 pounds of all freshwater finfish, excluding salmon, was the amount reasonably necessary for subsistence uses. Also in 1997, the board determined that the ANS for all marine finfish, excluding salmon and herring, was 45,049–75,082 pounds. In 1993, the board determined the amount reasonably necessary for subsistence uses to be 43,500 salmon in the Kotzebue District.

5. Do the regulations provide a reasonable opportunity for subsistence uses? This is a board determination.

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

PROPOSAL 142 – 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Jack Reakoff.

WHAT WOULD THE PROPOSALS DO? Modify the dates gillnet gear may be used in the South Fork and Middle Fork of Koyukuk River.

WHAT ARE THE CURRENT REGULATIONS? Gillnet gear may only be used in the South and Middle forks of the Koyukuk River from November 1 through June 30.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence fishermen would be able to operate gillnet gear from August 30 through June 30. Harvest of nonsalmon species and chum salmon may increase.

BACKGROUND: Beginning in 2004 subsistence fishing for nonsalmon species was allowed in areas of the Koyukuk River along the Dalton Highway under a permit. Gillnets with up to three and one-half inches mesh could be used between November 1 and June 30. The intent of the dates gillnets may be used was to prevent the incidental harvest of salmon.

Information from sonar operated in 1990 and a weir operated in 1996 and 1997 show low numbers of chum salmon were enumerated in the South Fork Koyukuk River after August 30 (Figure 142-1). Both projects were located downriver of the permit area where subsistence fishing is allowed. Aerial survey information indicates that low numbers of chum salmon were present in late August in the Middle Fork Koyukuk River, and small numbers of chum salmon were present in the South Fork Koyukuk River in late September (Table 142-1).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. Based on sonar, weir, and aerial survey information a small number of chum salmon have been observed in the South Fork Koyukuk River in September. Since 2004, when subsistence fishing has been allowed by permit, fewer than three permits have been issued annually, and the reported harvest of whitefishes and other freshwater fish has been very small. Based on the low numbers of chum salmon present in September and the low number of permits issued for this area, if this proposal was adopted, the number of incidentally harvested salmon would likely be small.

COST ANALYSIS: Adoption of this proposal is not expected to result in additional direct costs for private individuals to participate in this fishery.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? No.

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board determined that king salmon, summer chum salmon, fall chum salmon, coho salmon, pink salmon, and 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)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? 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 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 use? This is a board determination.

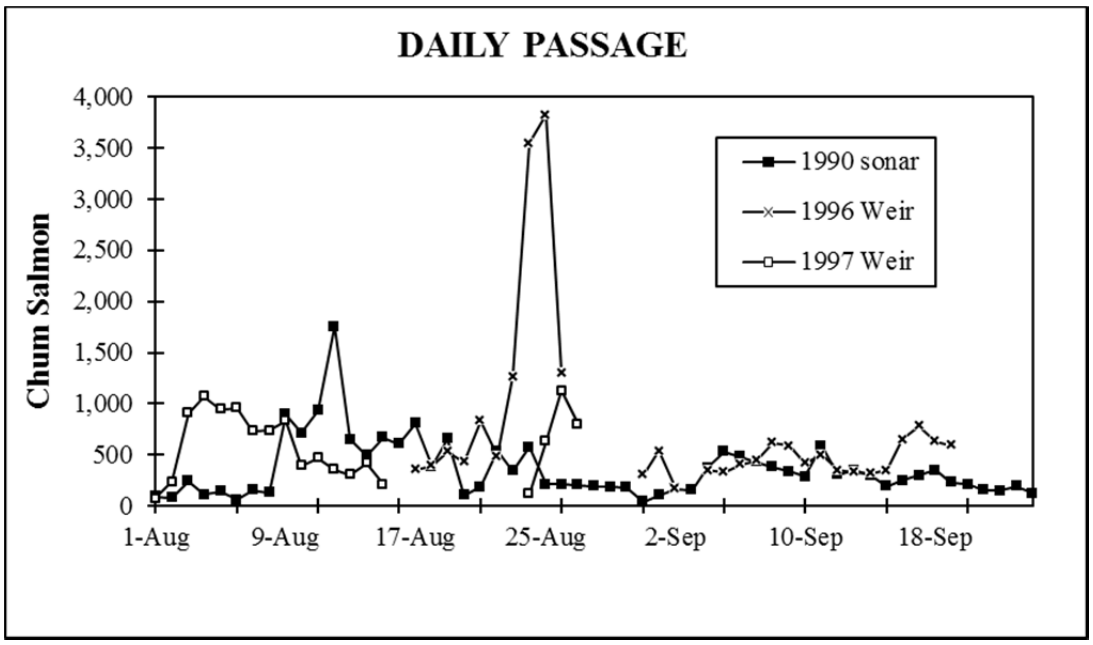


Figure 142-1.–Chum salmon passage counts on the South Fork Koyukuk River near Fish Creek, 1990 by sonar; 1996 and 1997 by weir.

Table 142-1.–Aerial survey counts for chum salmon in the upper Koyukuk River drainage by date.

Location	Date	Year	Total
Middle Fork			
	08/11 [a]	1971	50
	08/25	1975	47
South Fork			
	08/04	2012	26
	08/05	1975	14,626
	08/05	1999	207
	08/09	1974	57
	08/10	1975	600
	08/17	1975	470
	09/17 [a]	1989	241
	09/25 [a]	1985	954
	09/28 [a]	1971	652

[a] Surveys include counts outside South Fork permit area.

PROPOSAL 143 – 5 AAC 01.244. Minto Flats Northern Pike Management Plan.

PROPOSED BY: Marv Hassebroek.

WHAT WOULD THE PROPOSALS DO? This would reduce the subsistence bag and possession limit of northern pike in the Chatanika River drainage upstream from the confluence of the Chatanika River and Goldstream Creek to the Fairbanks Nonsubsistence Area Boundary (referred to as Chatanika SHA by proponent) from 10 fish per day and 20 in possession, to five fish per day and five in possession. Additionally, all northern pike 30 inches or longer would have to be returned to the water alive.

WHAT ARE THE CURRENT REGULATIONS? The subsistence fishing bag limit is 10 northern pike per day, with 20 in possession in the Chatanika River drainage upstream from the confluence of the Chatanika River and Goldstream Creek to the Fairbanks Nonsubsistence Area Boundary. There is no size limit on northern pike retained in the subsistence fishery.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence fishing bag and possession limits for northern pike would mirror the sport fish regulations found in 5 AAC 74.044 (b)(2)(B). This would also require subsistence fishermen to release northern pike over 30 inches long, which is more restrictive than the sport fishing regulations in 5 AAC 74.044 (b)(2)(B). The harvest of northern pike may decrease a small amount.

BACKGROUND: The Chatanika River drainage upstream from the confluence of the Chatanika River and Goldstream Creek to the Fairbanks Nonsubsistence Area Boundary (Figure 143-1) is a popular northern pike subsistence fishing area due to the concentration of an overwintering population and good winter trail access. In 2010, the board established a subsistence bag limit of 10 northern pike per day, with 20 in possession for this portion of the Chatanika River. This area is open to sport fishing from June 1 to October 14, and the sport fish bag and possession limit is five fish per day, only 1 of which may be 30 inches or longer.

The Minto Flats northern pike subsistence and sport fisheries are managed in accordance with the *Minto Flats Northern Pike Management plans* (5 AAC 01.244 and 5 AAC 74.044). The purposes of the plans are to manage stocks consistent with sustained yield principles, provide a reasonable opportunity for the priority subsistence fishery, and provide a sport fishing opportunity. Under the management plan, the exploitation rate of northern pike by all users may not exceed 20% annually. If 750 or more northern pike are harvested from the Chatanika River drainage upstream of the confluence on the Chatanika River and Goldstream Creek after January 1, the sport fishery bag and possession limit will be reduced to two fish for the remainder of the calendar year. If 1,500 or more northern pike are harvested from this portion of the Chatanika River drainage after January 1 until these waters are free of ice, the winter fishery will be

closed for the remainder of the winter season. The majority of the subsistence harvest occurs in mid-February to mid-April.

The most recent population estimate of 16,045 northern pike over 16 inches long in Minto Flats was made in 2008. Based on this estimate, a 20% exploitation rate is equal to a harvest of 3,209 northern pike. The recent 5-year average annual combined subsistence and sport harvest of northern pike was 774 fish (Table 143-1), which is below the maximum 20% exploitation rate specified in the *Minto Flats Northern Pike Management Plan.* Since 2010, when the bag and possession limit was implemented in the Chatanika River drainage upstream of the confluence on the Chatanika River and Goldstream Creek, the subsistence northern pike harvest has not met or exceeded the 750 or 1,500 fish management action trigger points. Therefore, the current subsistence harvest levels and exploitation rate are consistent with the sustained yield principles in the management plan.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on the allocative aspects of this proposal. However, current regulations are maintaining the harvests at a sustainable level and there is no need to further restrict subsistence users. While the proposed harvest bag and possession changes would mirror current sport fishing regulations, the size limit would be more restrictive than sport fishing regulations. 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 may result in additional direct costs for a private person to participate in the subsistence fishery if multiple trips are required to harvest similar amounts of pike for subsistence uses.

SUBSISTENCE REGULATION REVIEW:

1. Is this stock in a non-subsistence area? Yes, these northern pike stocks likely migrate through the Fairbanks Nonsubsistence Area (5 AAC 99.015(a)(4)).

2. Is the stock customarily and traditionally taken or used for subsistence? Yes: the board determined that freshwater fish species, including sheefish, whitefishes, lamprey, burbot, sucker, Arctic grayling, northern pike, and chars are associated with customary and traditional uses in the Yukon Area (5 AAC 01.236(a)(2)).

3. Can a portion of the stock be harvested consistent with sustained yield? Yes.

4. What amount is reasonably necessary for subsistence uses? 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 use? This is a board determination.

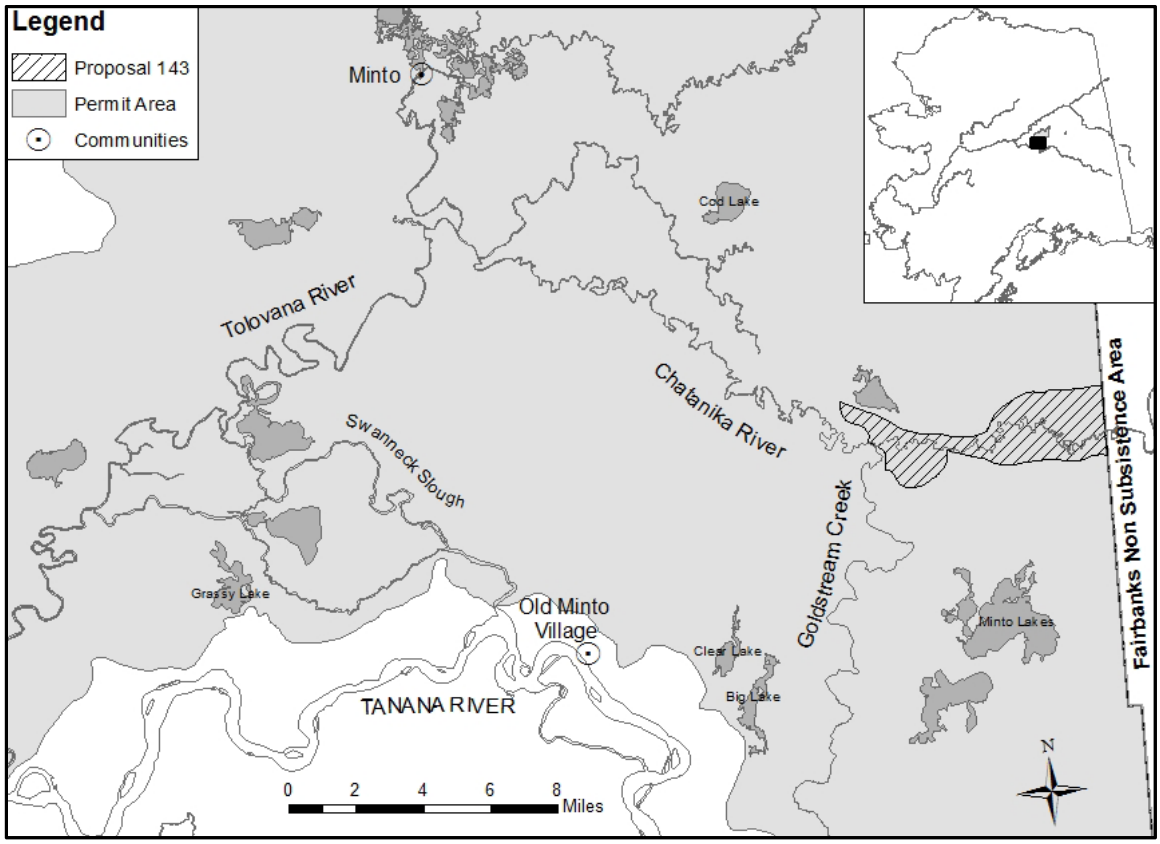


Figure 143-1.–Minto Flats northern pike subsistence fishing area.

Table 143-1.–Subsistence and sport fishing harvest of northern pike in Minto Flats complex[a], 2004–2015.

Year	Permits Issued	%Permits Returned	Subsistence Harvest	Sport Harvest	Total Harvest
2005	79	87%	386	2,052	2,438
2006	101	96%	788	1,204	1,992
2007	118	92%	1,837	1,809	3,646
2008	146	93%	1,339	386	1,725
2009	112	96%	563	873	1,436
2010	96	94%	115	609	724
2011	70	99%	100	422	522
2012	73	93%	525	412	937
2013	77	96%	231	382	613
2014	106	99%	478	597	1,075
2015[b]	104	13%	383	ND	383
Total	1,756	ND	14,325	12,070	26,395
2010–2014 Average	84	96%	290	484	774
2005–2014 Average	98	95%	636	875	1,511

Note: ND = no data.

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

[b] Data are preliminary and based on weekly call-ins. Permits expire 12/31/2015.

PROPOSAL 144 – 5 AAC 01.220. Lawful gear and gear specifications.

PROPOSED BY: Jack Wholecheese.

WHAT WOULD THE PROPOSALS DO? Allow the use of 5.5 inch mesh size gillnets across entire channels in portions of the Koyukuk River drainage for the purpose of targeting northern pike during spring until June 15.

WHAT ARE THE CURRENT REGULATIONS? The Koyukuk River is open with 7.5 inch or smaller mesh size set gillnets, 24 hours per day, seven days per week before June 15. A gillnet may not obstruct more than one-half the width of any fish stream and any channel or side channel of a fish stream.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Subsistence fishermen would be allowed to obstruct the entire width of Racetrack Slough, as well as sloughs off the Huslia River. This could block the passage of freshwater fish species other than northern pike. Harvest of northern pike and other freshwater fish species would likely increase.

BACKGROUND: There are traditional subsistence fishing practices that use gillnets and other gear types during springtime to capture northern pike and whitefish migrating out of lakes and into sloughs, streams, and main river channels in the Koyukuk River drainage. The current regulations prohibit obstructing more than one-half the width of fish streams or channels to provide some unobstructed fish passage for sheefish, whitefish, and other fish species.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal. The current regulation of limiting gillnets to obstruct no more than half of a stream or channel provides some unobstructed passage between habitats for freshwater fish species. During this time, northern pike, Arctic grayling, and whitefish species use sloughs to move from overwintering areas to summer feeding areas, and would be susceptible to local overharvest.

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 non-subsistence area? No.

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 uses? 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 use? This is a board determination.

AYK Resident Species Personal Use (1 proposal)

PROPOSAL 145 – 5 AAC 77.174. Waters closed to personal use fishing.

PROPOSED BY: Alaska Department of Fish and Game.

WHAT WOULD THE PROPOSALS DO? This would allow the retention of northern pike in Yukon Area Subdistrict 6-C personal use area (Figure 145-1).

WHAT ARE THE CURRENT REGULATIONS? Waters of the Tanana River drainage are closed to the personal use taking of northern pike above the mouth of the Kantishna River.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? Personal use salmon fishermen in Subdistrict 6-C would be able to retain northern pike as incidental harvest, eliminating the need to return fish (either dead or alive) to the water.

BACKGROUND: Personal use salmon fishermen in the Yukon Area Subdistrict 6-C may retain any finfish species except for northern pike, which must be returned to the water dead or alive. In 2013, the board repealed the subsistence regulation for the portion of the river both upstream and downstream of this area of the Tanana River that prevented fishermen from retaining incidentally caught northern pike.

From 2005 to 2014, subsistence fishermen in Subdistricts 6-A and 6-B reported an average annual harvest of 35 northern pike, while a total of 12 total northern pike have been incidentally harvested by personal use fishermen over the last 10 years. The vast majority of personal use fishermen utilize set gillnet gear. Information from set gillnets operated near Manley in 2014 as part of the Tanana River sonar test fish project indicated very low catches of northern pike in the mainstem Tanana River.

DEPARTMENT COMMENTS: The department submitted and **SUPPORTS** this proposal. The current regulation in the Fairbanks Nonsubsistence Area is more restrictive for personal use fishing than surrounding subsistence fishing opportunities for northern pike; however, there are no conservation concerns regarding northern pike in these waters that necessitate prohibiting the retention of a few incidentally caught northern pike by personal use fishermen.

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

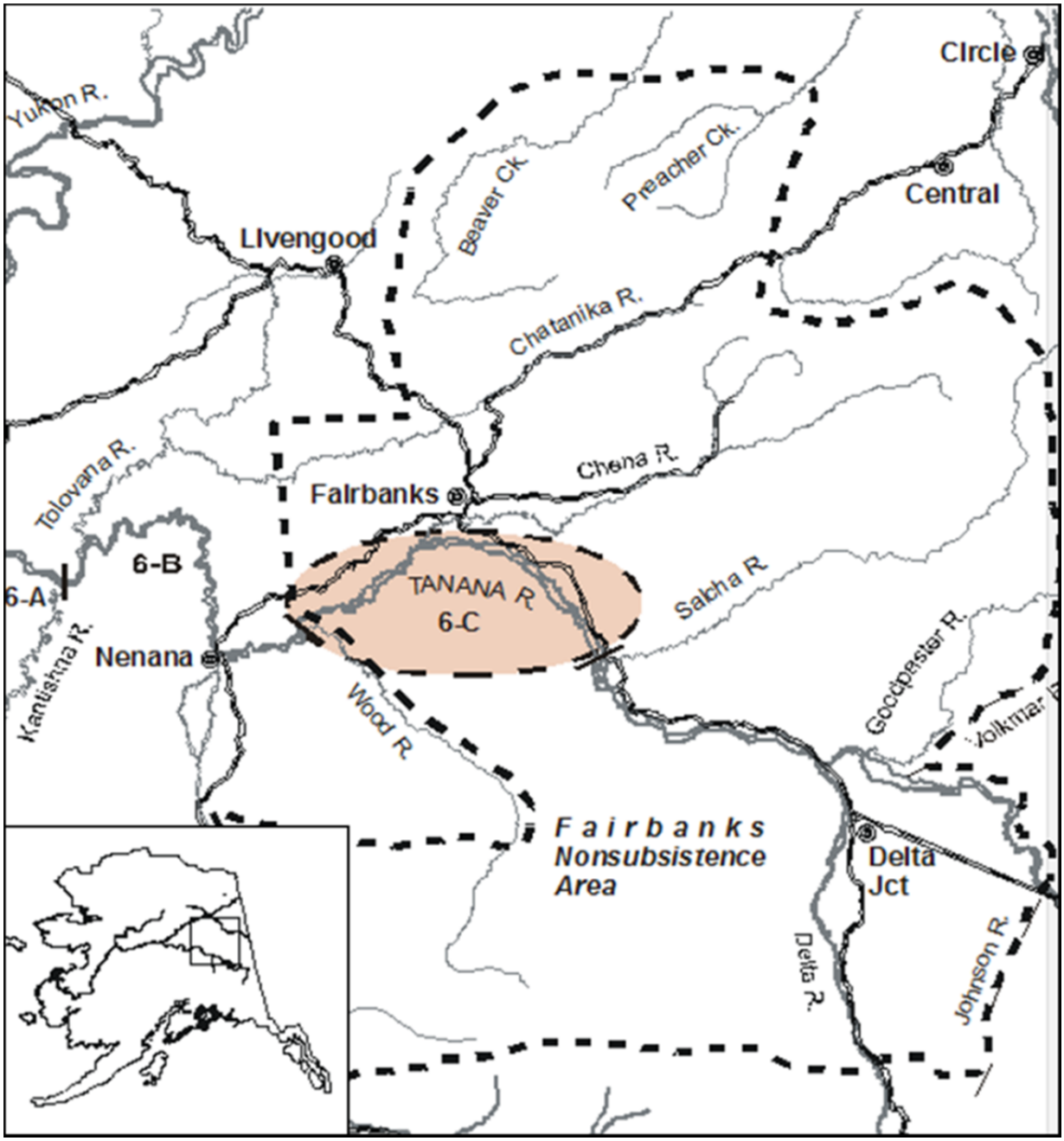


Figure 145-1.–Subdistrict 6-C personal use area within Fairbanks Nonsubsistence Area.

AYK Resident Species Commercial (1 proposal)

PROPOSAL 146 – 5 AAC 04.6XX. Fishing seasons.

PROPOSED BY: Southern Norton Sound Fish and Game Advisory Committee.

WHAT WOULD THE PROPOSAL DO? Establish a commercial cisco fishery in the Norton Sound and Port Clarence districts.

WHAT ARE THE CURRENT REGULATIONS? There is no designated commercial fishing season for ciscoes. However, harvest of ciscoes, other whitefish species, burbot, smelt, and Dolly Varden may occur under terms of an annual commissioner's permit. This permit also designates small commercial harvest quotas for whitefishes (including ciscoes), Dolly Varden, and burbot for individual river drainages in the Norton Sound-Port Clarence Area.

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This would establish a directed commercial fishery for ciscoes in the Norton Sound-Port Clarence Area. Season dates would also have to be established to minimize adverse impacts to ciscoes and other whitefish species during biologically sensitive periods and minimize conflicts with subsistence fisheries focused on ciscoes and other whitefish stocks. Harvest of ciscoes and whitefish species would presumably increase, but to an unknown degree. Incidental harvest of other non-target fish species would likely occur.

BACKGROUND: Since 2005, a commercial whitefish fishery has occurred on the lower Yukon River under a commissioner's permit that allows for sale of Bering cisco (*Coregonus laurettae*) and least cisco (*Coregonus sardinella*). The vast majority of the catch is Bering cisco. Spawning populations of Bering cisco are known to occur in the Yukon, Kuskokwim and Susitna rivers; however, information concerning population dynamics and abundance is very limited. These three populations are highly migratory, but genetic studies have shown that the vast majority of Bering ciscoes present in Norton Sound estuaries are of Yukon River origin. Conservative harvest quotas have been instituted on the Yukon River because of limited information on population dynamics, and due to their potential vulnerability in multiple fisheries because of their migratory behavior. Additionally, commercial quotas are kept low because of uncertainty regarding how current commercial harvest of ciscoes is impacting subsistence uses of whitefish stocks. Both state and federal Yukon River fishery managers are in agreement that increases to the Yukon River whitefish commercial harvest quota will not be granted for several years, or until more reliable information concerning population dynamics and abundance of cisco stocks is available to managers. This precautionary management approach reduces the possibility that the Yukon River commercial whitefish fishery will have long lasting adverse impacts on the sustainability of Bering cisco populations and subsistence uses of whitefishes.

Commercial miscellaneous finfish (including whitefishes) fisheries are authorized under a commissioner's permit in Norton Sound and Port Clarence from September 15 to June 15. As with the Yukon River whitefish fishery, Norton Sound fisheries directed on whitefish stocks are managed conservatively due to limited information on abundance estimates and concerns that increased commercial use could negatively impact subsistence uses. Small harvest quotas, ranging from 1,000–2,500 pounds, are set for each Norton Sound river drainage. Typically, the

majority of the commercial and subsistence whitefish harvest occurs from September through November. Table 146-1 shows commercial harvests of whitefishes in Norton Sound from 2006–2014. Quantitative information on species composition of the harvest is unavailable but Bering ciscoes are harvested alongside least ciscoes, round whitefish, humpback whitefish, and broad whitefish. Ciscoes and other subsistence caught finfish can also be sold in limited amounts up to $500 per calendar year under existing customary trade regulations in the Norton Sound-Port Clarence Area; however, a customary trade record form is required and such noncommercial sales are limited only to transactions that take place within the Norton Sound-Port Clarence Area and other restrictions identified in 5 AAC 01.188.

DEPARTMENT COMMENTS: The department is **OPPOSED** to this proposal. There is limited information about the stock composition or abundance of cisco species and other whitefishes harvested in Norton Sound and Port Clarence miscellaneous finfish fisheries. However, genetic information collected from Bering cisco captured in the region suggests that a commercial harvest directed on ciscoes in the Norton Sound-Port Clarence Area would potentially have negative impacts on the Yukon River Bering cisco stock. Allowing a new commercial fishery directed on ciscoes in Norton Sound would not be consistent with sustained yield principles by allowing additional commercial harvest of ciscoes without being able to adequately assess potential negative impacts to Yukon River Bering cisco and other cisco stocks.

COST ANALYSIS: Approval of this proposal may result in an additional direct cost for a private person to participate in the fishery depending on the gear requirements of gillnets used in the fishery.

Table 146-1.–Norton Sound District winter commercial whitefish harvest statistics, 2007–2014.

Year [a]	Number of Fishermen	Total Pounds	Price per Pound ($)	Estimated Value ($)
2006–2007	1	3,723	0.44	2,635
2007–2008 [b]				
2008–2009 [b]				
2009–2010 [b]				
2010–2011	1	2,009	0.50	1,005
2011–2012	1	2,148	0.50	859
2012–2013	2	105	0.50	53
2013–2014	1	4,726	0.50	2,363

Note: confidentiality was waived by fishermen and buyer.
[a] Season was from September 15 to June 15.
[b] No reported sales.